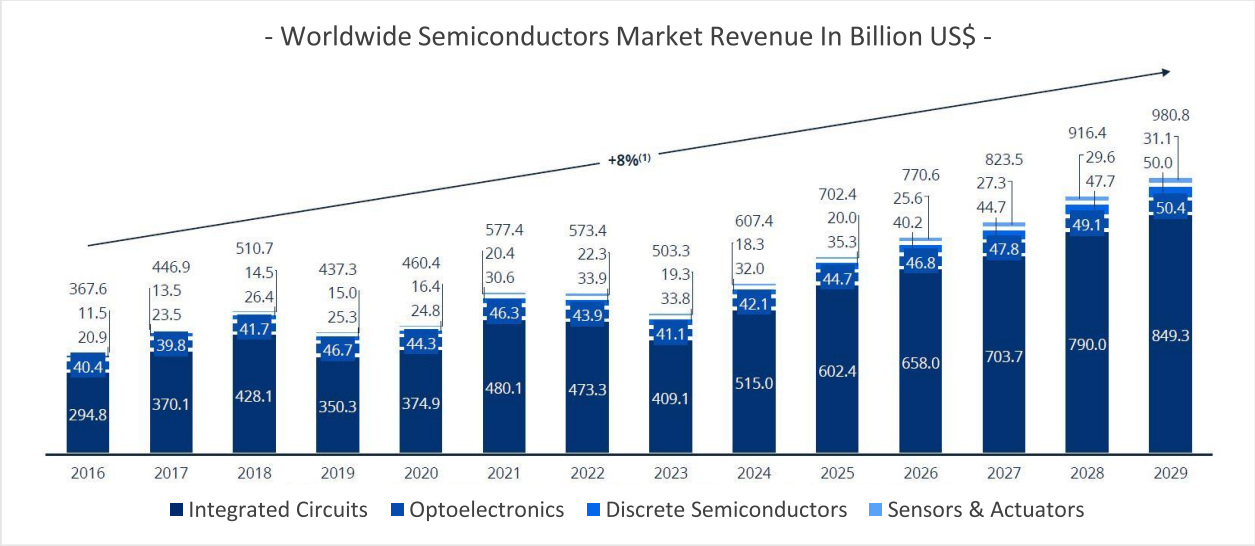
SEMICONDUCTOR

Global Market Size/Forecast

- The global semiconductor market is expected to grow by approximately 21% in 2024, reaching USD 607.4 billion.
  - In 2025, it is projected to grow by around 16%, reaching USD 702.4 billion.
  - For reference, the global semiconductor market size was USD 573.4 billion in 2022, and it experienced a 14% decline in 2023 due to a sharp drop in IT demand and falling memory prices.

