

KDI-Brookings Joint Seminar: Productivity in a Time of Change

11 April 2023

Technology Adoption and Productivity of Korean Firms

Dr. Jinkook Lee



Randall S. Jones

Adjunct Professor, Johns Hopkins University

Distinguished Non-resident Fellow, Korea Economic Institute

Research Associate, Center on Japanese Economy and Business, Columbia University

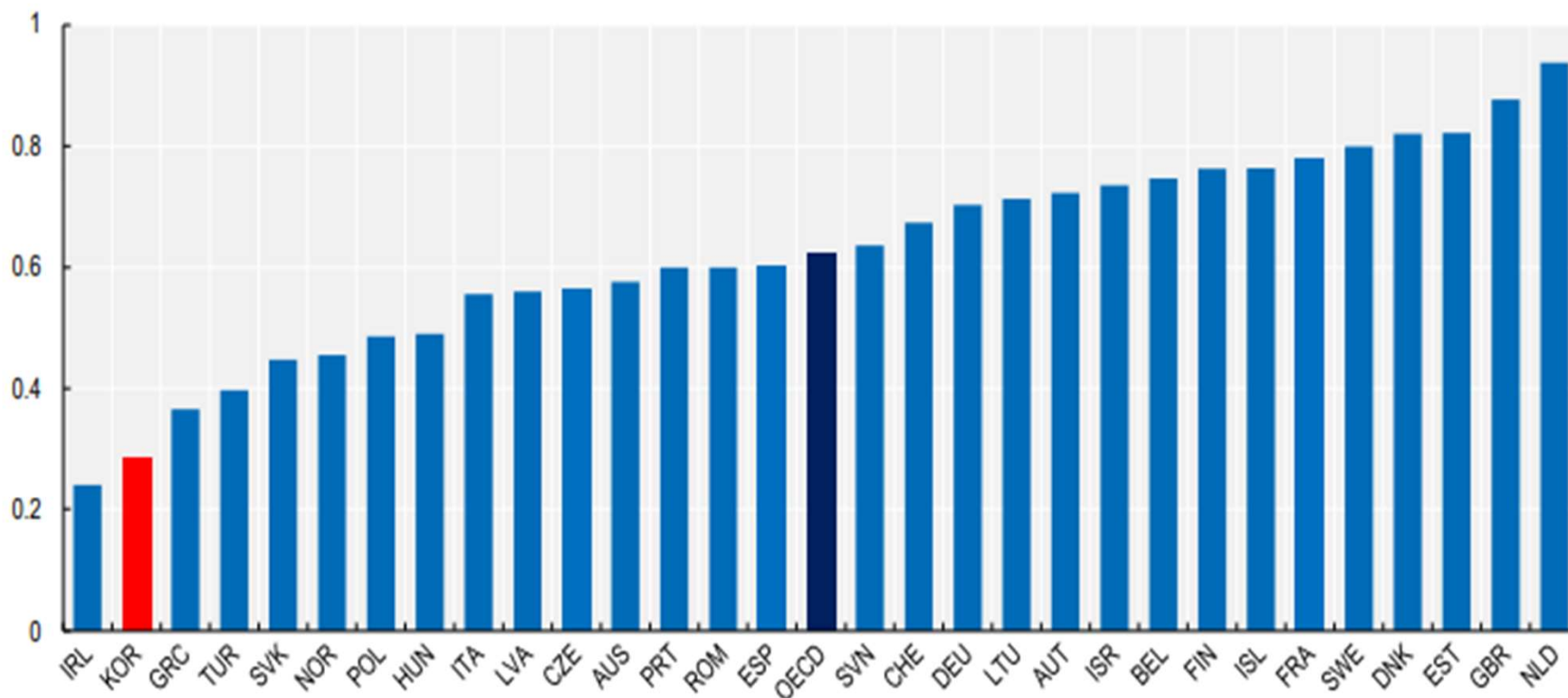
Former Senior Counselor - East Asia and Head of Japan/Korea Desk, Organisation for Economic Cooperation and Development (OECD)

