

# Competition, Innovation and Productivity

**Kevin Fox**

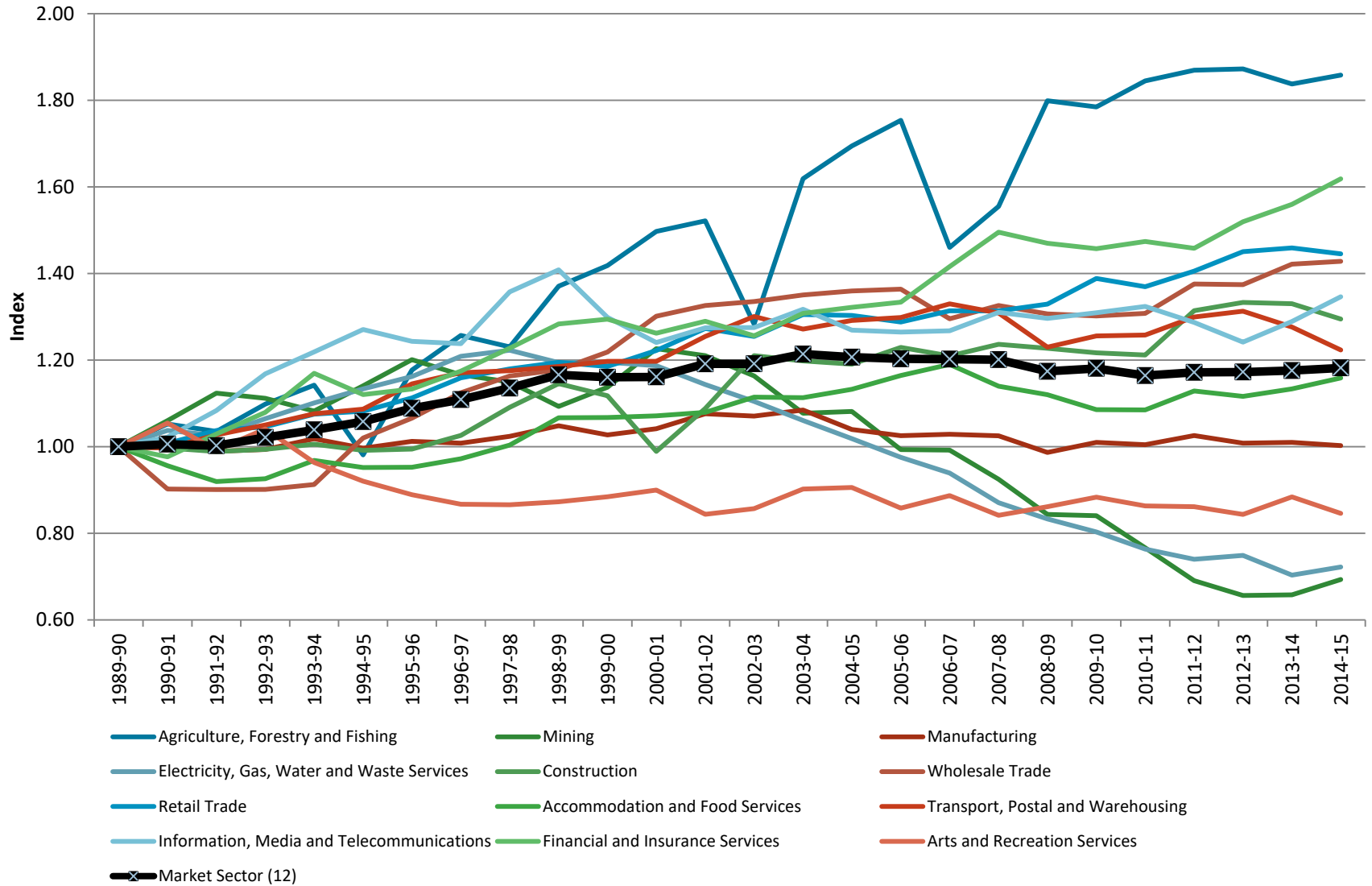
**Australian Law and Economics Conference  
ANU, Canberra  
4 November 2016**

*“...the need for productivity, innovation and incentive in our economy has never been more important.”*

Scott Morrison, Federal Treasurer, National Press Club Address, 17 February 2016. (<http://sjm.ministers.treasury.gov.au/speech/009-2016/>)

