

## JAMES A. MIRRLEES



Sir James Alexander Mirrlees is a Scottish economist known for his analytic research on economic incentives in situations with incomplete, or asymmetrical, information. Mirrlees was awarded the Nobel Memorial Prize in Economics jointly with William Vickrey in 1996 “for their fundamental contributions to the economic theory of incentives under asymmetric information” (Nobel Foundation, 2004).

James Mirrlees was born in 1936. He studied mathematics at the University of Edinburgh (M.A., 1957) and Trinity College, Cambridge (Ph.D., 1963). In 1969 he began teaching at the University of Oxford, and moved to the University of Cambridge in 1995. Mirrlees’ groundbreaking models and equations, published in the 1970s, illustrated the “optimal income taxation” (increasing the care taken by policyholders) problems. Mirrlees’ methodology became the standard in the economics of asymmetrical information and was used by economists in a variety of applications.

One of the key problem in modern economic research is how to deal with problem of *asymmetric information* – that is, where different decision-makers have different information. For example, if the government thinks about rising income tax, it doesn’t know if individuals will then decide to work less hard then they do now. If the government doesn’t know this, how can it set taxes so as to optimize revenue without stifling individuals’ incentive to work hard? Professor

Mirrlees found a solution to this complex problem – such solution as to provide the basis, not only for the construction of taxation systems around the world today, but for our understanding of a whole range of other markets and systems. These include insurance, auctions, wages, and share markets.

One of Mirrlees's main contributions was his path-breaking work on optimal income taxation – a progressive tax that included incentives for earning. With a few assumptions (e.g. the one about the effect that tax rates have on the incentive to earn), Mirrlees computed the top marginal tax ratio for high-income earners. He found that this optimal rate was not 83 percent - the top rate in Britain at the time, but instead only 20 percent. Moreover, he concluded that the marginal tax rate should be about 20 percent for everyone, which would make the optimal structure something very close to what is now called a *flat tax rate*. He was then able to approach the income tax question by understanding the difference between income and consumption as a tax (Dixit and Besley).

A second path-breaking advance is Mirrlees's analysis of principal- agent contract design in the context of moral hazard. Mirrlees characterises the principal-agent relationship as less about information asymmetries and more about 'the asymmetry of responsibilities, with the principal moving first, and the agent following' (Mirrlees).

Other notable contributions highlighted in Mirrlees's Nobel citation include, with Peter Diamond, an analysis of commodity taxes (Diamond and Mirrlees). This concludes that, to facilitate productive efficiency, taxes should be levied at the consumption stage rather than on factors of production, and that small countries

should eschew tariff protection (Dixit and Besley). With Ian Little, Mirrlees has also published work on project appraisal in developing countries (Little and Mirrlees) which has had a ‘significant impact’ on the development activities of agencies such as the World Bank.

James Mirrlees has also received honorary degrees from many universities, including Warwick, Portsmouth, Brunel, Edinburgh, Oxford, Peking and Macau. He was knighted by Queen Elizabeth II in 1998.

He has been Fellow and President of the Econometric Society in Britain; a Fellow of the British Academy; an Honorary Fellow of the Royal Society of Edinburgh; President of Royal Economic Society; President (Section F) of the British Association for the Advancement of Science; a Foreign Associate of the US National Academy of Sciences; and President of the European Economic Association.

Sir James has held visiting positions at many institutions like the MIT, Berkely, Yale, Centre for International Studies in New Delhi, and the Pakistan Institute of Development Economics in Karachi. In 1995 he returned to Cambridge as Professor of Political Economy - a position he held until 2003.

Professor Mirrlees developed an interest in Chinese economic development in the 1980s when he was involved in the establishment of the Chinese Economic Association in Britain. In 2002 he accepted appointment at The Chinese

University of Hong Kong as Distinguished Professor-at-Large. In this role he was able to provide leadership in the advancement of the University, enhancing the University's links with the international scholarly community.

Professor Mirrlees visited Indian Statistical Institute and participated in two days' workshop on "Economic growth in West Bengal" from 7 January - 8 January 2013 and gave a keynote address on "A good tax system".

Professor J A Mirrlees delivered the forty-seventh convocation address at Indian Statistical Institute, Kolkata on 9<sup>th</sup> January 2013. He talked about the positive aspects of higher education. For instance, it makes someone creative, and in some degree, original; it not only gives skills, but makes some moral contributions in the various dimensions of our lives. Higher education encourages tolerance and helps to improve our values.

A few of Mirrlees's major publications;

"A New Model of Economic Growth" (with N. Kaldor), RES, 1962

"Optimum Growth When Technology is Changing", RES, 1967

"The Dynamic Nonsubstitution Theorem", RES, 1969

Manual of Industrial Project Analysis in Developing Countries, Vol. II : Social Cost Benefit Analysis (With I. M. D. Little), 1969

"An Exploration in the Theory of Optimum Income Taxation", RES, 1971

"Optimal Taxation and Public Production I : Production Efficiency" (With P. A. Diamond), AER, 1971

“Optimal Taxation and Public Production II : Production Efficiency” (With P. A.Diamond), AER, 1971

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