

# Invest Korea

February 2021

## Spearheading Digital Transformation

**CHENFAI CHUNG**

Vice President & General Manager, North Asia  
Emerson Automation Solutions

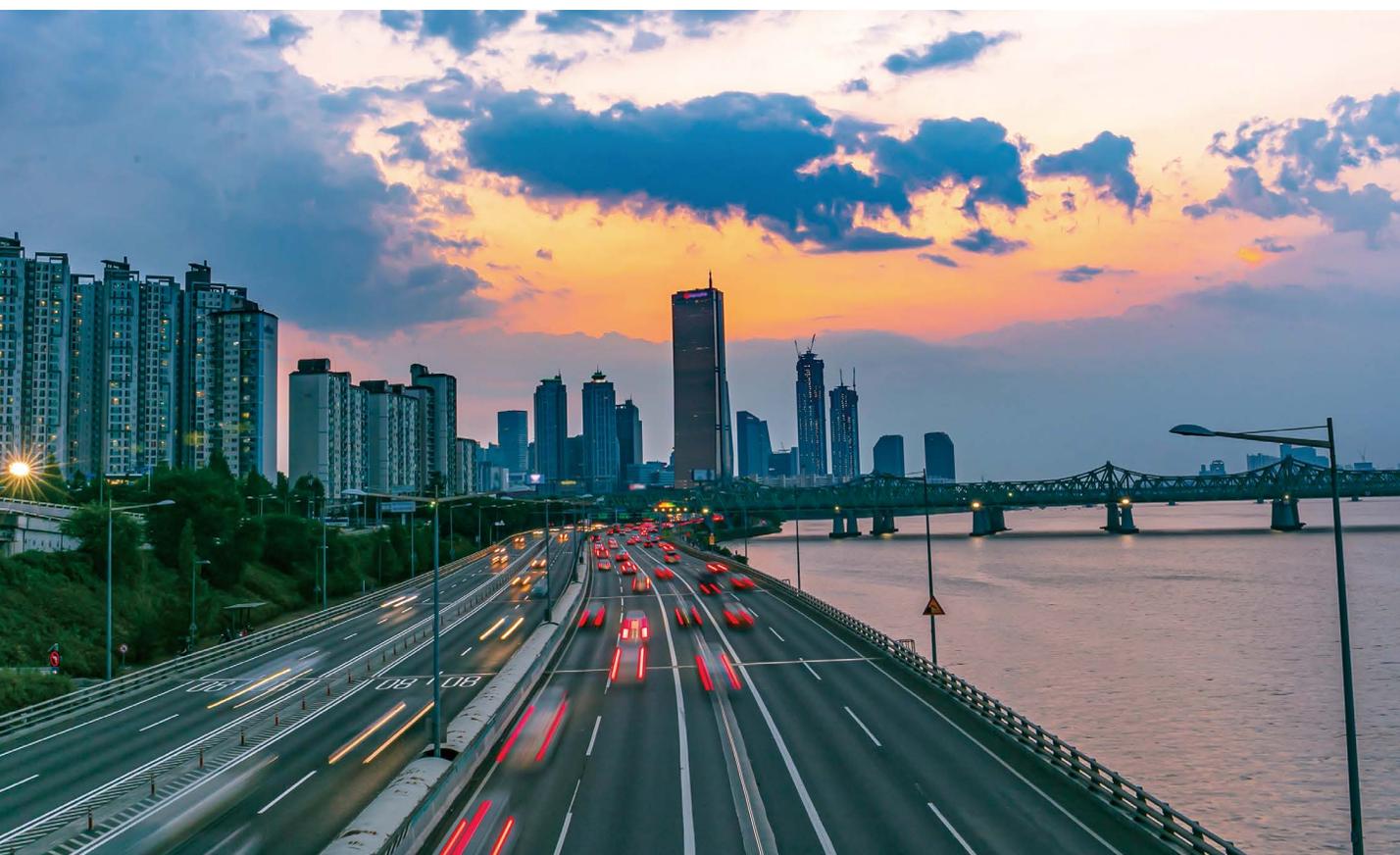
**Korea, the World's No.1 in Innovation**

**Strengthening Korea's Position as a Manufacturing Powerhouse  
through the Introduction of Smart Factories**

**Location Report: Gyeongnam Changwon Smart Green Industrial Complex**

# Korea, the World's No.1 in Innovation

Why is Korea the most innovative country in the world?



