The Present and Future of Industrial Complexes

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CUSHMAN & WAKEFIELD

Background and Growth

Industrial complexes in Korea began in 1962 with the Special Land Expropriation Act for Industrial Districts. Despite government-led initiatives such as the Five-Year Economic Development Plans and export-driven policies, early development was limited to the Ulsan Industrial District, with progress hindered by insufficient capital until a turning point in the mid-1960s.

In 1964, the Export Industrial Complex Development Act attracted Korean-Japanese capital and enabled manpower and technology inflows, paving the way for light-industry exports. Korea's first Export Industrial Complex, the Guro Complex (Phase 1), was completed in 1967 in Seoul, followed by Phases 2 and 3. During the 1960s, industries such as steel, oil refining, fertilizers, textiles, wigs, and garments were established, with light industries prevailing.

By the 1970s, the government promoted heavy and chemical industries, enacting the Industrial Base Development Promotion Act and creating the Industrial Base Development Corporation. Region-specific complexes emerged, including chemicals in Ulsan and Yeosu, electronics in Gumi, and shipbuilding in Busan, Ulsan, and Geoje. These developments continue to shape local economies today.

In the 1980s, industrial complexes diversified in both scale and type. Alongside large-scale projects, small and medium-sized complexes were developed in provincial areas, and significant efforts were made to revitalize underdeveloped regions. For the first time, pilot projects for agro-industrial complexes were designated.

The 1990s marked a new era of regulation with the Industrial Sites and Development Act (1990), which standardized procedures from designation to land sales and introduced streamlined approvals and support policies. Although the 1997 Asian Financial Crisis temporarily slowed development, the government established the Korea Industrial Complex Corporation to ensure efficient management, while complexes expanded beyond heavy industries into high-tech and services.

In 2001, the Industrial Sites and Development Act was revised to pave the way for urban high-tech industrial complexes. This amendment spurred the growth of specialized complexes supporting new industries. From the 2010s onward, themes such as eco-friendliness, carbon neutrality, and smart industrial complexes have come to the forefront. Alongside quantitative expansion, emphasis has shifted to qualitative growth through the modernization of aging complexes and facilities.

Period-Specific Characteristics of Industrial Complexes

1960s
- Establishment of Korea's First Industrial Complex
- Focused on Light Industries

1970s
- Fostering Heavy Industries
- Regionally Specialized Industry Development

1980s
- Balanced Regional Development
- Agro-Industrial Complexes Introduced

1990s
- High-Tech and Service Industry Expansion
- Toward Efficient Management

2000s
- Urban High-Tech Industrial Complexes Introduced
- New Industry Growth

After 2010
- Industry 4.0
- Smart Industrial Complexes

Source: National Archives of Korea

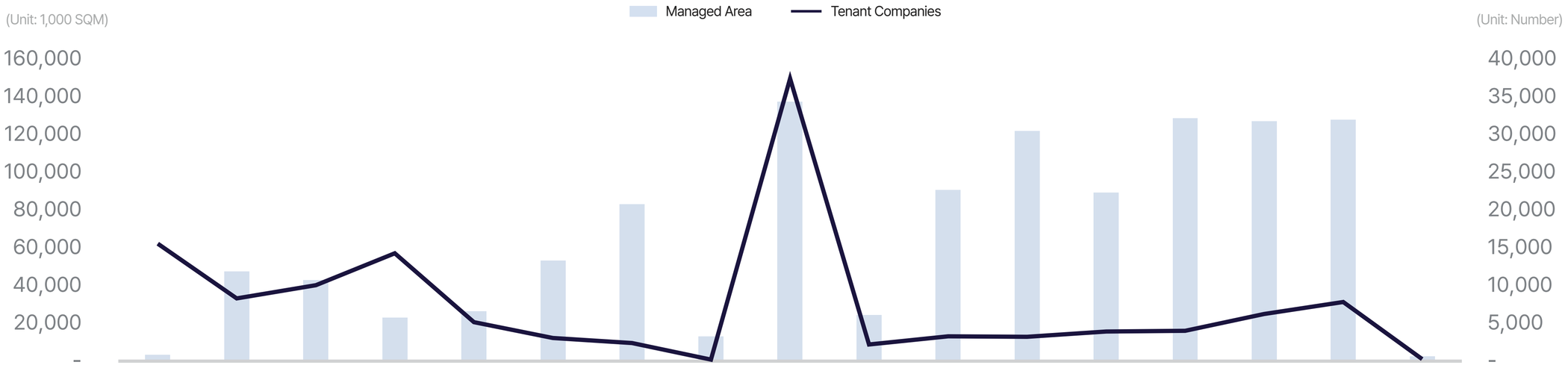
Supply

As of Q4 2024, Korea had 1,334 industrial complexes with a managed area of 1,149 million sqm and about 129,000 tenant companies.