# Summary

- The productivity of SMEs in Korea lags far behind large companies. The gap is large compared to other advanced economies.
- This leads to a polarized economy as SMEs account for an exceptionally large share of employment and output in Korea.
- Low productivity in SMEs reflects: *i)* their low level of innovation reflecting weak R&D spending; *ii)* a high level of government support; and *iii)* a lack of competition that would force them to innovate or exit.
- Low productivity in SMEs and services are two sides of the same coin as SMEs and the service sector overlap to a considerable extent.
- Low productivity in services also reflects a low level of innovation and R&D compared to manufacturing.
- In addition, stringent regulations on the service sector hinder productivity growth.

# The productivity gap between large firms and SMEs in Korea is exceptionally wide compared to other countries

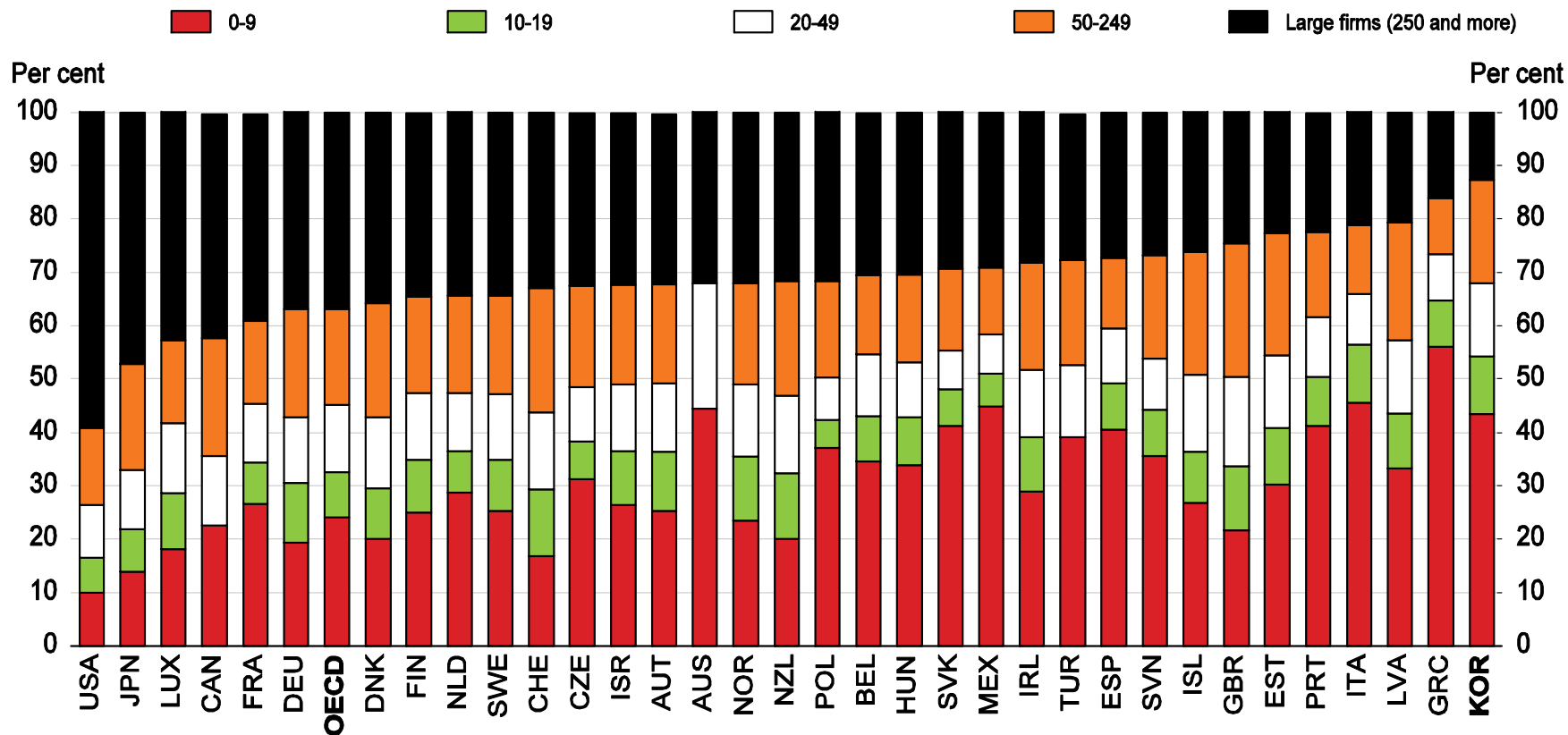
Labor productivity in SMEs relative to large firms = 1.0 in 2015



