

The Innovation Policy for SMEs in Republic of Korea

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Jong-Ouk Youn, Ph.D.

Director, Division for Technological Innovation Policy

Ministry of Small & Medium Enterprises and Startups

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- 1. Megatrend of Global Economy and Reaction**
- 2. Introduction to Ministry of SMEs and Startups**
- 3. Status of SMEs in Republic of Korea**
- 4. Innovation of SMEs Policies**

1. Megatrend of Global Economy and Reaction

4th Industrial Revolution & New Normal

4th Industrial Revolution



New Normal

**Low
Growth**

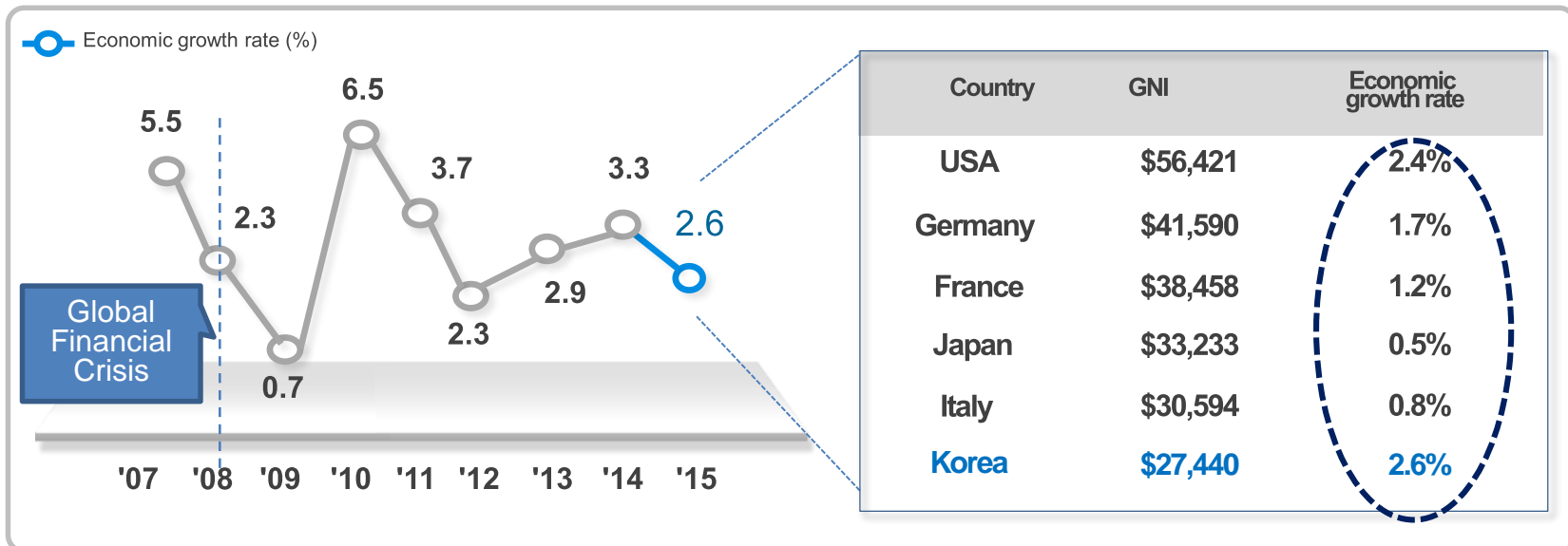
**Low
employment**

**Low
Interest
Rate**

**Low
Inflation**

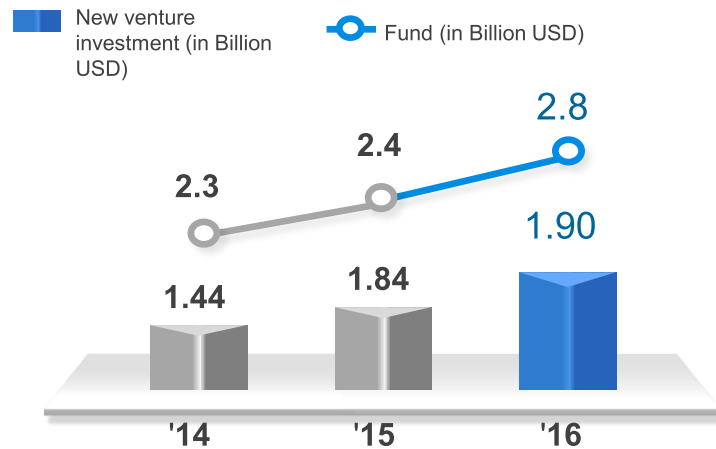


- **Stable Economic Growth Compared to Other OECD Countries**
- **Highest National Credit Rating by S&P : AA**

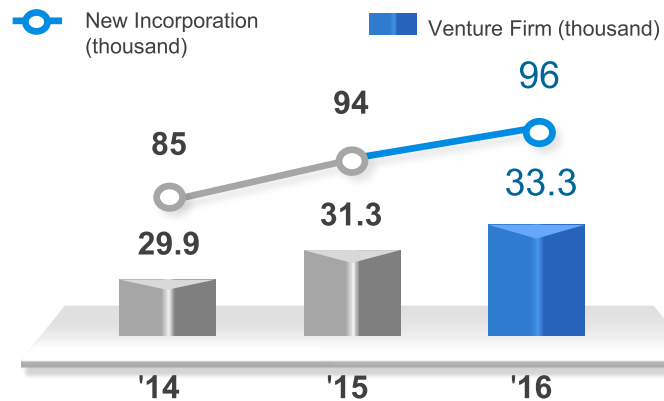


2nd Start-up and Venture Business Boom

- Highest Venture Investment in History

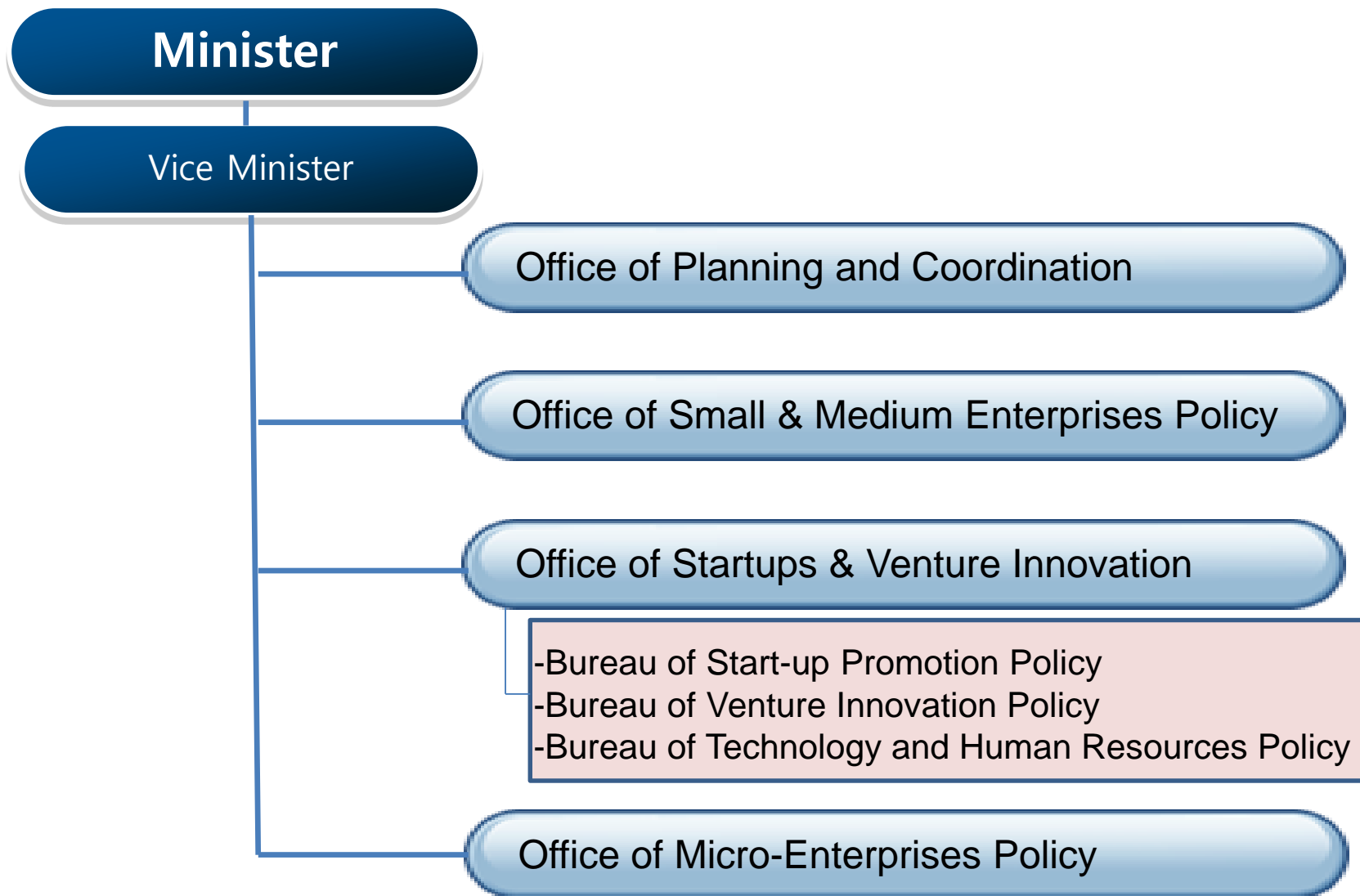


- Highest Number of New Incorporations & Venture Firms in History





2. Introduction to Ministry of Small & Medium Enterprises and Startups



- **Established SMBA(Small and Medium Business Administration) as a Central Government Organization in 1996**

- **Promoted to Ministry of Small & Medium Enterprises and Startups in July 2017**

- **7 Bureaus at Headquarters**
 - 12 Regional Offices
 - 2 Regional Branch Offices
 - 3 Meister High Schools

■ **Budget : 10 Billion USD(2017)**

■ **Employees : 1,325**

■ **Major Laws : Managing & Enforcing**

- Act on the Framework for SMEs ('66)
- Act on the Support for Establishment Act ('86)
- Act on the Special Measures for Support to for Small and Medium Enterprises('97)
- Act on the Promotion of Technology Innovation for Small and Medium Enterprises ('01), etc.

