



ESRI and JCER International Conference, Tokyo

*Enhancing productivity
and inclusive growth*

1 March 2016

Catherine L. Mann
OECD Chief Economist

www.oecd.org/economy/economicoutlook.htm
ECOSCOPE blog: oecdoscope.wordpress.com/



Road Map: Productivity and Inclusive growth

- Productivity and Inclusive growth are *outcomes* of the policy environment
- Is there a problem?
- Japan-specific guidance
 - Continuous improvement/education
 - Detail/design/engineering
 - Respect for nature/green

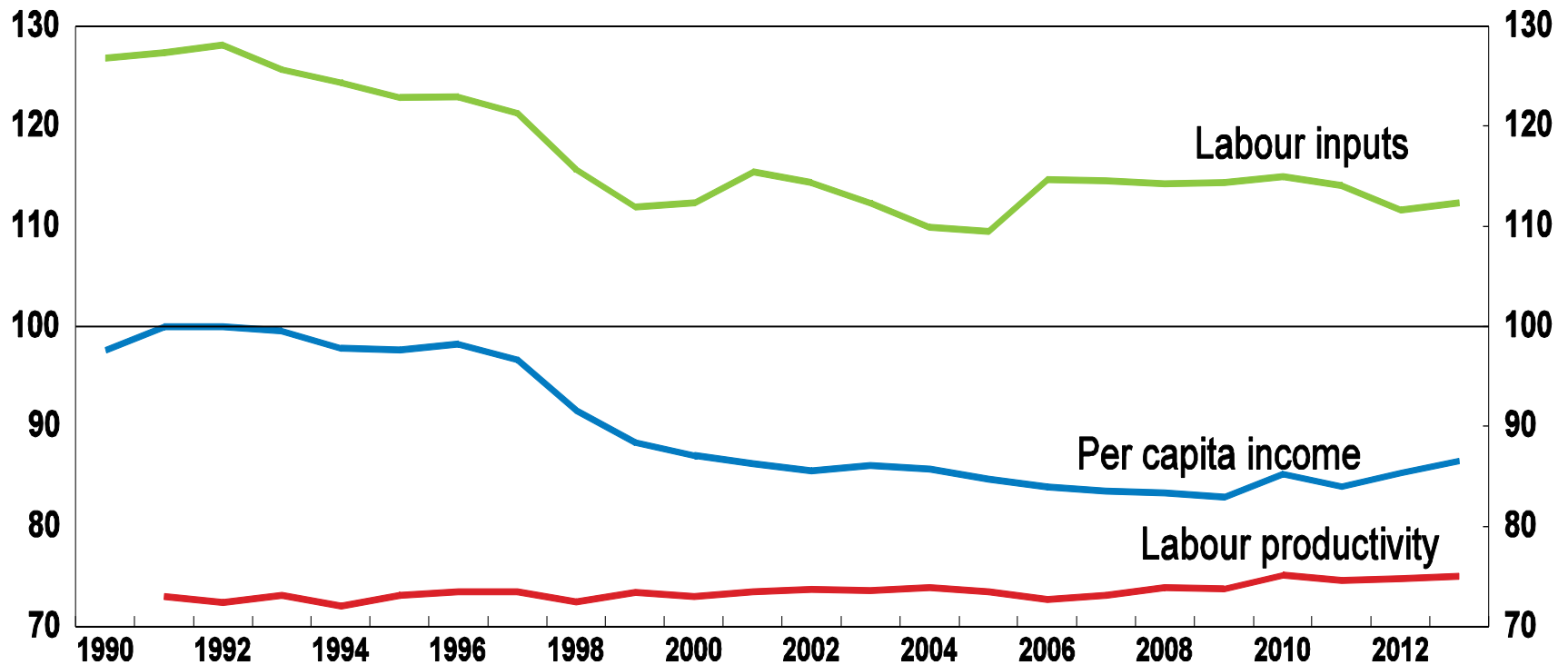


Living standards have fallen relative to top-half of OECD countries

Japan relative to the top half of the OECD

Top half of OECD = 100

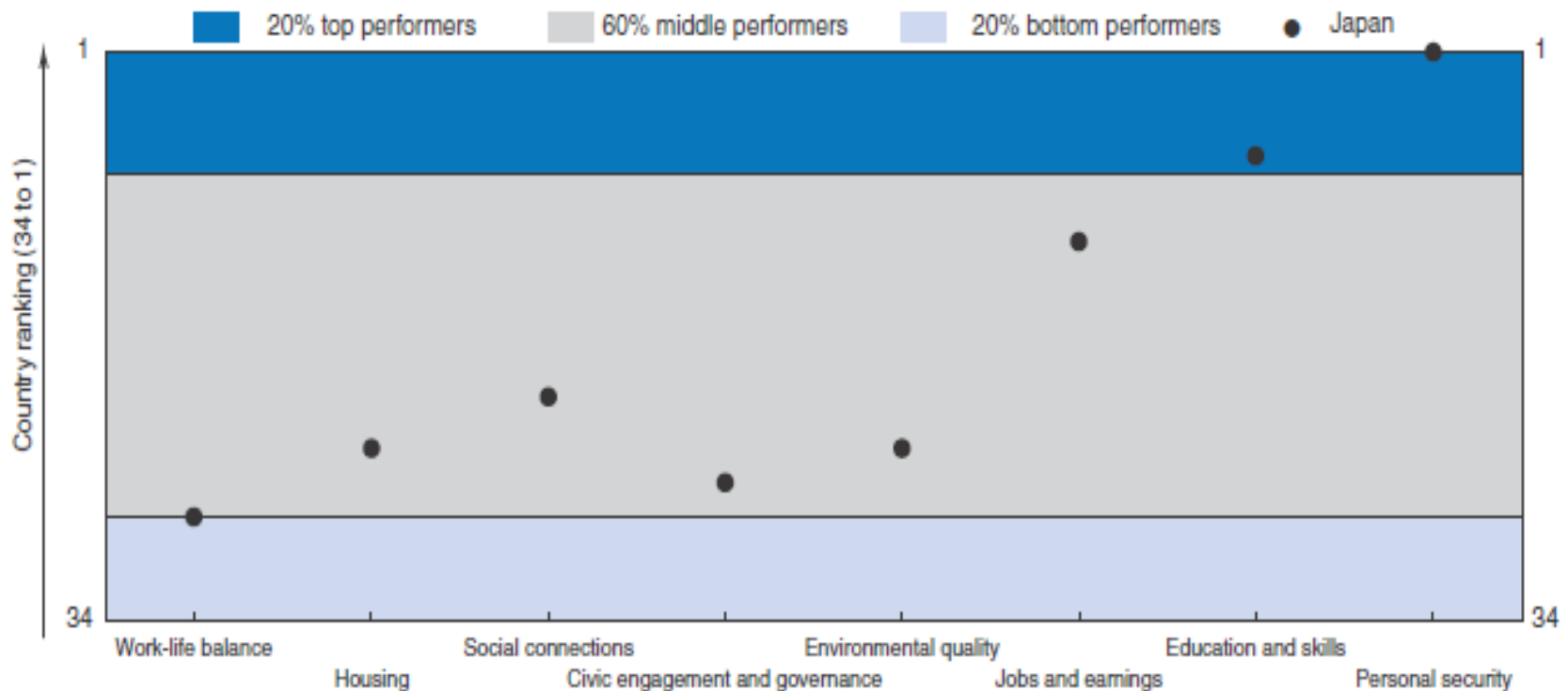
Top half of OECD = 100





Well-being lags in key dimensions... *Although top of the class in others*

Figure 6. Japan's well-being performance lags behind in a number of dimensions

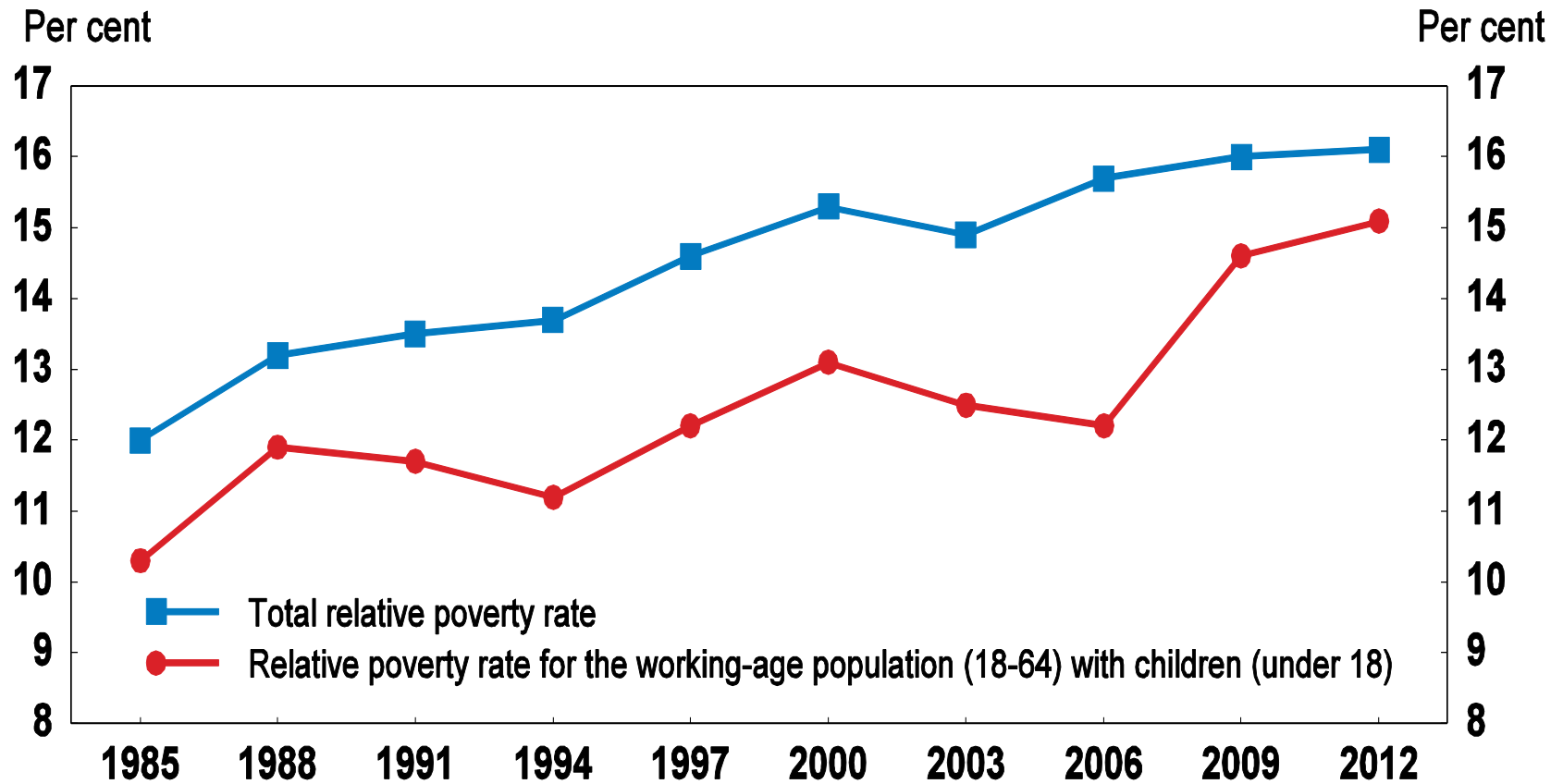


Source: OECD (2014c).

... 10 / 11 / 12 / 13 / 14 / 15 / 16 / 17 / 18 / 19 / 20 / 21 / 22 / 23 / 24 / 25 / 26 / 27 / 28 / 29 / 30 / 31 / 32 / 33 / 34 / 35 / 36 / 37 / 38 / 39 / 40 / 41 / 42 / 43 / 44 / 45 / 46 / 47 / 48 / 49 / 50 / 51 / 52 / 53 / 54 / 55 / 56 / 57 / 58 / 59 / 60 / 61 / 62 / 63 / 64 / 65 / 66 / 67 / 68 / 69 / 70 / 71 / 72 / 73 / 74 / 75 / 76 / 77 / 78 / 79 / 80 / 81 / 82 / 83 / 84 / 85 / 86 / 87 / 88 / 89 / 90 / 91 / 92 / 93 / 94 / 95 / 96 / 97 / 98 / 99 / 100

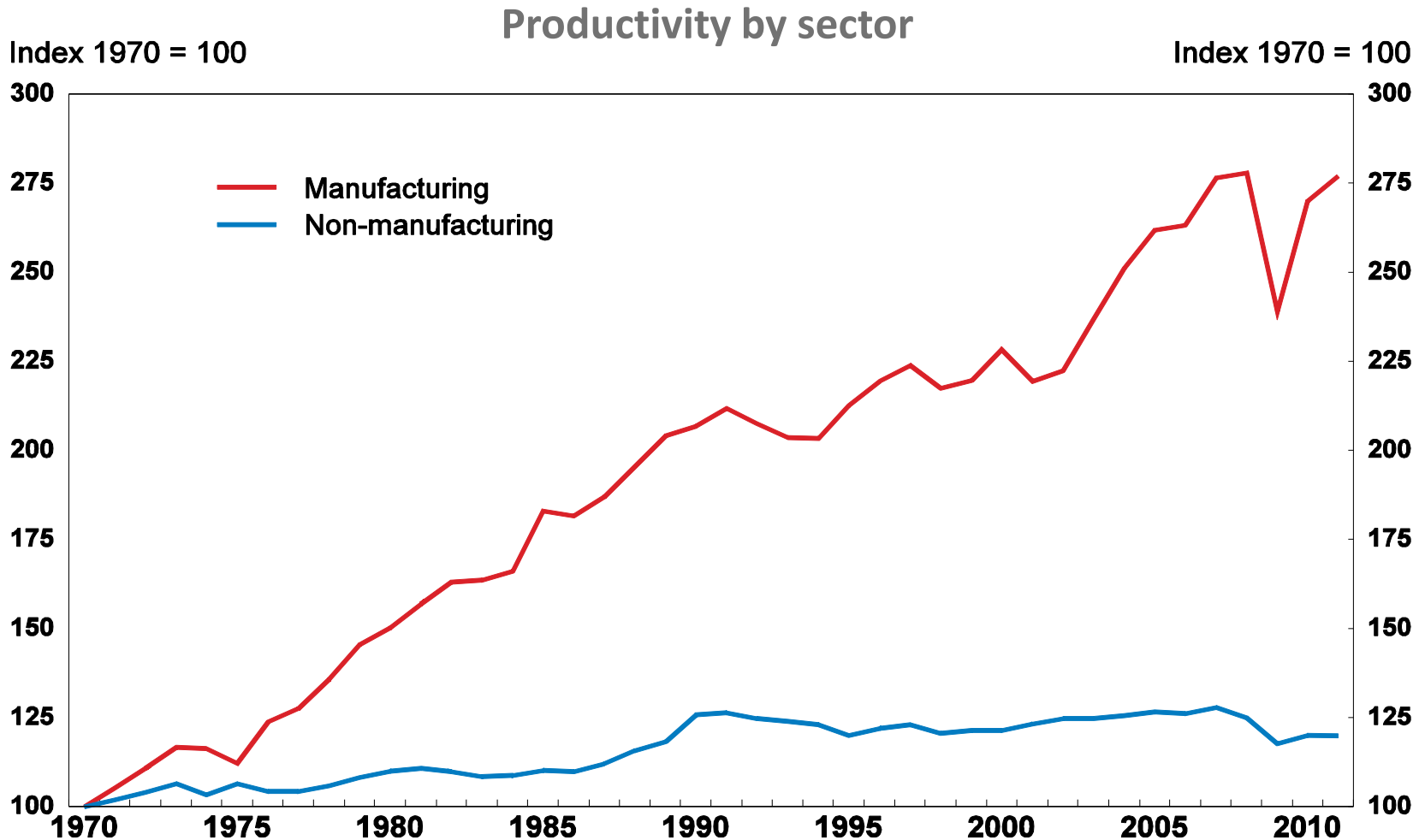


The poverty rate has been increasing





Large productivity gap manufacturing vs services



Source: Japan Industrial Productivity Database 2014.