Note: Figures show the ratio of labor productivity in firms with fewer than 250 workers to labor productivity in firms with more than 250 workers in the non-financial business sector. Labor productivity is measured as value added per person employed, broken down by economic sector and firm size class. The figure for OECD is the simple average of available countries.

Source: OECD STAN SStructural ANalysis Database, <https://oe.cd/stan>.

# The share of employment in SMEs in Korea is the highest in the OECD

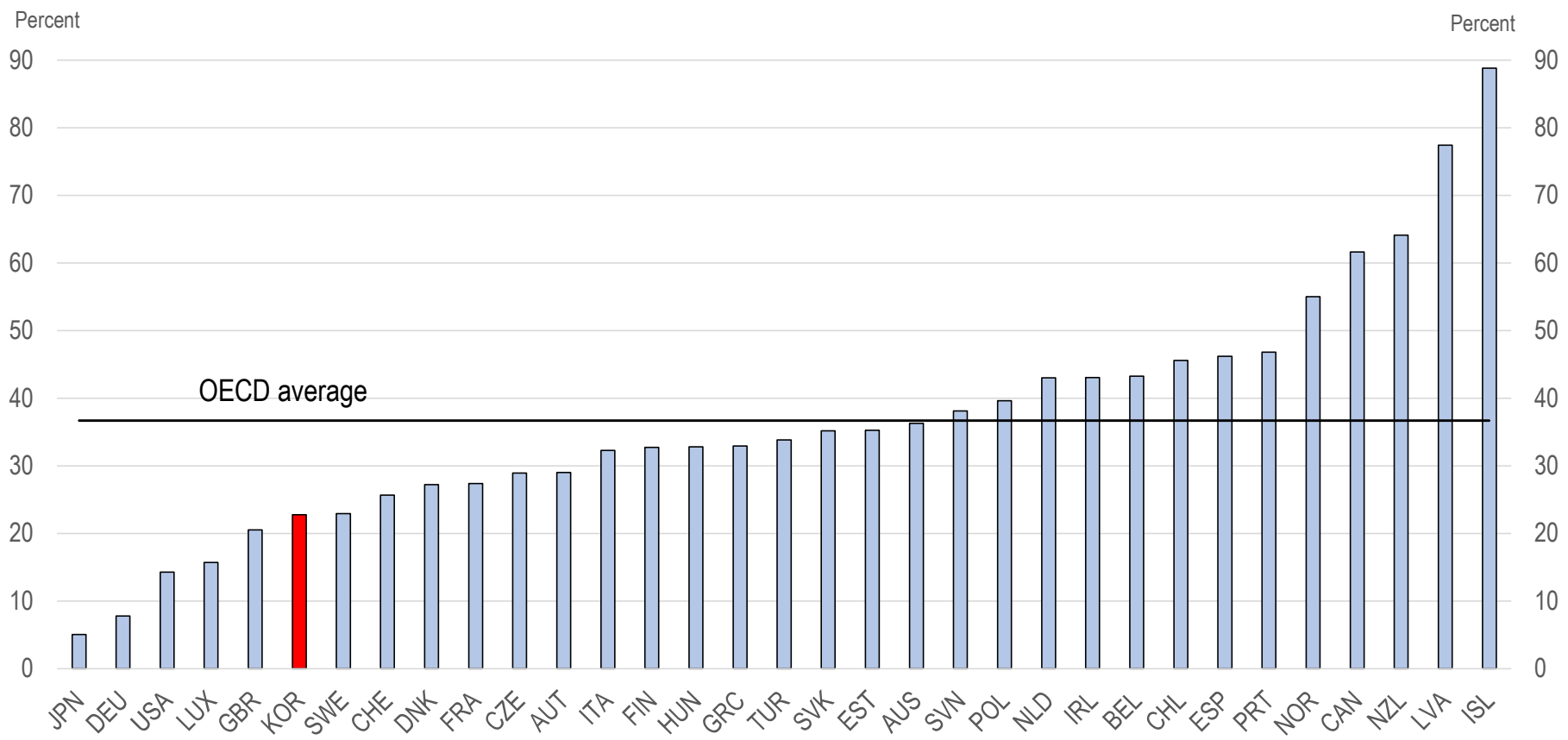


