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诺贝尔经济学奖获奖者学术精品自选集



经济理论与 经济计量学


(上册)

[美] 劳伦斯·克莱因 著

ECONOMIC THEORY AND ECONOMETRICS VOLUME 1

by

L. R. KLEIN

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诺贝尔经济学奖获奖者学术精品自选集

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Lawrence R. Klein

劳伦斯·罗伯特·克莱因 Lawrence Robert Klein (1920 ~)

美国宾夕法尼亚大学教授。1980年因其在“建立经济计量模型以及将它们用于分析经济波动和经济政策”方面的杰出贡献，荣获诺贝尔经济学奖。

出版说明

1968年在瑞典中央银行成立300周年之际,为纪念诺贝尔奖奖金提供者,由时任行长艾斯伯林克等人倡议,并经瑞典皇家科学院批准,设立了“纪念阿尔弗雷德·诺贝尔瑞典中央银行经济学奖”。该奖由瑞典皇家科学院委任的5~8名经济学家组成“经济科学委员会”(即奖项委员会),负责在全球范围内对入围的经济学家进行遴选并将评选意见提交科学院社会科学部,最终确定桂冠的得主。由于该奖项与诺贝尔遗嘱所设立的物理学奖、化学奖、生物医学奖、文学奖以及和平奖以同样的时间、同样的奖金额颁发,故被世人习惯地称为“诺贝尔经济学奖”。

1936年,英国经济学家约翰·梅纳德·凯恩斯发表了划时代的名著——《就业利息和货币通论》,标志着现代经济学的诞生。然而,在诺贝尔经济学奖设立以前,人们对能否称经济学为科学尚怀有极大的疑问,即使在艾斯伯林克等人提出设立经济学奖时,也遭到许多名人的反对。他们认为,经济学作为一门社会科学,以它的价值判断为基础,其成就难以用一定的客观标准来衡量。因此,尽管经济学的研究成果在促进人

类文明、推动社会进步方面已显示出极大的作用,但并未得到人们的足够重视。诺贝尔经济学奖的设立,首次使经济学奖与物理学奖、化学奖、生物医学奖、文学奖以及和平奖并驾齐驱,每年颁发给在经济学的研究领域作出杰出贡献的人士。它的设立,对经济学在门类众多的学科中确立自己应有的地位具有极为重要的作用。

今天,诺贝尔经济学奖已被世人极为关注,尤其在经济学界更被奉为至尊。从1969年首次颁奖起,诺贝尔经济学奖至今已颁发了31届,共有44位经济学家获此殊荣。获奖经济学家的研究成果可谓集西方经济理论之大成,几乎囊括了二战后西方经济学的主要研究成就,对西方经济学的发展具有积极、重要的影响。

西方经济学研究了市场经济条件下经济发展的基本规律,对各国在市场经济发展过程中的经验和教训进行了科学的归纳和总结。作为人类经济思想的精华,其成果是全人类共同的宝贵财富。从这个意义上讲,其对中国建立健全市场经济体系,加速经济发展具有无可辩驳的借鉴作用。因此,我们应注意研究和学习西方经济学,并在批判吸收的基础上创立有中国特色的社会主义经济理论。这也是我们出版本丛书

的初衷。

考虑到许多获奖者笔翰如流,著作等身,为使收入到丛书中的作品更具权威性,我们采用了由获奖者自己选择作品的方式确定书目。对那些业已仙逝的获奖者,则邀请其家人、同事、学生或国内专家学者代为确定作品。尽管这样做使得我们的工作变得异常艰辛,但这却是本丛书的特点及价值所在。

在本丛书面世时,我们由衷地感谢那些为本丛书的出版

提供过帮助的机构和人士,他们是:瑞典驻华大使馆文化处、美国驻华大使馆文化处及杨更琪先生、法国驻华大使馆文化处、英国驻华大使馆文化处、挪威驻华大使馆文化处、荷兰驻华大使馆文化处、爱立信(中国)有限公司业务开发及礼宾事务经理刘国来先生、瑞典皇家科学院经济科学委员会及托尔斯滕·珀森先生、北京大学图书馆沈正华女士等。没有他们卓有成效的工作,本丛书的顺利出版是不可想像的。我们还要感谢北京市新闻出版局及有关领导,他们对出版本丛书的支持为我们出好丛书提供了保证。我们更要感谢欣然允诺担任本丛书顾问及编委的学者们,他们的亲切指导,特别是为我们推荐能够胜任翻译工作的译者,对保证丛书质量起了关键作用。此外,我们还要感谢许许多多帮助过我们的朋友们。

我们希望本丛书能得到中国广大读者的承认,如果是那样,我们将深感欣慰。

出版者

2000年3月

为《诺贝尔经济学奖获奖者学术精品自选集》所作的序言

1968年,瑞典银行(Sverigs Riksbank)在其300周年志庆活动时宣布设立一个新的奖项,即“纪念阿尔弗雷德·诺贝尔瑞典中央银行经济学奖”,并承诺对该奖项提供永久支持。