3. Status of SMEs in Republic of Korea



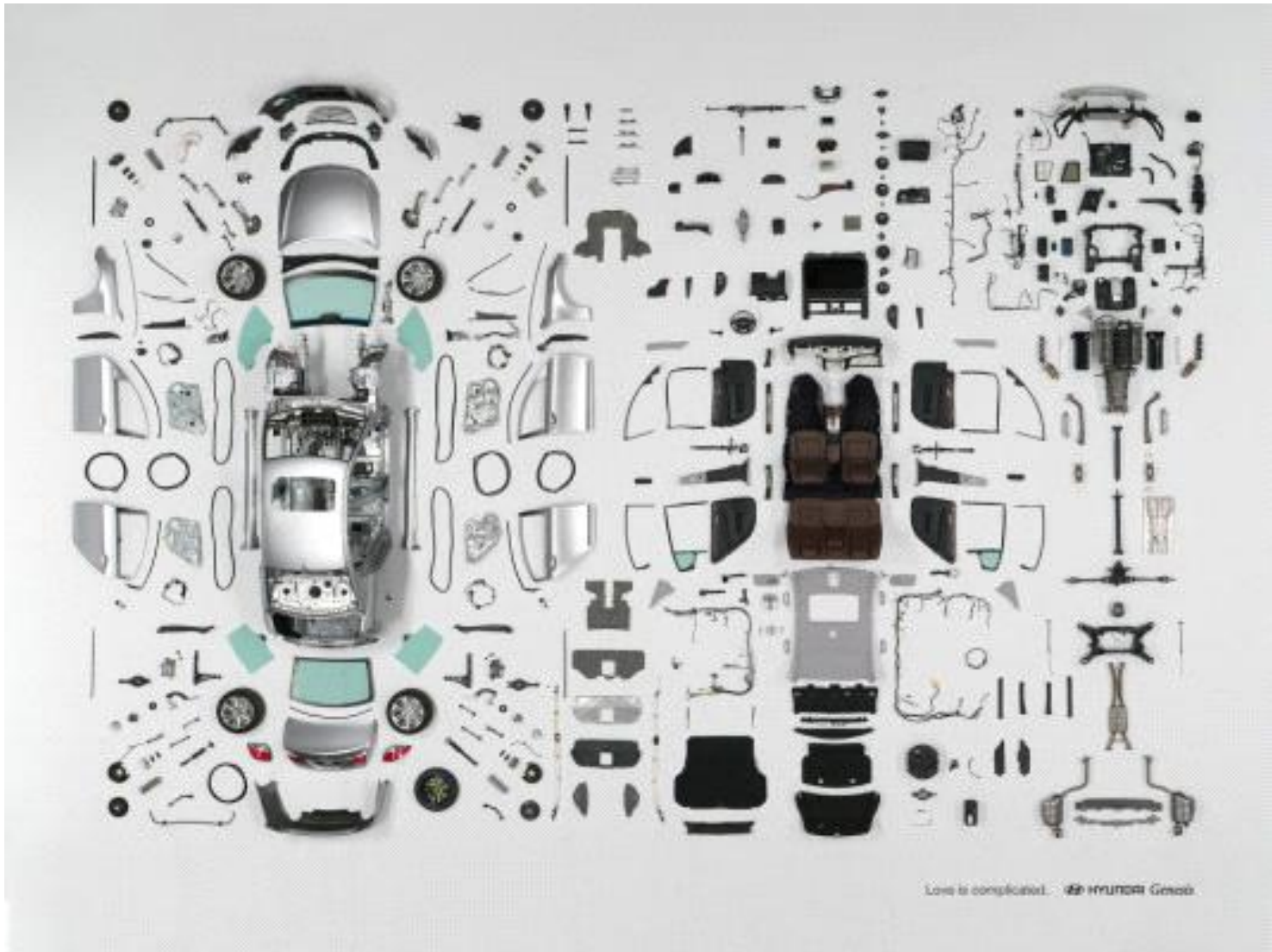
1 LSEs vs SMEs in Korea

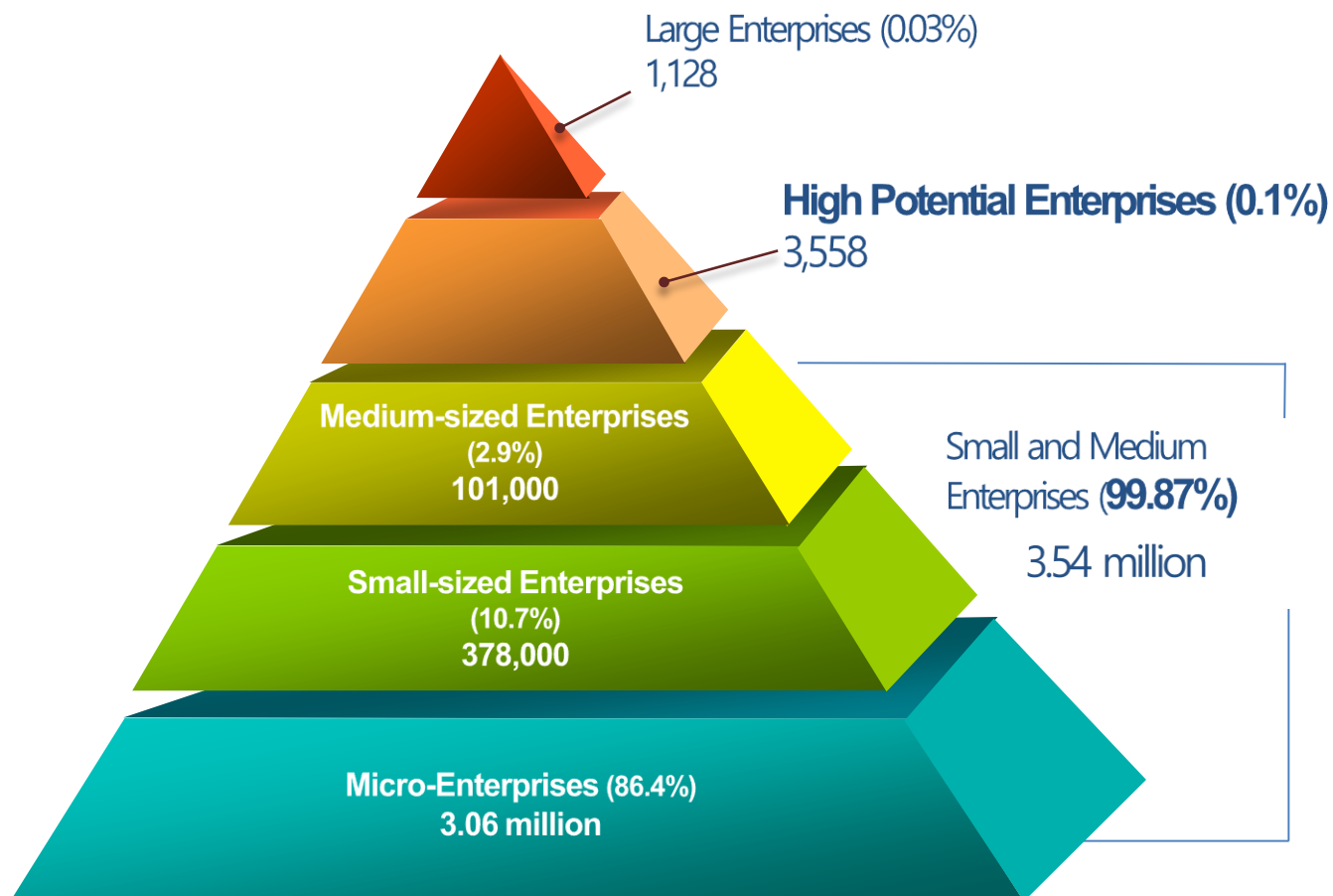


1 LSEs vs SMEs in Korea



1 LSEs vs SMEs in Korea

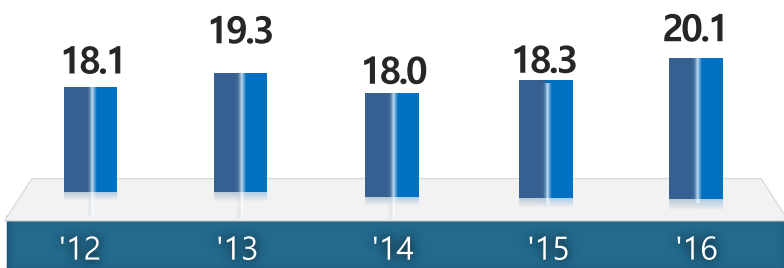




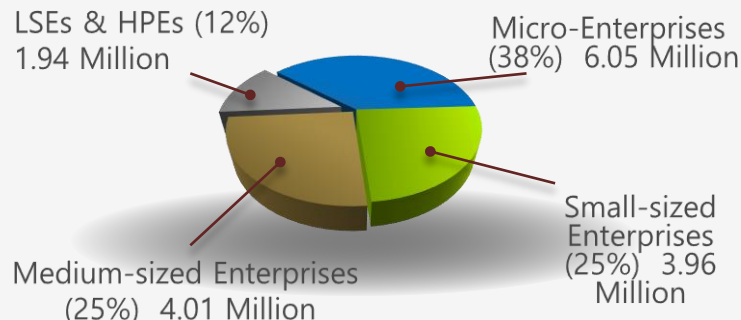
Source: Reorganization & Processing of national business survey (National Statistics Office, 2014)

■ **Employment : 88%**

■ **Export : 20.1%**

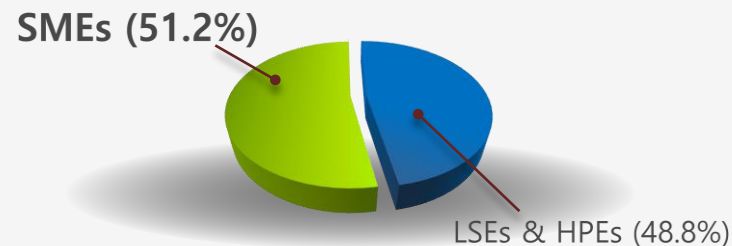


• Employment by Business Size