Note: The OECD defines SMEs as firms with up to 249 employees, divided into: micro-enterprises (1 to 9); small firms (10 to 49); and medium enterprises (50 to 249).

Source: Jones, R. and J. Lee (2018), "Enhancing Dynamism in SMEs and Entrepreneurship in Korea", *OECD Economics Department Working Paper No. 1510*, OECD Publishing, Paris.

# The share of business R&D by SMEs is relatively low in Korea

As a percentage of total business R&D in 2016



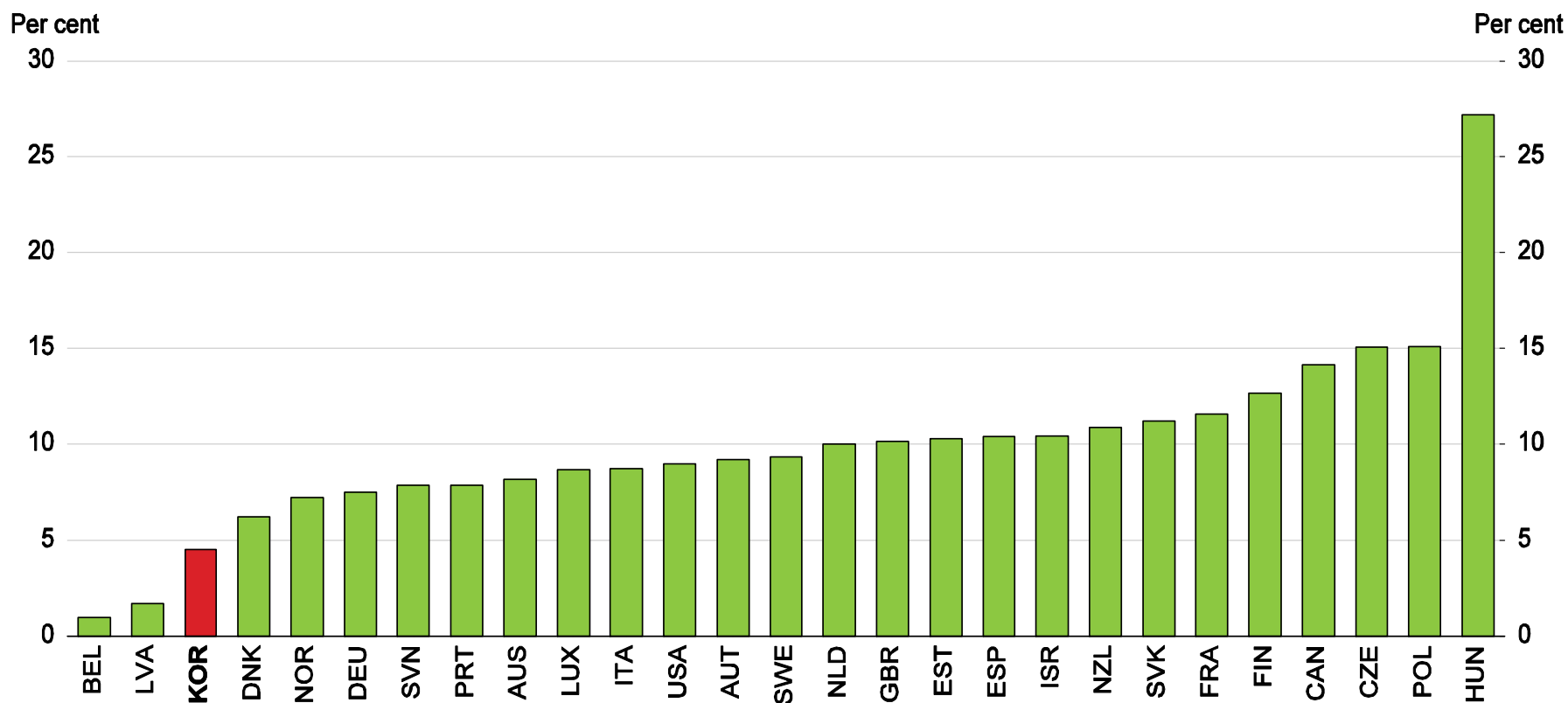
Source: OECD (2019), *OECD SME and Entrepreneurship Outlook, 2019*, OECD Publishing, Paris.

