

Edith Penrose's Legacy to Economics, Management and Political Economy

Kofi Adjepong-Boateng and Christine Oughton

Academics have seldom shaped their discipline to the extent that their name becomes a byword for theory, practice and policy. Keynes is a noteworthy example, leaving a legacy of Keynesian economics and policy that shaped the international economic order, underpinned the golden age of economic growth, helped to create a central bank in India and led a US President to declare himself a 'Keynesian' in 1971.

Even fewer academics have achieved such acclaim across two disciplines. Edith Penrose, however, is one of them, her influence spanning the disciplines of economics and management. Her achievement is all the more remarkable given the lack of representation and recognition of women in economics, both then and now.

The absence of women in the economics profession has not gone unnoticed, at least by the *Financial Times* (FT), *The Economist* and other media outlets. Both Diane Coyle (August 2017) and Gemma Tetlow (April 2018) have highlighted this problem in the FT. In her article, Gemma Tetlow point out that Elinor Ostrom is still the only woman to have been awarded the Nobel Prize in Economics; and that this year Rachel Griffith, Professor of Economics at Manchester University, has become only the second female president of the Royal Economic Society since its creation in 1890.

Moreover, a list of influential economists in *The Economist* attracted much attention, a fair bit of which was critical. One of the criticisms was the total absence of any women. A more recent article in the same publication argues that the gender problem in economics results in fewer ideas to benefit the discipline and the consequent disadvantage of a skewed point of view.

Writing in the *New Statesman* two years ago, Frances Weetman, who won the 2017 Virago/*New Statesman* Women's Prize for Politics and Economics, observed

Economics has a problem with women. I write this as a woman who has studied, worked in and is now writing about the subject. The data bears this out. Across the UK, just a quarter of undergraduate economics students are women. This is about the same proportion as the economics teaching and research academics at the University of Cambridge: by contrast, women make up 43 per cent of the Cambridge psychology faculty... Where are all the women? Why does economics fail to attract women in the way that other social sciences do? ... Perhaps they are discouraged from joining the world of economics as it doesn't seem likely to reward them with career prospects. According to a 2014 paper by the economists Donna K Ginther and Shulamit Kahn, working with the psychologists Stephen J Ceci and Wendy M Williams, once you control for productivity (which they measured by the number of published research articles), men and women have the same promotional outcomes in most academic fields – but not in economics.

So, while progress has been made since Penrose's time, the problem remains. One of the objectives of the Penrose Lecture series is to showcase the work of leading women in economics and management. The inaugural Penrose Lectures last year were given

by Professor Bronwyn H. Hall, one of the world's foremost authorities on R&D, innovation, patents, productivity and industrial policy. Professor Hall is Emerita Professor at the University of California at Berkeley, a Research Associate of the National Bureau of Economic Research and the Institute for Fiscal Studies, London, and a Visiting Fellow at NIESR, London. Professor Hall's lecture covered her work on the economics and econometrics of technical change and innovation. She presented it in the context of Penrose's work on innovation as a source of a firm's profits and the enhancement of profitability through learning at firm level, partly through developing new applications of its current resources (Cantwell, 2002).

This year's lectures will be given by Professor Rita McGrath, a world-renowned leader of management theory and an expert on leading innovation and growth in times of uncertainty. Rita is a professor at Columbia Business School and the author of five books, including the best-selling *The End of Competitive Advantage* and the upcoming *Seeing Around Corners: How to Spot Inflection Points in Business Before They Happen*. She has received the #1 achievement award for strategy from the prestigious Thinkers50 and in its bi-annual rankings has consistently been named one of the world's top ten thinkers in management.

Before turning to Professor McGrath's contribution in the following pages, it may be instructive to consider briefly the career and contribution of Edith Penrose, not just as a pioneering woman economist, but also as an outstanding and original theorist, thinker and contributor to academic and policy debates.

After graduating with a degree in economics from the University of California at Berkeley, and completing her PhD in economics at John Hopkins University, Penrose held a joint Readership at two University of London Colleges – the London School of Economics and the School of Oriental and African Studies (SOAS), before becoming in 1964 the first woman to be appointed to a Chair in economics at SOAS.

Penrose worked in the field of economics until she retired from SOAS in 1978; yet her contribution is equally, if not more widely recognized by management scholars and practitioners. Indeed, after retiring from SOAS in 1978 she became Professor of Political Economy at INSEAD – one of the world's leading business schools (Penrose, A, 2018).

Her best-known work, *The Theory of the Growth of the Firm*, was originally published in 1959, and has remained in print ever since. The book probed inside the conventional 'black box' model of the firm to look at the way in which the combination and renewal of resources within firms shaped their growth. This analysis provided fertile ground upon which to sow new theories of firm behaviour, dynamic business performance and strategic management, leading to the development of the *resource-based view* of the firm and the approaches of *dynamic capabilities* in strategic management. Firms are important to our livelihoods by being the primary engine of economic growth and prosperity across nations. For this reason, an analysis of what drives the success of firms is of critical importance and it is what keeps Penrose's work relevant.

To gauge the extent of her impact in the fields of both economics and management, one need only scan the pages of leading publications in both fields, where copious references to *Penrosian Theory*, *the Penrose Effect*, *the Penrosian Firm*, *Penrosian Analysis*, *the Penrosian Perspective*, *Penrosian Dynamics*, and so on, are standard.

