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# **The Impact of the Economic Crisis on Innovation and Long- Term Growth – Evidence, Implications and Policy Responses**

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# OECD work on the crisis and innovation

## – Two strategic initiatives

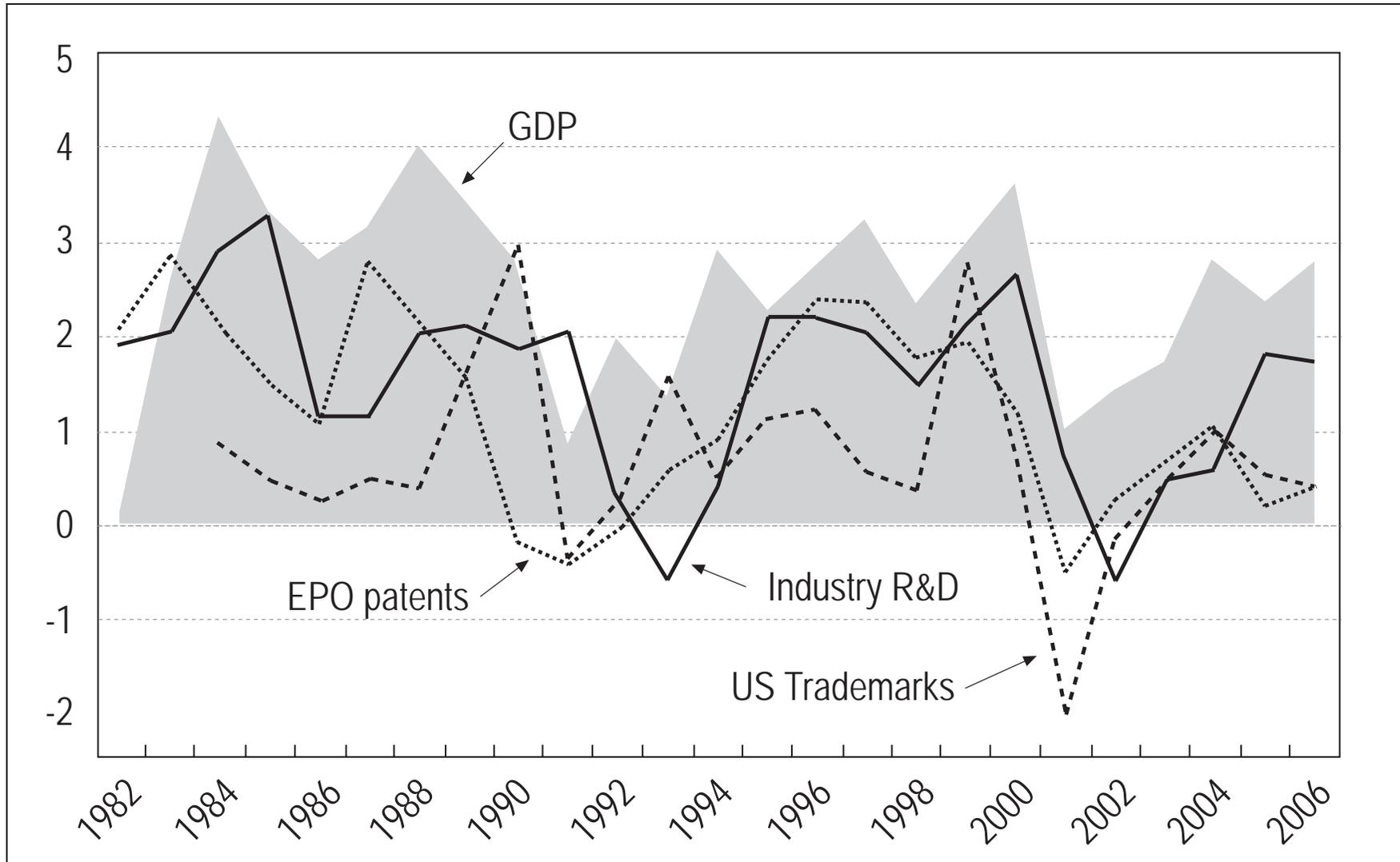
### **1. Strategic Response to the Crisis, combining:**

- Policies to resolve the crisis in the financial system
- Policies to foster sustainable, long-term growth