Source : Reorganization & Processing of national business survey (National Statistical Office)(2014)

• Added Value by Business Size



Source : Reorganization & Processing of Mining & Manufacturing Business Survey (National Statistical Office, 2013)

4. Innovation of SMEs Policies

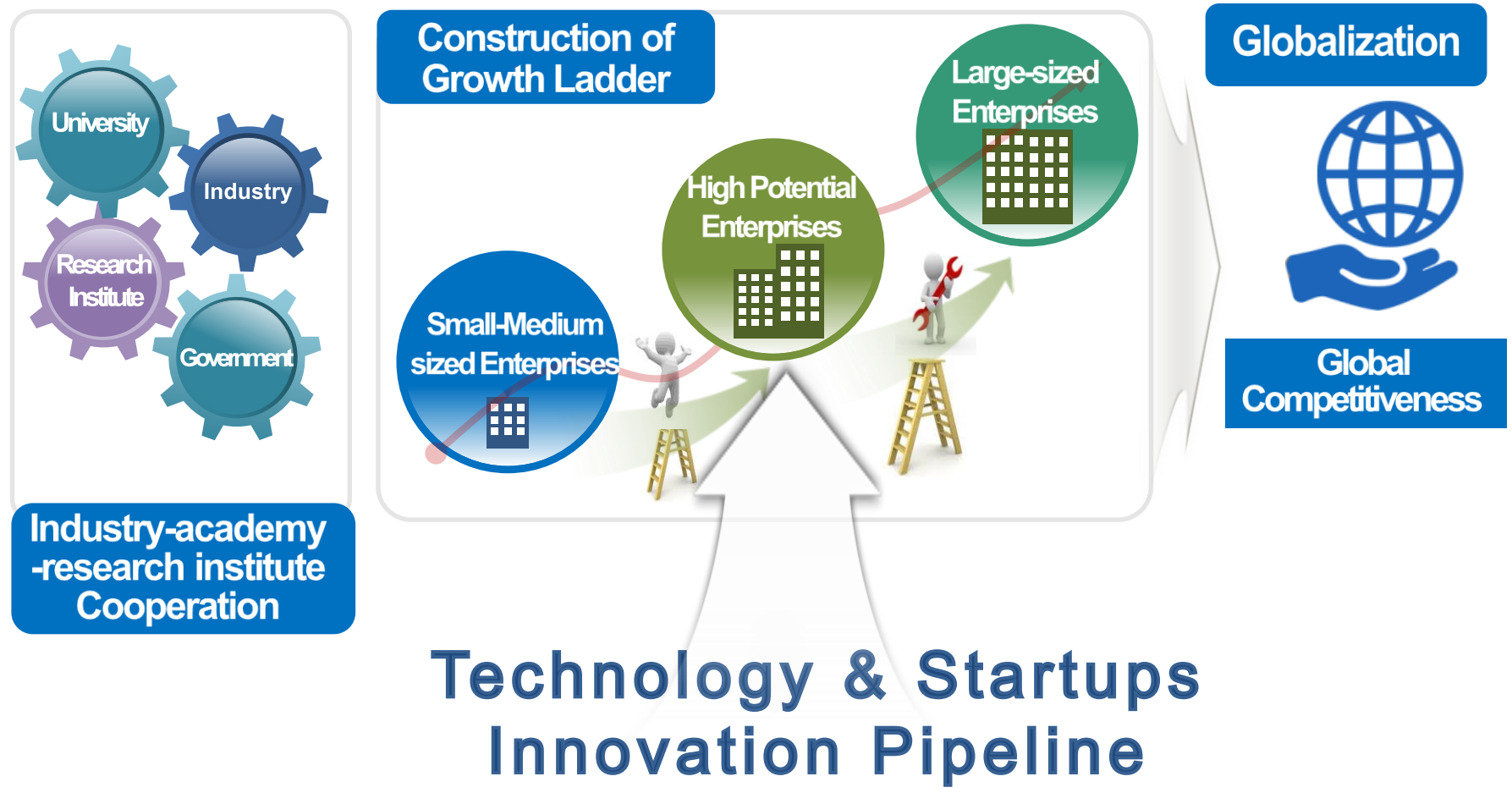
■ Global Competitiveness for Korea's SMEs

Korea's Economic Structure : Centered on Large Corporations

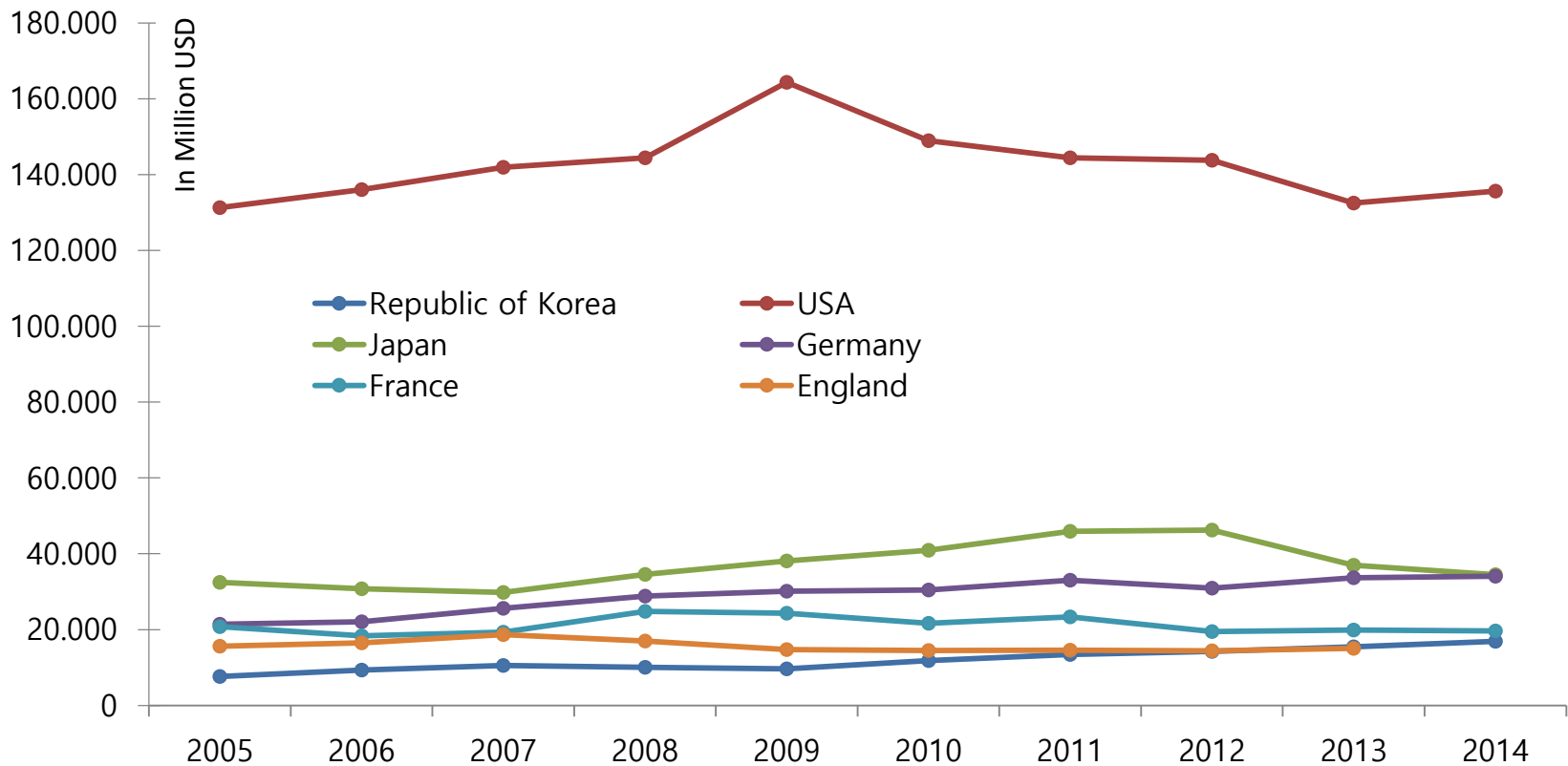
As the Center of Our Economy,
Globalization of **Small & Medium-sized Enterprises**

