

Science, Technology, Innovation and Economic Paradigms

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The current global financial and economic crisis has left the world economy confronting some very delicate challenges. To name but a few; budgetary deficits and fiscal consolidation in times of weak growth, spending cuts while unemployment is already at historically high levels, striving to reactivate industry while seeking to cut down emissions of CO₂, promoting world trade and investment flows while trying to keep jobs at home. At the same time, scientific and technological achievement have continued to advance rapidly, notably in general purpose technologies (ICTs, bio- and nano-technologies), relatively unchecked despite weakening of the investment climate, cutbacks in public sector expenditure and some fiscal tightening.

Innovation, in its broadest sense, is an efficient way to develop new sources of growth. So we need to foster innovation and its corollary, promotion of scientific and technological advance. The interplay of innovation and economic recovery and sustainable growth implies paradigm change as well as implications for measurement and applied econometric analysis.

This presentation draws heavily upon the OECD Innovation Strategy¹, an intergovernmental initiative to develop a broad based policy framework to foster new sources of economic growth and social benefit through innovation, released early in 2010. The presentation highlights the rationale and thinking behind the policy framework and sets out its main lines, highlighting those domains that draw on advances in science and technology, imply significant paradigm change or have implications for applied econometrics, models or data.

John Dryden is an independent consultant in the domains of economics, statistics, public policy and international relations, particularly in the areas of science, technology and innovation.

Between 1980 and 2008 he was a senior official of the Organisation for Economic Co-operation and Development, in Paris, notably as Deputy Director for Science, Technology and Industry. His responsibilities covered economics, statistics, public policy analysis and co-operation in the areas of S&T, knowledge-based economy, information and communications technologies including telecommunications, electronic commerce and the Internet as well as other new technologies, notably bio- and nanotechnology, in addition to issues related to industry, innovation and entrepreneurship and the impacts of technology, globalisation and structural change on the economy and society. Before that he held several other positions in the Directorate for Science, Technology and Industry and the Economics and Statistics Department of the OECD. Between 1968 and 1980 he worked in the Cabinet Office of the U.K. government. He is British and was educated at Oxford University and the University of Wales.

¹ Ministerial report on the OECD Innovation Strategy: “Innovation to strengthen growth and address global and social challenges -- Key Findings”, OECD, 2010.