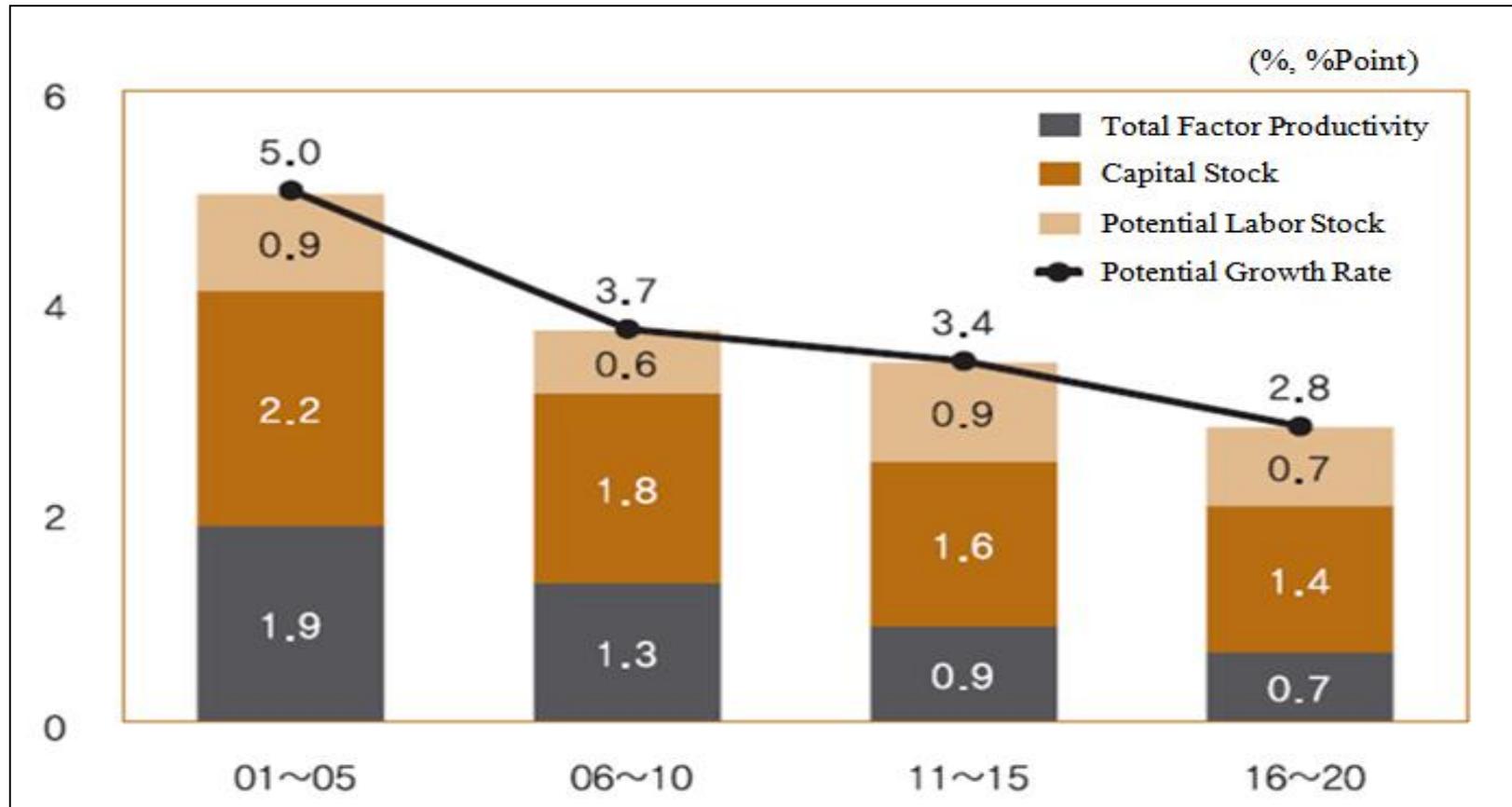


# **Employment Impacts of Disruptive Technologies and Policy Responses in Korea**

2<sup>nd</sup> Global Trade and Innovation Policy Alliance  
May 17, 2018, Milano

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# Declining Potential Growth