**Yes, there is a problem
with both
Productivity and Inclusiveness**

How to map into *policies*?



Potential Output

A way to decompose long-term growth in living standards
to map to policies

Components of potential output:

$$Y^p = A \times f(K, L)$$

Total factor productivity

Capital stock

Labor input

“Productivity isn't everything, but in the long run it is almost everything.”

Paul Krugman, 1994



Innovation, Skills, and Investment

three channels to affect potential growth

- **Capital deepening (investment)**
- **Labour market (employment and skills)**
- **Productivity (innovation and diffusion...
reallocation)**

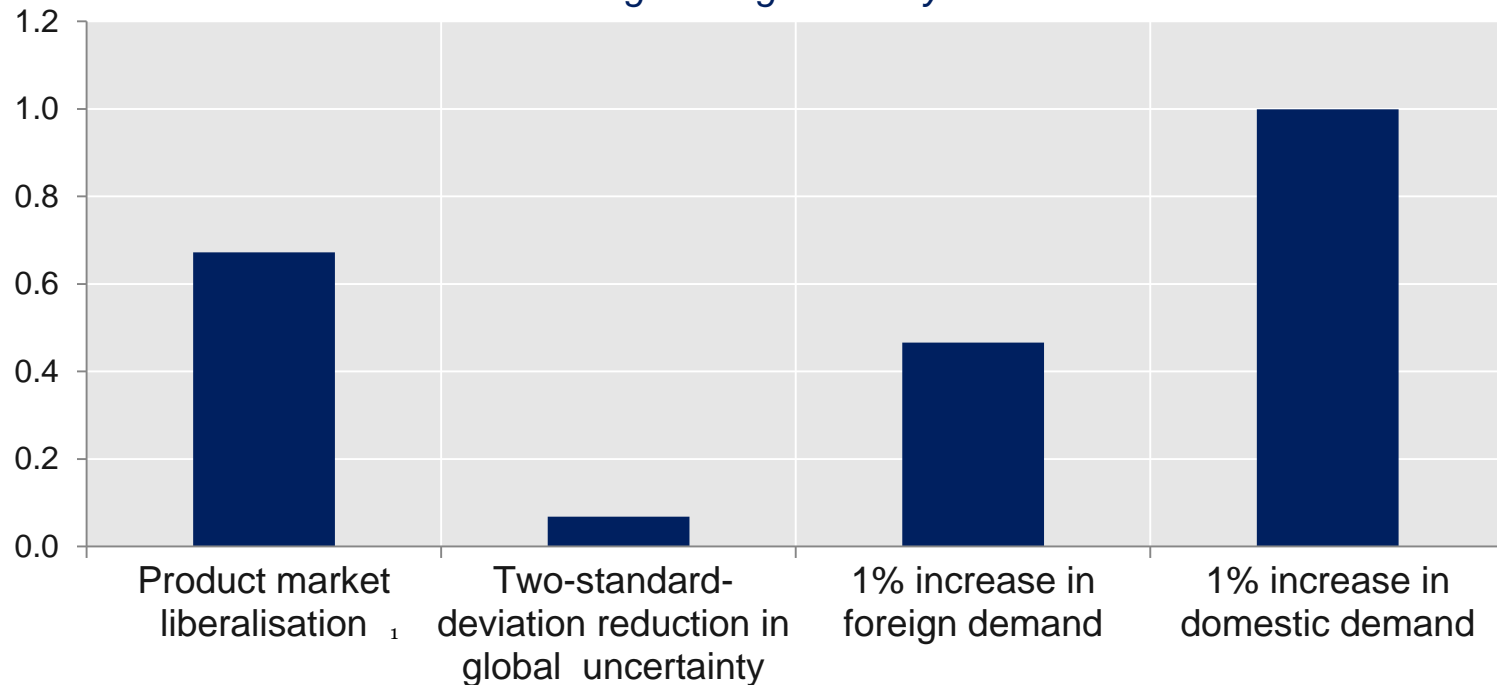
- **Packages of structural policies**
 - **Unique for each country**
 - **Work together for greatest impact**



Investment and growth: Negative feedback loop current & potential, domestic & global

Estimated impact of shocks on investment

Percentage change after 5 years



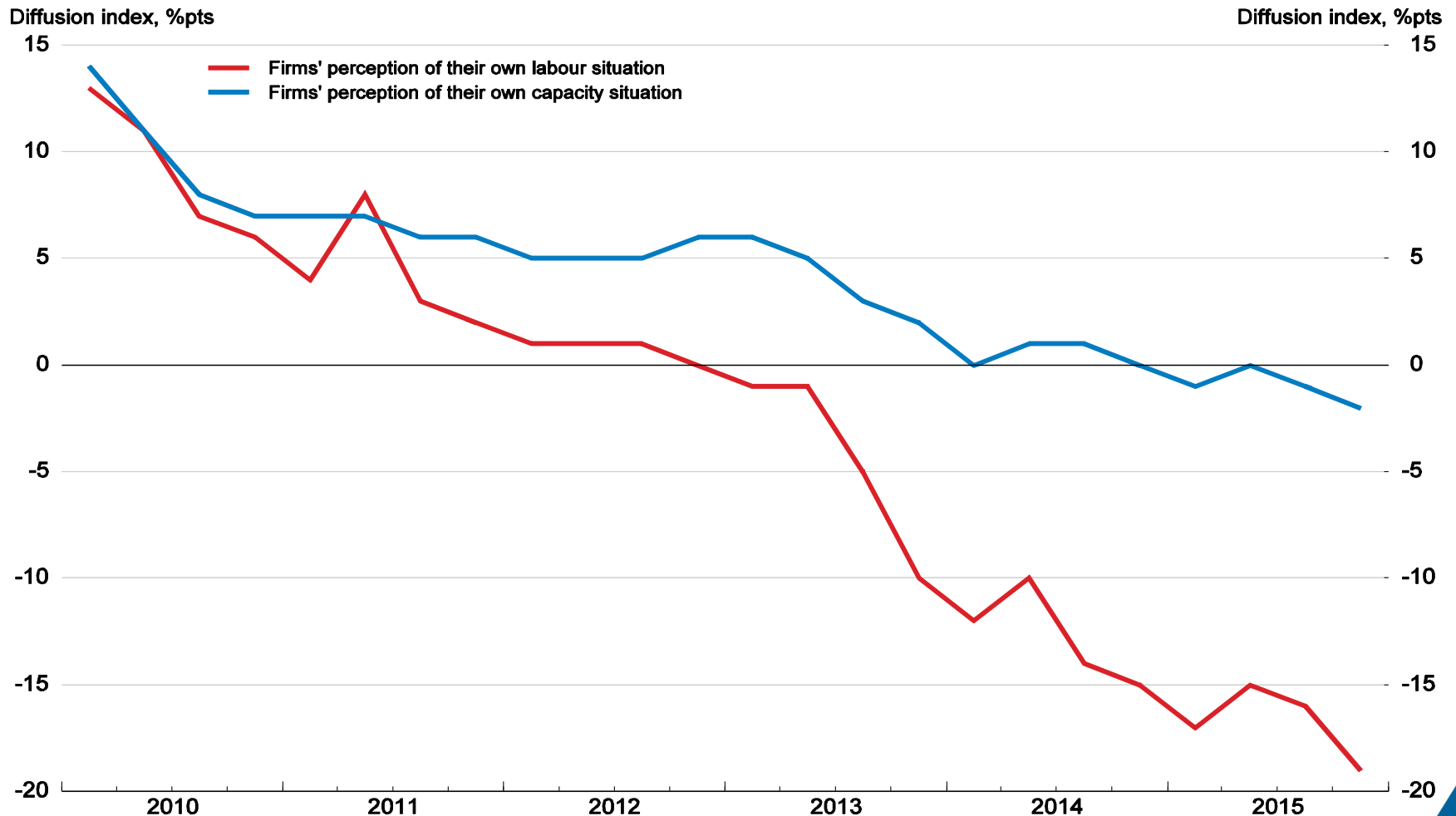
1. 16% reduction in OECD index of regulation in energy, transport and communications (ETCR) over 5 years, equivalent to the average pace of reduction among ²15 OECD countries during the period 1993-2013.

2. Two-standard-deviation reduction in index corresponds to a 26% reduction.

Source: OECD calculations.



In Japan, firms face shortages of labour and to some extent, capacity



Note: The diffusion indices show the number of firms responding they had an excess number of workers minus those reporting a shortage and the number responding that they had excess capacity minus those with a capacity shortage.

A negative number thus indicates an overall shortage of labour and capacity.

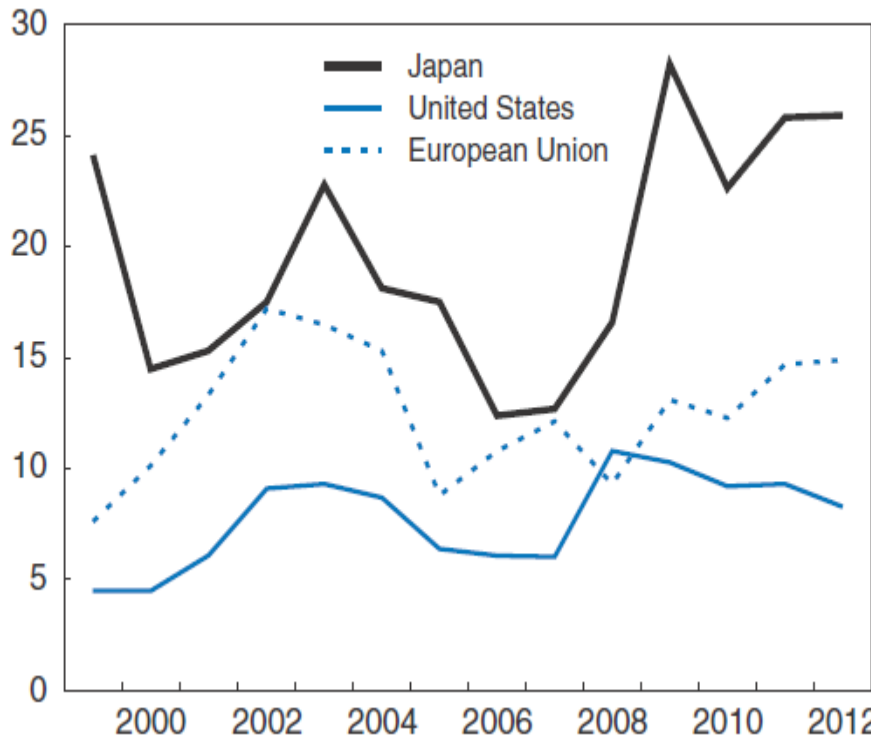
Source: Labour and investment shortage (DI): Bank of Japan.



Japan's corporate sector has high cash reserves and falling returns on assets...

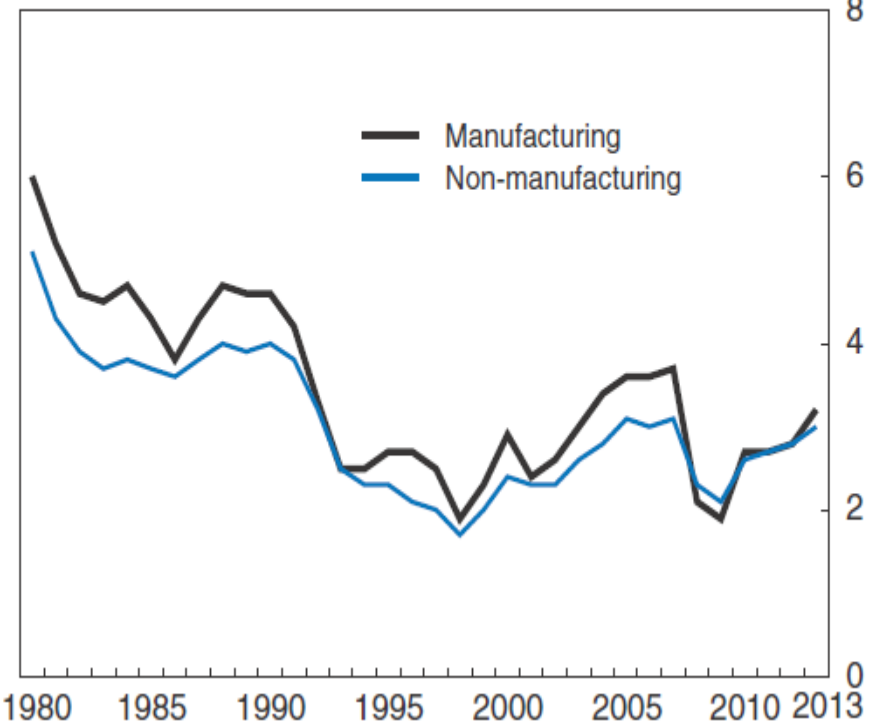
A. Cash holdings¹

Per cent of market capitalisation



B. Return on assets of Japanese enterprises

Per cent



1. Cash and marketable securities of listed companies as a percentage of market capitalisation in each country or region.

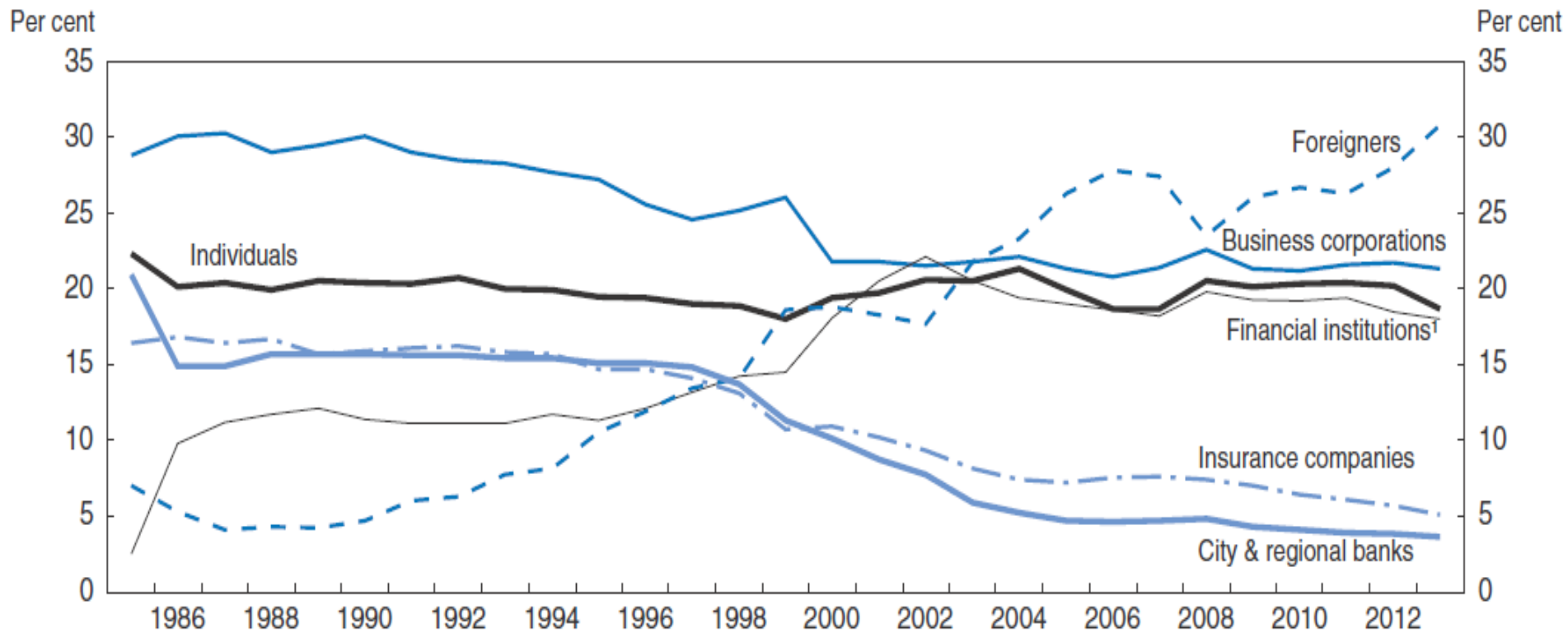
For Japan – Topix 500 Index; US – S&P 500, euro area – Bloomberg Europe 500.