<Global Semiconductor Market Revenue (Unit: Billion USD)**>**

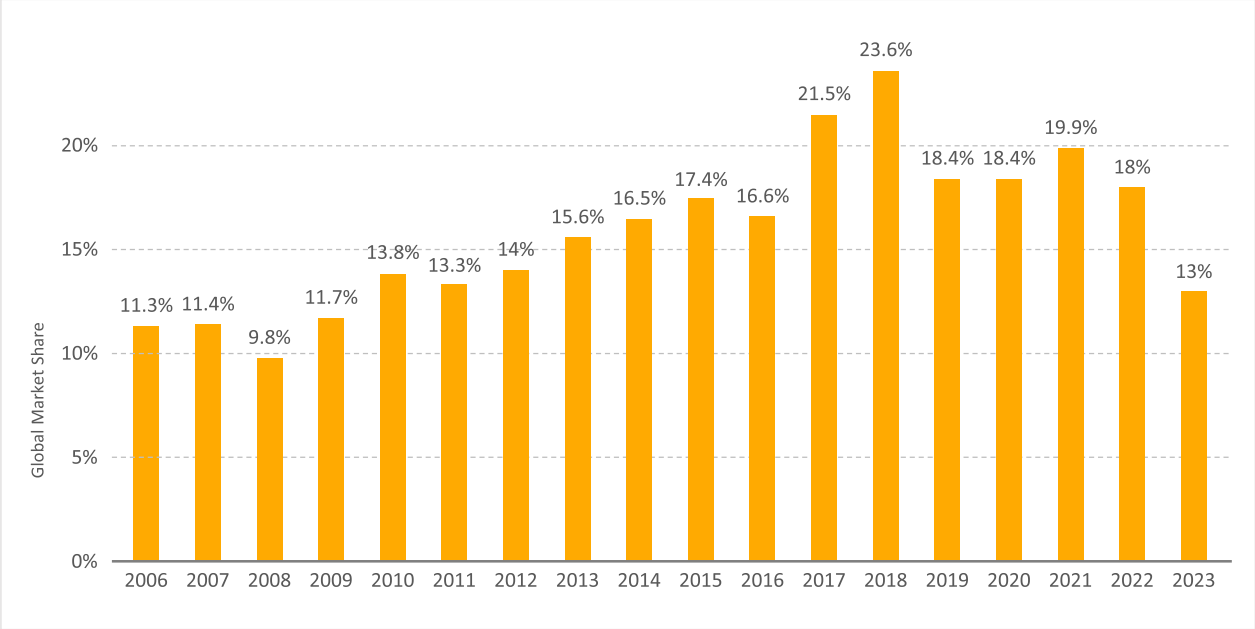


* Source: : Statista 2024

Domestic Market Size/Forecast

- South Korea ranks second in global semiconductor market share and first in memory semiconductor market share, making it the largest export industry in South Korea.
- South Korea has the third-largest semiconductor manufacturing facilities in the world, after China and Taiwan, and accounts for about 13% of the global semiconductor production capacity.

<South Korea Semiconductor Manufacturers' Global Market Share (2006-2023)>

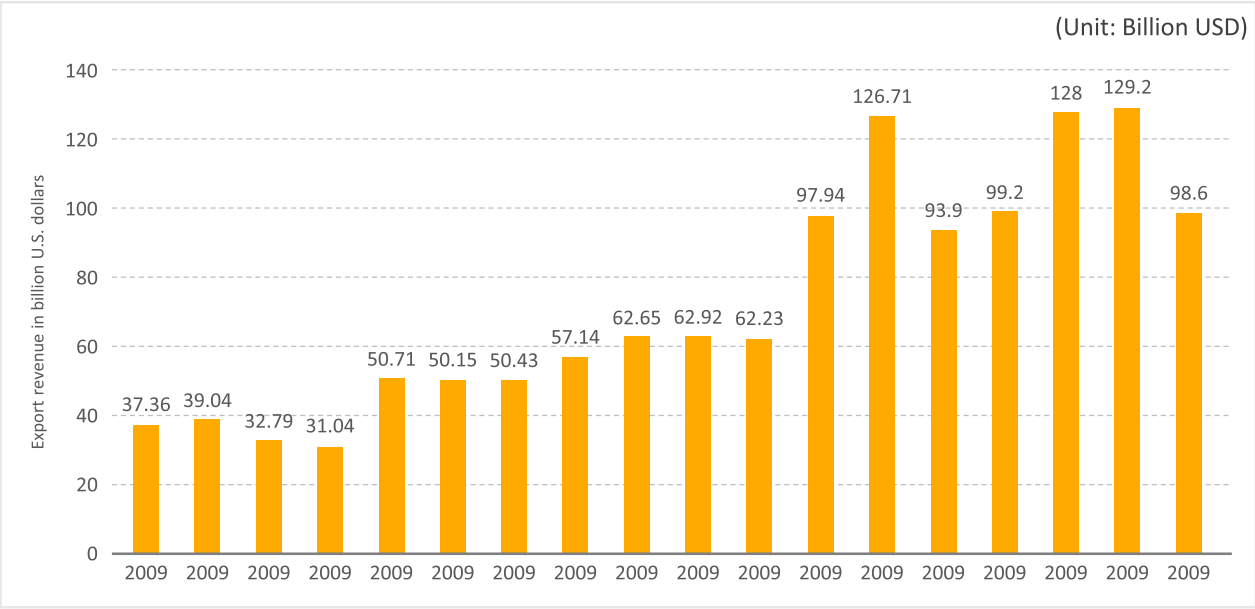


* Source: : Statista 2024

Sales/Exports/Production Volume

- **(EXPORTS)** South Korea's semiconductor exports surpassed USD 100 billion in 2018, and from 2018 to 2023, the annual average was over USD 110 billion.

<South Korea Semiconductor Export Size (2006-2023)>



* Source: : Statista 2024

Investment Strengths

- In recent years, investments in etching, deposition processes, EUV, and SiC power semiconductors have been prominent.
  - Demand for semiconductors specialized in AI servers and high-performance computing (HPC) technologies is expected to continue growing, with the automotive system semiconductor market also seeing notable growth due to advancements in electric vehicles and autonomous driving technologies. This is expected to accelerate investment in advanced semiconductor processes.
- South Korea is specialized in memory semiconductor manufacturing, and investments from leading foreign companies in foundational technologies such as materials, parts, equipment and design continue. Notably, there has been a recent surge in investment in HBM related materials and equipment.