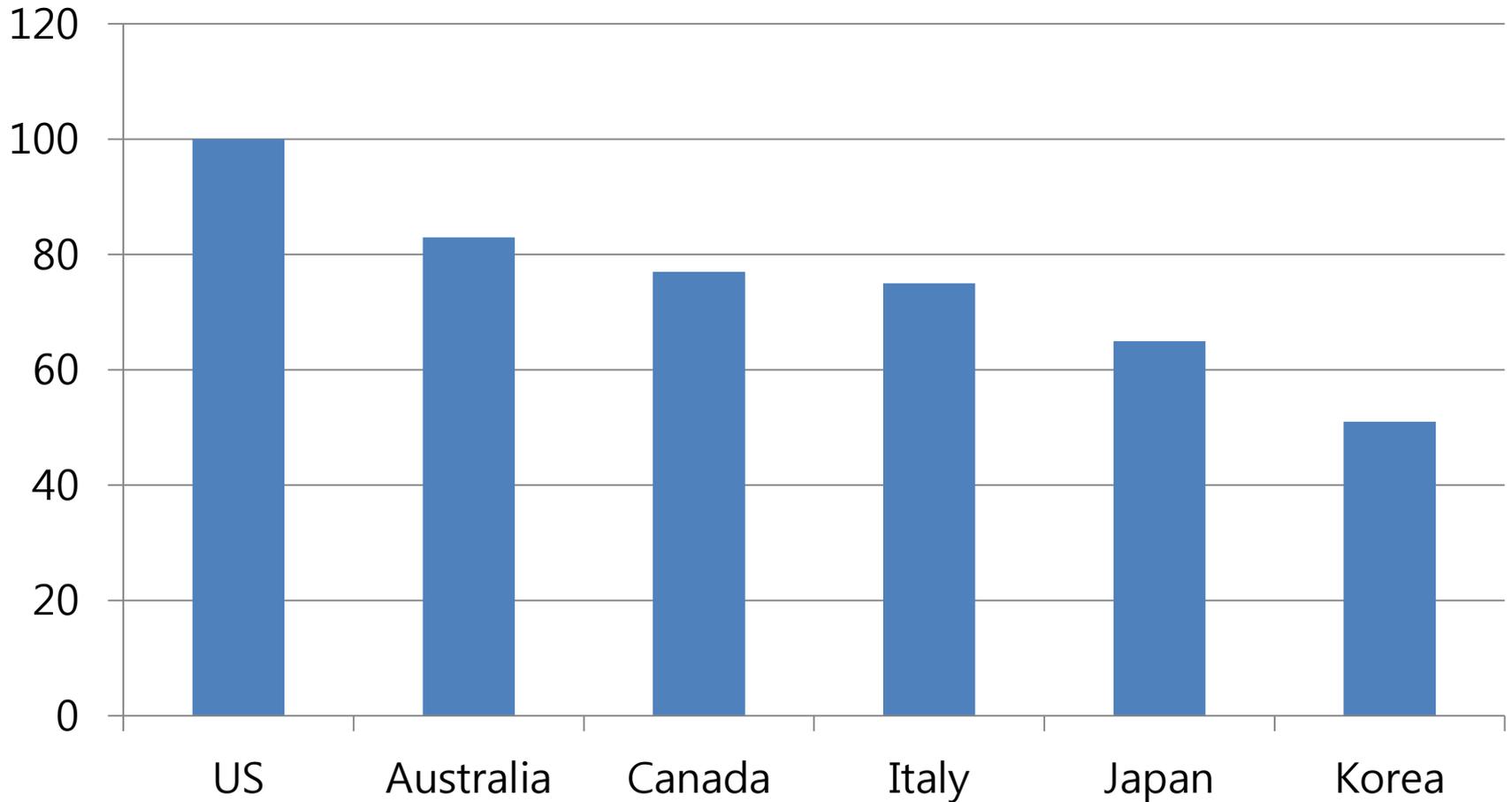
Source: The Bank of Korea, July 2017

# Fertility and Aging

	OECD average	Korea (2017)	Japan	US	UK	Sweden	Germany
Fertility (2015)	1.7	1.05	1.42	1.86	1.81	1.88	1.47
Elderly (2014)	15.9	14.0	26.0	14.5	17.5	19.4	21.4

Source: OECD Data 2018, Korea National Statistical Office 2018

# Labor Productivity (%)



Source: The Conference Board Total Economy Database (adjusted version)  
March 2018

# Korea's Growth Strategy



• “Income-led Growth”