Source: Bloomberg; OECD calculations; Ministry of Finance.

Change in corporate governance to improve investment and corporate decisions

Shareholder composition of Japanese companies

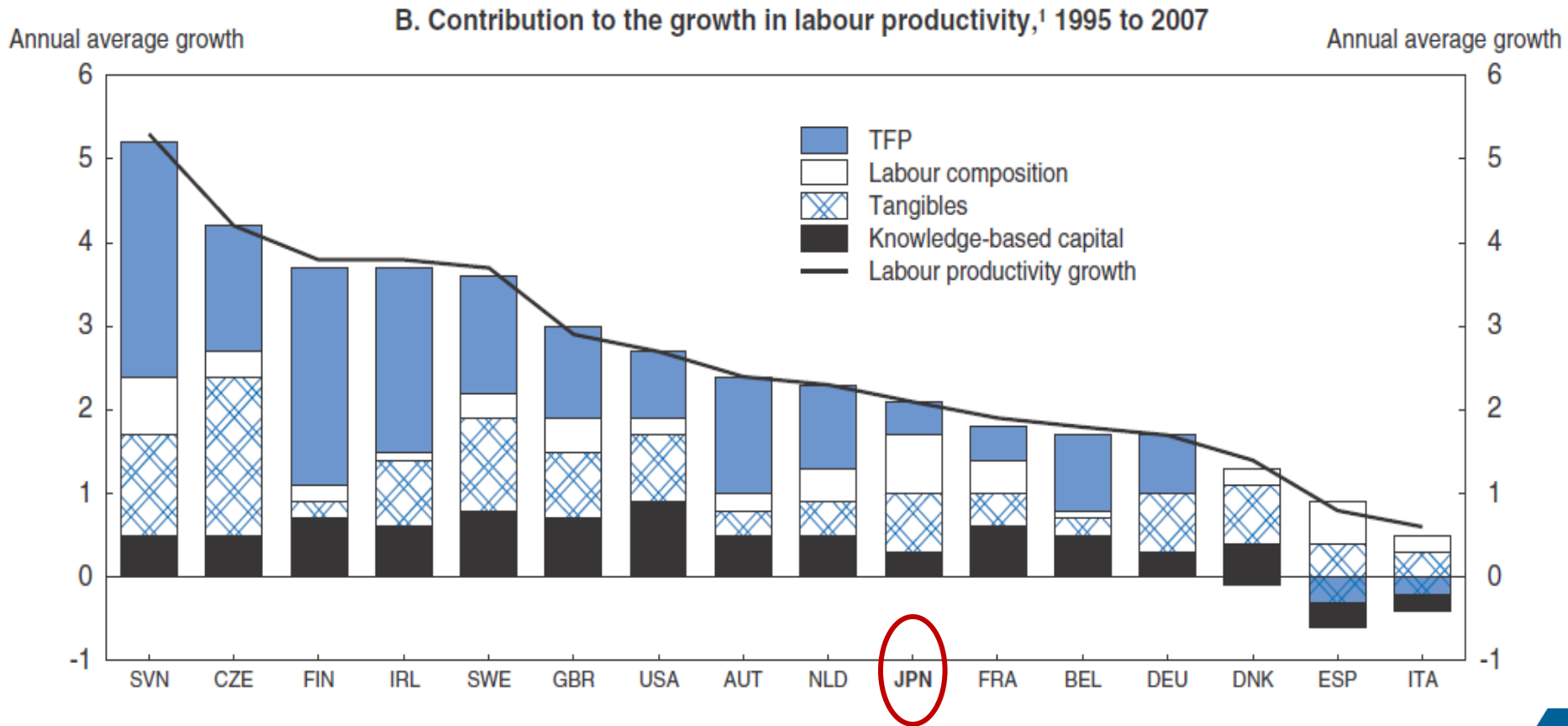
Distribution of market value by type of shareholder



1. Excluding insurance companies and city and regional banks.

Source: Tokyo Stock Exchange, 2013 Share Ownership Survey.

Change in type of investment to knowledge-based capital



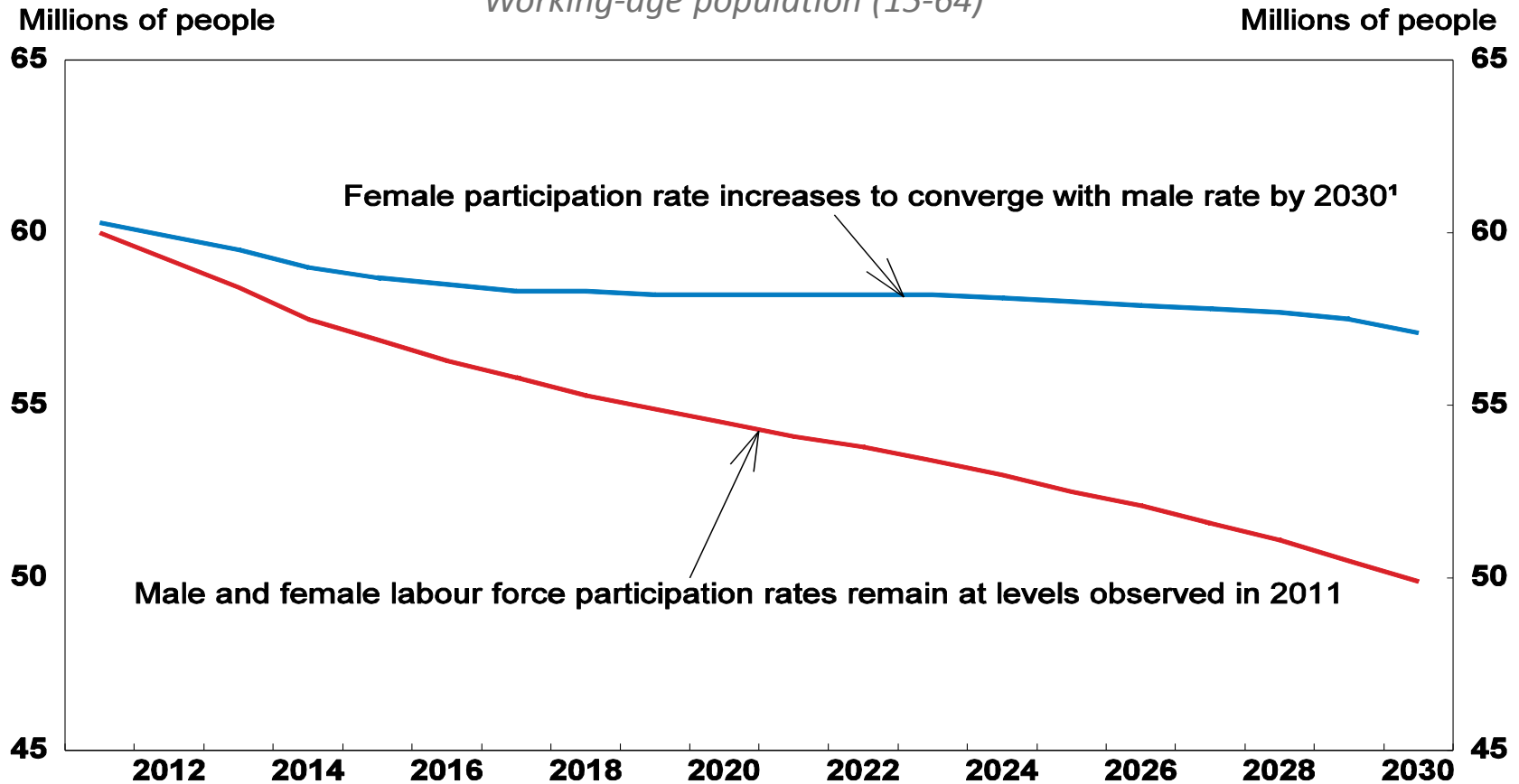
1. Annual average growth rate from 1995 to 2007 of output per hour worked.

Source: Corrado et al. (2012).

Increasing female employment; avoid looming labor supply shortages

Projected size of the labour force

Working-age population (15-64)

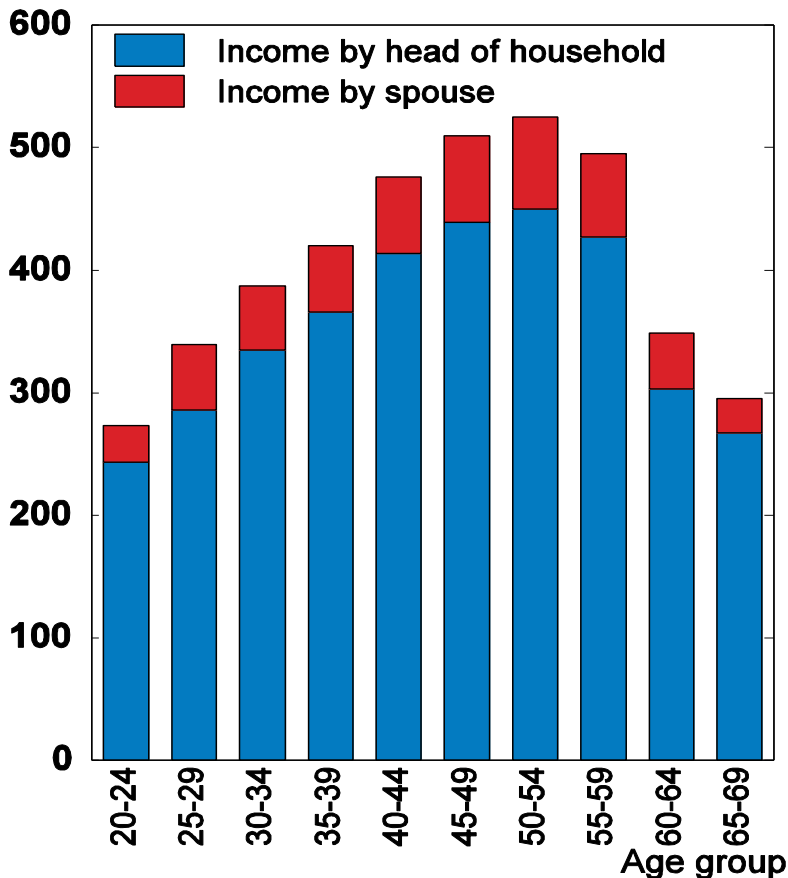


1. Assuming that the labour force participation rate for men remains constant from 2011 to 2030.

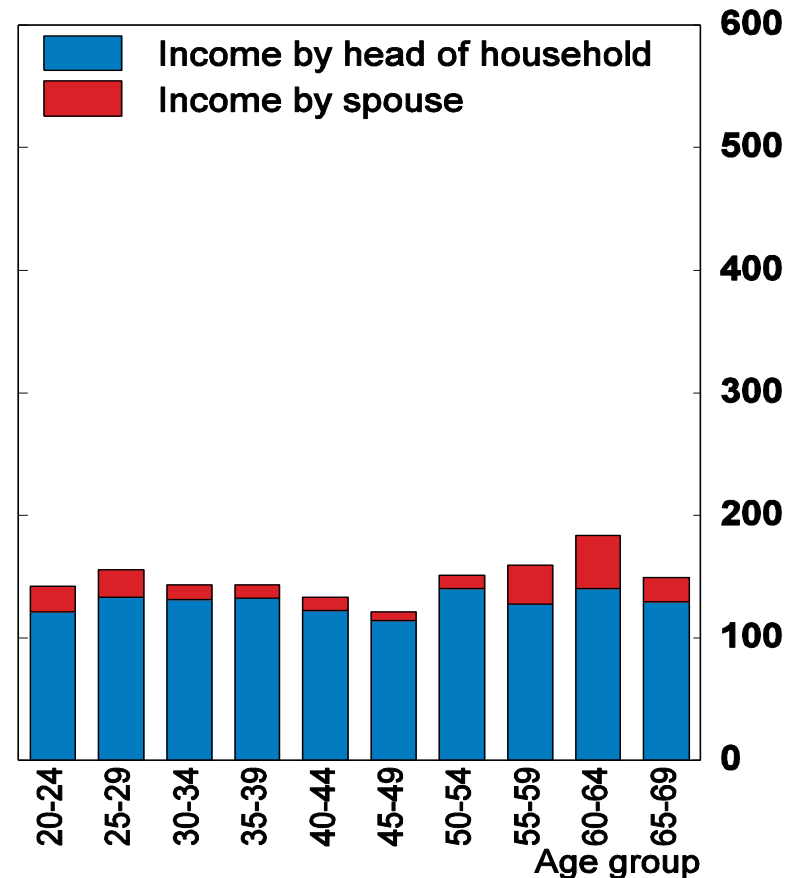
Source: 2015 OECD Economic Survey of Japan

Break down labor market dualism; eliminate tax cliff of moving to employment

A. Household headed by a regular worker
Thousand yen



B. Household headed by a non-regular worker
Thousand yen



Source: Ministry of Health, Labour and Welfare (2014).