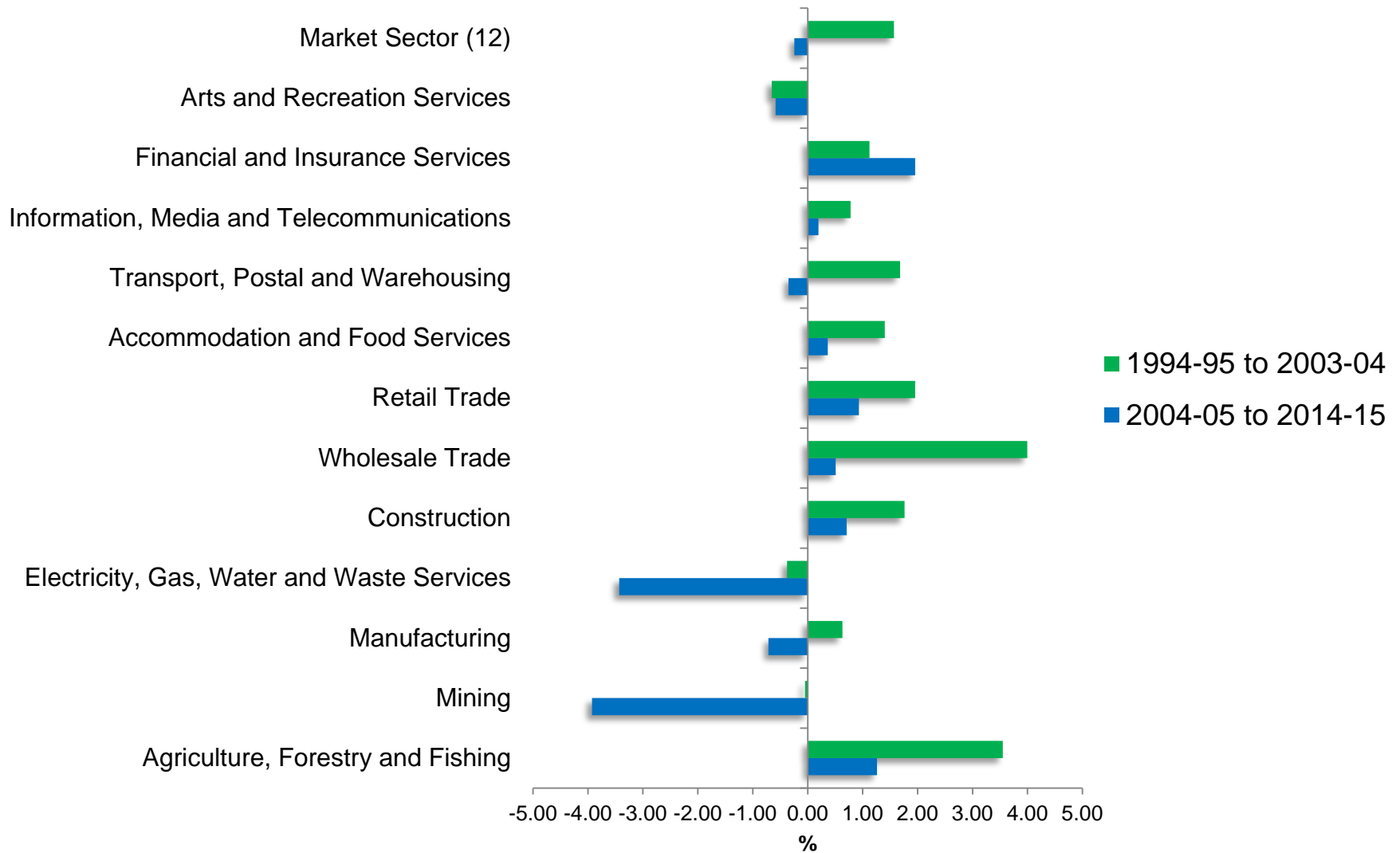


# Market Sector Cumulative Multifactor Productivity Indexes



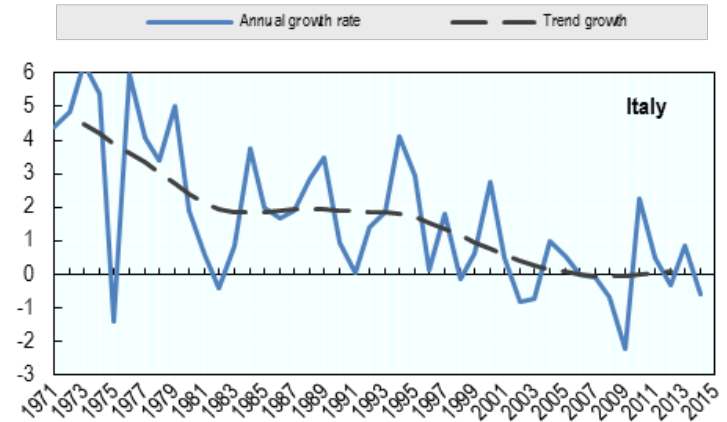
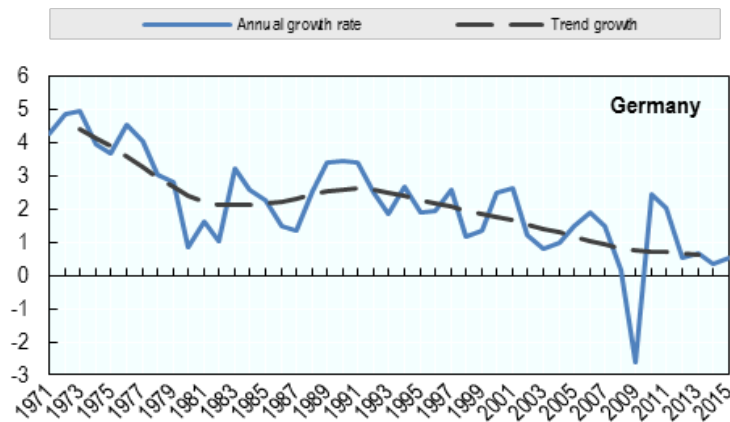
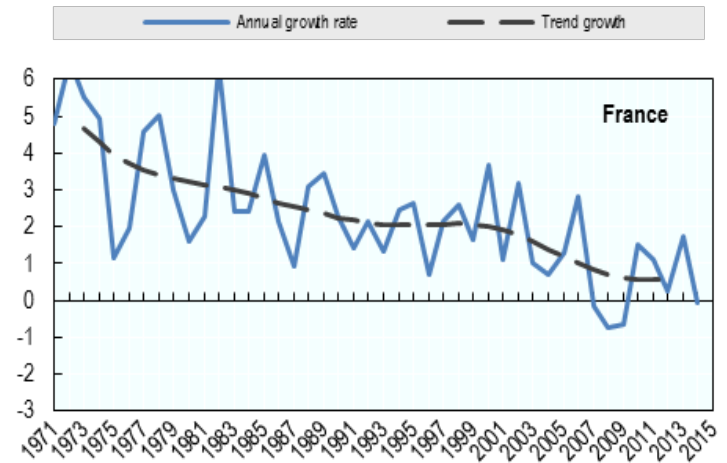
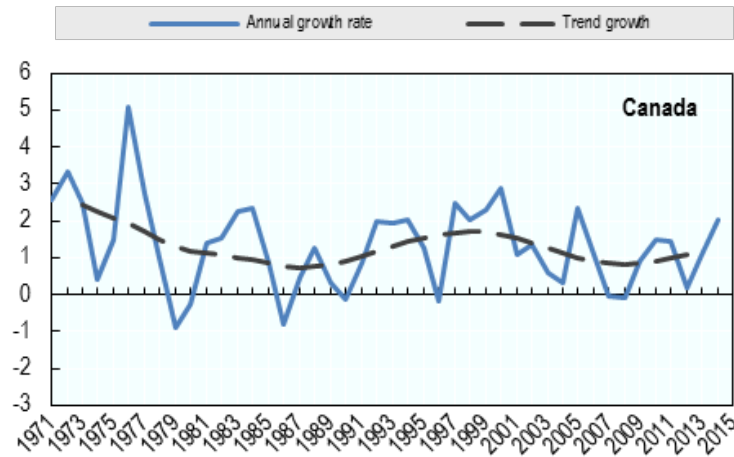
# Australian Multifactor Productivity Slowdown