By number of complexes, Gyeongsangnam-do (209) ranked highest, followed by Gyeonggi-do (202), Chungcheongnam-do (180), Gyeongsangbuk-do (156), and Chungcheongbuk-do (144).

In terms of area, Gyeonggi-do led with about 140,000 sqm, and Jeollanam-do followed with 130,000 sqm. Provinces such as Jeolla, Chungcheong, and Gyeongsang generally have larger managed areas than metropolitan cities like Seoul, Busan, Daegu, Incheon, and Gwangju. Gyeonggi-do recorded both the largest area and the most tenant firms, while major cities show higher tenant density relative to area. By contrast, provincial complexes have fewer firms per area, as companies occupy larger sites—reflecting government policies to promote regional balance through large-scale complexes and industrial decentralization.

Managed Area and Number of Tenant Companies by Region (2024)



	Seoul	Busan	Daegu	Incheon	Gwangju	Daejeon	Ulsan	Sejong	Gyeonggi	Gangwon	Chungbuk	Chungnam	Jeonbuk	Jeonnam	Gyeongbuk	Gyeongnam	Jeju	
Industrial Complex Count	4	39	24	19	14	6	32	19	202	82	144	180	90	108	156	209	6	(Unit: Number)

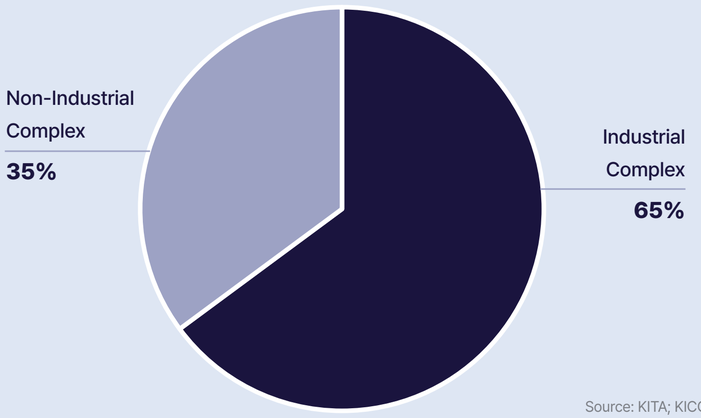
Source: KICOX

Industrial Complexes as the Core of the National Economy

With over 60 years of history, industrial complexes have grown rapidly in scale, serving as a key driver of Korea's economy. The increase in complexes and tenant firms has boosted employment, supported large-scale manufacturing, and generated over KRW 1,358 trillion in annual output, with more than 60% of exports originating from these sites.

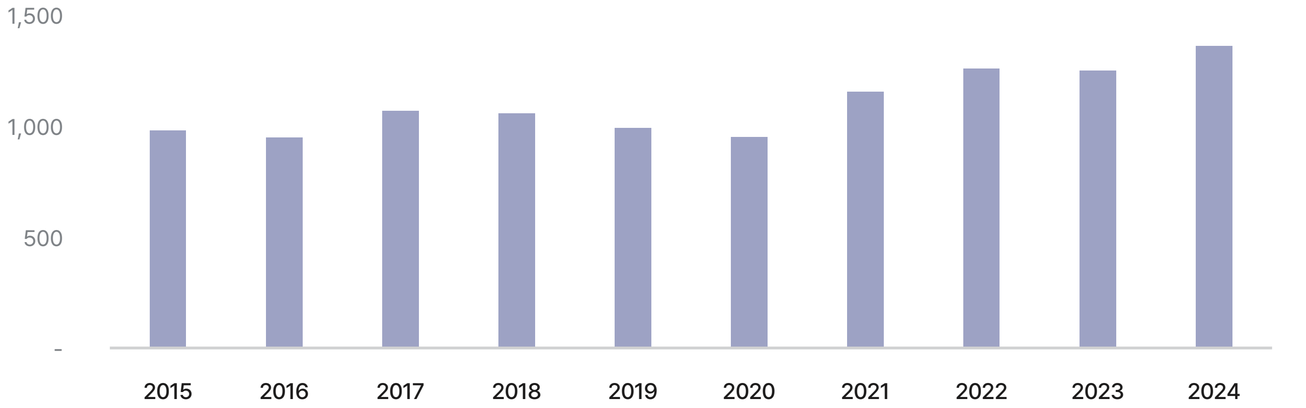
Overcoming early challenges of limited capital and technology, they expanded through new laws, systems, and dedicated management bodies, and today continue to seek transformation and new opportunities in the investment market.