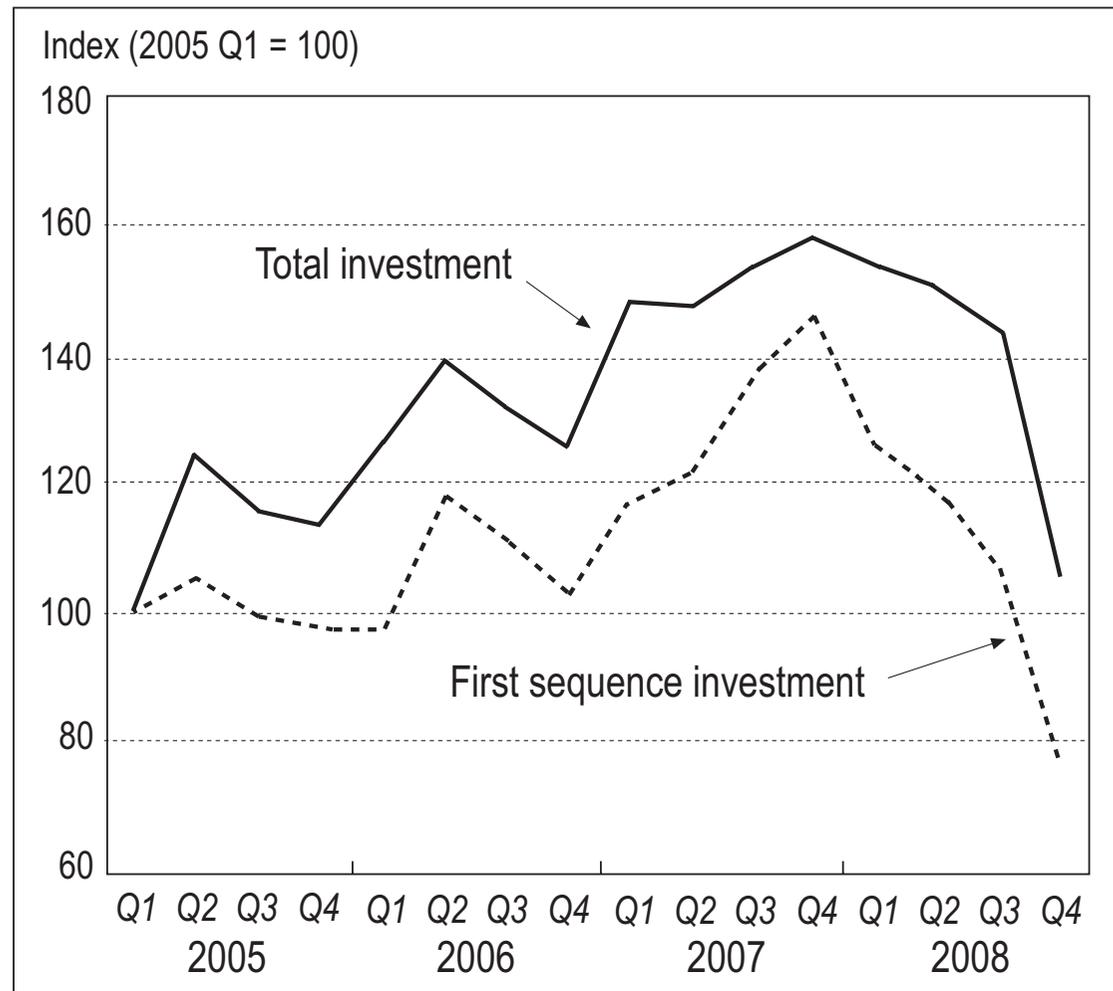
### **2. OECD Innovation Strategy:**

- Developing a coherent strategy for innovation to strengthen growth and help address social challenges
- Going beyond science, technology and R&D and adjusting to the changing nature of innovation