## Market Sector, Annual Averages



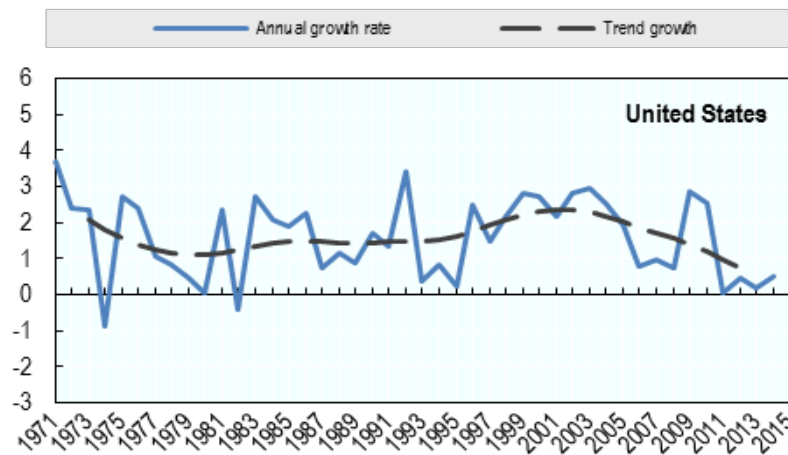
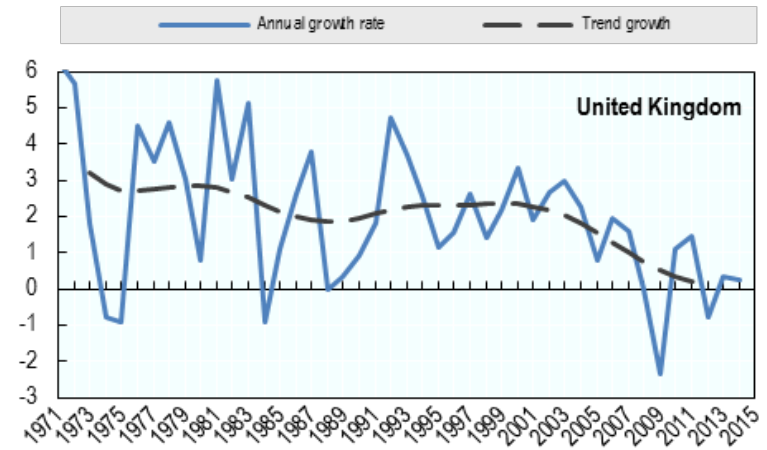
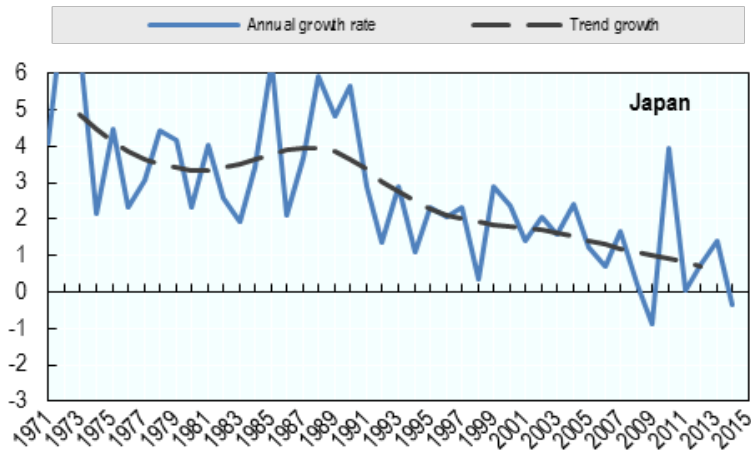
# Trend Labour Productivity Growth in G7 Countries

Average Annual Rate, OECD Productivity Compendium 2016

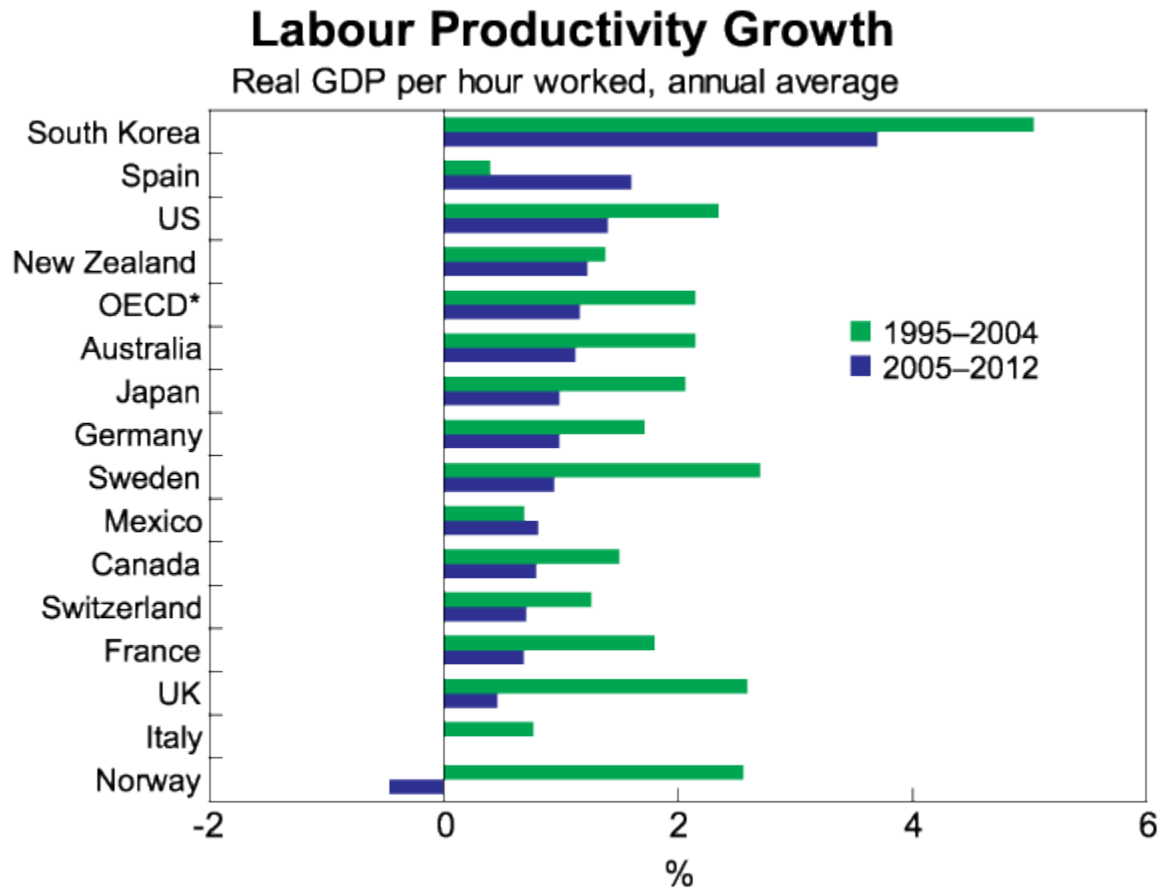


# Trend Labour Productivity Growth in G7 Countries

Average Annual Rate, OECD Productivity Compendium 2016



# International Productivity Performance



\* 1995-2004 period estimated based on 28 out of 34 countries

Sources: IMF; OECD; RBA

From a speech by Dr. Phillip Lowe, Deputy Governor, Reserve Bank of Australia: "Demographics, Productivity and Innovation,"  
The Sydney Institute, Sydney, 12 March 2014. <http://www.rba.gov.au/speeches/2014/sp-dg-120314.html>

# Plan

1. Competition and Productivity

2. Red Tape and Innovation

3. Market Failure and Public Support for  
Innovation



# Competition and Productivity

Hicks (1935, Econometrica) noted that people in monopolistic positions

*“are likely to exploit their advantage much more by not bothering to get very near the position of maximum profit, than by straining themselves to get very close to it. The best of all monopoly profits is a quiet life.”*



# Competition and Productivity

Banks (2012, “to-do list”):

*“productivity improvements generally necessitate changes within organisations and across industries. But change is never easy: it requires effort; it can be disruptive, and is often resisted. There need to be good reasons for going to the trouble.*

*“Competition provides such a reason, at least for firms operating in the private sector. In competitive markets, enterprises with relatively low productivity will generally be less profitable than others and will eventually face market sanctions.”*



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Innovation



# Red Tape and Innovation

Robert Gordon: “Why Innovation Won’t Save Us” (Wall Street Journal, 22-23 Dec. 2012)

## **-Drying up of big breakthroughs:**

- *Can economic growth be saved by Google’s driverless car?*
- *I am not forecasting an end to innovation, just a decline in the usefulness of future inventions in comparison with the great inventions of the past.*



# Red Tape and Innovation

## “The History of Technological Anxiety and the Future of Economic Growth: Is This Time Different?”

Joel Mokyr, Chris Vickers, and Nicolas L. Ziebarth (2015), *Journal of Economic Perspectives* 29(3), 31–50.