# Korea's 1987 Constitution declares that the “State shall protect and foster SMEs”

- In 2017, there were 288 central government programmes to support SMEs, in addition to 1,059 programmes at the local government level (1,347 in total). Central government spending on such programmes amounted to 3.0% of its total spending in 2017.
- 43% of SMEs in Korea receive government support, the seventh-highest share among OECD countries.
- The government also provides large-scale support to SMEs through public funds and credit guarantees, which were the 2nd-largest in the OECD at 3.6% of GDP in 2018.
- In addition, SMEs are assisted through: *i)* preferential treatment in public procurement; *ii)* lower corporate income tax rates at both the central and local government levels (half of large firms) and preferential treatment that lower taxable income; *iii)* exemptions for associations of SMEs from the Monopoly Regulation and Fair Trade Act; *iv)* the right to hire foreign workers; and *v)* discounted prices for water and electricity.
- **In sum, extensive government assistance has weakened competitive pressure on SMEs and slowed their restructuring. It is essential to scale back government support for SMEs.**

# The exit rate of companies is very low in Korea

The number of employer enterprise exits as a percentage of active employer enterprises, 2014 or latest year



Source: Jones, R. and J. Lee (2018), "Enhancing Dynamism in SMEs and Entrepreneurship in Korea", *OECD Economics Department Working Paper No. 1510*, OECD Publishing, Paris.