For the Globalization of Small and Medium-sized Companies
Securing Global Competitiveness

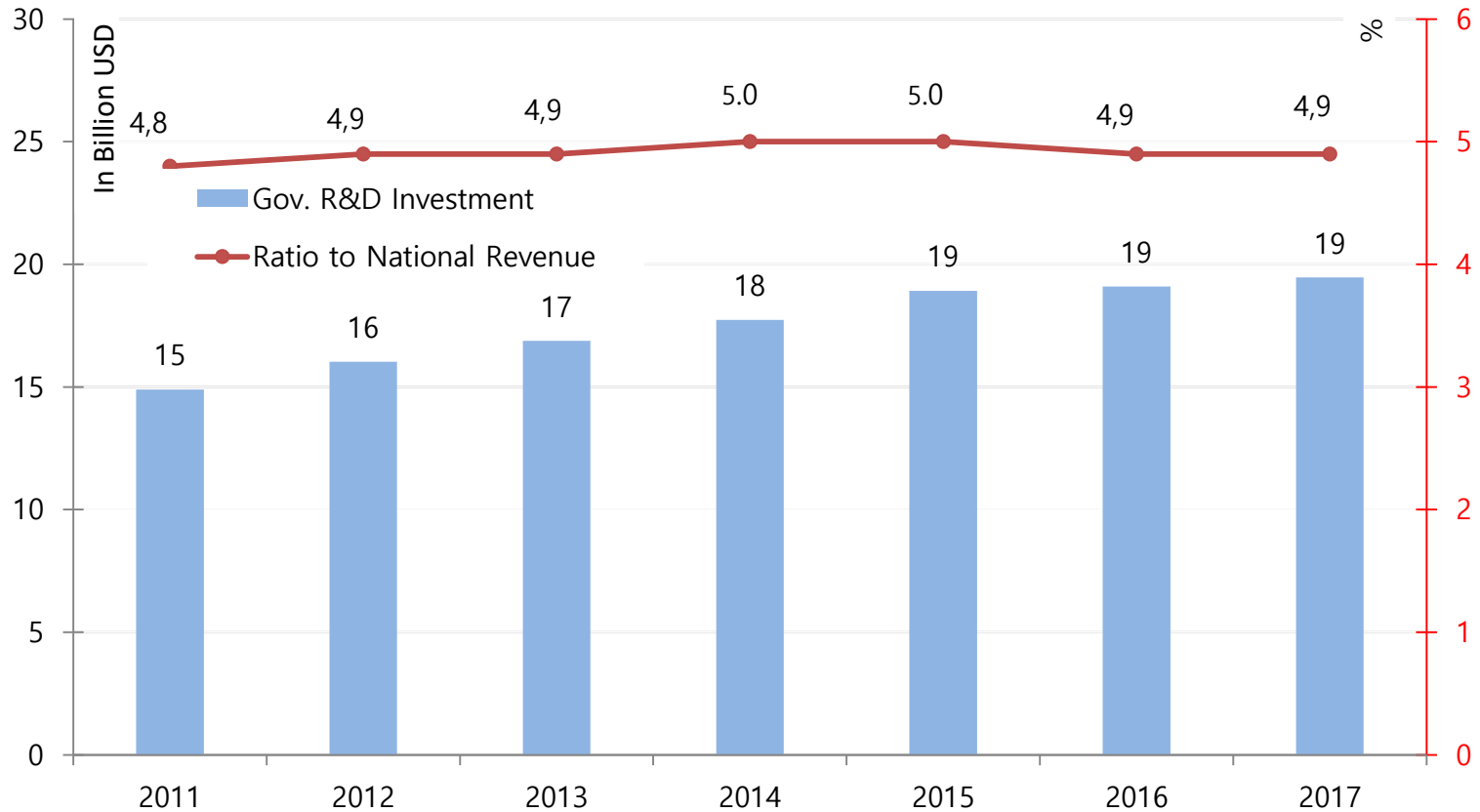
Globalization & Balanced Growth for SMEs



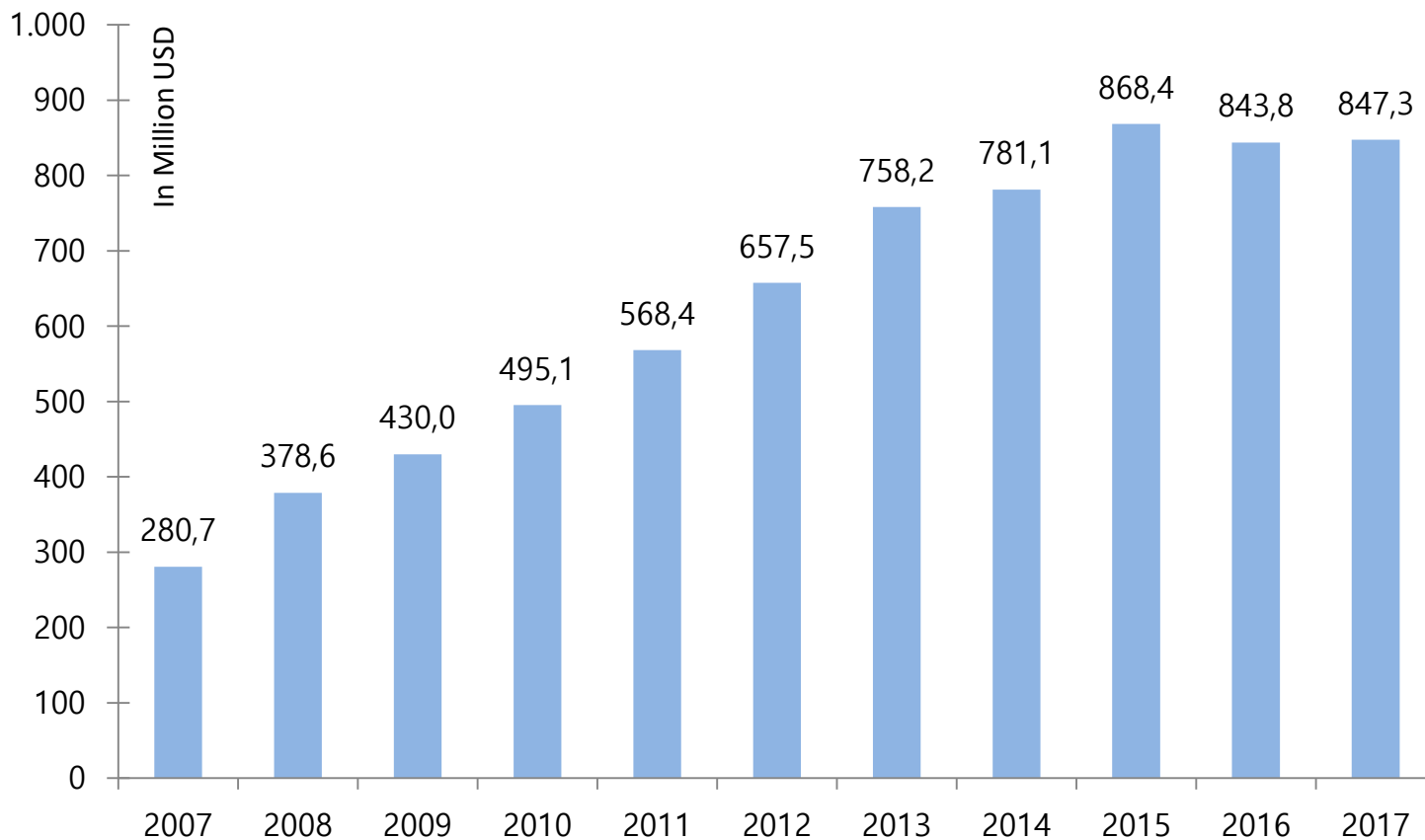
Total Government R&D Investment by Countries