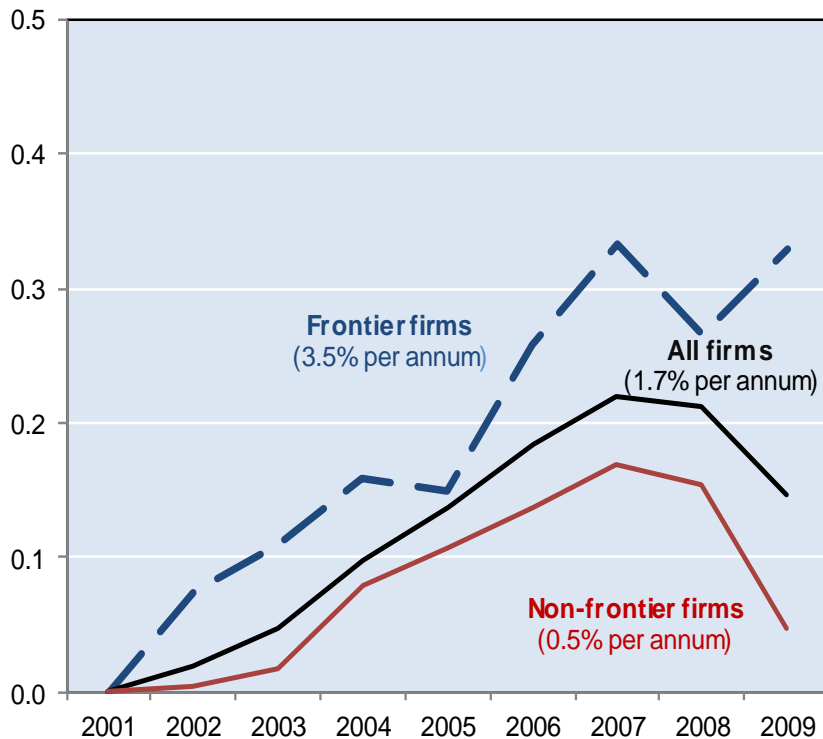
Global issue with productivity

Diffusion is the problem, not innovation

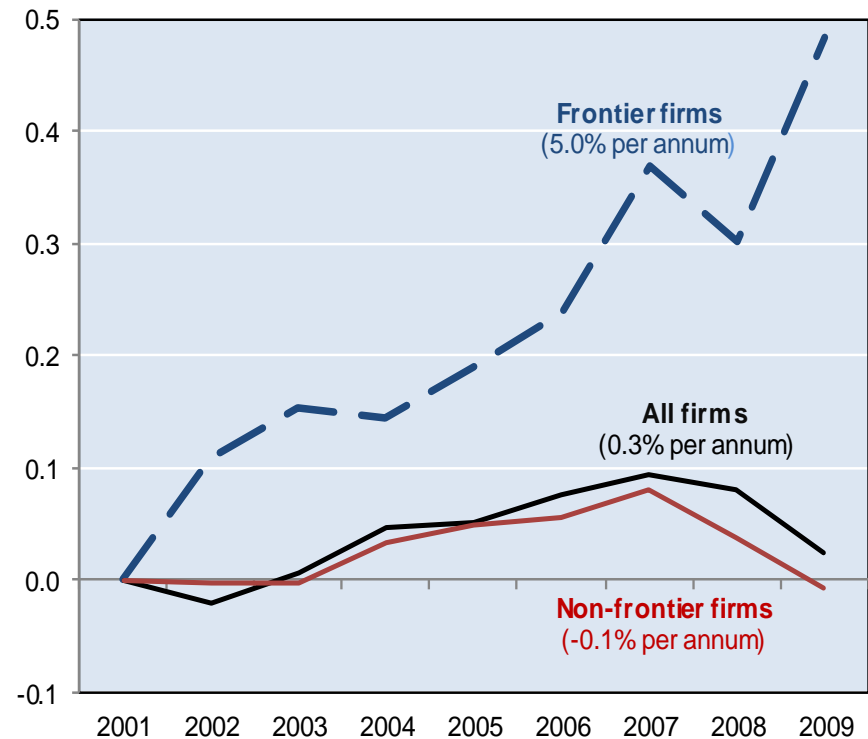
Solid growth at the global productivity frontier but spillovers disappointed

Labour productivity; index 2001=0

Manufacturing Sector



Services Sector

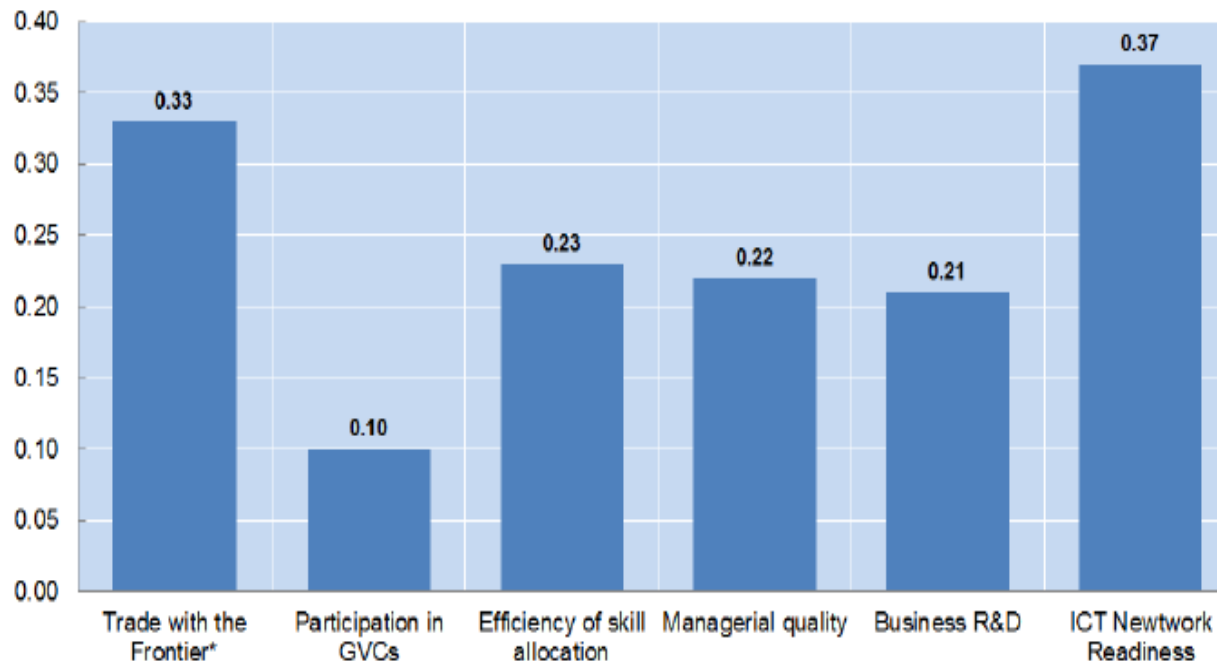


“Frontier firms” corresponds to the average labour productivity of the 100 globally most productive firms in each 2-digit sector. “Non-frontier firms” is the average of all other firms. “All firms” is the sector total. The average annual growth rate is shown in parentheses. Source: Andrews, Criscuolo and Gal (2015), “Frontier Firms, Technology Diffusion and Public Policy: Micro Evidence from OECD Countries”.

Structural policies to improve diffusion of innovation at the global frontier

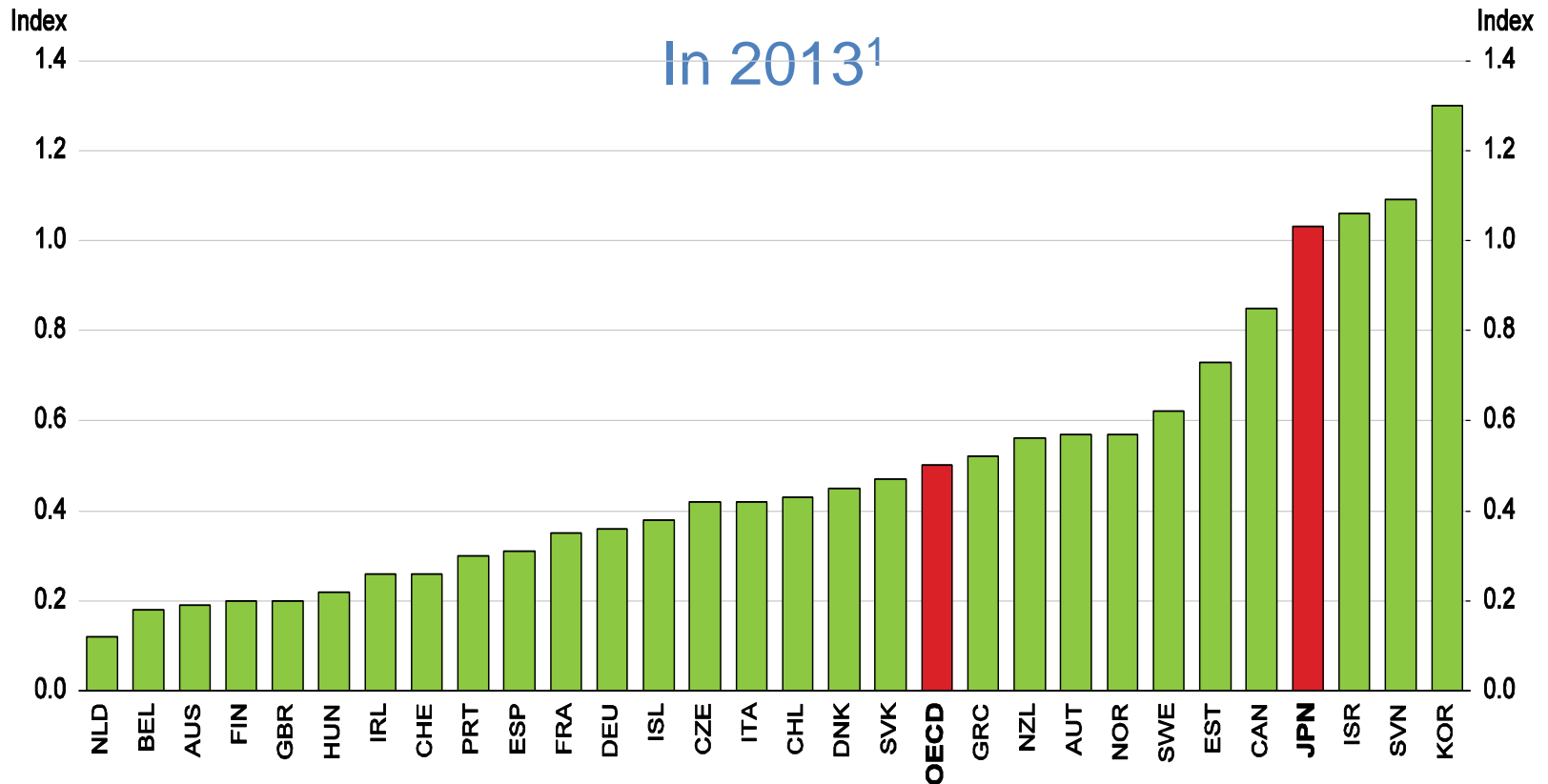
Figure 15. Learning from the frontier is shaped by key structural factors

% difference in learning effect between maximum and minimum value of each structural variable, assuming 2% MFP growth at the frontier



Notes: Trade with the frontier refers only to manufacturing. GVC Participation is based on the measure in Figure 16. Efficiency of skill allocation and managerial quality are derived from the *OECD Survey of Adult Skills (2012)*. Business R&D is defined as the ratio of business R&D expenditures to value added and sourced from *OECD, Main Science and Technology Indicators*. ICT network readiness is from the *World Economic Forum*.

Barriers to trade and investment hinder productivity growth



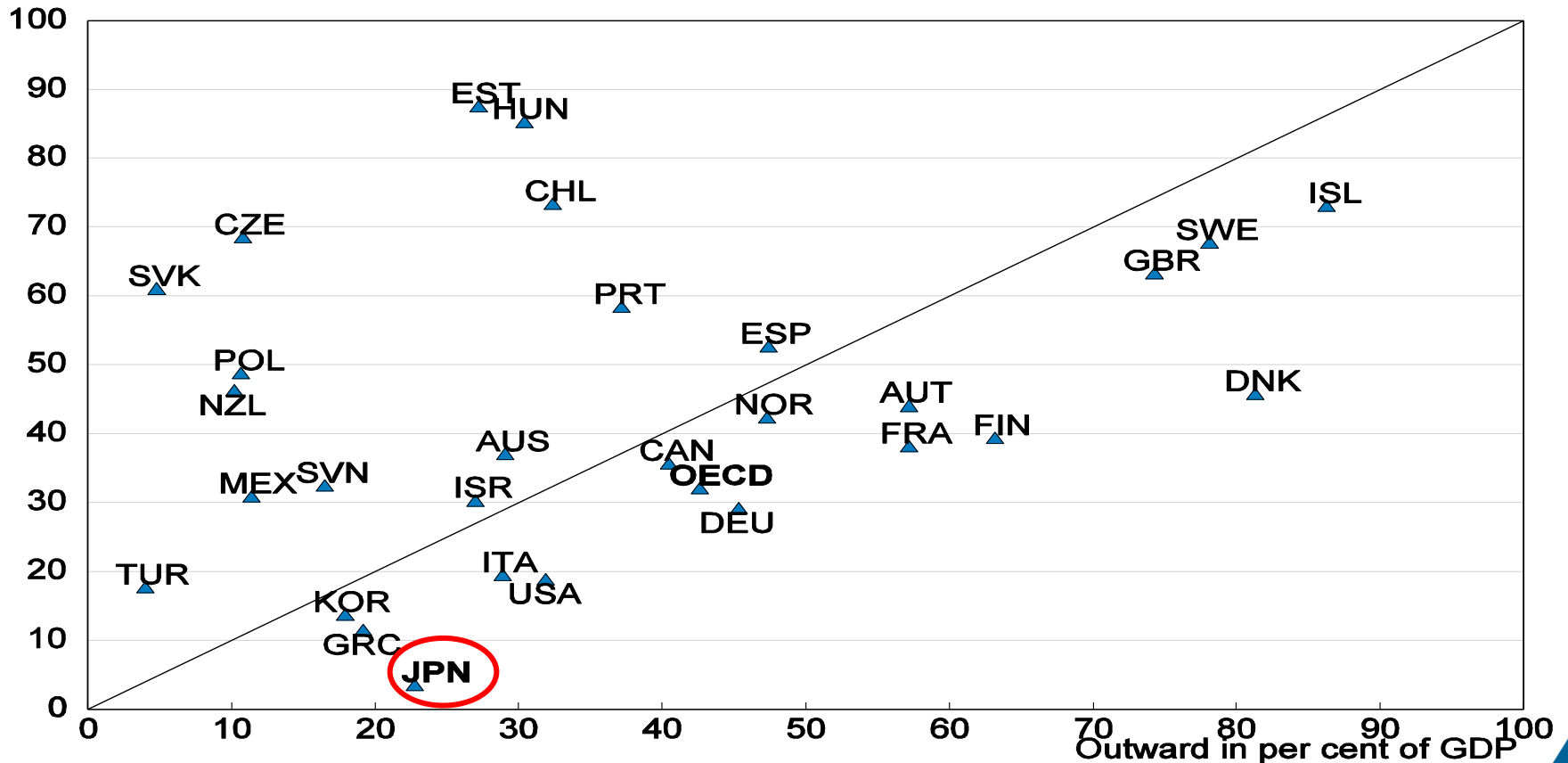
1. The OECD Indicators of Product Market Regulation are a comprehensive and internationally-comparable set of indicators that measure the degree to which policies promote or inhibit competition. Empirical research shows that the indicators have a robust link to performance. The indicator, which ranges from zero (most relaxed) to three (most stringent), is available for 30 OECD countries. The overall indicator is based on more than 700 questions.

Source: OECD Product Market Regulation database and Koske et al. (2015).