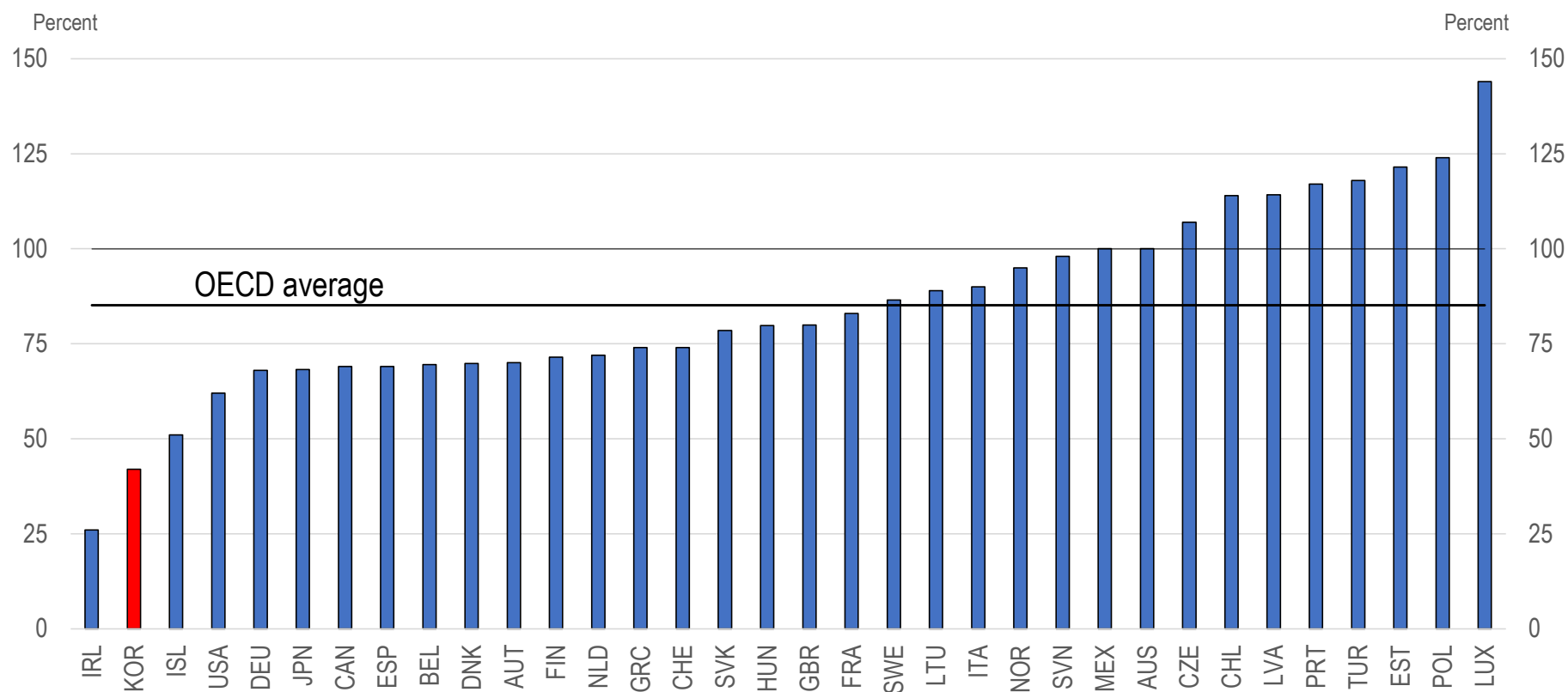
## What explains low productivity in SMEs? They are concentrated in Korea's low productivity service sector

- Almost two-thirds of SME employment is in the service sector, with manufacturing accounting for another 27% and construction 8%.
- Around 90% of employment and output in the service sector is accounted for by SMEs.
- Given the overlap between the service sector and SMEs, the causes of their low productivity are similar.
- In addition, low service-sector productivity is in part due to the legacy of an export-led growth strategy that attracted the most productive resources into manufacturing. In addition, manufacturing benefited from a number of measures, including lower tax rates and utility charges.
- **Establishing a level playing field between services and manufacturing would boost productivity levels in both services and SMEs.**



# Service-sector productivity is low in Korea

Labor productivity in the service sector as a percentage of that in the manufacturing sector in 2015