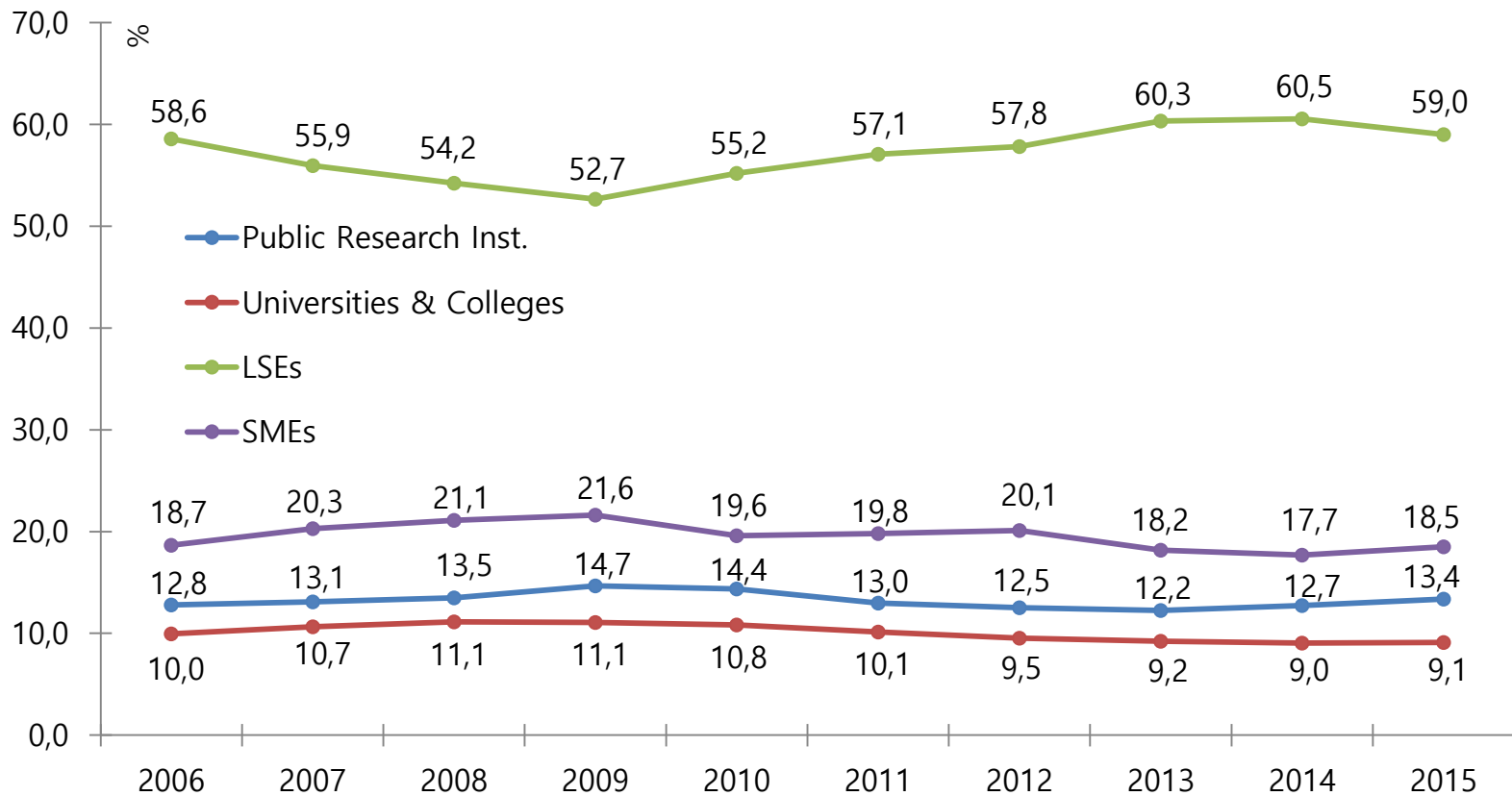
Korean Government's R&D Investment



R&D Expenditure in MSS(SMBA)

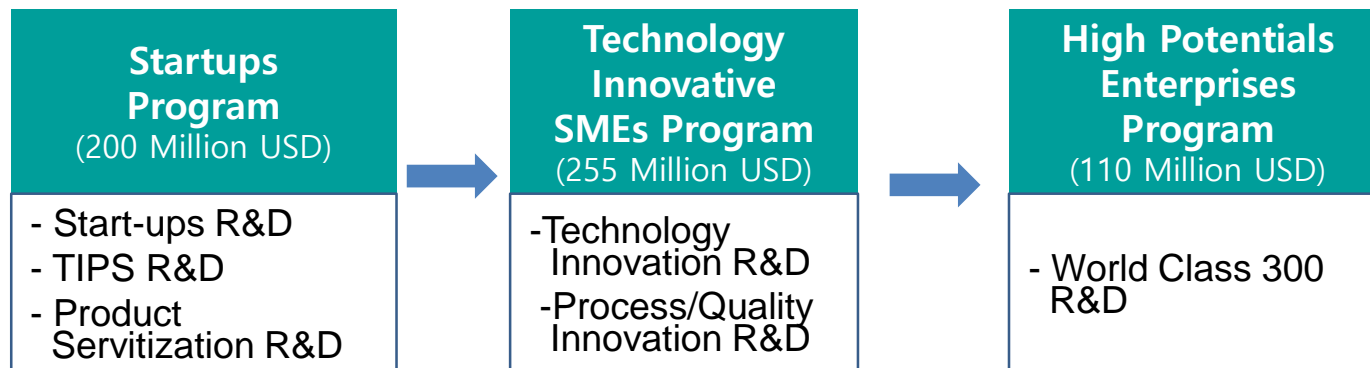


Korea's National R&D Investment by Sector of Performance

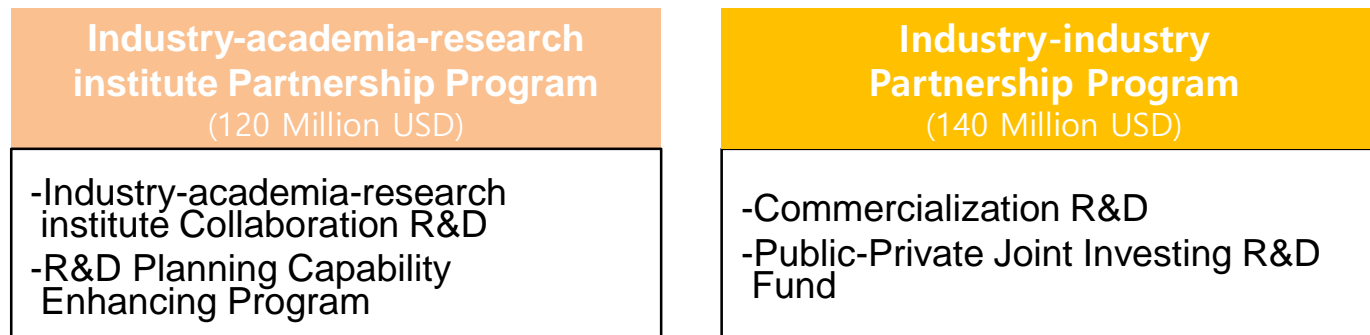


R&D Strategy for SMEs

- Balanced Growth Ladder for SMEs



- R&D Partnership Eco-system



■ R&D Collaboration Eco-system

- Joint Use of Equipment available in Universities and Research Institutes for SMEs
- Corporate Partnership Research Center for SMEs
- Engineering Consulting Centers for SMEs by Professors & Researchers in Universities

■ R&D Collaboration Ecosystem

- Partnership R&D Program with ESP(engineering service provider)
 - * Product Design Service, Prototyping, Process Design, Product Testing. etc.
- ESP Park(business incubator) for Supporting SMEs' R&D Performing Capability
- Public-Private Joint Investing R&D Fund for Commercialization(government-LSEs/HPEs)

- **Protection and Preventing of Technology Leakage of SMEs(example : IP, Trade Secrets)**
 - Committee for Technology Dispute Resolution for SMEs
 - External Experts Consulting Program(security, laws, etc.)
 - Technology Depository System for SMEs
(safe storing of technological data, know-how, etc)
 - Building of Technological and Physical Security IT Solutions from Cyber-attacks and DDOS

■ Consecutive Support R&D with Funds, Marketing

- Policy Financing for R&D Project's Commercialization
- Localization of Products and Overseas Marketing
- Procurement of SMEs-manufactured Products by Government and Corporations in Public Sector
- Promoting Purchasing of SMEs-manufactured New Technology Based Products
- On & Off-line Public Shops Exclusively for SMEs