The stock of inward FDI in Japan is the smallest in the OECD

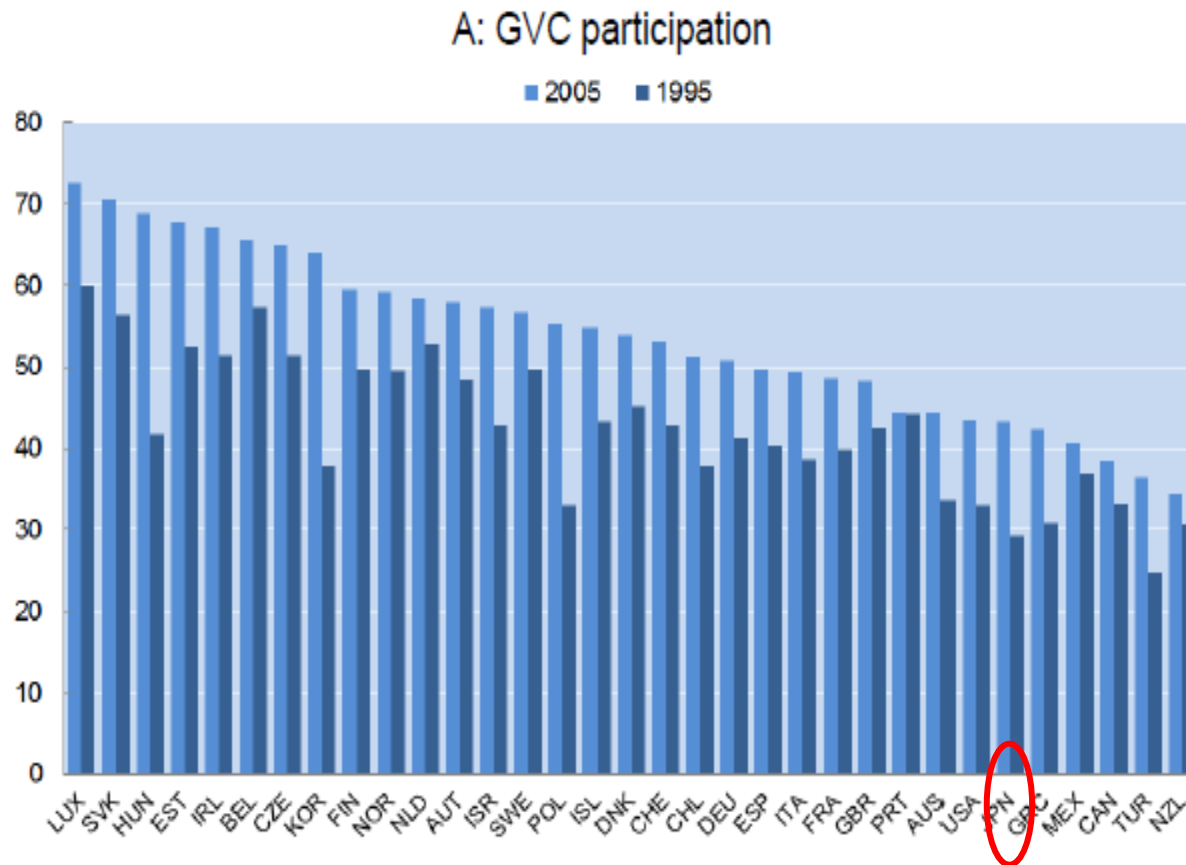
Inward and outward stocks of direct investment
2013

Inward in per cent of GDP



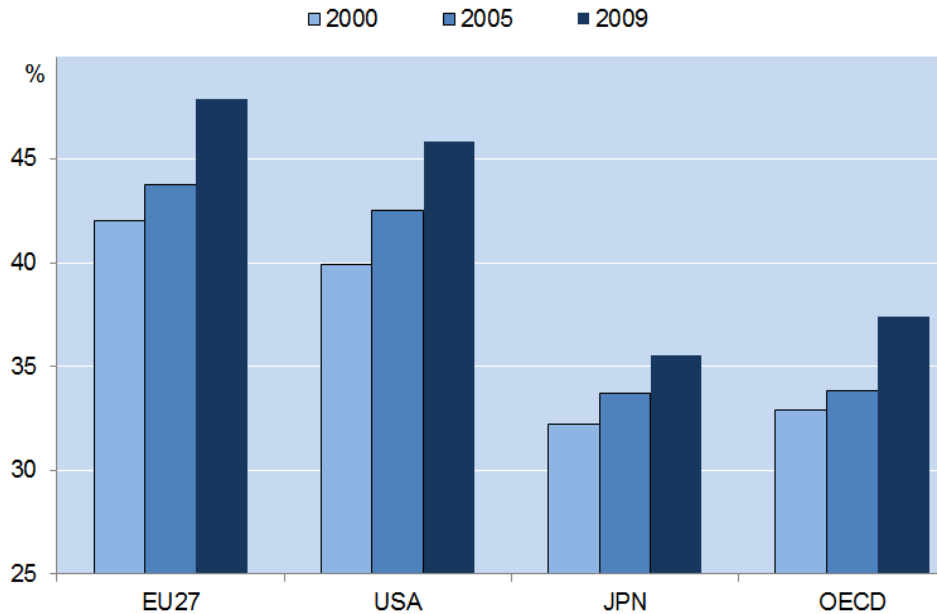
Japan's GVC participation is relatively low

Figure 16. Rising GVC participation and links with productivity growth

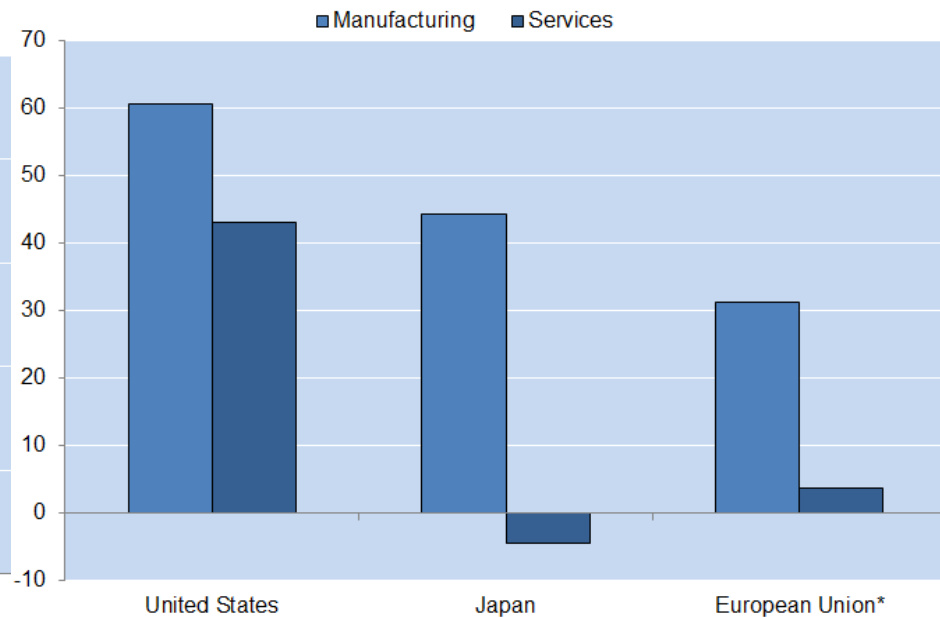


Services promote productivity gains from globalisation

A: Value added share of domestic services in gross exports has been rising



B: Resource misallocation in services is a problem

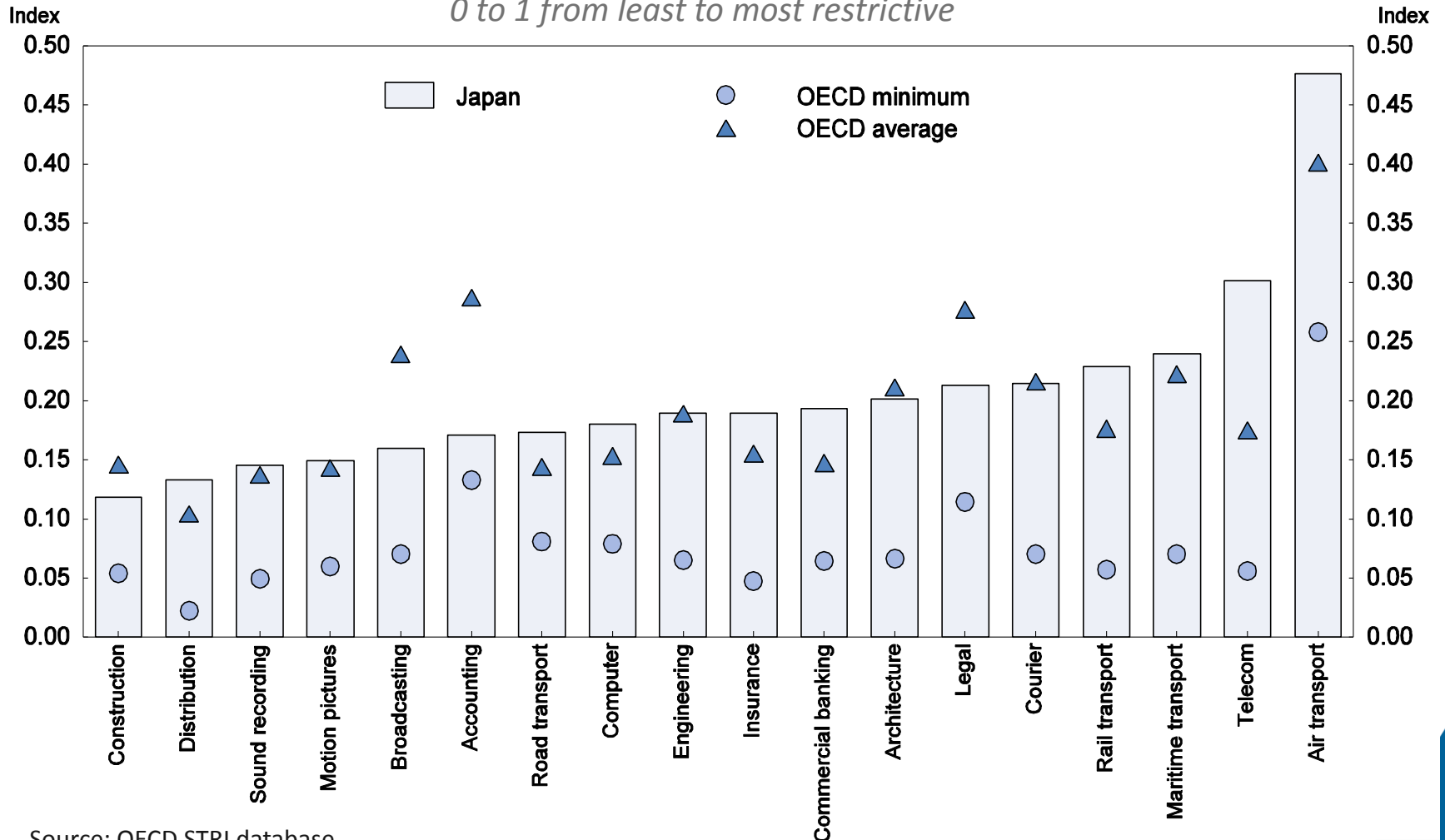


Conclusion: an inefficient domestic services sector can erode the productivity benefits of globalisation. There is a big role for policy to promote efficiency in services.

But, Japan's trade restrictions are high in most service sectors

OECD Services Trade Restrictiveness Index

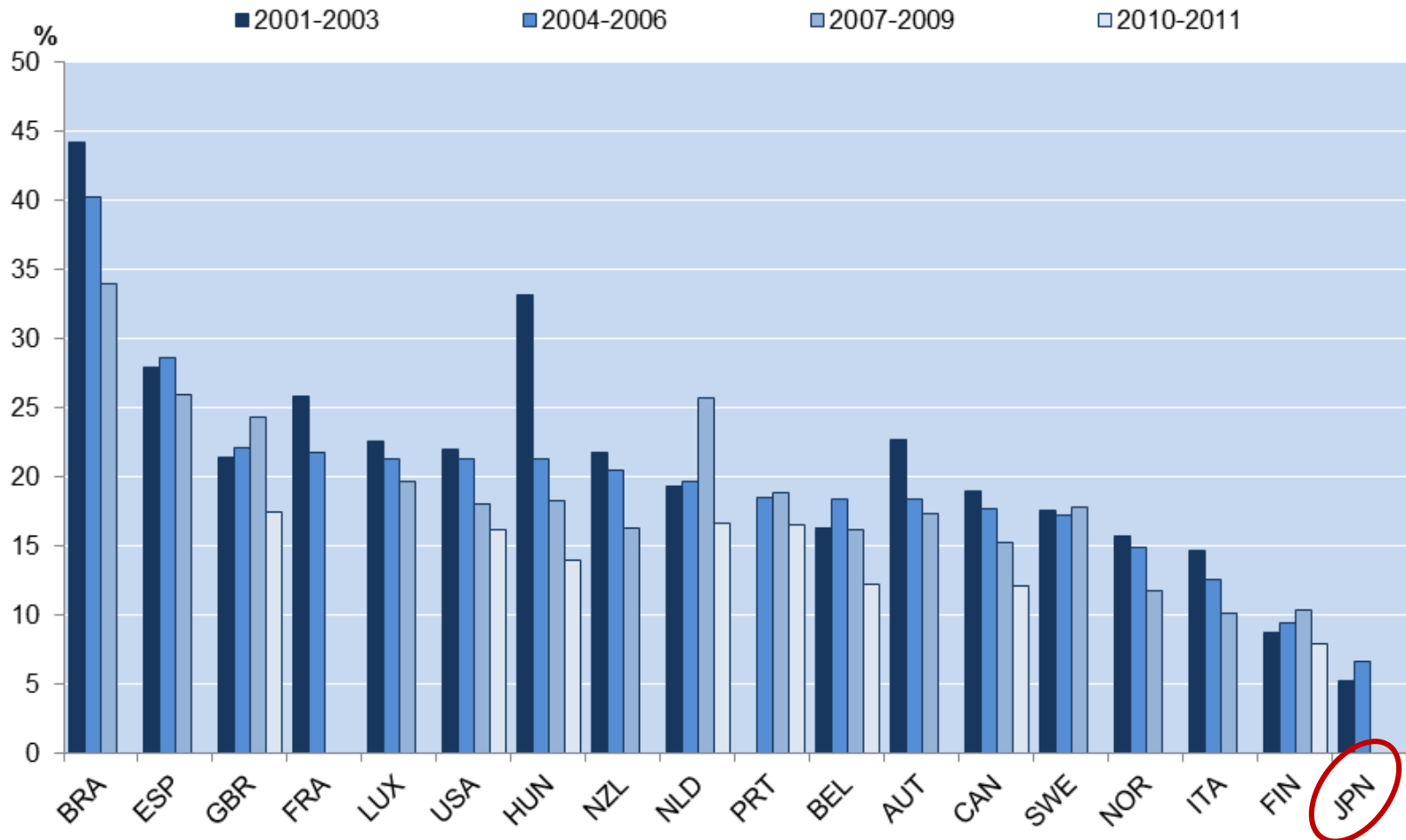
0 to 1 from least to most restrictive



Source: OECD STRI database.