Alvin Hansen’s 1938 book *Full Recovery or Stagnation?*

*“Hansen drew on the macroeconomic ideas of John Maynard Keynes in fearing that economic growth was over, with population growth and technological innovation exhausted.”*



# Red Tape and Innovation

Hilmer (2013): “The Red Tape Challenge—from Meat Axe to Scalpels”  
<http://iariw.org/papers/2013/HilmerPaper.pdf>

Publisher	Definition and Methodology	Estimated Burden
Netherlands (2004)	Measured administrative burdens using the Standard Cost Model (SCM)	3.6% of GDP
Denmark (2006)	Measured administrative burdens using the SCM	2.2% of GDP
Czech Republic (2006)	Measured administrative burdens using the SCM	3.0% of GDP
United Kingdom (2007)	Measured administrative burdens (excluding business as usual costs) using the SCM	1.6% of GDP
Australia	Productivity Commissioner (2006): Measured internal and external compliance costs using survey data	1.6% of GDP
Canada (2013)	Measured administrative burdens using survey data	1.7% of GDP
United States (2010)	Estimated the cost of economic, environmental, tax compliance, OH&S and homeland security regulation using statistical regressions	11.7% of GDP



# Red Tape and Innovation

Hilmer (2013):

*“Most red tape reduction programs fall into the meat axe category. They define a broad target to which they apply far-reaching, unprioritised processes which do little that can be verified.”*



# Red Tape and Innovation

Hilmer (2013):

*“Academic and empirical studies have demonstrated that economic incentives, such as competition, are a key driver of productivity and economic growth. Consequently, ensuring that regulation does not inhibit competition unless there is a clear public benefit is likely to remain a top priority for regulation review.”*





# Red Tape and Innovation

## **Productivity Commission (2016) *Data Availability and Use* (draft report)**

*“The capacity for individuals, as consumers, to copy their data between service providers is an integral part of facilitating competition in markets and reducing barriers to market entry.”*



*Wilson*



*2 Nov 12*

# Plan

1. Competition and Productivity

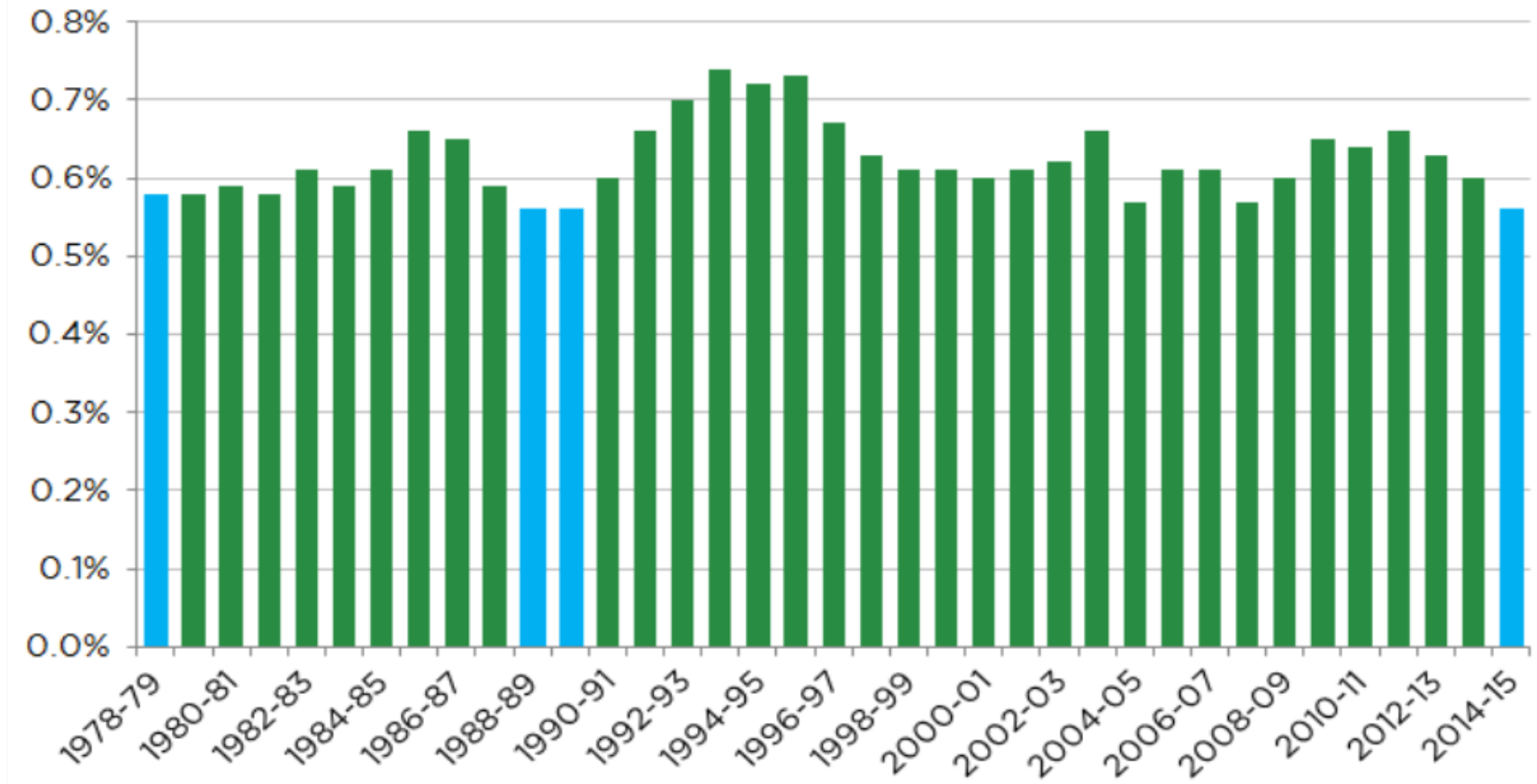
2. Red Tape and Innovation

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# Australian Government Spending on R&D