## No.1 on the 2021 Bloomberg Innovation Index

S. Korea has been named the most innovative country in the world, topping the 2021 Bloomberg Innovation Index, released in February 2021, for the eighth consecutive year in Asia. This can be largely attributed to both the unflagging commitment of Korean businesses and the authorities in investing in the country's future growth even when encountering tough headwinds at home and abroad. By launching a development and relief package dubbed the Korean New Deal, which comprises a set of sub-plans like D.N.A (data, network and AI) and +BIG3 (future mobility, bio-healthcare, system semiconductor) drafted to undertake reforms in the economy along with spending plans rolled out this year to invest

nearly KRW 100 trillion in research and development (World's top 5 in R&D expenditure, 2021), S. Korea has set out the path toward innovation-driven growth.

The Bloomberg Innovation Index makes a comprehensive analysis using seven metrics under which numerical data aggregated by each country are scored to rate a country's innovation capacity. S. Korea has been of the front rank in five sub-indicators of the index—2nd in R&D intensity, 2nd in value-added manufacturing, 4th in high-tech density, 3rd in researcher concentration and 1st in patent activity. Such resources to drive innovation would probably be part of the reasons that well explain why so many global investors are fascinated with Korea as the best place to invest in.

## No.1 in the 2021 Bloomberg Innovation Index

2021 Rank	Economy	Total Score	R&D Intensity	Manufacturing Value-added	High-tech Density	Patent Activity	
<b>1st</b>		<b>S. Korea</b>	<b>90.49</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>1</b>
2		Singapore	87.76	17	3	18	4
3		Switzerland	87.60	3	5	11	18
4		Germany	86.45	7	6	3	14
5		Sweden	86.39	4	21	6	21
6		Denmark	86.12	8	17	8	23
7		Israel	85.50	1	30	5	8
8		Finland	84.86	11	12	13	10
9		Netherlands	84.29	14	26	7	9
10		Austria	83.93	6	9	23	15

\*Source : Press release(Feb 3, 2021), Ministry of Economy and Finance

### No. 2 in R&D expenditure to GDP ratio

S. Korea has also maintained a leading position, ranking 2nd in R&D spending as a percentage of gross domestic production (GDP), which well signifies that the country has been making unremitting efforts to further improve its innovation prowess. According to the “Survey of Research and Development in Korea, 2019,” S. Korea placed 2nd for R&D expenditure to GDP ratio with 4.64 percent, a 0.12 percent jump on year, following Israel (4.94%, as of 2018)

※ The OECD average (excluding the data values for Korea) is based on the database sourced in 2018 and the statistical variables extracted in 2019 by country can change rankings and scores.

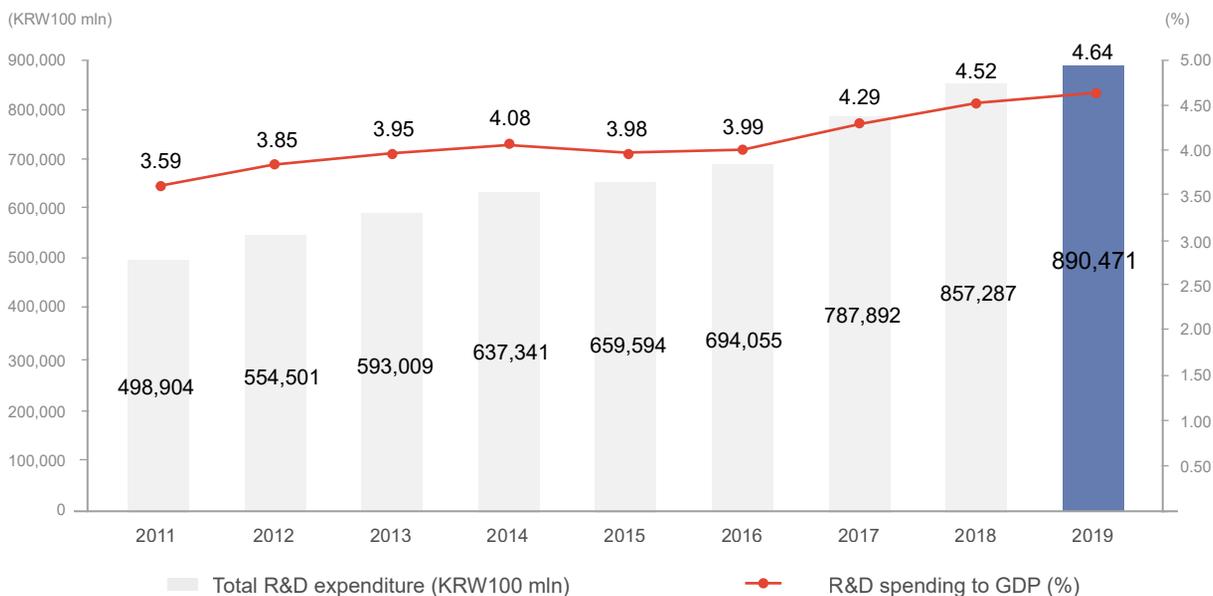
\* S. Korea’s R&D expenditure as a share of national GDP (ranking):  
2nd in 2016 → 2nd in 2017 → 2nd in 2018 → 2nd in 2019