Business dynamism is very low in Japan

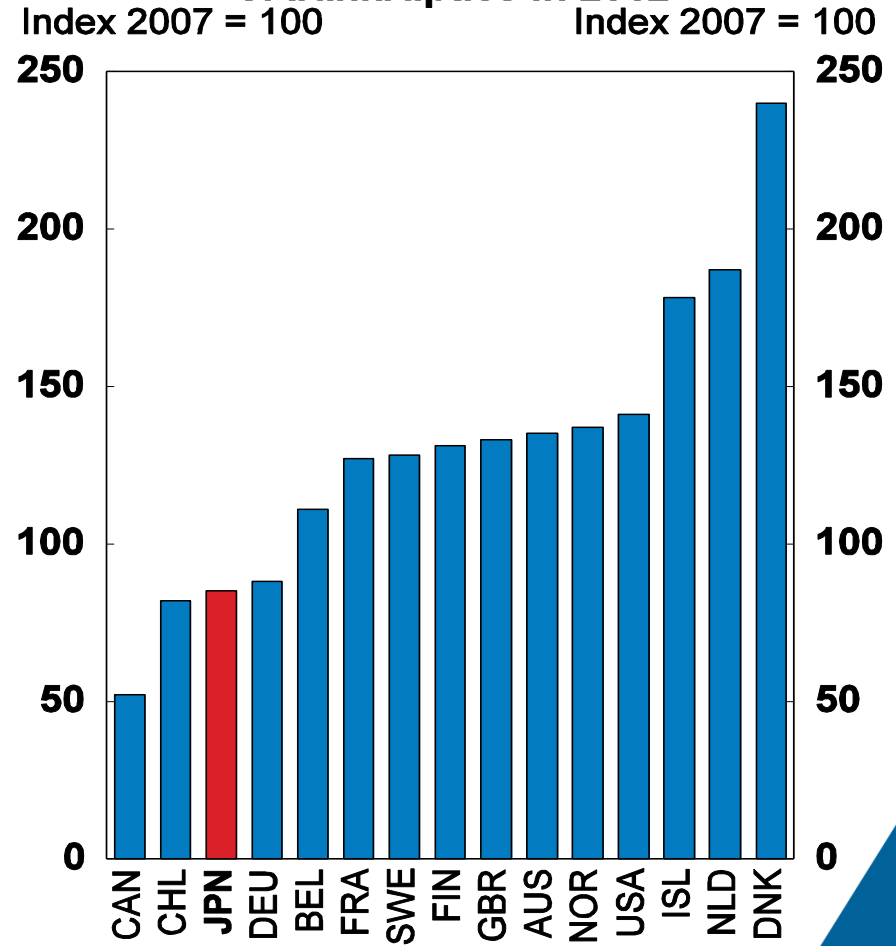
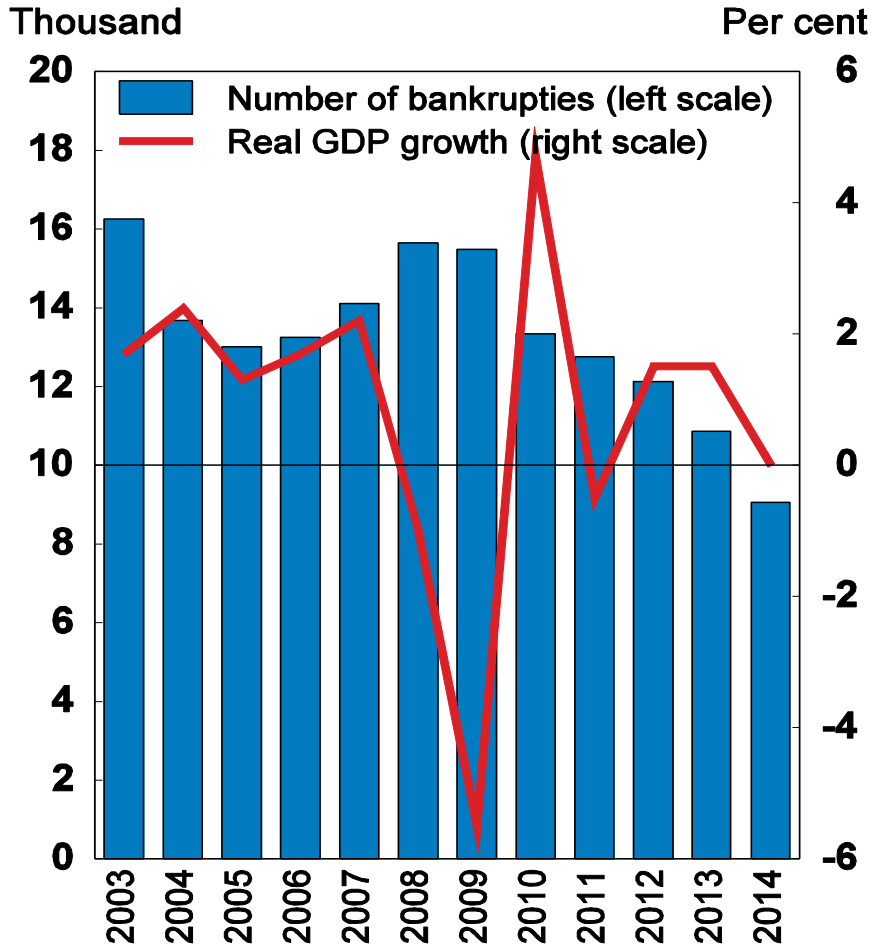
Start-up rates across OECD countries



Source: C. Criscuolo, P. N. Gal and C. Menon (2014), "The Dynamics of Employment Growth: New Evidence from 18 Countries", OECD Science, Technology and Industry Policy Papers no. 14.

Crucial to ensure the exit of non-viable firms

A. The number of bankruptcies is falling in Japan **B. International comparison of number of bankruptcies in 2012**



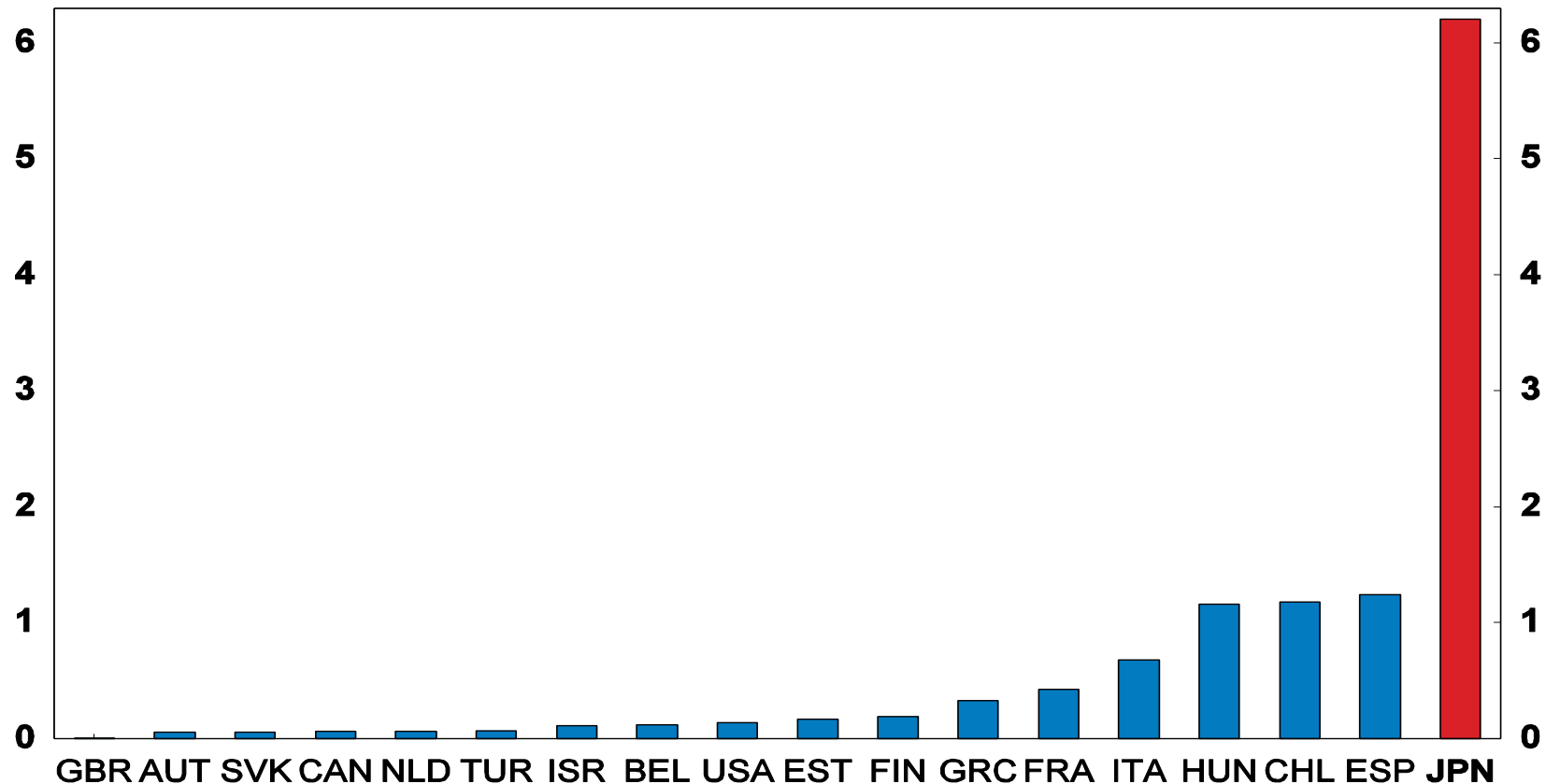
Shift SME policies from support to restructuring

Stock of SME guarantees

As a share of GDP in 2013

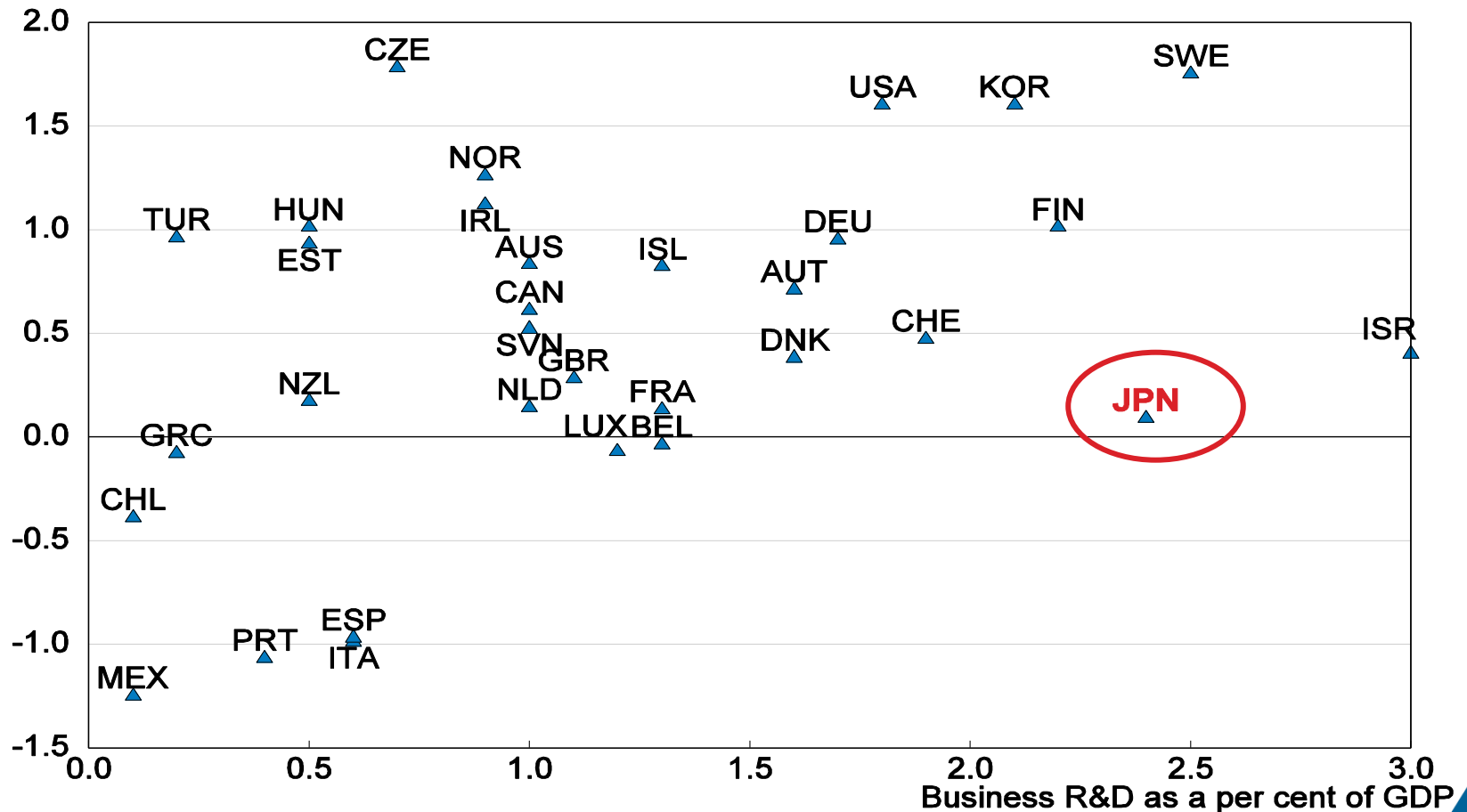
Per cent

Per cent



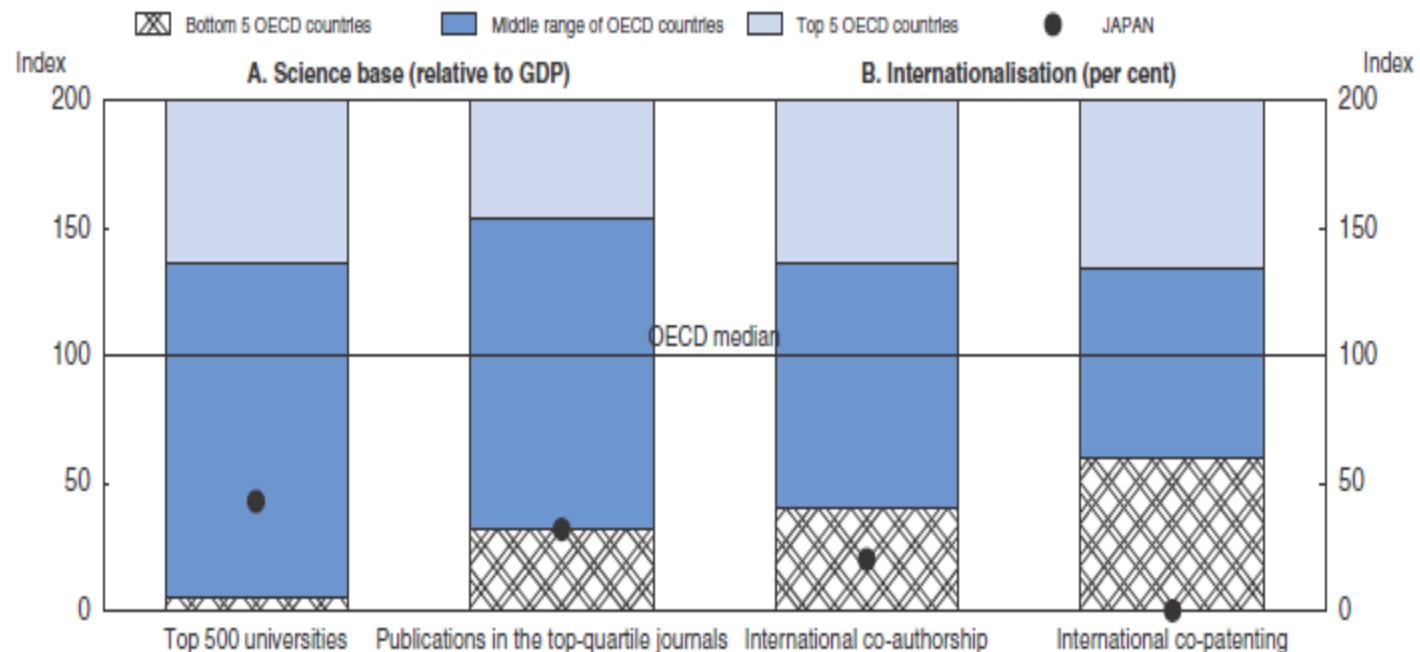
High business R&D does not translate into higher productivity growth

Annual TFP growth in per cent



International networks promote innovation But Japan is poorly integrated

Figure 9. Japan ranks low in some areas of its national science and innovation systems (2014)

