



# Symposium on Technology, Innovation and Inclusive Growth

April 28-29 2016



# The OECD Context

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Meeting of the OECD Council at Ministerial level (MCM), June 1-2 2016

Productivity and Inclusive Growth

Report on *“Enabling the Next Production Revolution: The Future of Manufacturing and Services”* (NPR)



# The Next Production Revolution

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A range of radically new technologies will come to the market over the next 10-15 years: IoT, robotics, AI, 3D-printing, gene editing etc.

⇒ Mapping these developments (how fast? how deep?).

⇒ What opportunities and risks – for the economy, society, well-being and the environment?

⇒ What policies to help cope with risks and realise the opportunities?



## NPR – Some Conclusions

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1. Great potential impact on productivity and well-being.
2. Scarcity might not be the main economic problem, rather income distribution
3. Public acceptance might be a barrier to development and adoption
4. Radical change in skills is needed
5. Many technology-specific effects... and policies
6. **Governments are not well-equipped to confront the strategic challenges:** need to reinforce foresight



# Questions to be Addressed by the Symposium



*What is the potential of new technologies as engines of **growth**?*



*How do new technologies impact **employment and income distribution**?*



*What are the key implications for **policies**?*



# Benefits from Innovation: Productivity Growth



**Source:** OECD Productivity Database



# Distributing the Benefits from Innovation



- **Innovation generates benefits** that are distributed through a range of mechanisms:
  - Lower output prices benefit consumers
  - Higher wages benefit labour
  - Higher profits benefit capital owners with stakes in innovations
  - More income means more demand ....
- Historical evidence is **positive** on economic and labour market effects of technological change (for countries, industries, firms and workers).
- **But adjustments can take a long time, be very costly** (creative destruction) and **unequal** (skill-biased technological change)





# Impact of NPR on the Product Market

1. Innovation and IT create **“winner-takes-all” dynamics ...**

... since IT allows for **full & instant upscaling** of the winning product/idea, which can take over the entire market at global level



2. The resulting **market power creates rents** → the traditional & necessary **fuel to innovation** (Schumpeter) has been boosted by IT