### R&D expenditure to GDP ratio

1st		Israel	4.94%
<b>2nd</b>		<b>S. Korea</b>	<b>4.52%</b>
5th		Japan	3.28%
7th		Germany	3.13%
9th		U.S.	2.83%
14th		China	2.14%

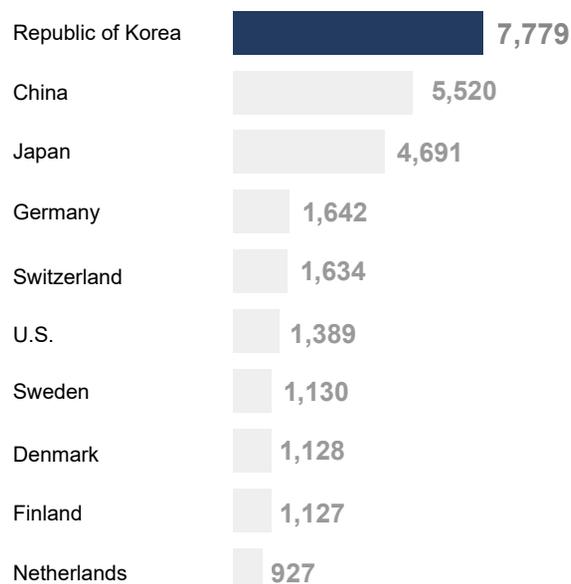
\*Source: OECD (February 2020)

### S. Korea’s total R&D expenditure and R&D spending to GDP

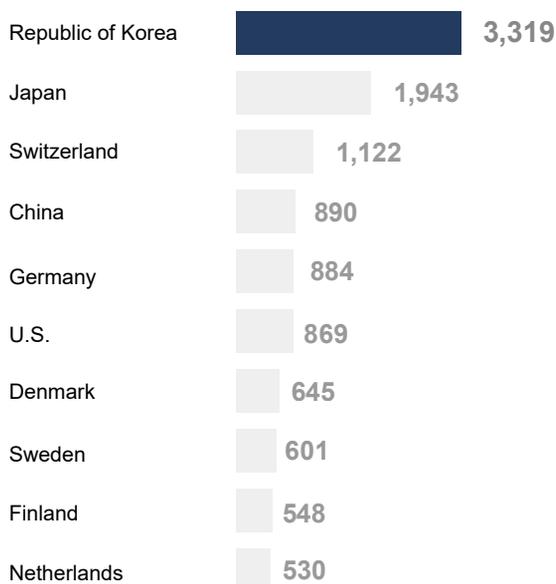


\*Source: Press release (Dec 9, 2020), Ministry of Science and ICT

### Resident patent applications per USD 100 billion GDP



### Resident patent applications per million population



\*Note: GDP data are in 2017 U.S. purchasing power parity (PPP) dollars.

\*Source: "World Intellectual Property Indicators 2020", World Intellectual Property Organization

### S. Korea, the world leader in patent applications per GDP · population

The World Intellectual Property Organization (WIPO)'s 2020 World Intellectual Property Indicator, an up-to-date annual overview of global patent activities, said that S. Korea is taking the lead in the rankings of patent filings per GDP as well as population.

S. Korea topped the global list of patent origins with 7,779 applications filed by Korean nationals per USD 100 billion GDP in 2019, ahead of China (5,520), Japan (4,691) and Germany (1,642) by a wide margin. Patent filings per million population in Korea was 3,319, proved to be overwhelmingly larger than 1,943 of Japan, the second leading nation in the 2019 index.

The aforementioned data can be an indicator which well demonstrates S. Korea's tireless commitment to R&D and its capability to lead the world in innovation.

Spurring on national level growth initiatives such as

the Korean version of the New Deal or DNA+BIG3, S. Korea will keep up its efforts to make substantial progress on improving innovation prowess and productivity.

The March issue of Invest Korea will cover S. Korea's superb logistics infrastructure and transport networks which connect all major cities and countries across the world.

**By Hyo Jung Jang**

*Assistant Manager*

*Investment Public Relations Team*

*Korea Trade-Investment Promotion Agency (KOTRA)*

# Economic Indicators

Here are some of Korea's major economic indicators that provide an overview of the country's recent economic developments.

**Source:**  
 International Monetary Fund (IMF), Bank of Korea (BOK), Korea International Trade Association (KITA), Ministry of Trade, Industry and Energy (MOTIE)