# We know that innovation will suffer in the downturn



## Investment in venture capital is already declining ...



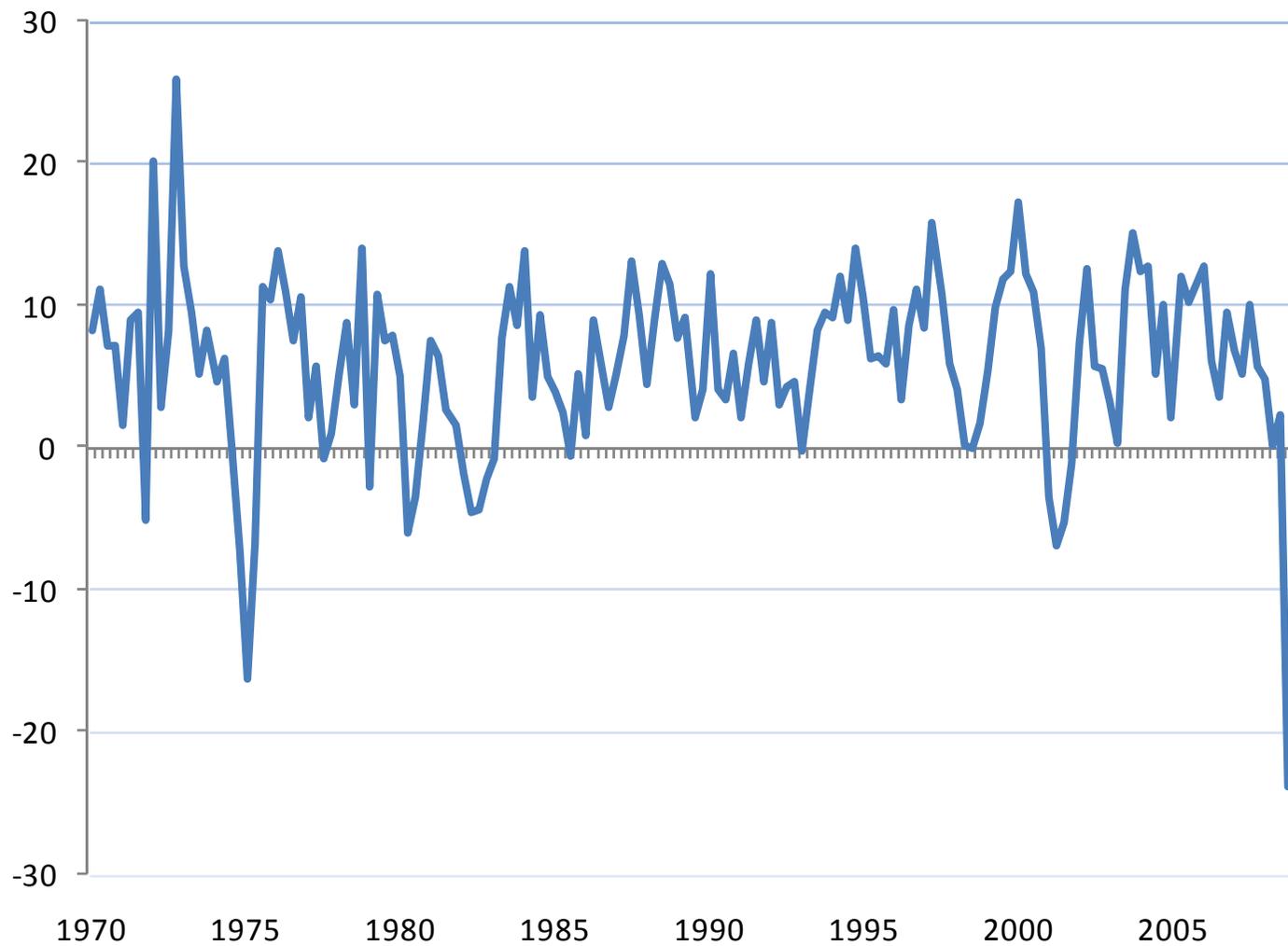


## .. as is investment in R&D and innovation

- Investment in R&D is falling in many firms:
  - A sharp drop in R&D expenditure of certain large, public companies reported in the fourth quarter of 2008.
  - A growing focus on development, instead of research.
  - Though some firms are increasing investment.
- Small firms are even more affected:
  - Financial constraints are more pressing
  - Sharp increase in bankruptcies and insolvencies
  - New innovative firms have difficulties in entering and exiting (e.g. through IPOs).

# World trade has fallen rapidly ...

(annualised quarter to quarter growth, %)





## ... which also risks affecting innovation and long-term growth

- The decline in trade affects global innovation networks.
- It also increases the risks of protectionism.
- With more firms having a global business model and growing interactions between firms, this risks affecting growth and innovation more widely.