## Percentage of GDP



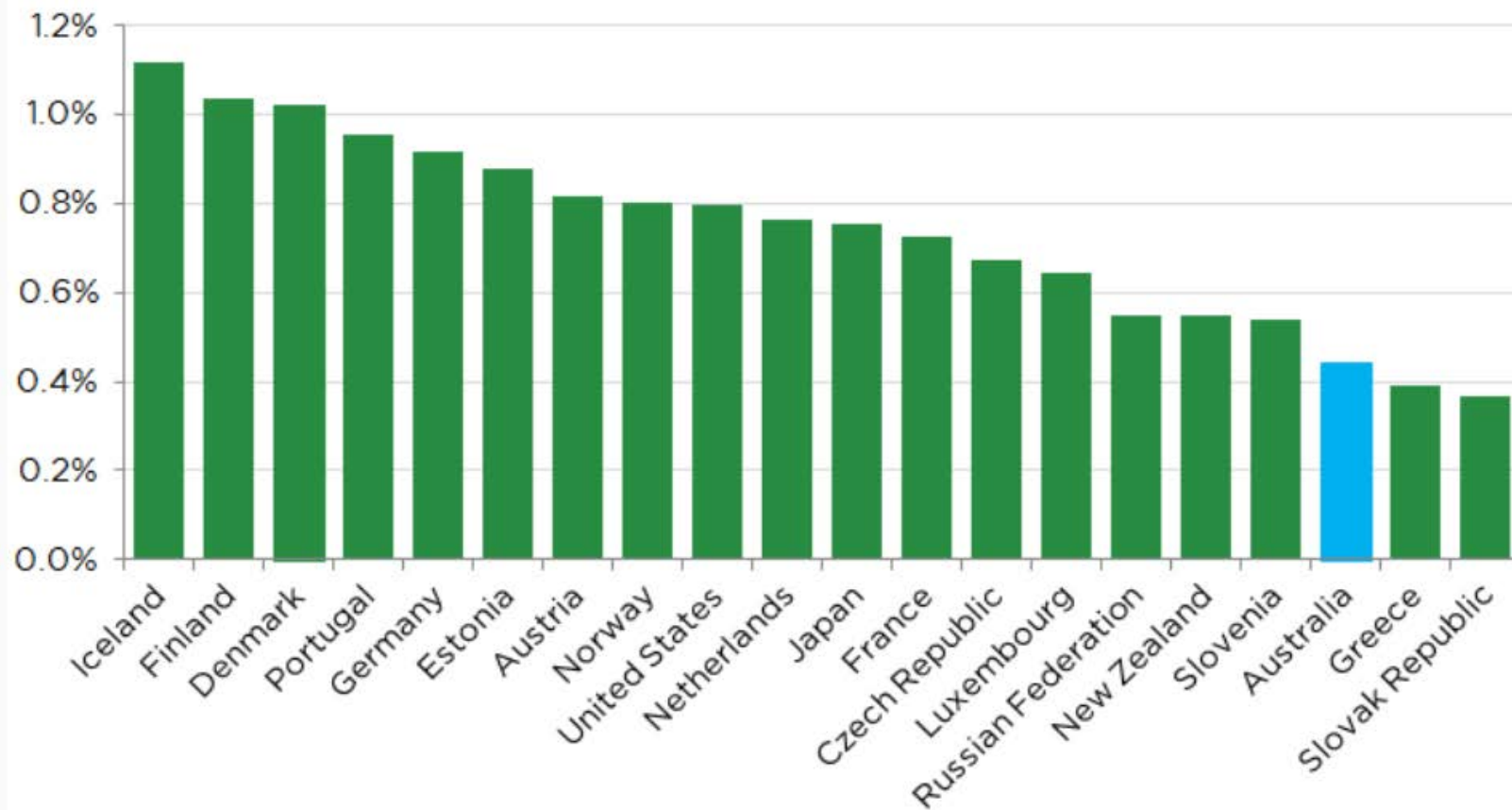
**INFOGRAPHIC:** Australian government spending on research and development, 1978-79 to 2014-15. Data by Parliamentary Library. (ABC Fact Check)

<http://www.abc.net.au/news/2014-10-07/adam-bandt-research-development-spending-claim-checks-out/5789134>



# Government Spending on R&D

Percentage of GDP, 2013

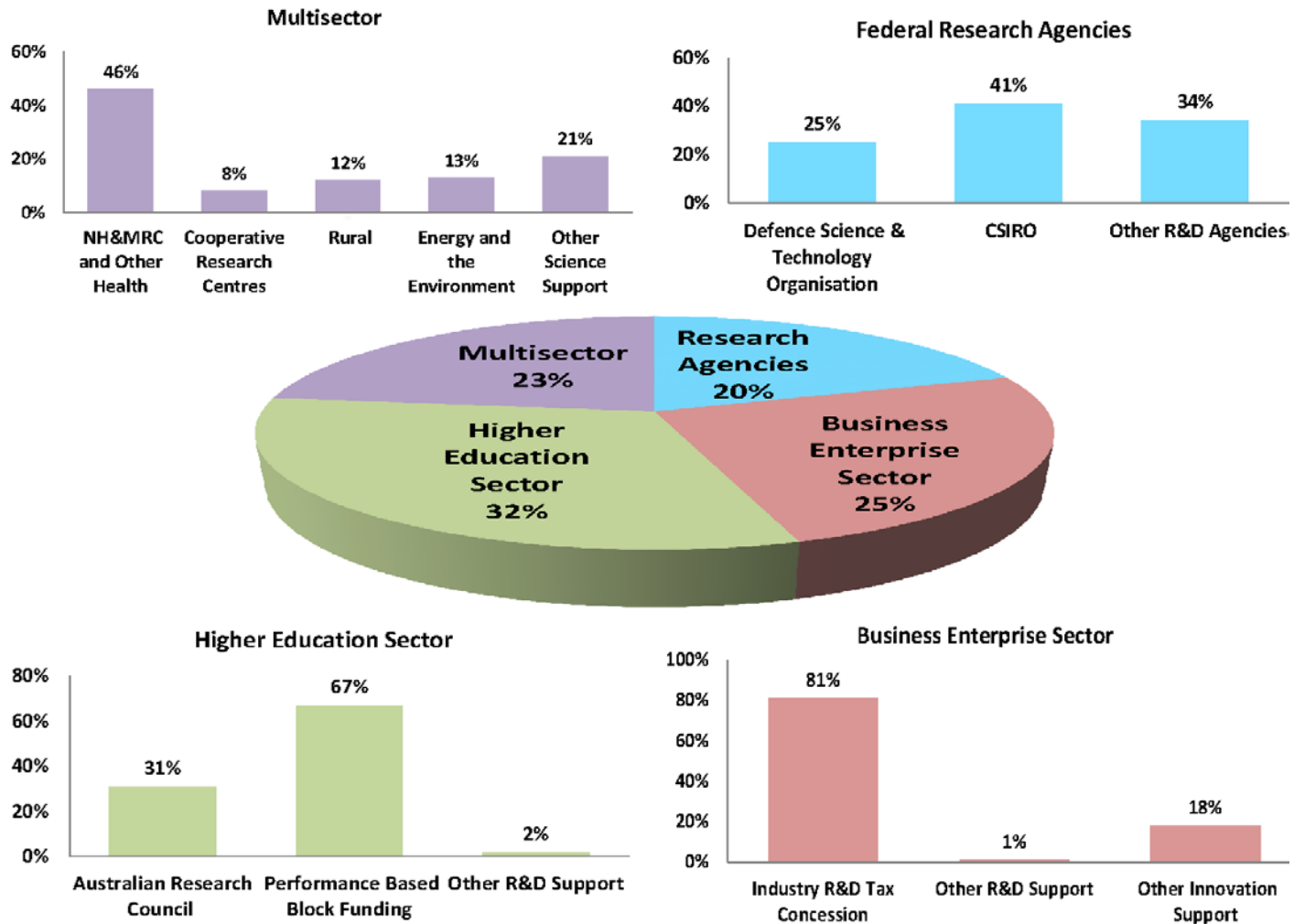


**INFOGRAPHIC:** OECD figures on government spending on research and development as a percentage of GDP in 2013.  
(ABC Fact Check)