Penrose's work laid the foundation for a new general theory of the growth of firms. Rather than seeking to determine the optimal size and efficiency of firms, something that had preoccupied much of economic theory since Marshall, Penrose focused on a different question: why, faced with the same market conditions, do some firms grow while others stagnate? Her answer identified the key role of firms' managerial, or entrepreneurial, capacity to create and renew the resources required to generate new products, new processes and new market demand.

Penrose viewed the firm as a collection of productive resources. Prime amongst these are technology, knowledge, marketing expertise and above all, the managerial capabilities that enable firms to exploit and renew their resources, create new products and grow. Her focus was on growth as a process. Firms grow over time by enhancing their understanding of the productive potential of the internal resources at their disposal.

Physically describable resources are purchased in the market for their known services; but as soon as they become part of a firm the range of services they are capable of yielding starts to change. The services that resources will yield depend on the capacities of the men [sic] using them, but the development of the capacities of men is shaped partly by the resources men deal with. The two together create the special productive opportunity of a particular firm. The full potentialities for growth provided by this reciprocal change will not necessarily be realized by any given firm, but in so far as they are realized, growth will take place which cannot be satisfactorily explained with reference to changes in the environment of the firm (Penrose, 1959/2009, pp. 69-70).

For Penrose, the hitherto "conventional economic approach" of modeling the behavior of all firms by treating it as a replication of the behavior of a single "representative" firm, was a nonsense. In terms of their resources and the way in which resources are configured and used, firms differ in important ways. Innovation, knowledge, especially firm-specific knowledge, and learning are central to the growth process. Managerial resources deserve particular attention; Penrose argued that 'management capabilities' are often the main limit to growth.

In other words, hiring more staff, especially managerial staff, does not guarantee that these resources will immediately be productive – this takes time, since new managers and employees need to gain experience in the context of the firm before their capabilities can be fully used to generate growth.

Penrose's theory of the innovative firm is more relevant in the 21st century than it was when first introduced in 1959, because knowledge, advances in technology, and organisational innovation are more critical in today's advanced economies. For example, Penrose's theory of the growth of the innovative firm provides insight into the recent debate on the UK "productivity puzzle" that currently preoccupies economists, management theorists, businesses and policy makers (including the Bank of England).

Since the financial crisis in 2008 and subsequent recession, the UK's output (as measured by total output or gross domestic product), and employment have increased, but productivity (the ratio of output to employment) has remained flat. Penrosian theory points to the combination of resources within the firm – knowledge, financial

resources for investment in capital, research and development and human capital – as well as managerial capability, to understand how firms may continually enhance the efficiency of their internal resources and combine them with other resources, such as newly recruited employees.

Her approach suggests that part of the explanation for the failure of UK productivity to increase in step with the growth in employment and output is the failure of managerial capacity to fully and efficiently use the internal resources of the firm and combine them with resources from newly hired staff. It takes time for managers to understand the full potential of newly employed resources (capital, knowledge and labour), which by virtue of their “newness” are less productive than existing internal resources. Hence, the theory also explains why firms may hoard staff during a recession because their firm-specific, intrinsic institutional knowledge is invaluable to the firm and its long-term growth.

Throughout her career, Penrose slipped easily between academia and policy, using her research to inform economic policy, political economy and wider humanitarian issues. She witnessed many of the major events of the 20th century, including the Depression in the US and the Second World War. During this, she worked as a special adviser to the US Ambassador in London, and on food planning with her husband in England and in Switzerland to help Jews escape from Germany. During the post-war reconstruction, she helped Eleanor Roosevelt with the drafting of the Universal Declaration of Human Rights; and she lived through the oil crisis of the 1970s. Her work as an economist made its mark in several areas of which she had direct experience – the patent system, the theory of the firm, multinational enterprises, the oil industry, and the economics of the Middle East.

It is worth noting, too, that during her time at SOAS, as Visiting Professor at the University of Dar es Salaam in 1972, she participated in a sensitive mission to University College, Rhodesia where she openly expressed her contempt for the College's collusion with racial segregation.

Professor Penrose also held a number of positions outside academia, including membership of the UK Government Committee of Inquiry into the Relationship of the Pharmaceutical Industry with the National Health Service (the Sainsbury Committee) from 1965 to 1967 and the Medicines Commission in 1975-78. She was an advisor to the UK Monopolies Commission from 1968-1970 and also served on a variety of associations of economists: chairing the Economic Committee of the SSRC/ESRC from 1970 to 1976; on the Council of the Royal Economic Society from 1975 to 1980; as a Director of the Commonwealth Development Corporation from 1975 to 1978; and as a member of the Overseas Development Institute from 1992 to 1994.

Edith Penrose was a truly remarkable person and the Penrose Lectures were established in recognition of her work and legacy. Few women have had as distinguished and influential a career in economics as hers. She was influential in the affairs of many countries and her groundbreaking ideas in the fields of management, patents and petroleum, as well as her work as a writer, as a member of committees and as a university professor, all set her apart. The goal of the Penrose Lecture series is to bring her work and the work of many other outstanding economists and management scholars who have continued to expand on her thinking to a wider audience of faculty, students, practitioners and the general public.

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About the authors

Kofi Adjepong-Boateng is a merchant banker, a member of the Board of Trustees and Chair of the Penrose Lectures Committee at SOAS University of London.

Christine Oughton is Professor of Management Economics and founding Head of the School of Finance and Management, at SOAS University of London where she also served on the Board of Trustees from 2013-2016.