



Improving Tax Support for Researchers in Innovative Fields

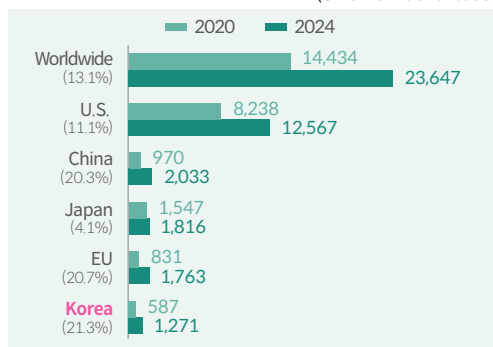
Tax Analysis Division II Analyst Park Jung-hwan

Background

▪ Countries are increasingly competing for leadership in innovative fields such as AI.

- As the competition in the AI field has recently intensified, it is a critical time to secure large-scale investment and human resources (HR) for technological development.
- The number of annual patent registrations related to AI technology has increased by an average of 13.1% over the last 5 years. The U.S. has the highest share of registrations, but China, the E.U., and South Korea are increasing relatively quickly.
- However, according to AI Index 2026¹⁾, South Korea is classified an AI talent exporter.
- The AI Talent Mobility Index is an estimate of the net migration per 10,000 people engaged in the AI field. Positive (+) and negative (-) values denote talent importers and exporters, respectively. South Korea's index is -0.35, classifying it as a talent exporter.

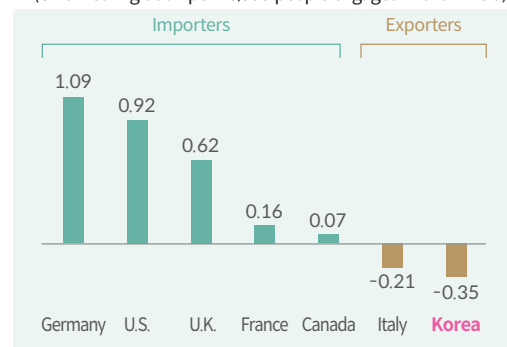
[Figure 1] Annual AI Technology Patent Registrations
(Unit: Number of cases)



Note: 1. Based on registrations with the USPTO
2. Numbers in brackets indicate the average annual growth rate from 2020 to 2024.

Source: OECD Intellectual Property Statistics

[Figure 2] 2026 AI Talent Mobility Index
(Unit: Net migration per 10,000 people engaged in the AI field)



Note: The talent mobility index is an estimate of net migration per 10,000 people engaged in AI and possessing related skills.

Source: Stanford Univ. HAI, AI Index 2026, 2026.4

- Major overseas countries, such as the U.S., actively use tax support as a means to encourage the employment of researchers and the influx of talent.
- **This paper examines the current status of tax support for researchers in innovative fields and derives improvement measures by looking at cases in other countries.**

1) A report published by the Stanford University Institute for Human-centered Artificial Intelligence (HAI), providing comprehensive information on the global status of AI (Software Policy Research Institute, 2025).



Korea's Tax Support for Researchers

- Korea's current tax support for researchers is largely divided into tax support for employers and for researchers.
- (Employers): The tax credit for R&D and HR development expenses is a representative tax support to promote the employment of researchers.
 - This system credits a portion of labor costs incurred when recruiting researchers and costs invested in the education of those personnel against, for example, corporate tax.
 - In 2022, the government introduced preferential credit rates for national strategic technologies such as semiconductors and has since strengthened tax support by increasing credit rates and expanding the scope of such technologies.
 - Credit Rates (SME/Medium/Large, %): (general tech) 25/8/2; (new growth/core tech) 30-40/20-30/20-30; (national strategic tech) 40-50/30-40/30-40
 - National strategic technologies: (2022) three fields including semiconductors → (Current) eight fields including semiconductors and AI

[Table 1] Overview of Tax Credit for R&D and HR Development

Category	Key Details
Target of Credit	- R&D and HR development expenses * R&D costs: Labor costs for researchers in labs/dedicated departments, material costs (consumables, samples, reagents, software), facility rental costs, commissioned/joint R&D costs, etc. * HR development costs: Commissioned training costs for company personnel, education expenses, etc.
Credit Rate	- Differential rates by company size and technology: * (General tech) SME 25%, medium 8%, large 2% (New growth/core tech) SME 30-40%, medium/large 20-30% (National strategic tech) SME 40-50%, medium/large 30-40% ※ AI technology was included in national strategic technology via the tax law amendment in February 2025.
Other	Unused credits can be carried forward for 10 years.