<http://www.abc.net.au/news/2014-10-07/adam-bandt-research-development-spending-claim-checks-out/5789134>

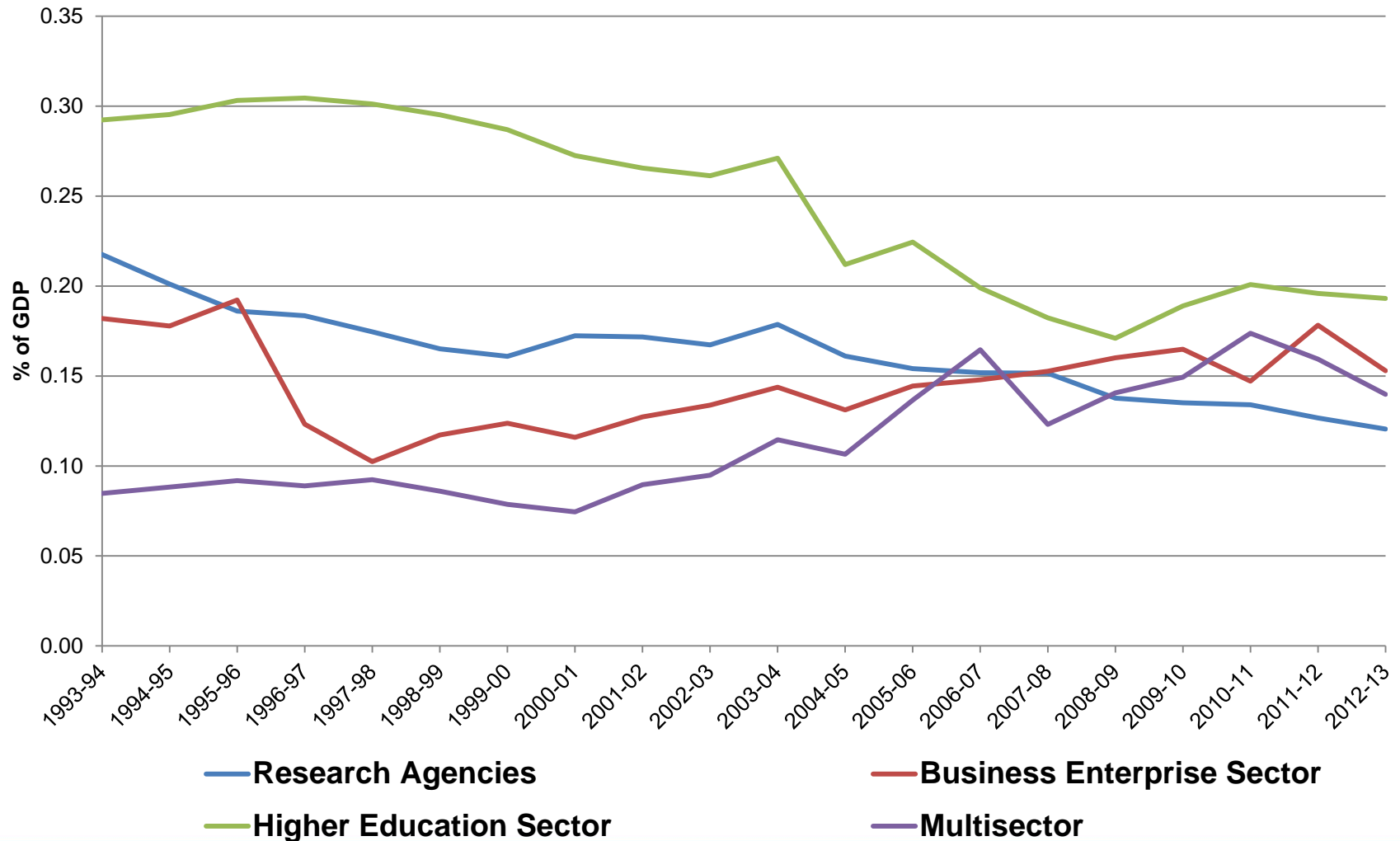


# Australian Government spending on science, research and innovation 2012-13



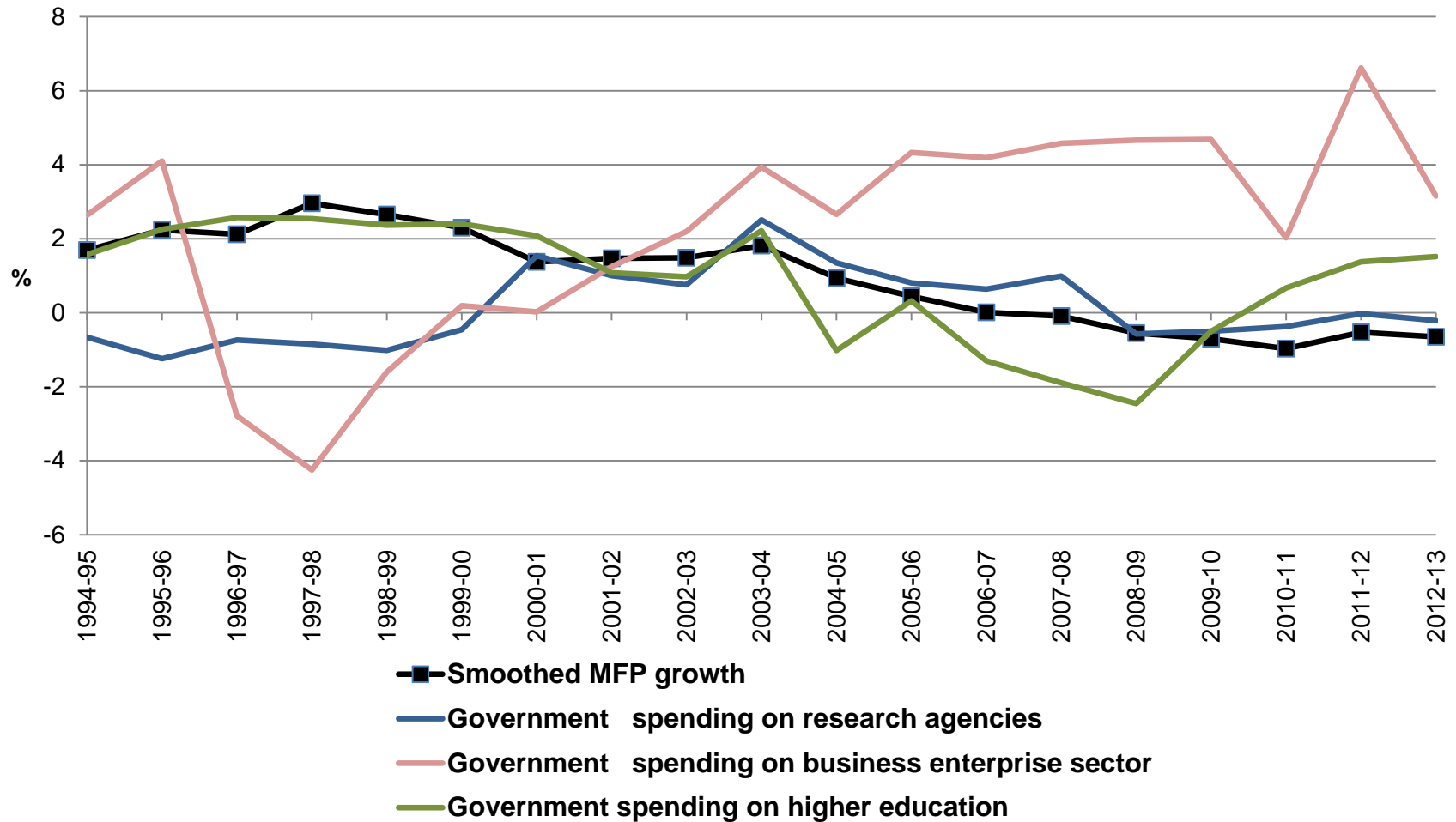
# Public support for science, research and innovation