■ R&D Evaluation and Management System

- Selection of Projects by External Expert Committee (mainly from related industries)
- Focus on the Feasibility of the R&D Projects' Commercialization at Final R&D Evaluation Stage
- Upon a Project's Completion, Royalty is Paid by Licensee Companies(SMEs) to MSS

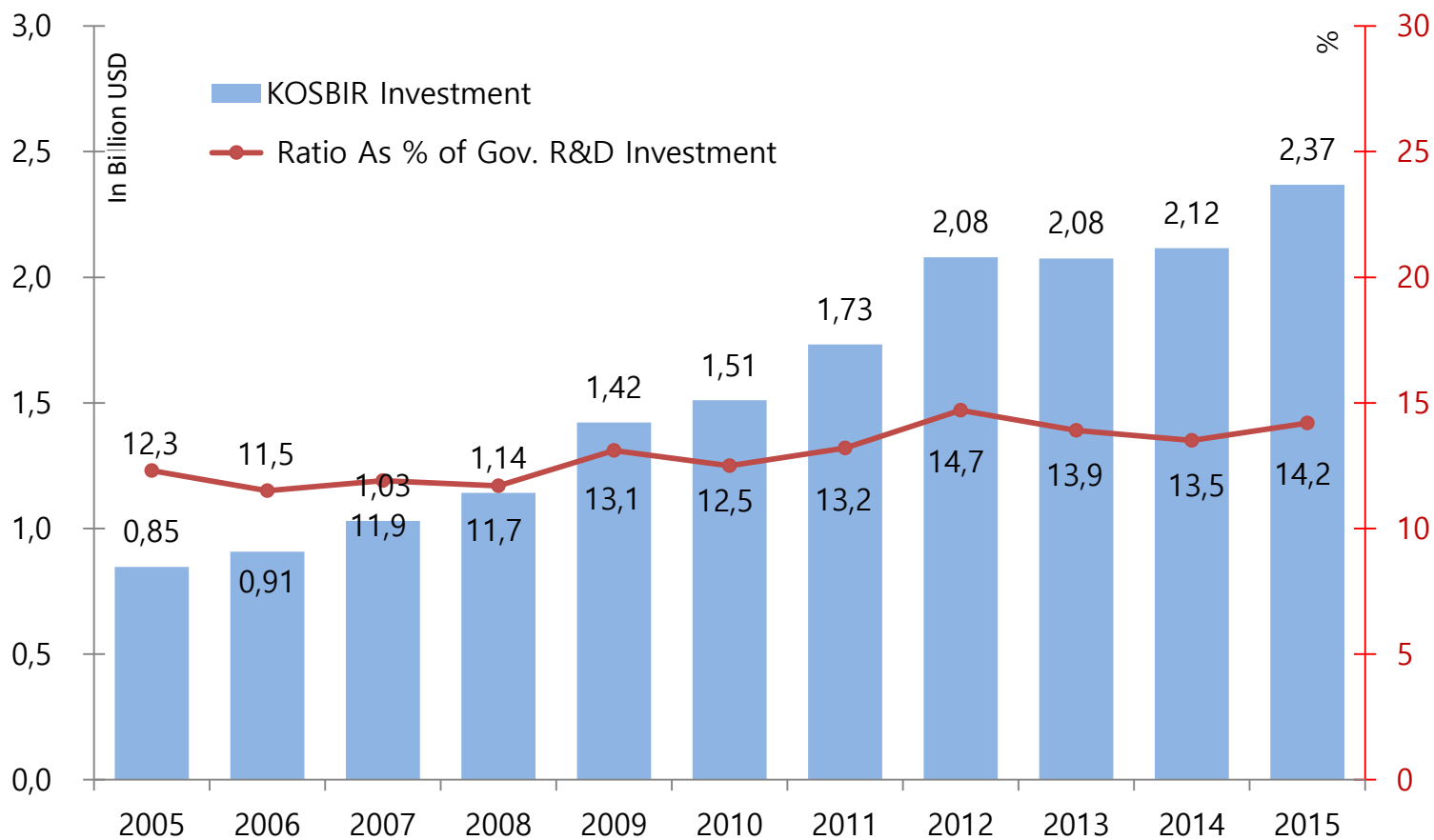
* 10 % of Governments Contributions

- Small & Medium Technology Development Management System(www.smtech.go.kr)

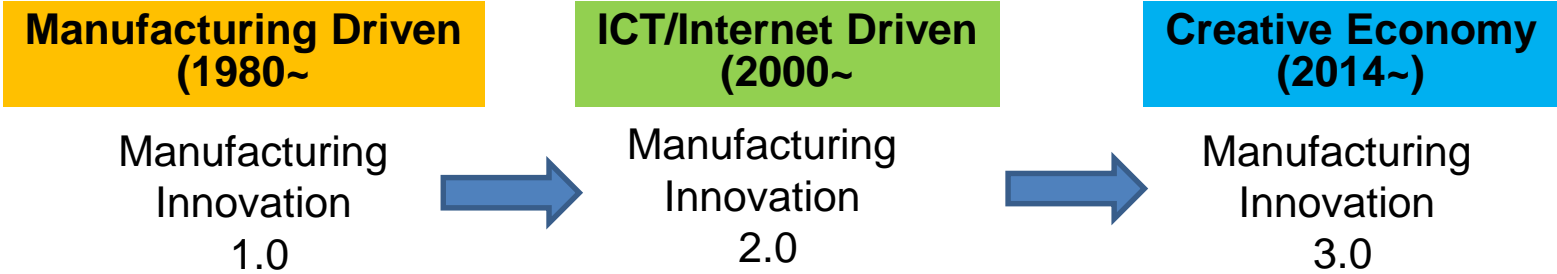
■ Overview of the KOSBIR(Korea Small Business Innovation Research) Program

KOSBIR Program Participants	<ul style="list-style-type: none">– 14 Government Ministries & 7 Public Enterprises– Annual R&D Budget of 27 Million USD and Over
Assistance R&D Ratio	<ul style="list-style-type: none">– Based on Total R&D Budget a Year
Operational Diversity & Flexibility	<ul style="list-style-type: none">– Each Participants
Program Results Reporting	<ul style="list-style-type: none">– National Cabinet Council by MSS
Role of MSS	<ul style="list-style-type: none">– Facilitator
The Ratio of R&D Portion for SMEs	<ul style="list-style-type: none">– Obligatory Operating System

KOSBIR Program Investment in Korea

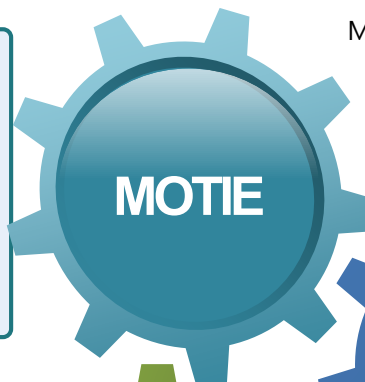


Evolution of Korea's Manufacturing Innovation Policy



Korean Smart Factory

1. Establish Model Factories for “Smart Factory”
2. Smartize Major Industries in Cooperation with LSEs



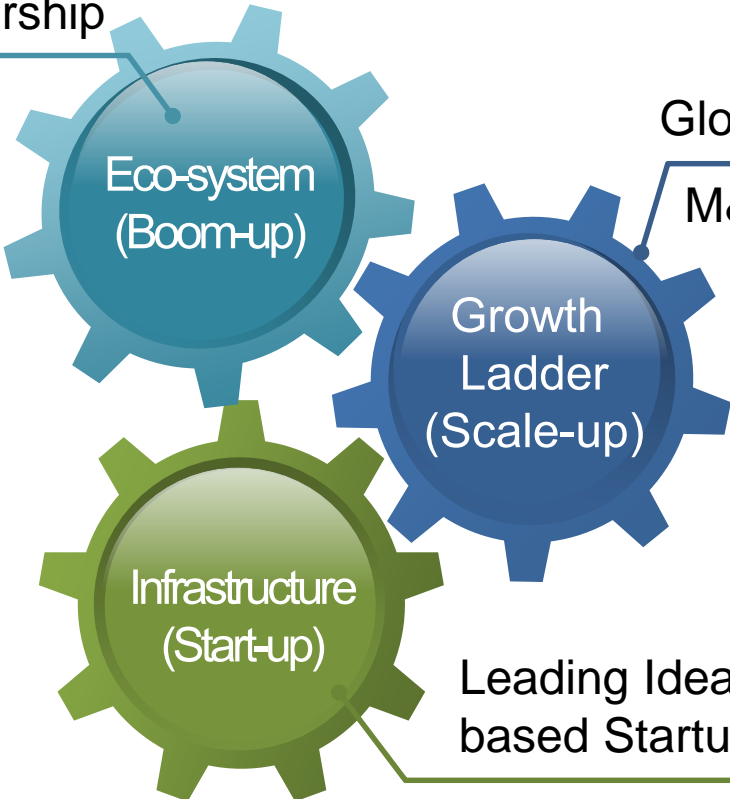
1. Develop 8-Platform Techs for “Smart Factory”
 - Smart Sensor, 3D Printing, CPS, Energy Saving, IoT, Cloud, Big Data, Hologram