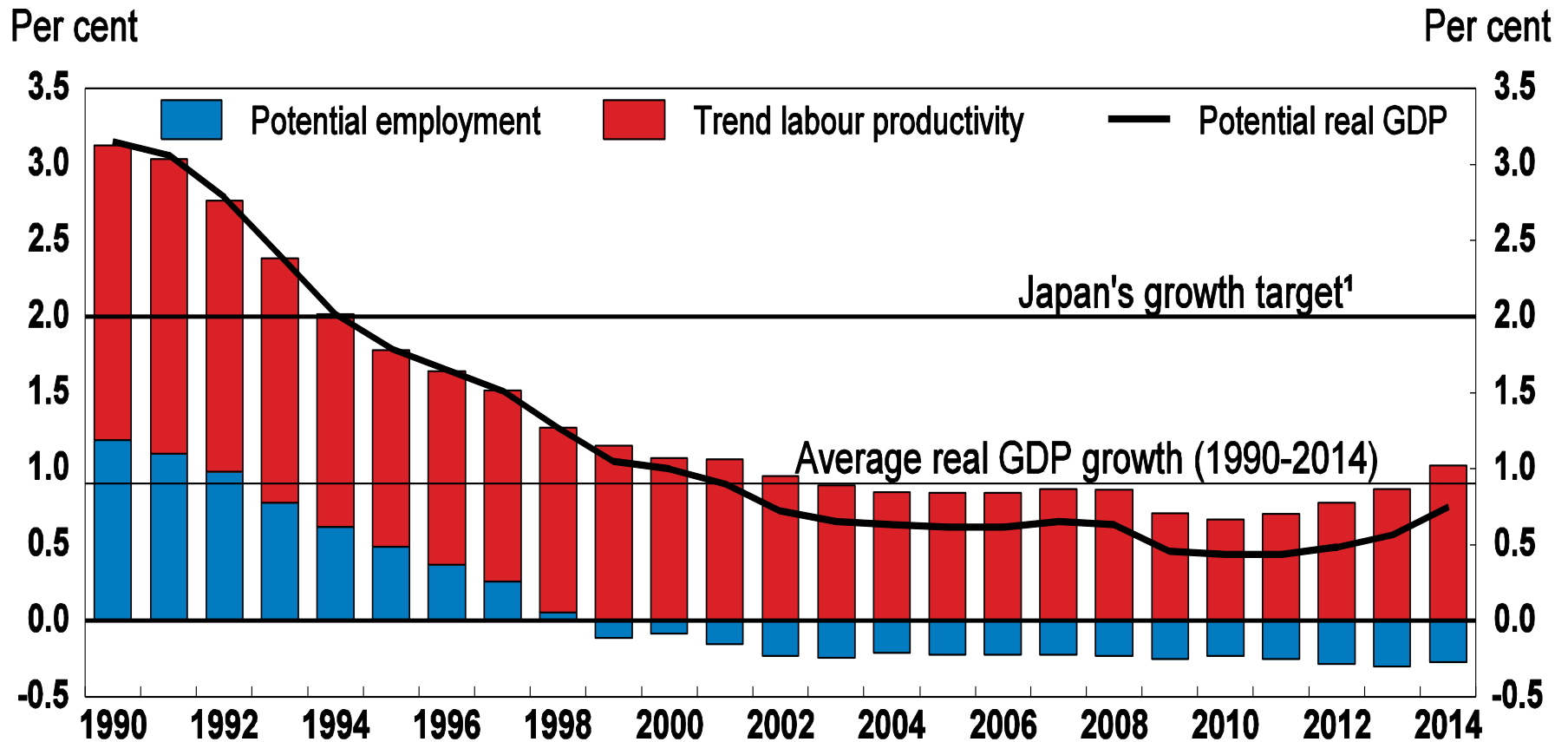


Note: Normalised index of performance relative to the median values in the OECD, which are set at 100. The top performer is set at 200 and the lowest at zero. The fifth-highest performer in the case of the "Top 500 universities" had a score of 137 relative to the OECD median, while the fifth lowest had a score of 5. Japan, with a score of 43, was in the middle range.

Source: OECD (2014e).



Japan's potential growth has fallen sharply ... why does this matter? *Promises*



1. The 2% growth target was set in 2009 and maintained by subsequent governments.

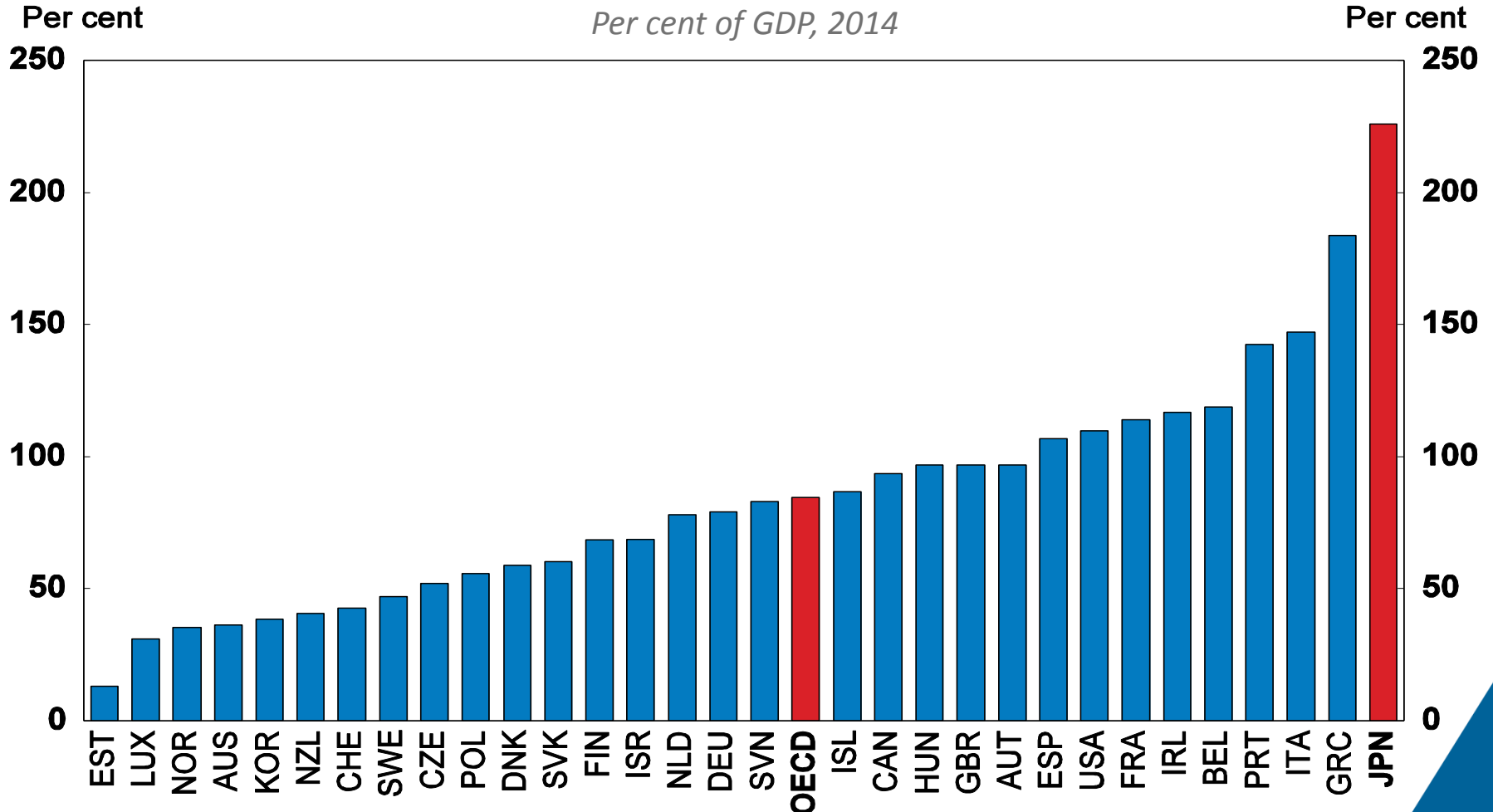
Source: OECD Economic Outlook database.



