

# Sir Richard Stone and the National Accounts

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Richard Stone, a Nobel Prize winner in Economic Sciences and one of the founders of the UK national accounts, died last December. Macroeconomics forecasting, which is now taken for granted, depends for its data on his pioneering work in economic statistics at the very foundation of the CSO in the 1940s. This led directly to his preparation of the United Nations' *System of*

*National Accounts*, used throughout most of the world as the means of organising macroeconomic data. Later work established in 1975 the UN's *System of Social and Demographic Statistics*. He was also responsible for path-breaking econometric research in the analysis of consumers' expenditures. In 1960 he started, with Alan Brown, the Cambridge Growth Project which developed new techniques in large-scale modelling of economic structure.

Among many honours and distinctions, the crowning international recognition of his career was the award in 1984 of the Nobel Memorial Prize in Economics 'for having made fundamental contributions to the development of systems of national accounts and hence greatly improved the basis for empirical economic analysis'. An essential marriage of theory and fact characterised his writings; he liked to quote Marshall's words on economic theorising as being 'as mischievous an imposter when it claims to be economics proper as mere crude unanalysed history'. In this belief he stood in the tradition of English empiricists such as William Petty, Gregory King and Marshall himself.

He was born in 1913, and in accordance with his father's wishes he began reading law at Gonville and Caius College, Cambridge, obtaining a first in Part One of the Law Tripos. In his second year, he decided to change to economics, which brought him to Keynes's attention at the famous 'Monday evening' seminars. He obtained a first in economics in 1935 and then worked for a few years in the City for a Lloyds' underwriter. In his spare time from 1937 until 1940 he published, with his first wife, a monthly feature called *Trends* (subtitled as 'a monthly graphical survey of business movements'), a modest forerunner to *Economic Trends*. In 1939, he joined the Ministry of Economic Warfare, but it was not long before he was transferred to the Central Economic Information Service of the War Cabinet to work on war finance with James Meade.

This move in fact inaugurated the British national accounts. The first accounts, produced by Meade and Stone, were published as an annex to a White Paper written by Keynes and circulated with the Budget of 1941. This was a crucial development in the history of national accounting. The system of double-entry bookkeeping was applied to show how the main sectors of the

economy (Meade and Stone suggested four sectors: households, business, government and the rest of the world) related to each other and how they came together to form a set of national accounts. At this point the Central Statistical Office was established. Stone was transferred to the new office and continued to work on the accounts, producing for the rest of the war White Papers which anticipated the annual *Blue Book*. It is remarkable that at the same time he was able to initiate a large project on consumers' expenditures in the National Institute for Economic and Social Research.

At the end of the war, at the age of 32, he was appointed director for the newly founded Department of Applied Economics at the University of Cambridge. It was at this time that he started his international work on national accounts, with the League of Nations (later the United Nations) and the OEEC (subsequently the OECD). This work was carried out by international committees of experts chaired by Richard Stone. His memorandum to the League of Nations Sub-Committee on National Income Statistics (of the Committee of Statistical Experts) written in 1945 was the basis of the 1947 report on National Income. The OEEC established a National Accounts Research Unit in Cambridge in 1949 under his direction which produced two OEEC reports on the principles of national accounting: *A Simplified System of National Accounts* in 1950 and *A Standardised System of National Accounts* in 1951. A series of country studies was undertaken under his editorial guidance and the new presentation was soon widely adopted by many countries. The definitive United Nations's *System of National Accounts* (SNA) followed in 1953.

He continued his interest in social accounting with proposals for a general accounting system which encompassed both the input-output tables and the national accounts in a series of papers presented at conferences and published over the period 1950-55. This introduced the concept of the Social Accounting Matrix (SAM) and estimated a SAM for the United Kingdom for 1950. These ideas eventually led to the revised SNA published in 1968. Stone again acted as Chairman of the Expert Group. The revisions included the incorporation of input-output tables, flow-of-funds analysis and sectoral balance sheets into the earlier SNA. The success of the new approach was largely due to his patient work as he prepared and explained successive reports.

His time as Director of the DAE between 1945 and 1955 saw the flowering of econometric research in Britain and attracted visitors and staff who were, or became, highly distinguished economists, a tradition that continued after he ceased to be Director in 1955 and was appointed to a personal chair in finance and accounting.

In the 1950s, the work on consumers' expenditure started at the National Institute came to fruition. His book on the topic published in 1954 is a classic of applied econometrics; and in the same year he published his paper which contained the first estimation of a system of demand equations, the Linear Expenditure System, consistent with consumer theory.

The Cambridge Growth Project was started in 1960 with Alan Brown. It developed a large-scale model of economic structure, combining the analysis of production (using input-output tables) with that of consumers' expenditure, with both elements based on the SAM. A new SAM for the UK was constructed for 1960 consistent with the 1961 *Blue Book* and published in 1962, distinguishing 31 industries and commodities, 39 categories of consumers' expenditures and six institutional sectors. The emphasis of the modelling was on computability and on applications to questions of policy. The innovation was not the building of an econometric model in itself, but the level of detail, the accounting consistency and the combination of time-series and cross-section analyses. The project continued to 1987 and influenced a generation of economic modellers in Britain; a successor to the model is still in use.

Those who worked with him, even if he disagreed with them, have remarked on his personal kindness. He led by example and inspiration, never condescending and always courteous. He was a man whose scholarship infused his whole life. He married three times. His first marriage, to fellow economist Winifred Jenkins in 1936, ended in divorce; his second, to Feodora Leontinoff in 1941, ended with her death in 1956. He married Giovanna Croft-Murray in 1960, and they worked together in a long and happy partnership. In the last few years they brought to light the very earliest examples of English political arithmetic. Many friends appreciated their urbane, stimulating and kind hospitality.