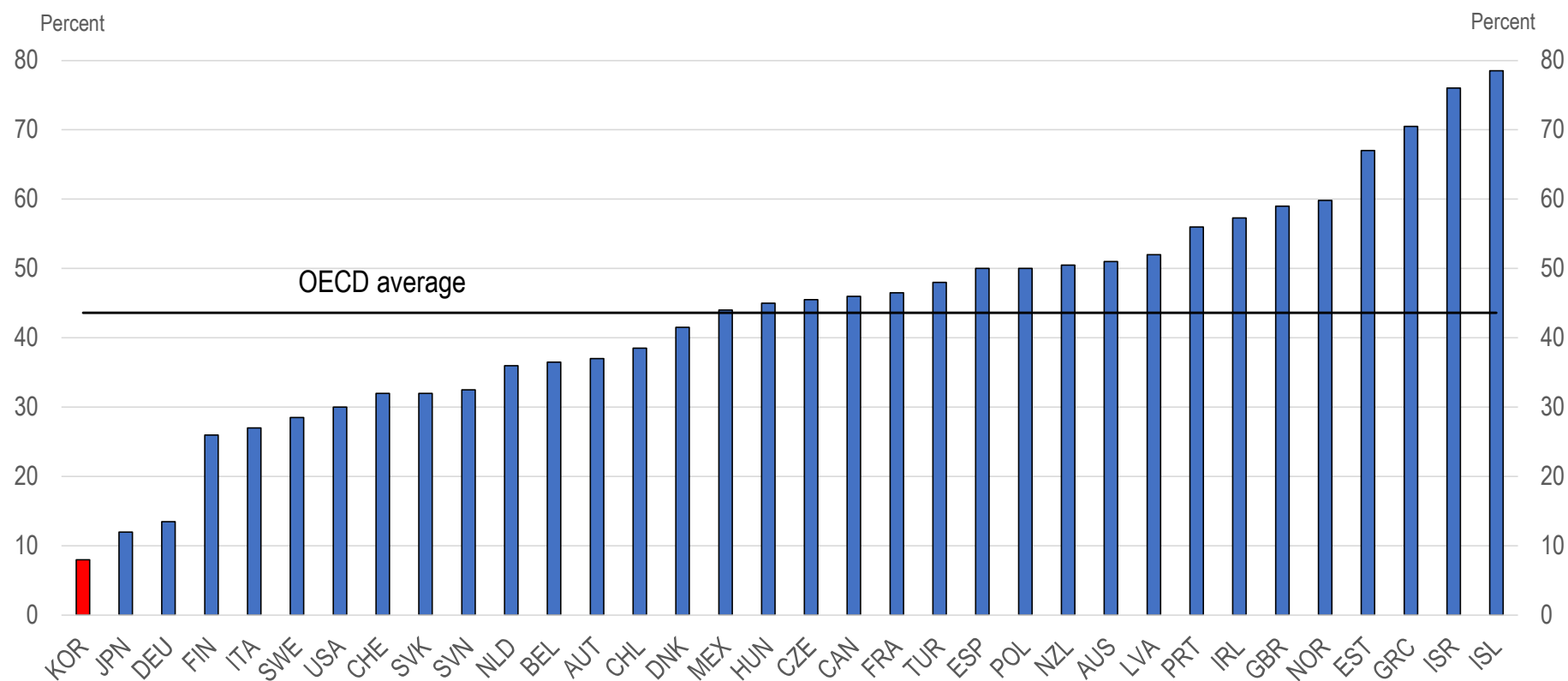


Note: The service sector excludes financial services.

Source: OECD (2021), *Inclusive Growth Review of Korea: Creating Opportunities for All*, OECD Publishing, Paris.