(shares of GDP current prices)



# Elnasri and Fox (2015)

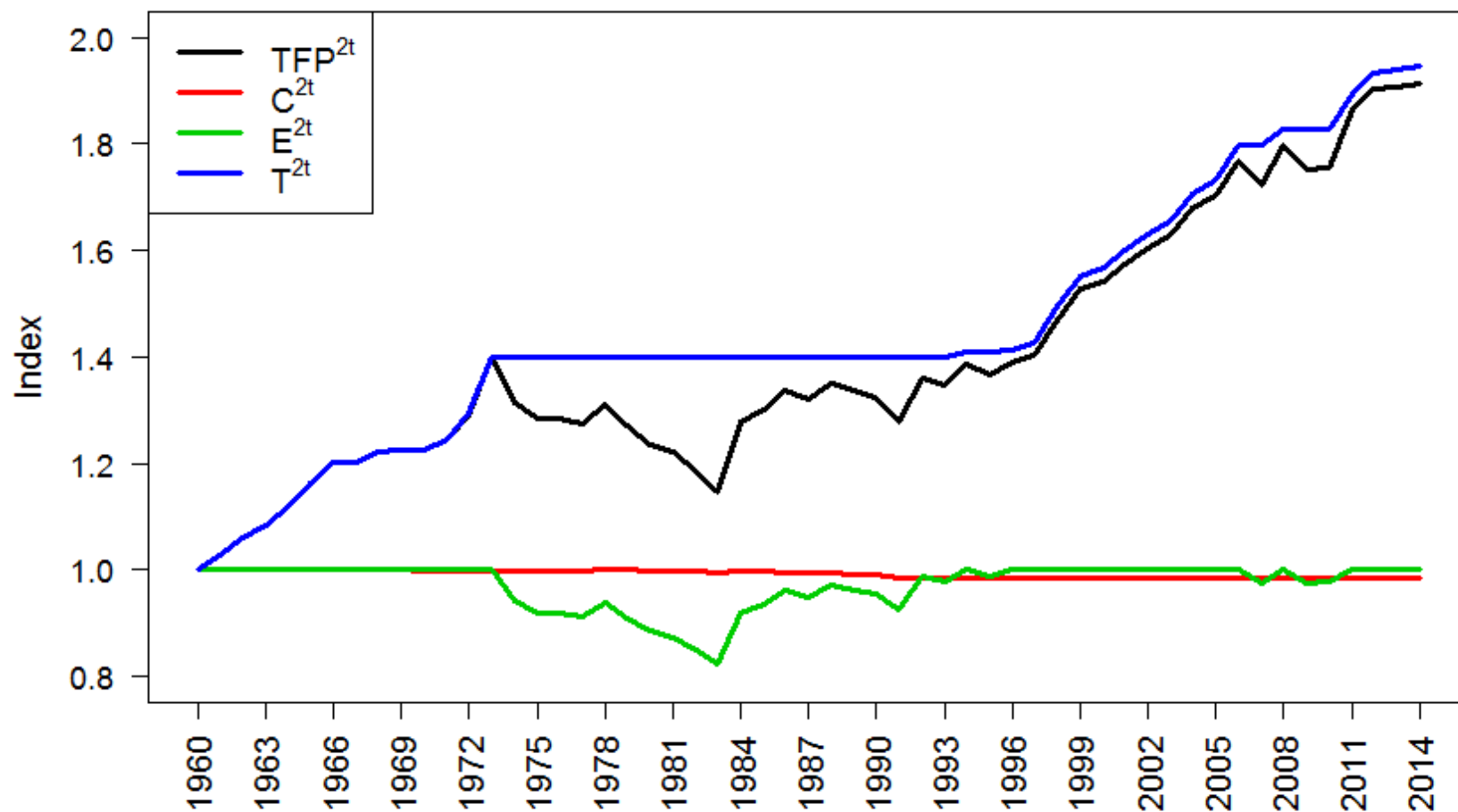
Market sector MFP growth and public support to research agencies & business sectors





# Diewert and Fox (2016), "Decomposing Value Added Growth Over Sectors into Explanatory Factors": US Noncorporate, Nonfinancial Sector

Figure 2: Sector 2 Level of TFP, Input Mix, Value Added Efficiency and Technology



# US Corporate Nonfinancial Sector

Figure 1: Sector 1 Level of TFP, Input Mix, Value Added Efficiency and Technology