1. Smartize Individual SMEs Factories (Tier 2, 3, etc.)
2. Dissemination of Smart Factory Model for SMEs



Entrepreneurship



Global Star Venture Business

M&A Transaction

Leading Ideas & Technology based Startups

Skilled Human Resources

■ Technology-based Startups

- Start-up Camps & Schools
- Start-up Incubation Centers

■ One-person Startups

- Start-up Leading Universities
- Business Centers for One Person Startups

■ Investment Eco-system for Startups

- Angel Investment Matching Fund System
- Crowd Funding System

■ Infrastructure for Growth of Venture Business

- M&A Transaction Information Network for Venture Business
- KONEX(korea new exchange) : Venture Business Financing Market for Innovative SMEs

■ Supporting Repeated Start-ups Attempts

- Start-ups Revitalization Fund
- Revitalization Center for Strained Entrepreneurs

■ Overseas Technology Exchange Centers for SMEs(G2G)

- Process
 - Demand & Supply Survey for Technologies Between Korean and Foreign SMEs by Governments
 - Matching Conference Between Korea's Techs Supplying SMEs and Foreign Demanding SMEs
- Technology Licensing, Complete Knock-Down Trade, Parts/Equipments Trade, Joint Venture Business
- IKTEC(iran, '16.8), VKTEC(vietnam, '17.4)

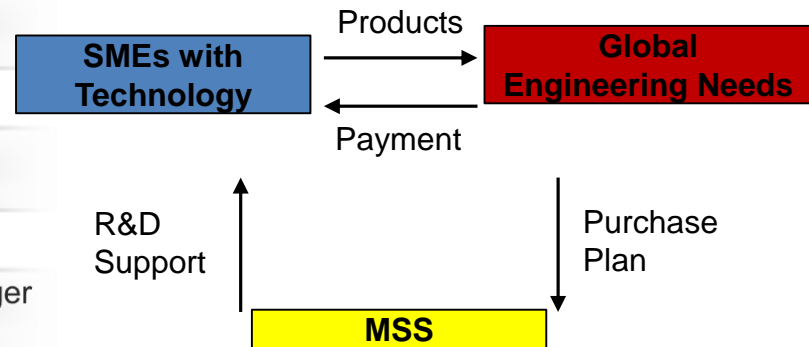
Thank you!

For more info, Please visit

 <http://www.mss.go.kr/eng>

Program : R&D Commercialization (Based on Overseas Procurement Demand)

- Budget (2017)** 140 Million USD
- Subsidy** 1 to 2 years, up to 450,000 USD
- Criteria** LOI, Buyer with Procurement amount (three times larger than subsidy)
- Matching** 65% of the total R&D expense
- Areas** Expenses required for technology/product development
* Mock-up, test analysis, performance certification, design, etc.



- Supported 500 SMEs since 2008
- Provided 88 million USD (accumulated)

Program : TIPS(Tech Incubator Program for Startups)

**Budget
(2017)**

47 Million USD

Subsidy

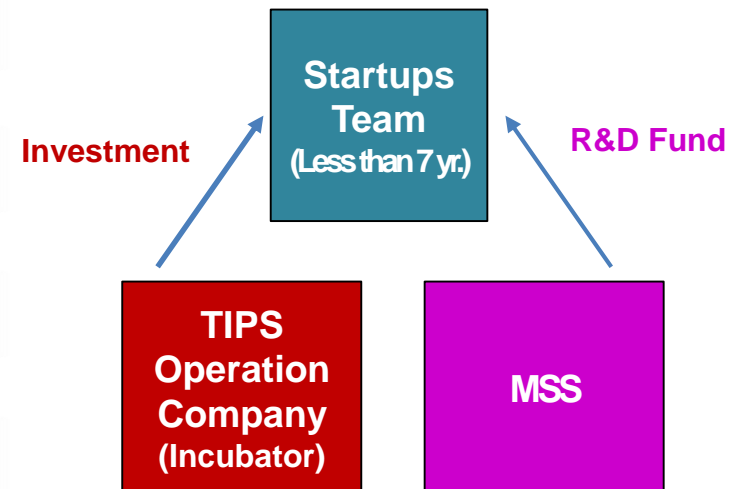
Up to 2 years, up to 450,000 USD

Matching

80% of the total R&D expense

Areas

Expenses required for technology/product development
* Mock-up, test analysis, performance certification, design, etc.