Source: National Assembly Budget Office

- The proportion of large companies getting the tax credit is high in new growth/core and national strategic technologies, which include AI.
- Despite SMEs receiving relatively higher credit rates for national strategic technologies, the proportion of total tax credits is higher for medium and large corporations.

[Table 2] Corporate Tax Credit Performance for R&D: 2024 (Based on Filings)

Technology	SME			Medium/Large			Total		
	Companies (A)	Tax Credit (B, KRW 100M)	Tax Credit per Company (B/A, KRW 100M)	Companies (A)	Tax Credit (B, KRW 100M)	Tax Credit per Company (B/A, KRW 100M)	Companies (A)	Tax Credit (B, KRW 100M)	Tax Credit per Company (B/A, KRW 100M)
National Strategic	20 (39.2)	54 (2.0)	2.7	31 (60.8)	2,628 (98.0)	84.8	51 (100.0)	2,682 (100.0)	52.6
New Growth/Core	173 (66.0)	195 (3.2)	1.1	89 (34.0)	5,929 (96.8)	66.6	262 (100.0)	6,124 (100.0)	23.5
General	39,970 (96.5)	13,150 (66.7)	0.3	1,464 (3.5)	6,564 (33.3)	4.5	41,434 (100.0)	19,714 (100.0)	0.5

Note: Numbers in brackets indicate the proportion (%) of company size within that technology category.

Source: Prepared by the National Assembly Budget Office based on National Tax Service data.

- This suggests that SMEs in innovative fields struggle to utilize tax support because they often remain in a deficit state until technology is commercialized.
 - According to the 2024 AI Industry Survey by the Ministry of Science and ICT, only 29.3% of companies in the AI industry received tax support from 2021 to 2023.
 - In the information and communications technology (ICT) sector (which includes AI software), the average pre-tax net profit margin for SMEs remained negative from 2022 to 2024.
※ SME Pre-tax Net Profit Margin in ICT (%): (2022) -1.84, (2023) -3.43, (2024) -3.20
- **(Researchers): To attract core talent, income tax is reduced to encourage the influx of foreign technicians and the return of top domestic personnel.**
- The income tax of those meeting education/career requirements is halved 10 years.
 - This system has remained largely unchanged since 2019, and it is rarely utilized.²⁾

[Table 3] Income Tax Support for Top Researchers

Category	Clause	Key Details
Foreign Technicians	Restriction of Special Taxation Act Art. 18	• Income tax reduction for foreign technicians meeting requirements - (Education) bachelor's degree or higher in natural sciences, engineering, or medicine - (Experience) 5 years or more with bachelor's degree, 2 years or more with Ph.D. - Workplace: Corporate research institutes, dedicated R&D departments, government-funded research institutes, etc. - Reduction Rate: 50% for 10 years
Returning Korean Talent	Restriction of Special Taxation Act Art. 18-3	• Income tax reduction for Korean nationals working overseas who meet requirements and return to Korea - (Education) Ph.D. holder in natural sciences, engineering, or medicine - (Experience) 5 years or more - Workplace: Corporate research institutes, dedicated R&D departments, government-funded research institutes, etc. - Reduction Rate: 50% for 10 years

Source: National Assembly Budget Office

Overseas Cases of Tax Support for Researchers

- **(Employers): Like Korea, major countries provide tax support for labor costs and allow limited refunds for startups and SMEs.**
- Major countries (e.g., U.S., U.K.) allow tax credits or deductions for research and support staff labor costs, along with carry-forward options for unused credits.
 - The scope of labor costs varies: France limits it to direct research personnel, while the U.S. and U.K. include support staff.
 - The U.S. and U.K. allow limited refunds of unused credits to enhance policy utility for startups and SMEs.

2) As of 2024, the reduction amounts for foreign technicians and returning Korean talent were 5.7 billion KRW and 2.4 billion KRW, respectively.