## The crisis has other impacts on innovation and long-term growth

- Reduced incentives for environmental innovation:
  - Consumers buy less expensive goods; firms find it more difficult to reap a price premium for new innovations
  - Price conditions for environmental innovation (e.g. price of oil) have worsened
- The crisis has made underlying structural problems more apparent, e.g. in the car market
- It has spread beyond countries with weakened financial sectors – mainly to manufacturing.

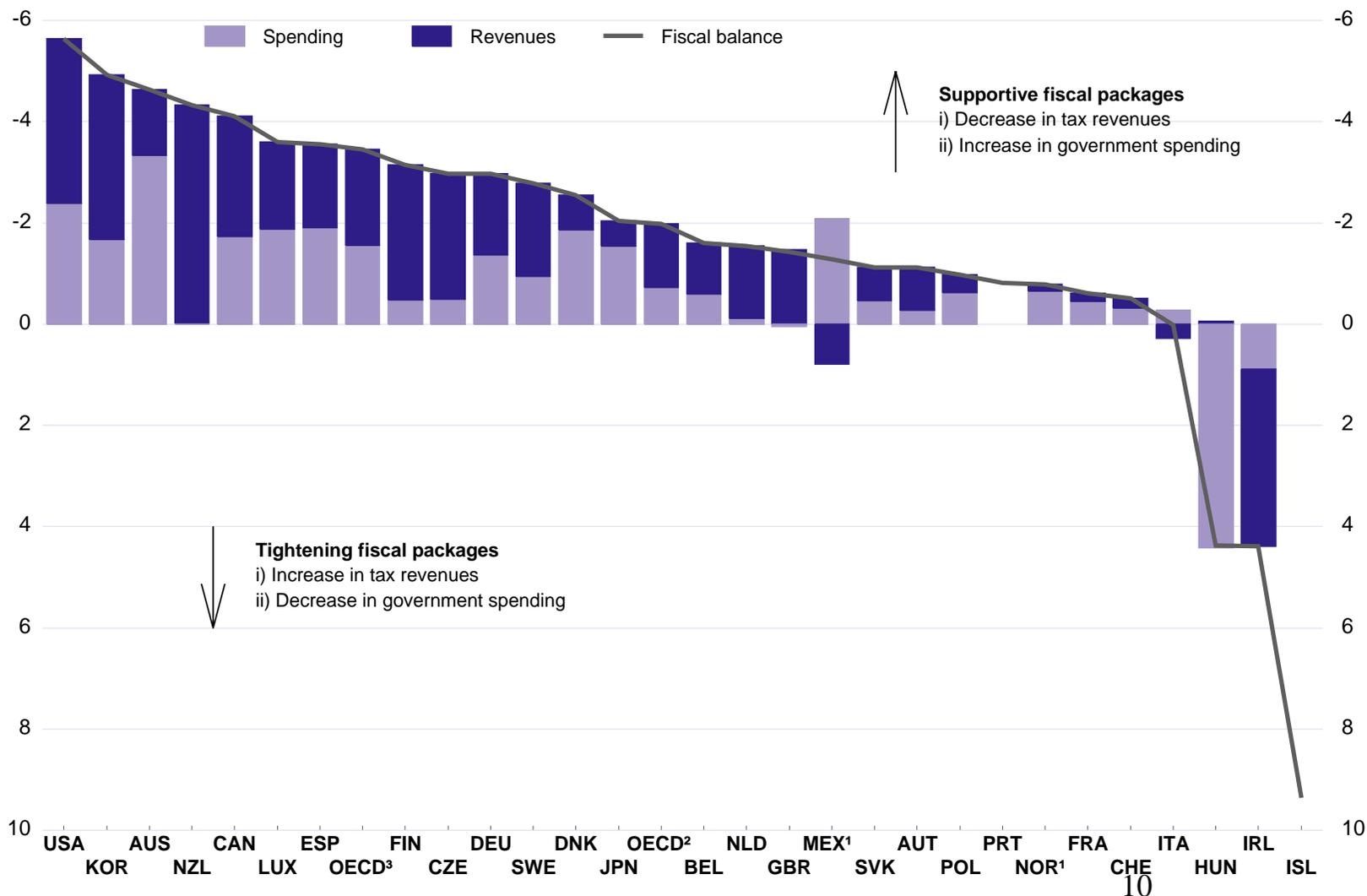


# Government responses: Economic stimulus packages

- Unprecedented fiscal stimulus: mixtures of financial bail-outs, tax cuts and extra-budgetary spending
- Virtually all OECD countries have packages, some several, ranging from (2009/10):
  - **USD 500 million to 790 billion**
  - as share of GDP: **0.3% to 8%**
  - total of **USD 1.5 trillion**
- Non member economies:
  - China USD 580 billion (13% of GDP)