# The service sector's share of business R&D in Korea is the lowest in the OECD area

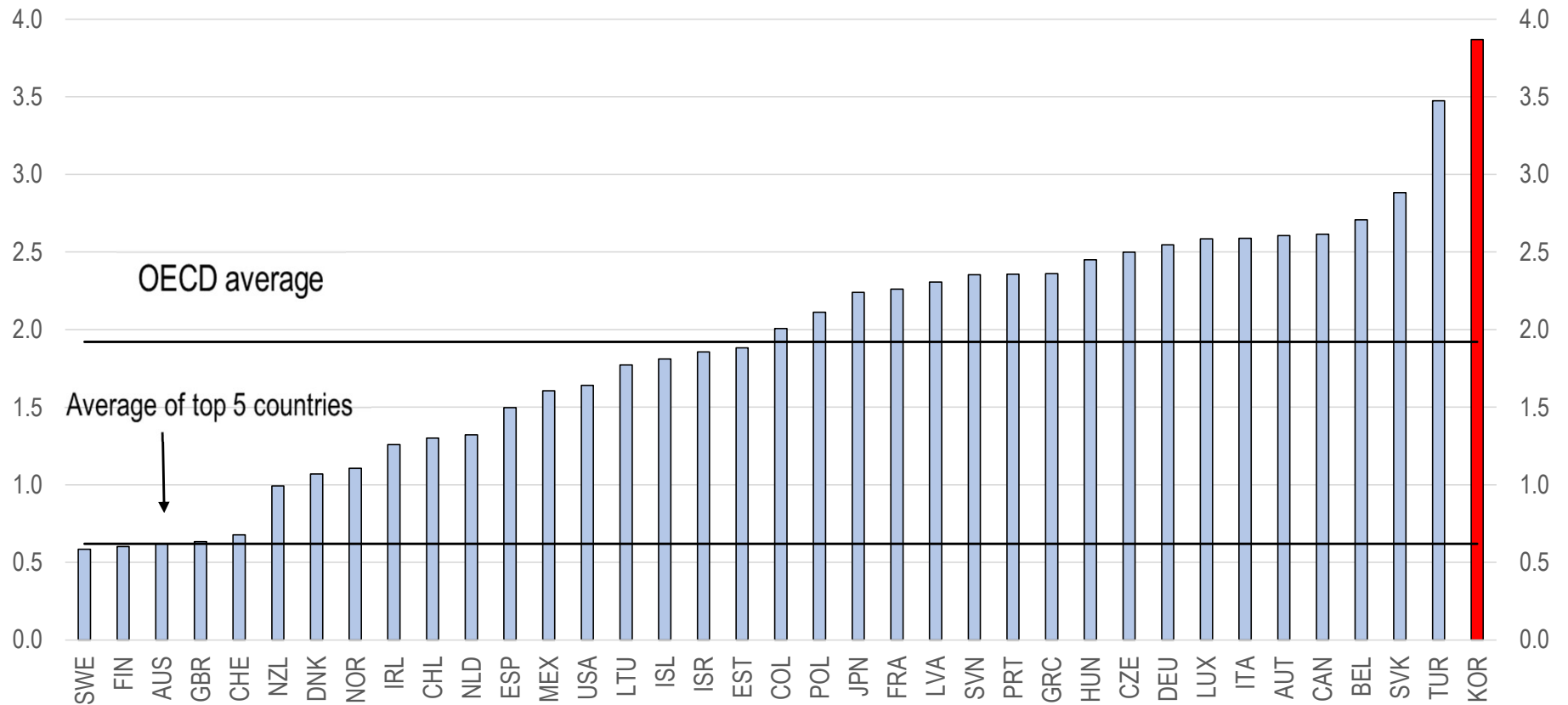
As a percentage of total business R&D in 2015



Source: OECD (2017), *OECD Science, Technology and Industry Scoreboard 2017*, OECD Publishing, Paris.

# Regulations imposed on services are very stringent in Korea

The index ranks regulation from zero to six (most competition-friendly to least) in 2018



Note: The index covers retail distribution, retail sales of medicine, lawyers, notaries, accountants, civil engineers and real estate agents.

Source: OECD data, Sector PMR Indicators.

KDI-Brookings Joint Seminar: Productivity in a Time of Change

11 April 2023

Technology Adoption and Productivity of Korean Firms

Dr. Jinkook Lee



Randall S. Jones

Adjunct Professor, Johns Hopkins University

Distinguished Non-resident Fellow, Korea Economic Institute

Research Associate, Center on Japanese Economy and Business, Columbia University

Former Senior Counselor - East Asia and Head of Japan/Korea Desk, Organisation for Economic Cooperation and Development (OECD)