Investment Strengths

- South Korea, along with Taiwan and China, is one of the most active countries in the world for semiconductor manufacturing investment, forming a massive semiconductor equipment and materials market.
- With world-class memory semiconductor competitiveness and a leading position in advanced processes (such as 3nm and EUV), South Korea offers significant trust to foreign investors.
- South Korea's robust manufacturing infrastructure and optimized facilities and technologies for semiconductor production have established a supply chain and an ecosystem that includes skilled personnel and strong R&D foundations across semiconductor design, manufacturing, and packaging.
- Government policies, including tax benefits, infrastructure investment, and regulatory easing, also make South Korea an attractive location for companies producing semiconductor equipment and materials, making business collaboration with South Korean firms an opportunity.

Incentives/Regulatory Status

(INCENTIVES) The cash subsidy support limit for total investment amounts is permanently increased by 5-20 percentage points, with a temporary increase of 10-25 percentage points to a maximum of 75% in 2025.

<Cash Subsidy Maximum Allowable Amount by Category>

Current		Revised (2025 temporary)	
R&D Centers, National Strategic Technologies	50%	R&D Centers (National Strategic Technologies) , Global Company Regional HQ	50% (75%)
		R&D Centers (Others), National Strategic Technologies	50% (60%)
New Growth, Advanced, Materials/ Parts/Equipment	40%	New Growth, Advanced, Materials/Parts/Equipment	45% (55%)
Global Company Regional HQ, Large-scale Employment, Regional Specialized Industries, etc.	30%	Large-scale Employment, Regional Specialized Industries, etc.	40% (50%)

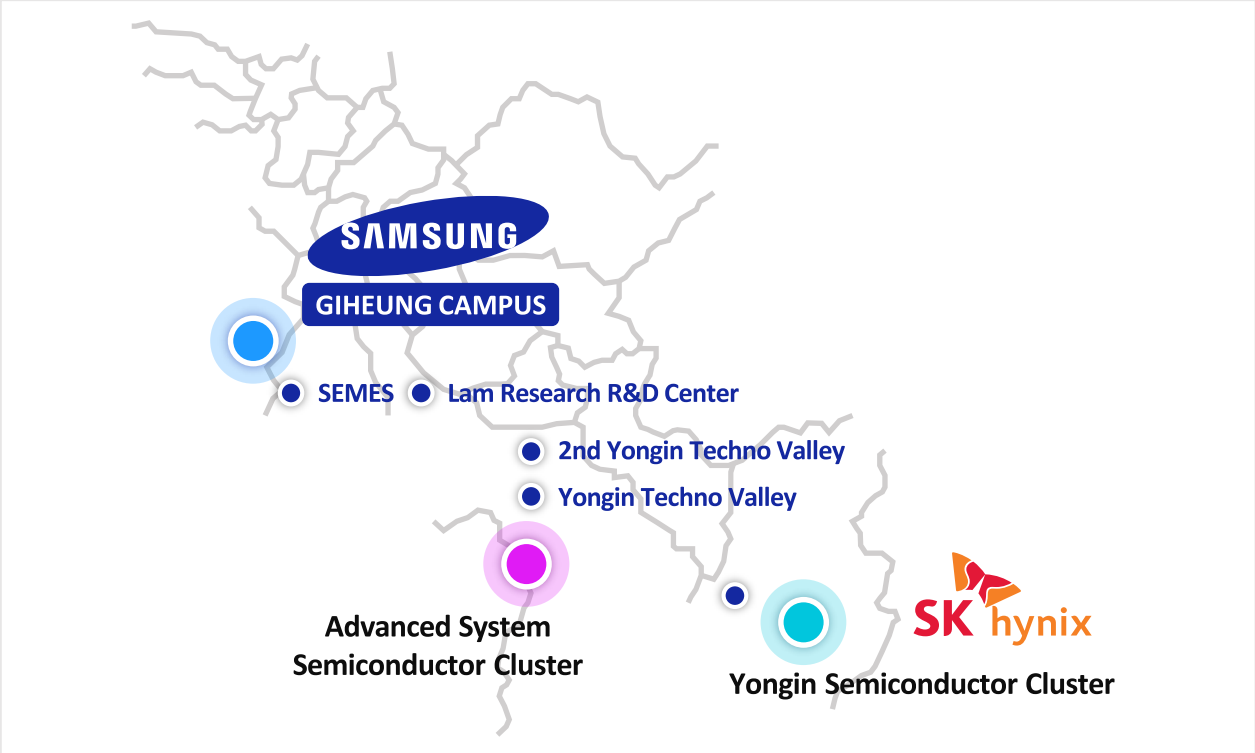
- Additionally, the period for exemptions from customs duties, special consumption tax, and VAT on capital goods imported for foreign investment is extended up to 7 years.