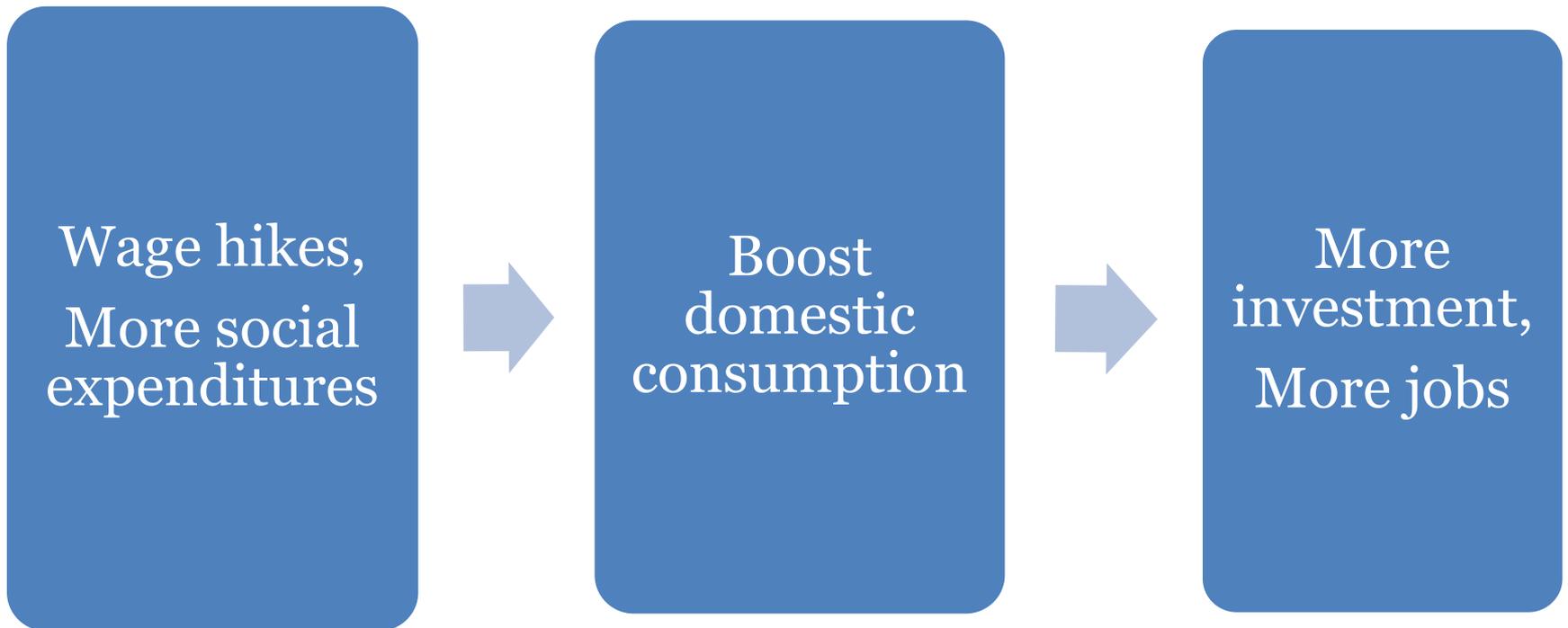


• Innovative Growth



• Inclusive and Sustainable Growth

# “Income-led Growth”



Effectiveness & Sustainability?

# Labor Productivity and Wages (% point)

	2010	2011	2012	2013	2014	2015	2016
Nominal wage/Hour	100	101.7	107.2	112.5	116.2	120.2	125.7
Labor productivity	100	100.2	97.6	98.7	97.3	84.5	87.1

1. 2010=base year
2. Labor productivity index excluding agricultural workers

Source: The Bank of Korea and Government statistics

# Innovative Growth

- To increase productivity and long-term economic growth potential
- Particularly through innovations in technology, industry, human resources, institutions
- Fiscal policy and regulatory reform to facilitate private sector investment

