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FARRELL's technical efficiency measurement by Emili Grifell-Tatjé and C.A.Knox Lovell

Michael James Farrell (1926-1975) was pure Oxbridge, educated at Oxford and employed at Cambridge. During his brief but distinguished academic career he made significant contributions to economic theory, including welfare economics, consumer demand analysis, the profitability of speculation, and price formation in public utilities and other imperfectly competitive markets. His interest in business pricing strategy led him to his most lasting achievement, the development in 1957 of a rigorous analysis of the efficiency of business performance. He showed how to measure and compare the technical efficiency of businesses (the avoidance of wasted resources) and their allocative efficiency (the avoidance of resource misallocation in light of their relative prices). He then combined the two to obtain a measure of business cost efficiency. His influence grew slowly at first, and then expanded rapidly beginning in the 1970s when his work was extended by economists (who used statistical regression techniques) and management scientists (who refined his mathematical programming techniques). Nearly half a century after his initial investigation, his ideas have gained widespread acceptance. They are used to examine the linkage between the efficiency and profitability of business, and as an early warning business failure predictor. They are used in benchmarking and budget allocation exercises by businesses and government agencies, and to monitor the effectiveness of public service provision, particularly (and controversially) in the UK. They are also used to implement incentive regulation of public utilities in a growing number of countries. At an aggregate level they are used to explore the sources of productivity growth, and they have been adopted by the World Health Organization to monitor the health care delivery performance of its member countries. Farrell's insights have spread far beyond their academic origins.