Program : Industry-academia-research institute Partnership

**Budget
(2017)**

120 Million USD

Subsidy

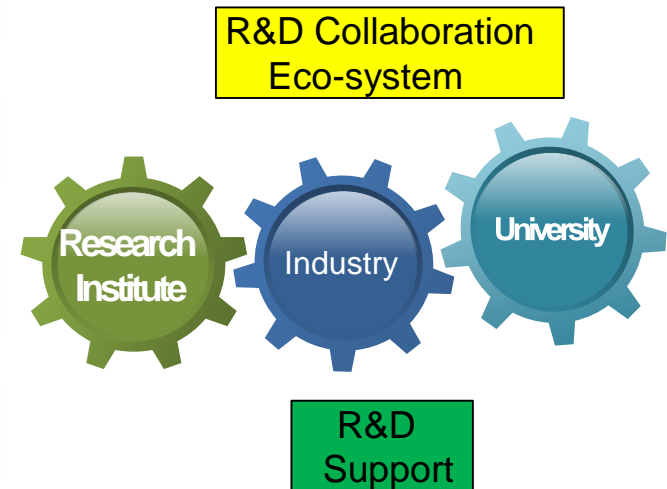
1 ~ 2 years, up to 450,000 USD

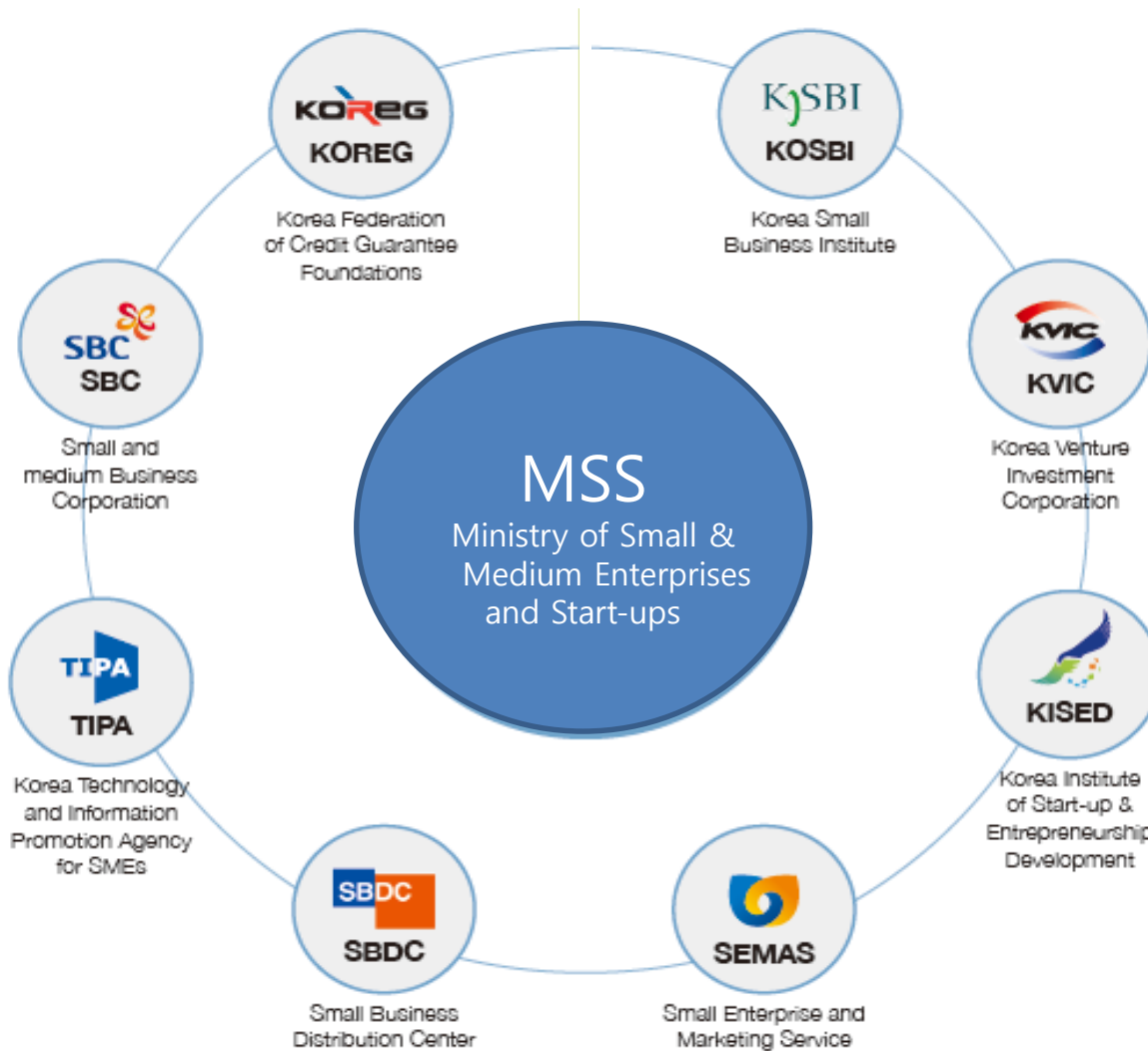
Matching

75% of the total R&D expense

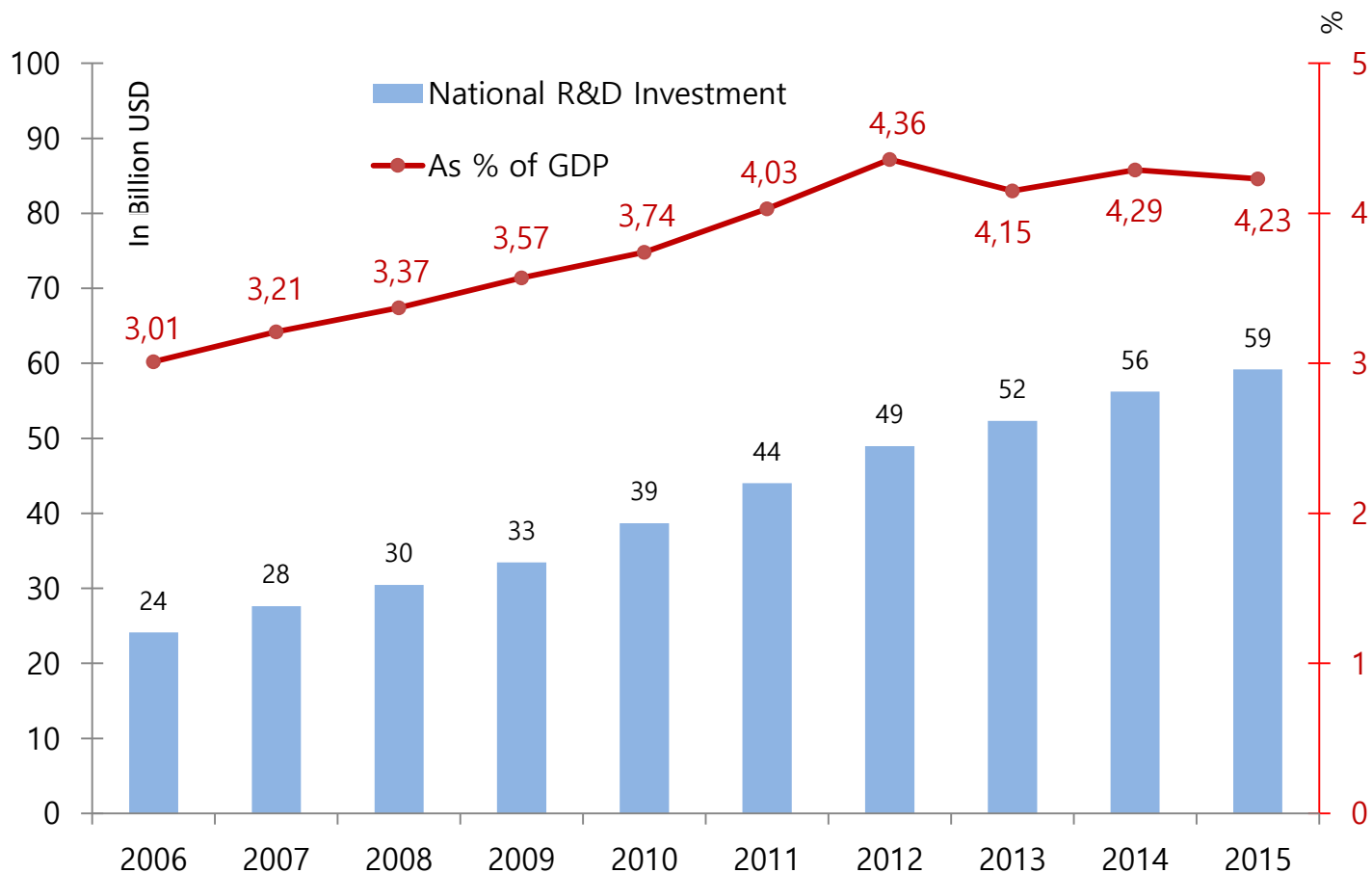
Areas

Expenses required for technology/product development
* Mock-up, test analysis, performance certification, design, etc.

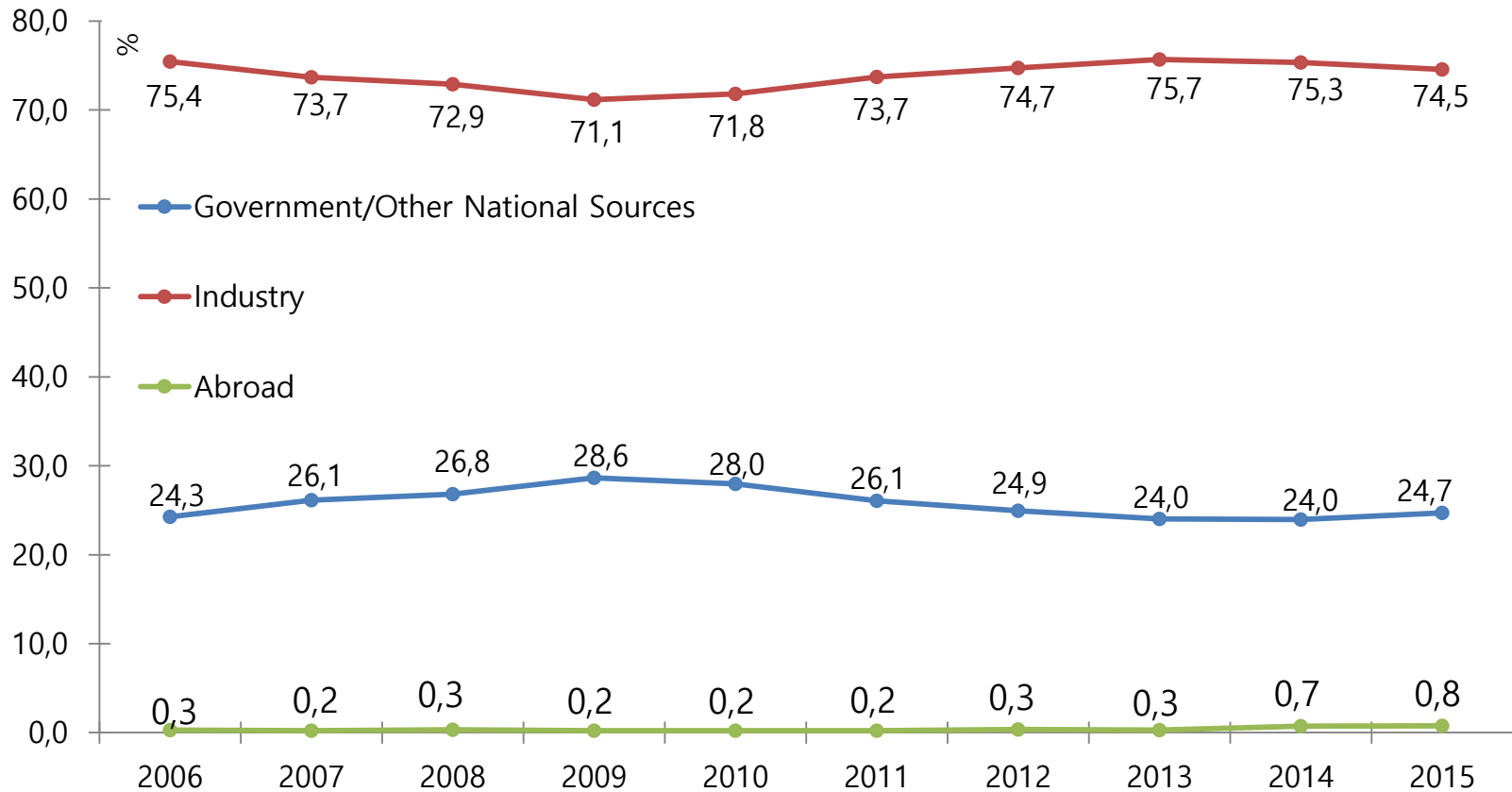




Korea's National R&D Investment



■ Korea's National R&D Investment by Source of Funds



Level of Smart Factory

Advanced Level

- Equipment/Material/System connected via wired/wireless network (IoT/CPS)
- Autonomous factory operation with intelligent equipment & system

Intermediate Level 2

- Automated control via management system (real-time optimized production)
- Real-time fully connected management systems
(Product development ↔ Production ↔ Resource Management)

Intermediate Level 1

- Automated collection of production/equipment data
(real-time operation monitoring, operation/quality analysis)
- Partially connected management system of individual functions/sectors

Basic Level

- Automated collection of production data (including MES, POP, etc.)
(Real-time management of material flow, production lot tracking, etc.)
- Partial management system in operation

No ICT Applied

- Currently no ICT system available