同时,瑞典皇家科学院承担了与自1901年起开始运作的诺贝尔奖完全相同的程序来对获奖者进行评选的任务。这样,每年年初科学院都会收到250~300个提名建议,通常涵盖多达百名以上的候选人(未经邀请主动提名的个人没有计算在内)。科学院奖项委员会(成员5~8名)首先对世界各地的候选人进行专业评估,然后,再以报告的形式将奖励意见提交给科学院社会科学部(The Social Science Class of the Academy)。最后,科学院的全体成员要在10月份齐集一堂,以决定奖项的最终归属。

本奖项的评选原则与诺贝尔奖完全一致,完全遵循阿尔弗雷德·诺贝尔的遗愿——奖励在其所处领域有最为重大发现、发明或发展的科学家。在实践中,这就意味着要考虑到参

选者学术成果的独创性、在理论与实践当中的重要性及其对科学工作的影响。科学院及奖项委员会也在一定程度上考虑到了候选对象及其学术成果对社会的影响,包括其对公共政策的影响。

在本奖项设立后的前 30 年里,科学院及奖项委员会对“经济科学”一词采取了相当广泛的理解。因此,奖励对象涉及经济学邻近学科的很多重大科学成就。有几个奖项实际上是授予了“跨学科研究”的成果,处于经济学、政治学、社会学及历史学等学科的交叉点。

本奖项设立后 30 年的运行也反映出本世纪下半叶经济学研究的特点与走向。首先,获奖情况清楚地表明美国在这一领域的优势地位。43 名获奖者中,有 28 人是美国公民,尽管其中 4 人,即里昂惕夫(Leontief)、库普曼斯(Koopmans)、德布鲁(Debreu)和哈萨尼(Harsanyi)的出生地及受教育地均非美国。其他获奖者来自英国(6 人),瑞典、挪威(各 2 人),法国、印度、荷兰、前苏联、德国(各 1 人)。获奖一人次以上的大学有:芝加哥大学(8 人)、哈佛大学(4 人)、剑桥大学(4 人)、麻省理工学院(3 人)、伯克利大学(2 人)、奥斯陆大学(2 人)、普林斯顿大学(2 人)、斯坦福大学(2 人)、耶鲁大学(2 人)。

在获奖成果的内容方面,经济分析中的演绎法与数学公式化表述成为其显著特征。例如,萨缪尔森(Samuelson)、希克斯(Hicks)、阿罗(Arrow)、库普曼斯、康托罗维奇(Kantorovich)、德布鲁、阿莱斯(Allais)等人的获奖,还有金融经济学方面的获奖者马克威茨(Markowitz)、米勒(Miller)、夏普

(Sharpe)、默顿(Merton)和斯科尔斯(Scholes),以及博弈论研究方面的获奖者哈萨尼、纳什(Nash)、泽尔滕(Selten)等。

20 世纪下半叶,经济学研究的趋势和特点之二是包括系统统计测试或评估等在内的定量研究法变得越来越重要。这主要反映在授予弗里希(Frisch)、丁伯根(Tinbergen)、里昂惕夫、克莱因(Klein)、斯通(Stone)、哈维尔莫(Haavelmo)等人的奖项上。实际上,在过去 10 年间,定量研究领域的硕果涉及了大量的数据,如果没有分析技术手段的发展(如计量经济学、投入—产出分析、程序编制、高能计算机等的发展和应用),要想取得这样的成就几乎是不可能的。

本奖项还反映出二战后宏观经济学的重要作用。在此,我们应特别注意弗里德曼(Friedman)、克莱因、托宾(Tobin)、莫迪里安尼(Modigliani)、索洛(Solow)和卢卡斯(Lucas)等人的成就。一些研究经济体系的新方法得到了认同,这反映在奖项授予信息经济学[米尔利斯(Mirrlees)、威克里(Vickery)]、人力资源[贝克尔(Becker)]和博弈论等研究课题上。定量研究法在经济史学研究中的不断上升的重要作用表现在库兹涅茨(Kuznets)和福格尔(Fogel)的获奖上。同样,发达国家和发展中国家经济中的制度的重要作用则体现在授予冯·哈耶克(Von Hayek)、布坎南(Buchanan)、科斯(Coase)和诺斯(North)等人的几个奖项上。对经济发展不同方面的研究成果的奖励则授予了缪尔达尔(Myrdal)、刘易斯(Lewis)、舒尔茨(Schultz)和森(Sen)等人。

据我所知,此套系列丛书是首次尝试系统地出版所有获

奖者的主要著作,丛书的出版本身就具有重大的意义。在中国读者中的面世同样具有深远的意义,我希望它将有助于经济学的发展,并直接推动中国经济的发展。

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托尔斯滕·珀森

1999年7月,于斯德哥尔摩

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Journal of Money, Credit, and Banking

Journal of Political Economy

Metroeconomica

North-Holland Publishing Company

Review of Economics and Statistics

Review of Economic Studies

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Festschrift für Nationalökonomie

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Forty Years of 'Rigorous Observational Positivism'

JAIME MARQUEZ

Federal Reserve Board

An econometrician wears two hats. In formulating behavioral relations, we wear a theorist's hat since we assume the parameters of the behavioral relations to be known. In estimating the parameters, we wear a statistician's hat since we take the behavioral relations as given.