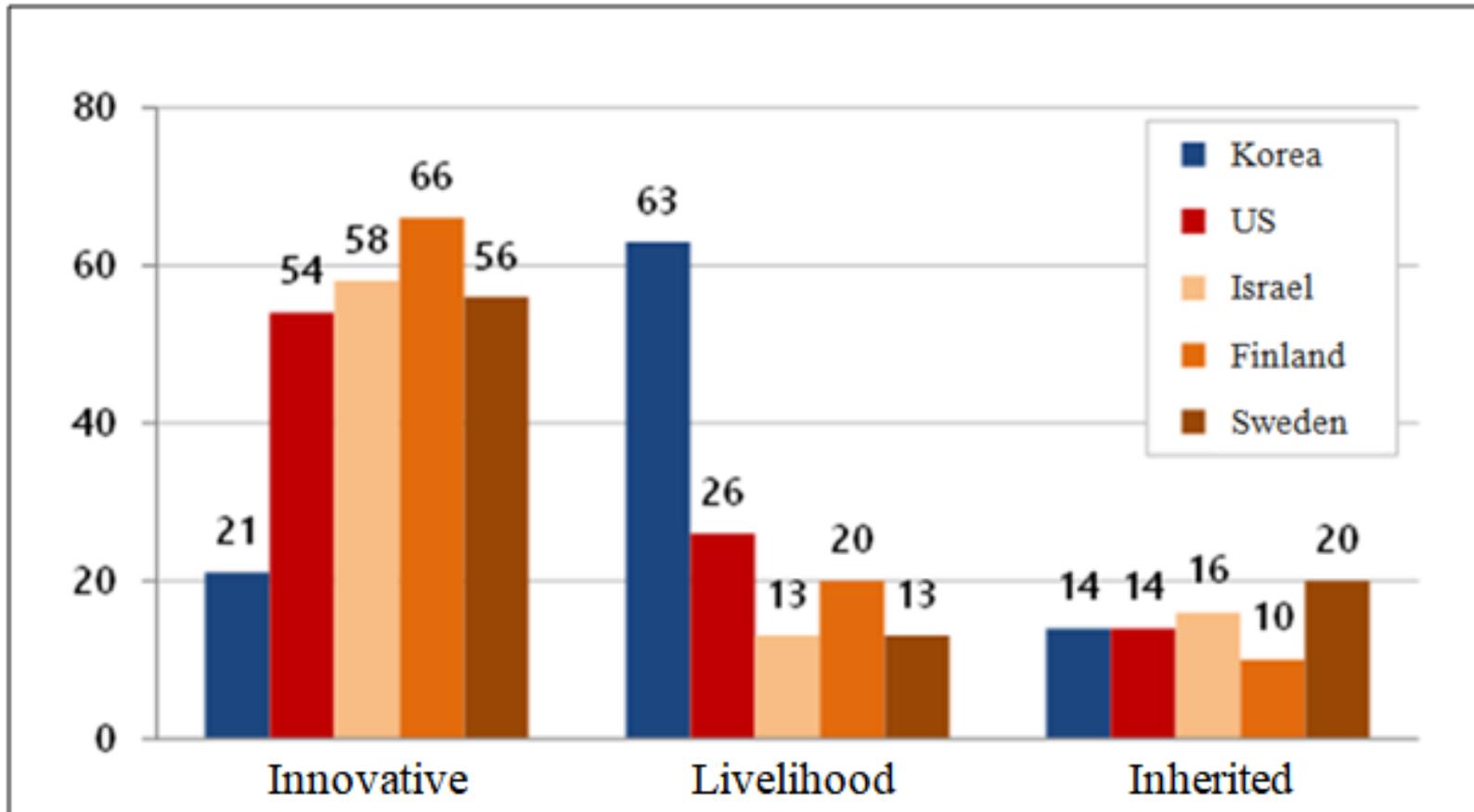
# **Focus Areas**

- Startups & venture investment
- Effectiveness of R&D investment
- Regulatory reform

# Startups & Venture Investment

- Between 2012 and 2017
  - new startups (annual average): 74,162 → 98,330
  - venture companies (annual average): 28,193 → 35,282
- Survival: 25% only. 75% disappeared in 5 yrs (death valley)
- Difficulty in financing

# Types of Business Startups



Source: OECD Entrepreneurship at a Glance 2014

# R&D Investment

- R&D investment as percentage of GDP: Korea (4.23%), Israel (4.25%), Japan (3.29%), Germany (2.93%), US (2.79%)
- Government R&D budget (as % of GDP): 1.21%, world's highest since 2011
- Technology trade balance: in deficit
- Technological readiness index: 29<sup>th</sup> (WEF)
- Public R&D to focus on basic & source technology research
- Efficiency of R&D investment to enhance
- More open and collaborative approach (co-authorship, co-patenting)

# Regulatory Reform

- Regulation: No.1 barrier to global competition
- Comprehensive negative regulation
- Regulatory Sandbox to apply to new industries and new technologies, except in such areas as security, protection of micro self-employed, life & medical ethics, and protection of privacy
- Sectors most affected by heavy regulation coincide with new growth industries to promote: fintech (70.5%), new renewable energy (64.7%), driverless cars (50.0%), bio & health (43.8%) [survey result, June 2017]

# Create an Ecosystem for Innovation

- Leave for building a startup
- TIPS: US\$2 mil financial support for 3 yrs (esp. for high value added tech areas, incl. bio/healthcare)
- Encourage in-house startup incubation in universities, govt sponsored research institutes, public corporations
- Entrepreneurship to be added to high school curriculum

# Reduce Barriers to Innovation

- Do away with Guarantee system
- Prevent technology extortion by large corporations (Fair Trade Commission)
- Establish more “Makers Space” – open source, mentoring, office space, etc. (350 makers spaces by 2022)
- Strengthen social safety nets (training for job transfer, etc.)

# Education Reform

- Skills mismatch
- Around 63% of Korean workers not well-matched to their jobs (PIAAC 2015)
- Young and aging workers skills gap, esp digital skills
- Expectations mismatch
- Less investment efficiency
- Facilitate school-to-work transition
- Lifelong learning – adult learning particularly low among poorer workers

# Labor Market Flexibility and SSN

- Duality and rigidity of labor market – regular vs non-regular workers
- Less conducive to more productive use of human capital and adjusting to disruptive technologies
- Strengthen SSN

# Women Labor Force Participation

- Low participation rate
- Aging population
- Childcare facilities
- Flexible work hours