# The size and composition of fiscal packages

Cumulative impact of fiscal packages over the period 2008-2010 on fiscal balances as % of 2008 GDP



Source: OECD Interim Economic Outlook 2009, 31 March 2009

# Innovation and growth measures in the stimulus packages

**Improving infrastructure (e.g. roads, transit, broadband)**

**Support for R&D and innovation**

**Investment in human capital, education/training**

**Green technologies and energy-efficiency**

**Support for innovation and entrepreneurship (incl. support for SMEs, venture capital)**



## As well as non-financial measures

- Simplification and speeding up of administrative procedures
- Making the public administration more efficient
- Industry-specific agreements or regulations to accompany additional spending & targets of stimulus plans, e.g. investment in next-generation networks, smart grids



## Long-term goals and short-term actions

- Looking for **double-dividend actions** that can strengthen demand and support growth, e.g.:
  - Well-designed investments in infrastructure
  - Spending on training and active labour market policies
  - Easing of entry restrictions to create new markets.
- Long term actions can:
  - Increase the long-term **credibility** of government actions.
  - Serve as an **opportunity** to accelerate structural changes and move to a more sustainable growth path



## Some policy considerations

### Supporting R&D and innovation

- Investments in innovation can be of strategic importance for long-term growth:
  - governments can cushion the impact of the crisis on private innovation expenditure (through support for R&D, public/private partnerships, etc.).
  - Investment in research infrastructure may strengthen short-term demand and long-term growth
- Innovation (and policies) should be closer linked to economic and social needs (e.g. ageing, climate change, etc); this is where future opportunities and markets will be.



## Financing for small and innovative firms

- Firms that are willing to take risks are essential for innovation - support for risk takers and small innovative firms remains important.
- The scope for government action includes:
  - Policies to enhance cash flows, e.g. by shortening payment delays for public procurement (or changes to tax payments and export credits).
  - Policies to enhance access to liquidity, e.g. by extension of loans and loan guarantees (or by mediation with banks).
  - Strengthening the provision of private risk capital.
  - Broader initiatives to strengthen the financial system.



## Industrial renewal and business dynamics

- Governments are providing considerable support to firms and industries in need, sometimes indirectly:
  - In assisting existing firms or industries, policy needs to avoid locking-in old economic structures and business models – give room to new firms and business models.
  - Make support conditional on restructuring and rationalisation.
  - Industrial support also risks fuelling protectionism.
  - Clear exit strategies are needed: outlining the maximum duration of support and how it will be scaled back.

## Environmental innovation

- The crisis has reduced incentives for environmental innovation, but delaying action may be costly.
- Crisis provides an opportunity to improve efficiency, some win-win options include:
  - Removing subsidies on fossil-fuel based energy production and consumption.
  - Cutting trade barriers on environment-friendly products.
- But most important is to establish a clear long-term signal to investors and the public about climate change.
- Environmental innovation offers new business opportunities and can generate new tax revenues.

## Implementation

- Achieving a balance between the necessary speed of translating measures into action, ensuring accountability and avoiding waste of resources
- International coordination of stimulus packages
- With a growing role of government, the quality of government intervention is key:
  - Evaluation of measures to ensure their impact and enhance accountability
  - Coherency of the overall strategy to address the crisis



## In sum

The crisis offers new opportunities to undertake structural change and help shape the future of OECD economies

The long run starts now.



## For further information

- OECD Strategic Response:

<http://www.oecd.org/dataoecd/33/57/42061463.pdf>

- OECD Innovation Strategy:

[www.oecd.org/innovation/strategy](http://www.oecd.org/innovation/strategy)

- Directorate for Science, Technology and Industry:

[www.oecd.org/sti](http://www.oecd.org/sti)