This is — more or less — the way that Lawrence Klein introduced his econometrics lectures at the University of Pennsylvania in the fall of 1980, the first year I was his student. I was impressed with his work long before I met him, and I am honored to be able to assemble a (small) collection of his papers. My purpose in this brief introduction is to outline what I think has been the unifying theme of Professor Klein's academic career. ^①

① The title is not original. It is inspired by a recent article by Paul Samuelson, 'Rigorous observational positivism: Klein's envelope aggregation; thermodynamics and economic isomorphisms', (eds) F. Gerard Adams and Bert G. Hickman, *Global Econometrics: Essays in Honor of Lawrence R. Klein*, MIT Press, Cambridge: (1983). I have benefited from comments from Lawrence Klein, Paul Samuelson, and Janice Shack-Marquez. This paper represents the views of the author and should not be interpreted as reflecting the views of the Board of Governors of the Federal Reserve or other members of its staff.

As I see it, Klein's research program has addressed — over the last forty years — the following question: is it possible to develop a theory of policy stabilization which, while firmly grounded on individual's rational behavior, can be both refuted by the data and passed from one generation to another? Two key dimensions must be considered in developing such a theory. First, from a theoretical viewpoint, one needs an understanding of the functioning of the economy as a whole, and how it relates to the behavior of individual agents (domestically and abroad). Second, from a statistical viewpoint, we need to determine the existence of stable relations among the different variables of interest, the different estimation procedures, and how they can be applied. Klein knew that consideration of either economic theory or econometrics exclusively would not lead to a satisfactory theory of policy stabilization. As an economist and statistician he was aware that a (convex) combination of the two would yield a more useful theory.

I have grouped the present collection of articles into four parts. The classification is somewhat arbitrary given Klein's combination of both econometric theory and econometrics in economic analyses.

It is hard to exaggerate the importance that Klein gives to the idea that the data must support the particular theory being advanced. Naturally, this is closely related to estimation methods and the associated statistical properties of the parameter estimates. I include in part I a few of Klein's most important contri-

butions in econometric methodology. Klein's first paper addressed one of the oldest statistical challenges in econometrics, namely, the identification problem. Indeed, by drawing on the parallel case of demand-supply behavior, Klein finds that similar problems exist in the analysis of investment-savings behavior. A second — and frequently encountered — econometric problem is the existence of multicollinearity. Given the desirable statistical properties of system estimators, one may ask what is the effect of multicollinearity on these estimators. Klein finds that two-stage least squares are more sensitive to multicollinearity than ordinary least squares, and that both limited and full information maximum likelihood techniques are more sensitive to multicollinearity than two-stage least squares. If expectations variables are estimated using two-stage least squares, then hypothesis testing will surely be affected by the existence of multicollinearity.

More recently, econometric models have become increasingly polarized into two classes: structural models and vector autoregressive models. The first class of models is characterized by the use of economic theory in specifying the behavioral relations and accounting identities. Naturally, the specification takes the form of identifying restrictions. Some economists believe these restrictions are either too 'strong' or 'incredible', leading to the development of the second class of models.

Vector autoregressive models do not impose parameter restrictions. In other words, it is fair to say that they constitute a so-

phisticated version of 'measuring without theory'. Given that these models do not have any theoretical content, their usefulness lies primarily in forecasting. However, by applying the Le Chatelier principle to parameter estimation, Klein shows that the precision of parameter estimates increases as correct identifying restrictions are added to the estimation problem. Therefore, for a given degree of uncertainty in the exogenous variables, it seems clear that the model with greater parameter estimate precision (the structural model) may prove more useful in forecasting.

Part II contains a sampling of Klein's contributions to economic theory. One of his first propositions is that the design of stabilization policies is greatly improved from having forecasts of the behavior of the economy as a whole. There are many alternative approaches to forecasting: with and without economic theory, judgmentally, mathematical-statistically, etc. Klein opts for the development of mathematical models of the economy as a whole, but he adds the prerequisites that the macromodels be based on individuals' rational behavior and be refutable by the data.

In explaining consumer and firm's behavior, Klein introduces the linear expenditure system and reinterprets Leontieff's input-output system in a way more suitable for practical applications. These two contributions have not only stimulated substantial research, but have also laid the foundations of both the Keynesian system and the development of the supply side of modern econometric models. Once a useful representation of individuals' ra-