Fiscal sustainability: Japan's gross debt is the highest in the OECD

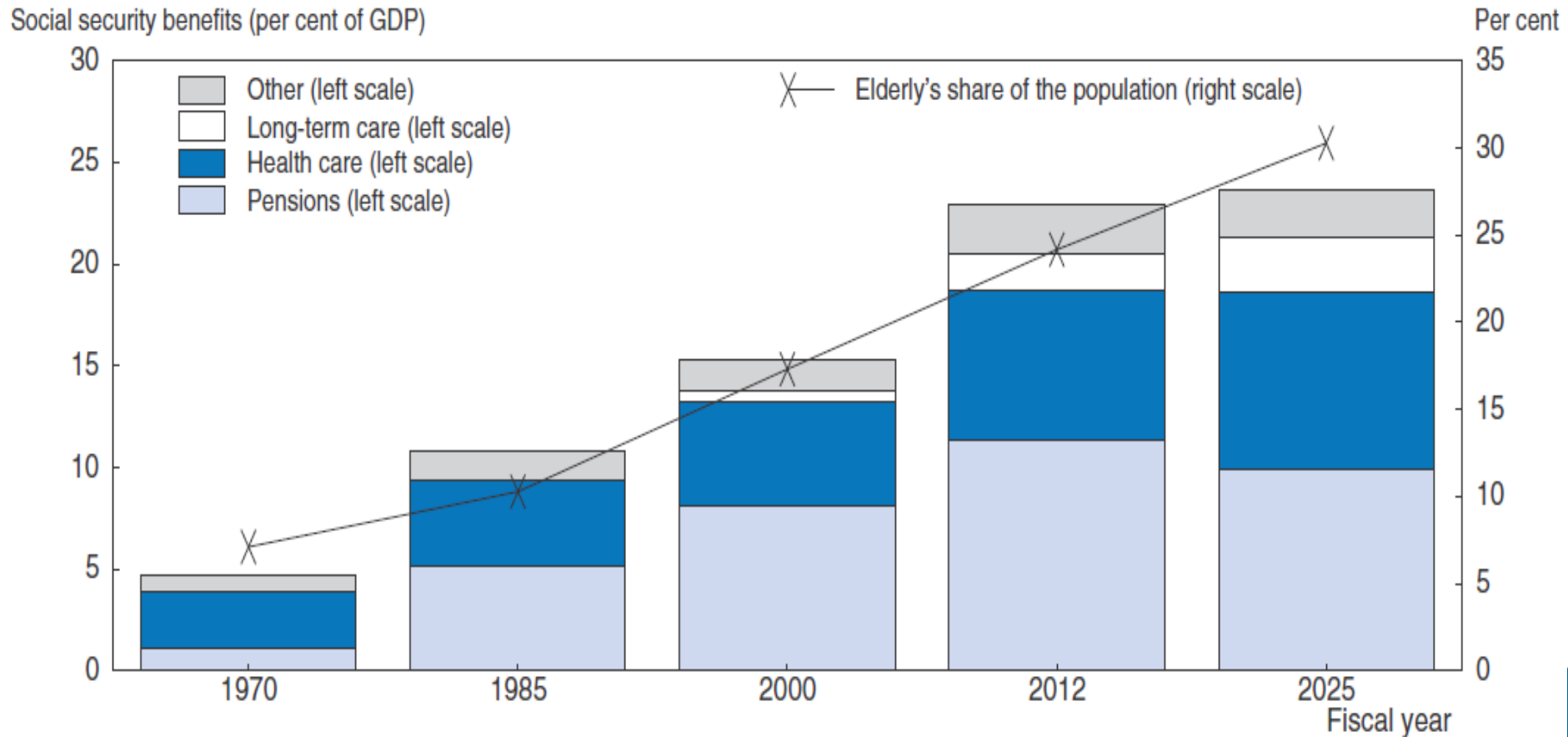
General government debt

Per cent of GDP, 2014





Public social spending has been rising sharply with population ageing

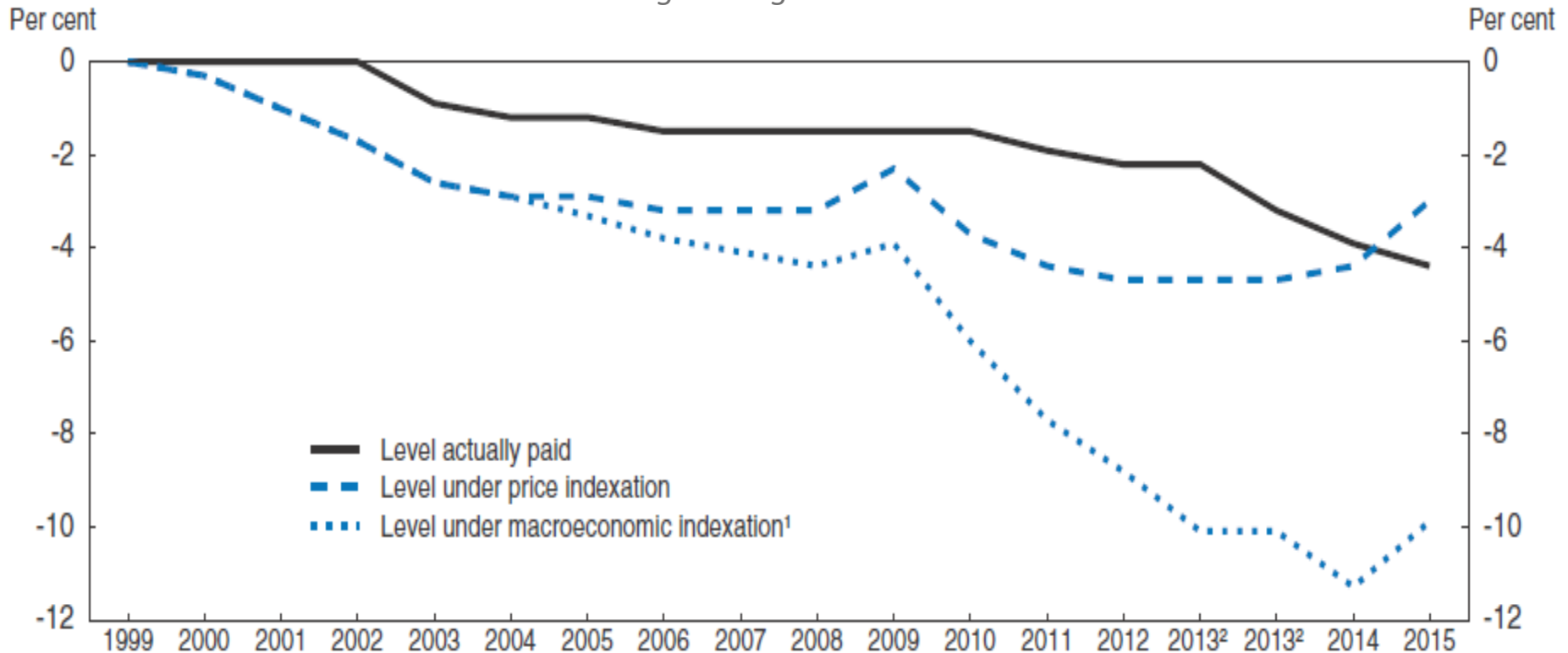




Meanwhile pension benefits have declined

Pension benefit levels

Percentage change relative to 1999



1. Macroeconomic indexation implies that price indexation is fully implemented.

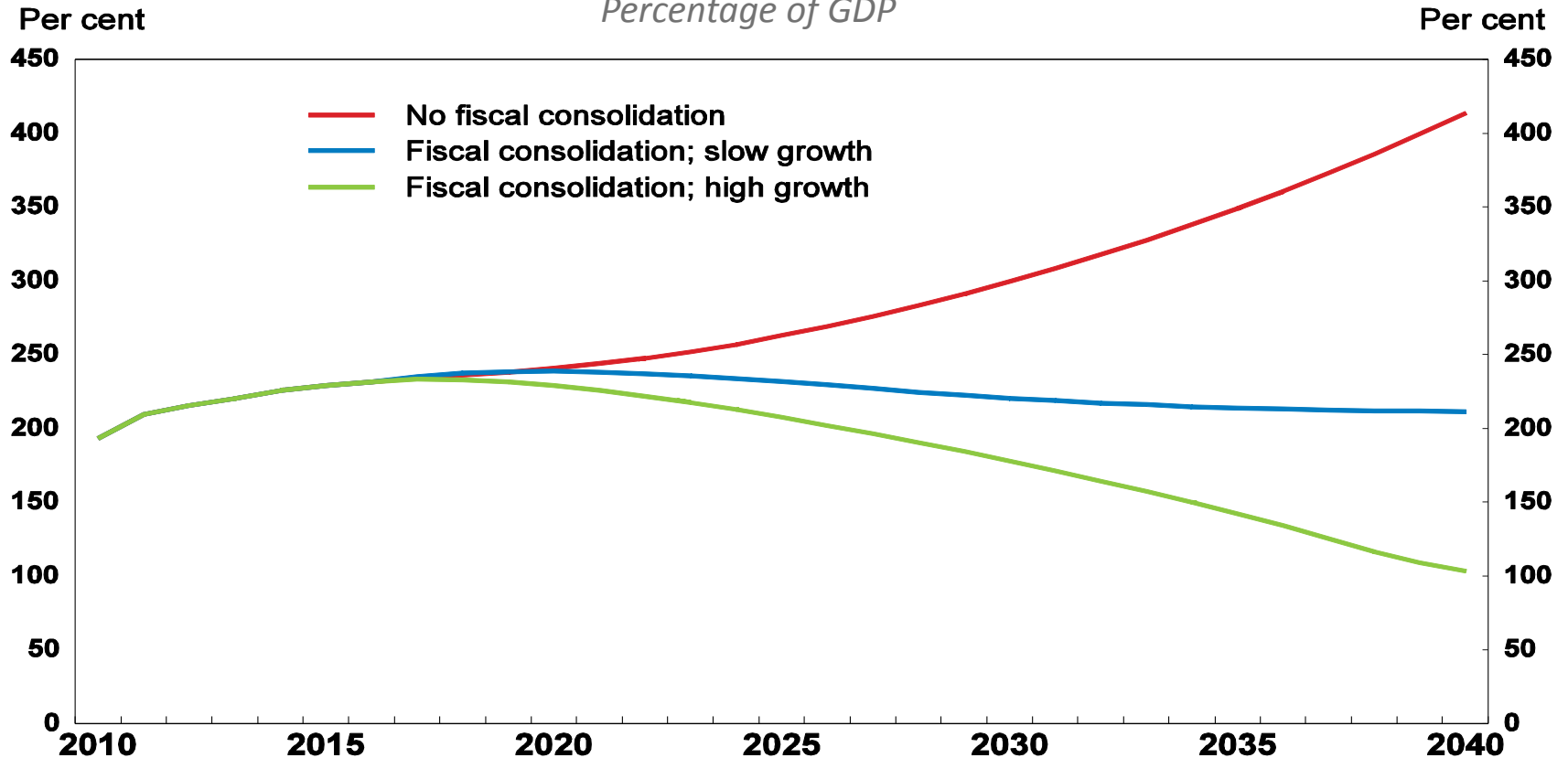
2. There were two revisions in 2013 (April and October).

Source: Nakazawa et al. (2014).



Reducing debt/GDP requires growth, inflation, and fiscal consolidation... in that order!

Gross government debt
Percentage of GDP



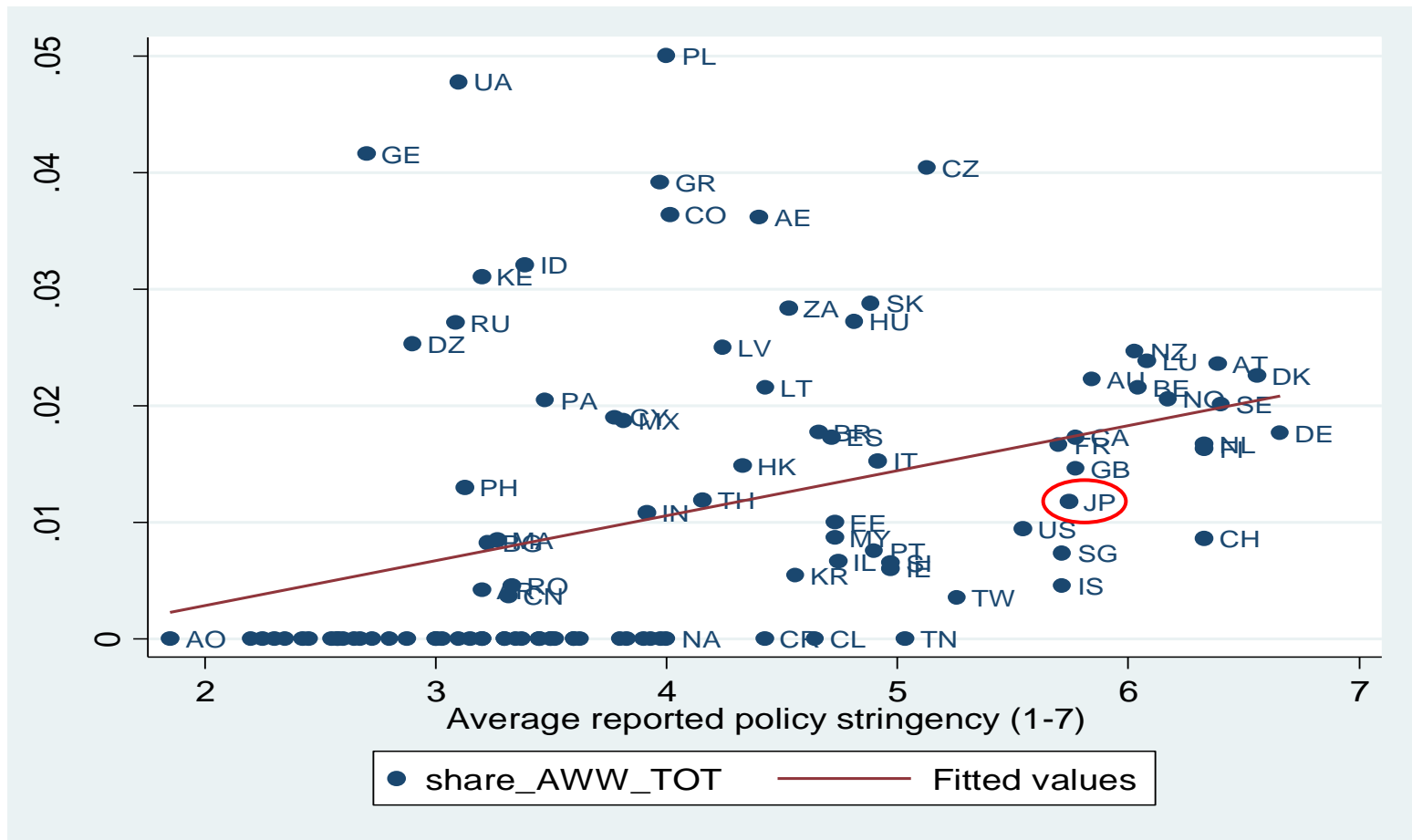
Note: In the no fiscal consolidation scenario, nominal growth is around 2¼ per cent (1% real growth, 1¼ per cent inflation). Fiscal consolidation of 7% of GDP over the decade 2017-26 is assumed in the other two scenarios. Output growth rates over 2015-40, resulting in varying levels of interest rates:
Slow growth: nominal growth of 1½ per cent (1% real growth, ½ per cent inflation).
High growth: is nominal growth of 4% (2% real growth and 2% inflation).
Source: OECD Economic Outlook Database; OECD calculations.



Stringent policies ⇔ Faster innovation in environmental technologies

Stringency of environmental policy regimes and innovation in environmental technologies

Mean value over 2001-2007



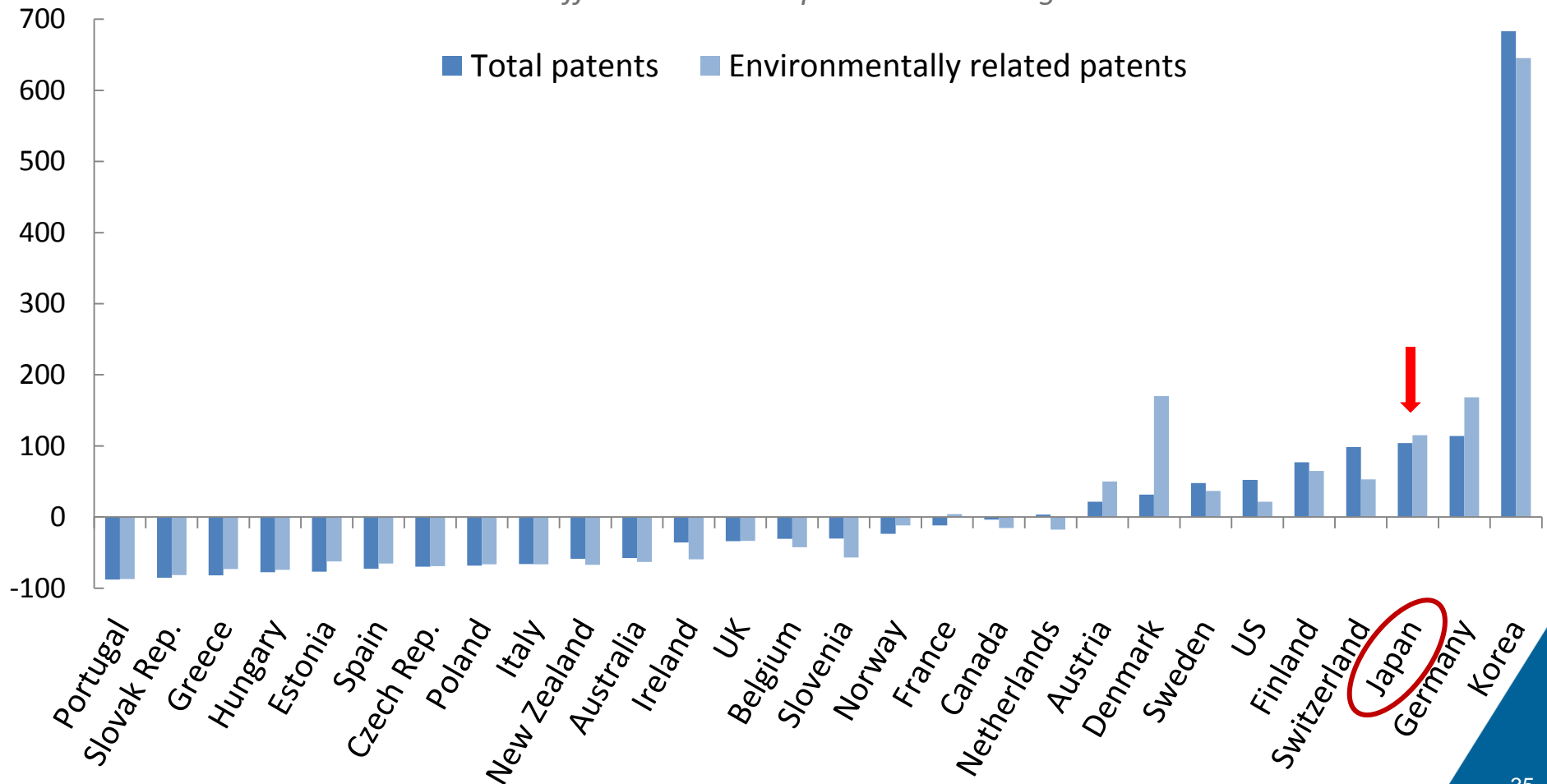


Japan is a Green Innovation Leader (although not *the* leader)

Number of patents (2010-2012) per person

% difference with respect OECD average

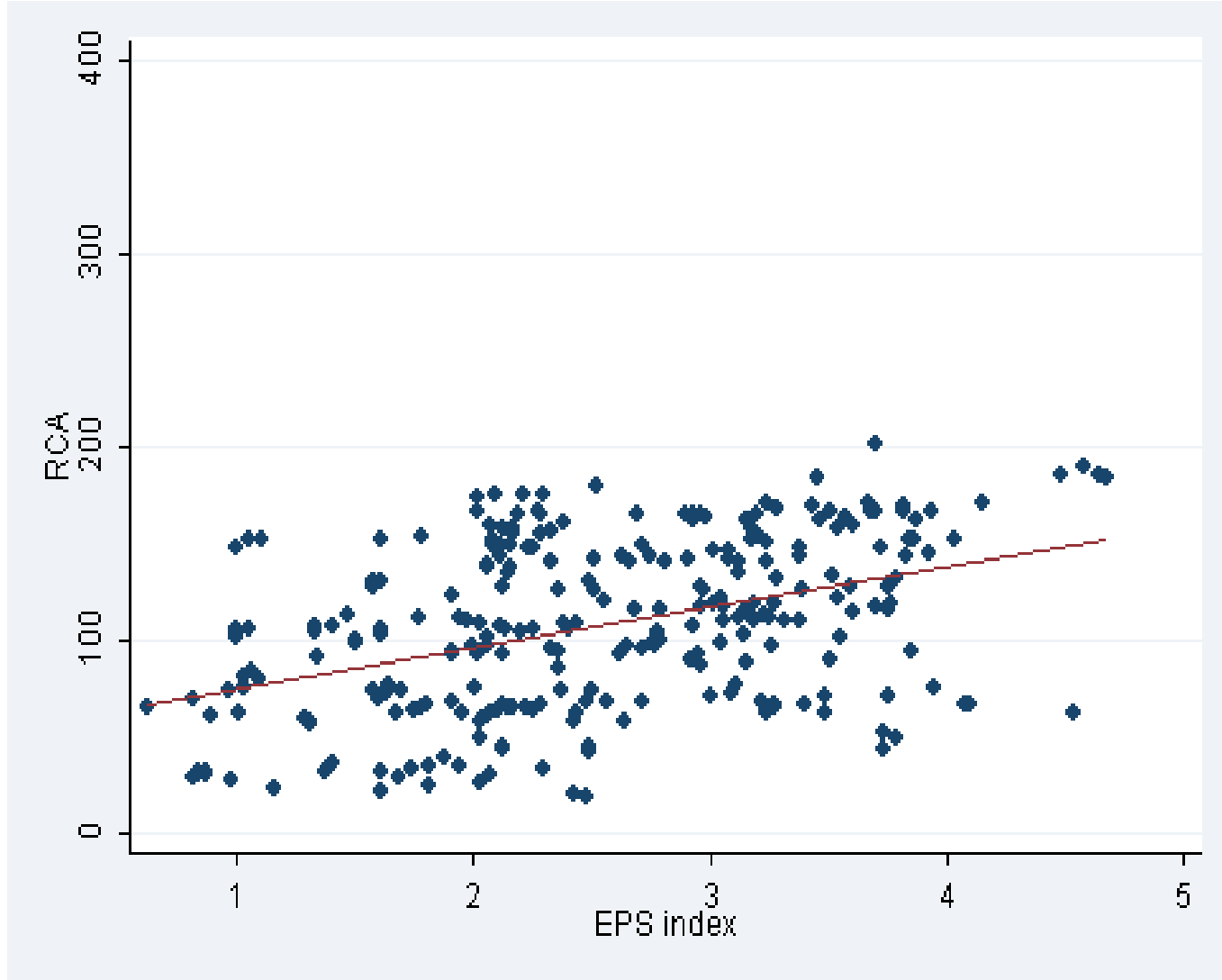
■ Total patents ■ Environmentally related patents



Source: OECD Patents Based by Technology database.



Stringent environmental policies ↔ trade in environmental goods





More information...



www.oecd.org/eco/surveys/economic-survey-japan.htm

The Future of Productivity



<http://www.oecd.org/eco/the-future-of-productivity.htm>