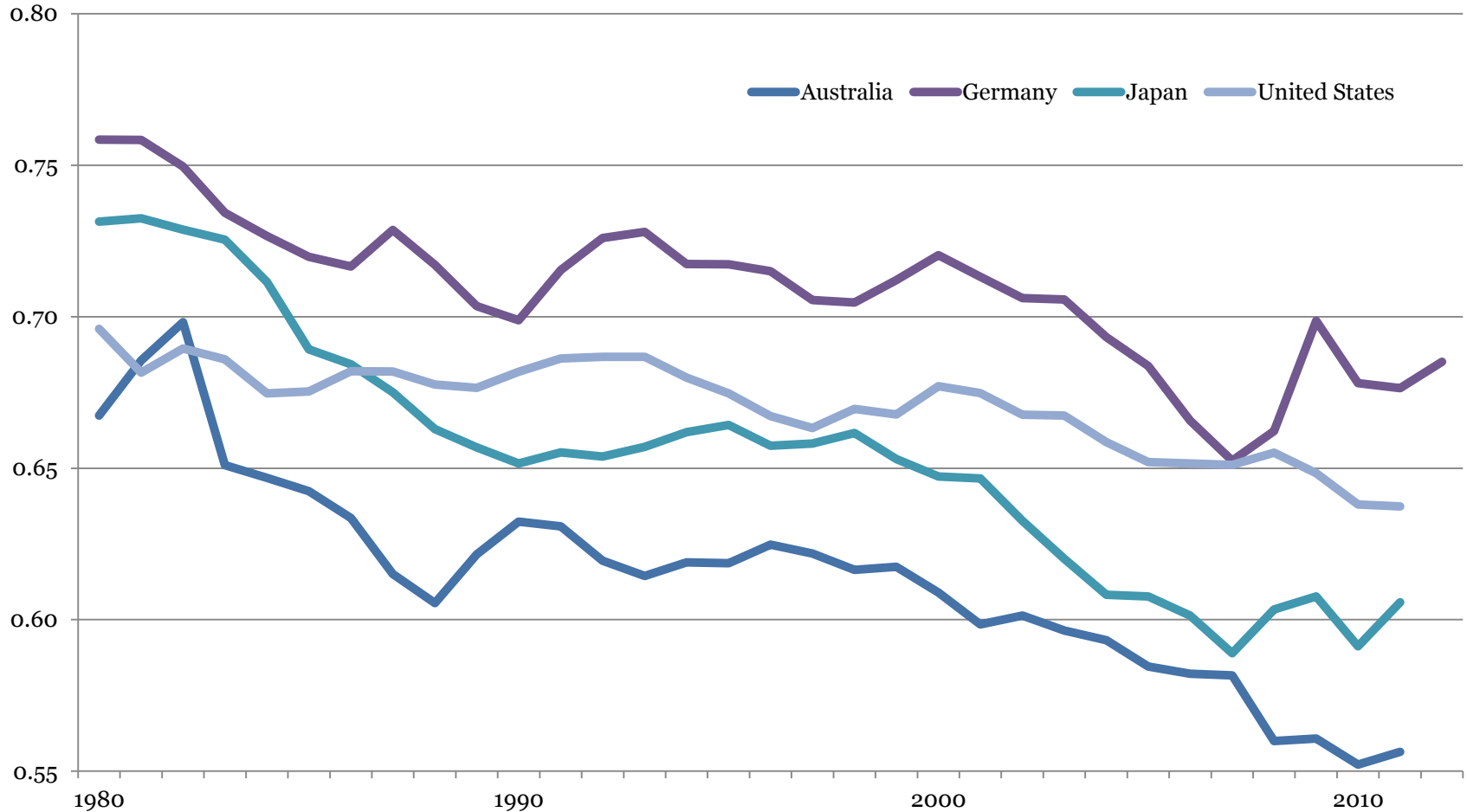






# Economic Growth does not Necessarily Lift All Boats

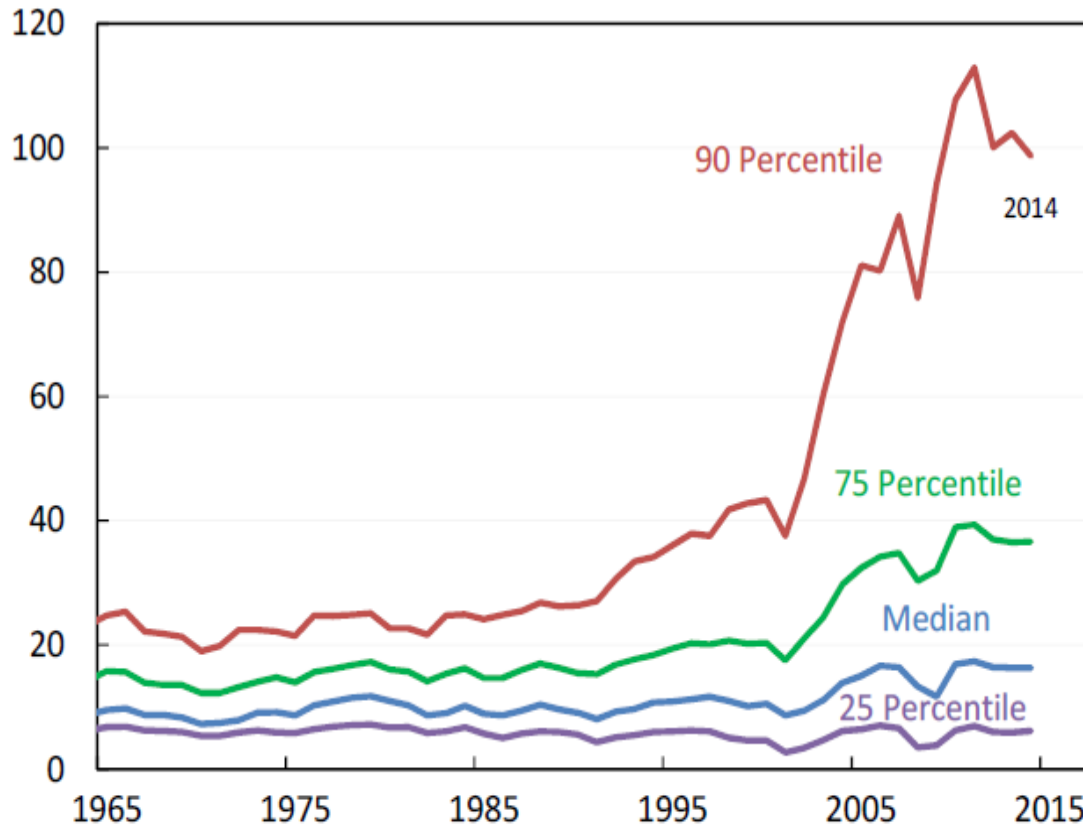
## Income Share Going to Labour





# Increased and More Skewed Return on Capital

Return on invested capital excluding goodwill, US publicly-traded nonfinancial



**Source:** Furman and Orszag, 2015 based on Koller et al. 2015



# Implications for the Distribution of Income

**Rents** are shared between capital owners, managers and workers of successful firms → **contribute to increasing income dispersion** among households

**BUT: Creative destruction** provides opportunities for **social mobility**, notably in tech and knowledge-intensive sectors





# The Policy Challenge

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## Objective:

Keep encouraging innovation... and ensure that policies do not generate excess rents

## Solutions:

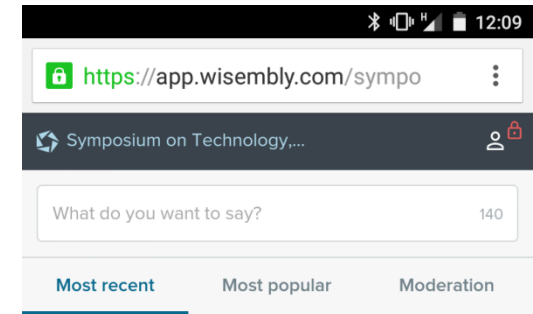
- ⇒ *Innovation policies need to be open to outsiders (tax incentives, public procurement)*
- ⇒ *Intellectual property (scope of patents? Fluidity of IP markets)*
- ⇒ *Competition policies (platforms)*
- ⇒ *Entrepreneurship policies (facilitating entry)*
- ⇒ *Education/ skills (programming, inter-disciplinarity)*



# A Question for You ...

In your view what will be the consequences of the current wave of new technologies:

- ⇒ Strong growth benefitting all
- ⇒ Strong growth benefitting a few
- ⇒ Weak growth



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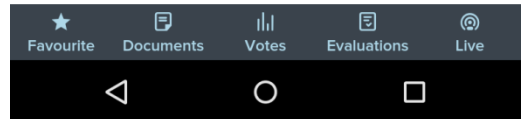
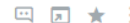
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**Thank you**

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