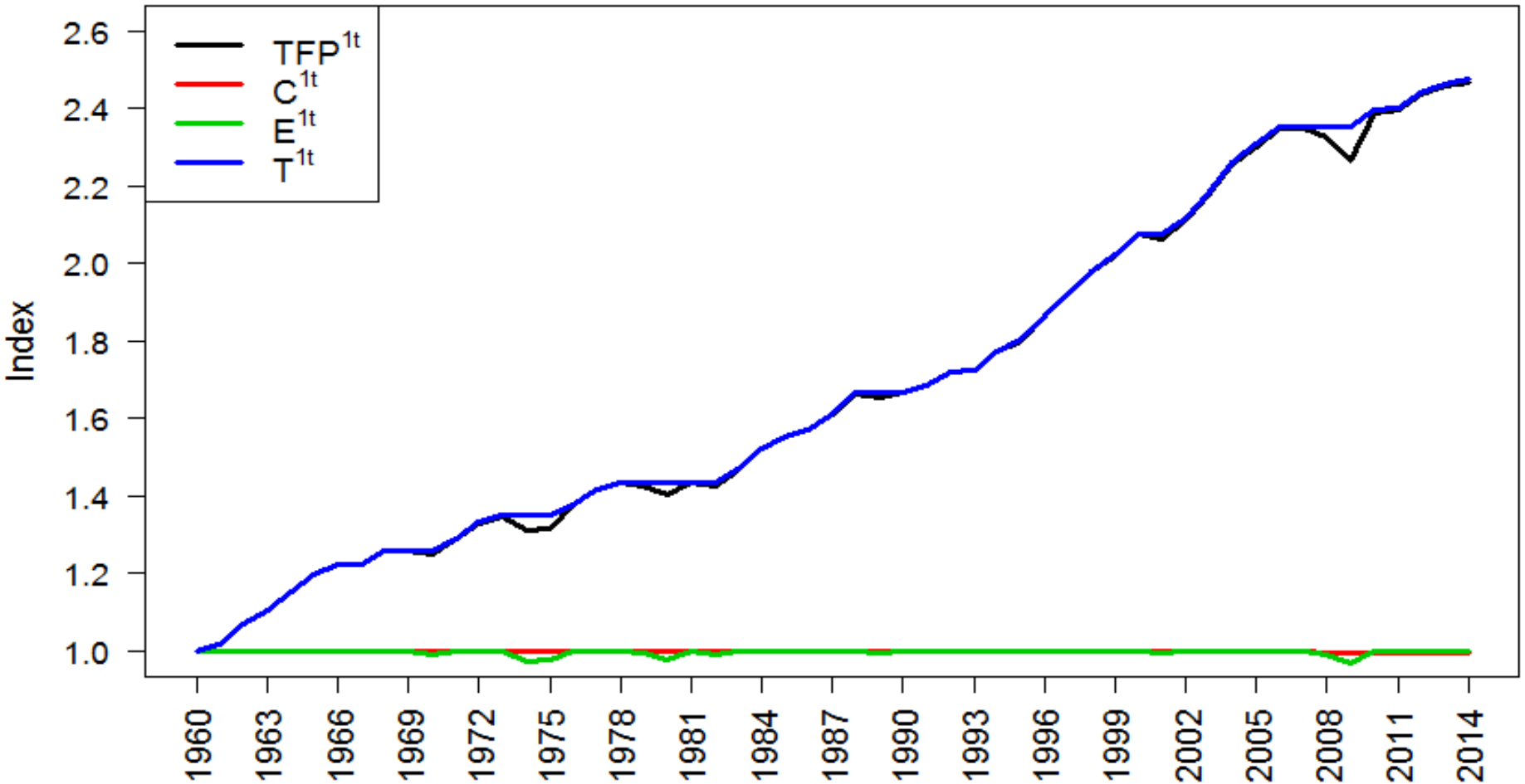
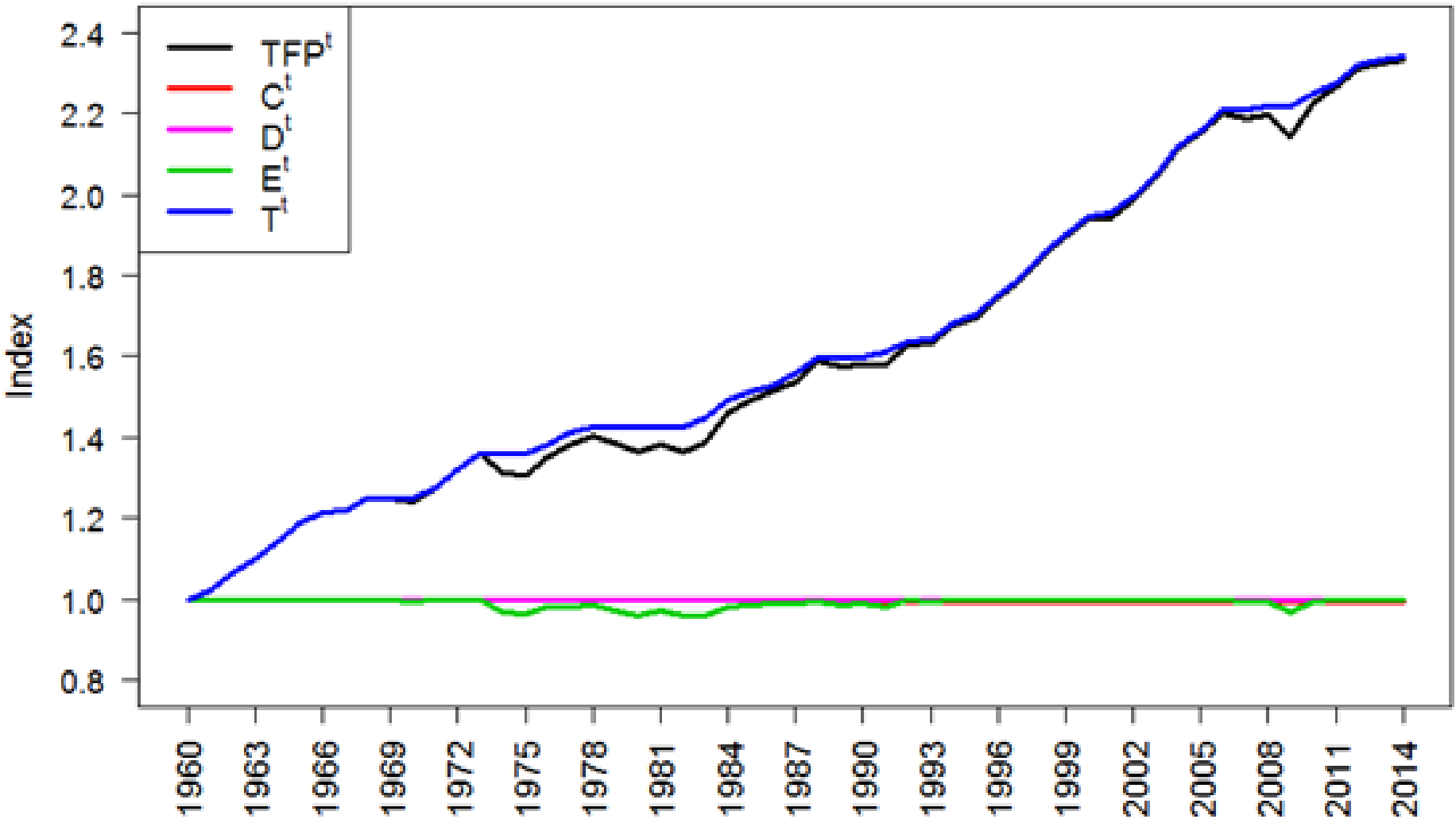


Figure 4: National Level of TFP, Input Mix, Returns to Scale, Value Added Efficiency and Technology



# Summary

- The international productivity slowdown since 2004 has intensified interest in
  - Competition policy
  - Policies to support innovation

Both seem to have a role to play in driving future productivity growth

- Significant inefficiencies seem to exist (at least in the U.S. noncorporate nonfinancial sector)
- Represent the inability of firms to respond rapidly to downturns by adjusting capital (and labour) inputs
- Of interest to understand if there are unnecessary regulatory constraints that exacerbate the inefficiencies