  * (Current) 5 years of 100% exemption, with a 1-year extension possible → (Revised) 5 years of 100% exemption, with a 2-year extension possible.

  ** Eligible for exemption: Foreign investments in new growth industries, foreign investment zones, and economic free zones under the Act on Restriction on Special Cases Concerning Taxation.

Cluster Status

(INDUSTRIAL CLUSTERS) A semiconductor mega-cluster is being formed centered around Yongin and Giheung, and investments in non-capital region material and parts manufacturing facilities are expected to expand the K-Semiconductor Belt.



Industry Development Policies

- **(SEMICONDUCTOR SUPERPOWER STRATEGY)** The South Korean government has a strong determination to develop a comprehensive semiconductor powerhouse, not only in memory semiconductors but also in system semiconductors. This is demonstrated through strategies such as the K-Semiconductor Strategy (May 2021), the Semiconductor Superpower Strategy (July 2022), the System Semiconductor Ecosystem Enhancement Strategy (March 2023), and the Comprehensive Support Plan for Semiconductor Ecosystems (June 2024).
- Aiming to build the world's best semiconductor supply chain, the government has expanded tax incentives for investments in semiconductor facilities (15-25%) and R&D (30-50%) and is actively improving labor and environmental regulations to promote semiconductor investment. Additionally, large-scale semiconductor factory expansions are underway in Pyeongtaek and Yongin, with government support for infrastructure such as water and electricity.
- The government plans to cultivate 150,000 skilled workers by 2030 through regulatory reforms and financial support, supplying them to the semiconductor industry. The government will also support inter-company R&D collaboration through the creation of semiconductor technology-specific clusters.

Vision: Becoming a semiconductor superpower led by strong companies and exceptional talent

Goal: Establishing the position of a core production base in the global supply chain + Becoming a leading country in semiconductor industry innovation

Strategy for Achieving Semiconductor Superpower

All-out support for corporate investment	Public-private collaboration for workforce development
Securing leading technologies in system semiconductors	Building a solid materials, parts, and equipment ecosystem

Sub-project

CORPORATIONS	• Infrastructure support and fast-track permitting • Expand tax incentives for corporate investment • Deregulation in labor, safety, etc.
PEOPLE	• Workforce development through universities and graduate schools • Building four key human infrastructures by industry-academia collaboration • Strengthening the attraction and management of top talent
TECHNOLOGY	• Development of three next-generation semiconductor technologies • Supporting the growth of promising fabless companies • Enhancing the ecosystem capabilities of system semiconductors
MATERIALS, PARTS, AND EQUIPMENT	• Shifting to market-leading technology development • Establishing growth hubs for materials, parts, and equipment companies • Expanding support for commercialization of promising technologies

Maximize the outcome with Plus Strategy

Semiconductor Plus Industry

SW Workforce

Expected Outcomes

INVESTMENT PROMOTION

Total investment of KRW 340 trillion by 2026

Technology development, capital investment over 5 years

TALENT DEVELOPMENT

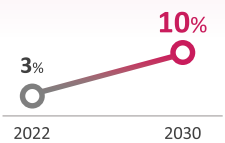
Semiconductor professionals by 2031: 150,000+ professionals

Expand the quota to 45,000

105,000 students in Industry-academia cooperation, convergence majors

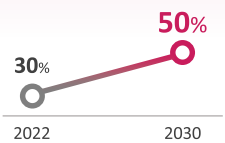
TECHNOLOGY COMPETITIVENESS

System semiconductor by 2030
10% Market Share



MATERIALS, PARTS, EQUIPMENT FOUNDATION

Materials, parts, equipment by 2030
Increase self-sufficiency rate to 50%



Key Examples

- JSR, a Japanese company, is planning to establish a manufacturing facility for inorganic EUV photoresist in Cheongju, Chungcheongbuk-do, starting in 2024. The company is the only global leader with both research and development capabilities and manufacturing expertise in inorganic EUV photoresist, having previously achieved the world's first market entry for ArF photoresist. This investment is expected to result in technology transfer to domestic raw material companies, leading to the localization of advanced photoresist technologies and the enhancement of the capabilities of domestic companies.

- Lam Research, a U.S. company specializing in semiconductor etching and deposition equipment, has been steadily increasing its domestic production since establishing Lam Research Manufacturing Korea in 2011. In 2021, the company began operating a new 5,170 m^2 factory in Hwaseong, Gyeonggi Province. Additionally, in 2022, Lam Research Korea Technology Center opened, where it develops key technologies and equipment, playing a significant role in strengthening the Korean semiconductor ecosystem.