[Table 4] Overseas Cases of Tax Support for Employers

Country	Tax Support Overview
U.S.	- Tax credits are provided for the labor costs of research, management, and direct research support personnel, and additional tax credit support is provided for energy R&D and basic research R&D. - Unused credit amount: (Carry-forward) allowed for 20 years, (Refund) possible up to \$500,000 only for small-scale startups.
U.K.	- Tax credits and other supports are provided for labor costs of researchers, direct support personnel, etc. - Unused credit amount: (Carry-forward) allowed indefinitely, (Refund) allowed within 14.5% of losses only for R&D-intensive SMEs
France	- Tax credits are provided for the labor costs of researchers, with preferential treatment for SMEs, startups, and university-linked enterprises. - Unused credit amount: (Carry-forward) 3 years, (Refund) allowed for amounts remaining even after the 3-year carry-forward; immediate refund in the case of new enterprises
Japan	- Tax credits are provided for the labor costs of researchers and research assistants - Unused credit amount: No carry-forward or refund

Source: Prepared by the National Assembly Budget Office based on Korea Institute of Public Finance (2024), International Bureau of Fiscal Documentation (IBFD) DB, etc.

▪ **(Researchers): Major countries provide support beyond income tax reduction to attract global talent, including low tax rates and tax-free relocation costs.**

- Tax support in major countries is classified into the application of temporary low tax rates and non-taxation of relocation costs, in addition to income tax reductions.

[Table 5] Tax Support in Major Countries to Attract Global Talent

Type	Key Content	Related to attracting talent	
		Advantages	Limitations
Income Tax Reduction (e.g., France)	Reduction of a certain percentage of the calculated income tax amount	Additional family-related deductions possible	General progressive tax rates are applied; social insurance burden exists
Low Tax Rate (e.g., Spain, Portugal)	Imposed at a low tax rate rather than the general progressive rate	Simplification of tax procedures; alleviation of progressive tax burden; advantageous for temporary high income	General tax supports such as non-taxation and deductions are excluded
Non-taxation of relocation costs, etc. (e.g., Netherlands, Belgium)	Non-taxation of income for relocation costs, etc.; excluded from social insurance premium calculation	Simplification of tax procedures; alleviation of social insurance burden	General progressive rates are applied
Non-taxation of overseas income ¹⁾ (e.g., Hong Kong, Singapore)	Tax rights are not exercised over capital gains, overseas investment income, etc.	Permanent form with no expiration date	-

Note: 1) A system that is not a separate preferential tax system for researchers, but is also applied to general residents

Source: Prepared by the National Assembly Budget Office based on, for example, IBFD DB.

Conclusion and Implications

- **To attract talent in intensifying fields like AI, South Korea provides tax support for both employers and researchers.**
 - Tax support for companies has been strengthened through a preferential rate for national strategic technologies and the scope expansion of such technologies.
 - Income tax reduction for top researchers has been maintained without significant changes in, for example, credit rates.
- **When employers hire top researchers, the tax support for national strategic and new growth/core technologies is being strengthened. Thus, measures to improve the utilization of tax support by SMEs operating in national strategic technology fields must be reviewed.**
 - The tax credit for R&D and HR development for national strategic technology mostly occurs in large corporations; the average tax credit amount per SME is only 3%.
 - Considering that tech startups may see deficits until technology commercialization, it is necessary to seek ways to increase support usage, such as temporarily refunding unused tax credits for tech startups, as in the cases of major countries.
 - In the 22nd National Assembly, an amendment to the Restriction of Special Taxation Act, which allows the refund of unused tax credit amounts for R&D and HR development for national strategic technology, was proposed and is currently pending (Bill No. 2209937, proposal by Representative Young-dae Shin).
- **It is necessary to supplement the tax support for top researchers, as the global competition to attract such talent is intensifying.**
 - While the current requirements for top researchers limit them to certain fields (e.g., science and engineering), the AI field is often combined with various fields (e.g., law and business administration),³⁾ so the requirements should be relaxed.
 - As various costs are involved when top researchers move to Korea, it is necessary to review complementary measures such as deductions for relocation costs.

3) According to Russell and Norvig (2021) and Jordan and Mitchell (2015), in the AI industry, experts from other academic fields, such as law, in addition to science and engineering, tend to develop AI capabilities and remain active.