Exports Inside vs. Outside Industrial Complexes (2024)



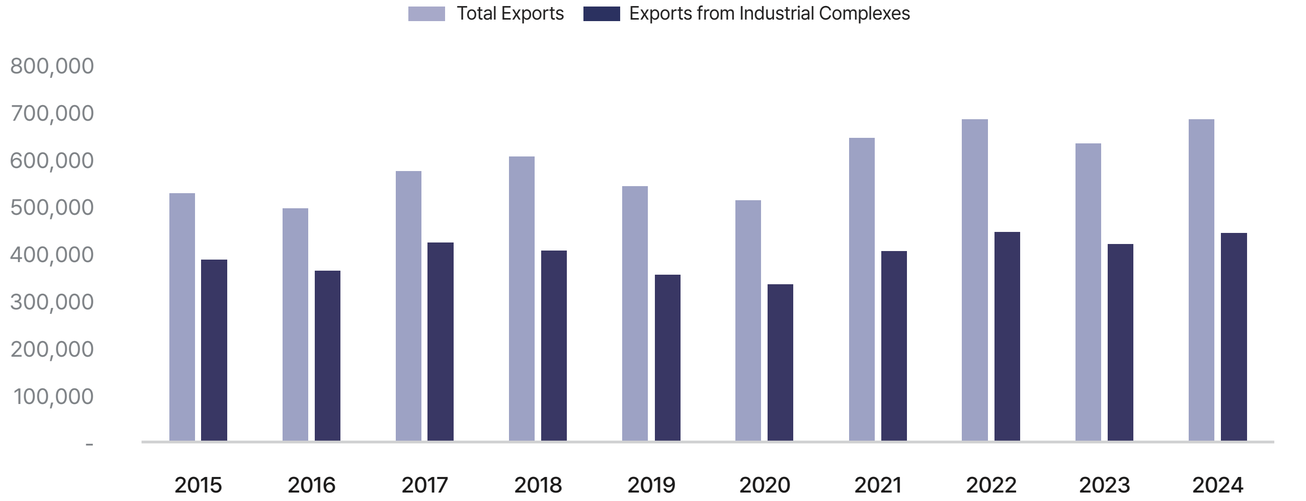
Source: KITA; KICOX

Industrial Complex Production by Year (KRW Trillion)



Source: KICOX

Annual Export Value by Year (USD Million)



Source: KITA

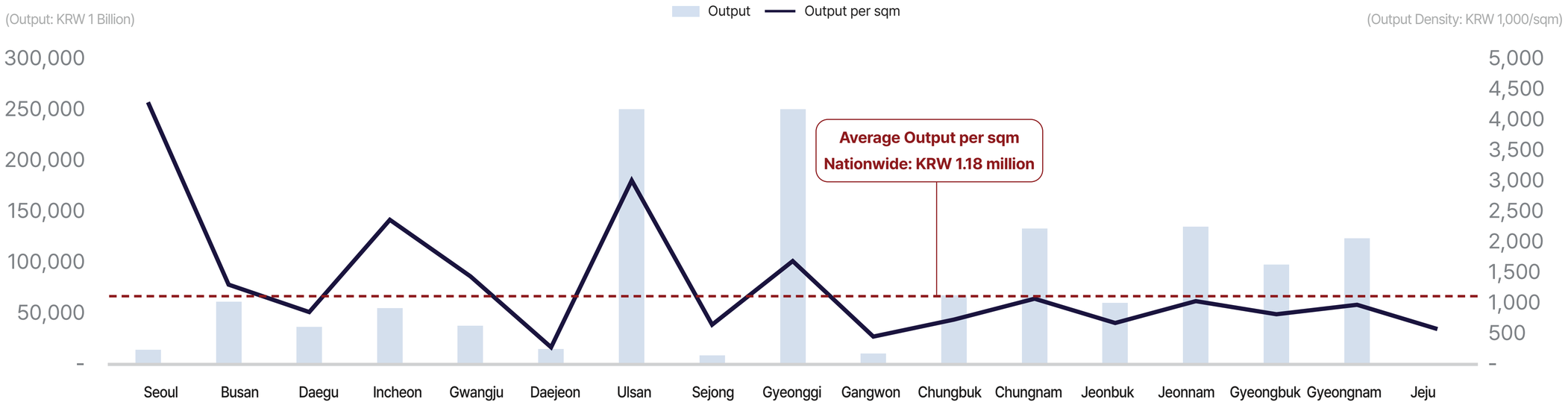
Production Efficiency of Industrial Complexes by Region

In 2024, Korea's industrial complexes recorded an annual output of KRW 1,358 trillion and a managed area of 1,149 million sqm, resulting in an average output of approximately KRW 1.18 million per sqm nationwide.

Seoul, driven by the Seoul Digital Industrial Complex in Guro, recorded the highest output per unit area. Despite a relatively small managed area of 3.28 million sqm, its annual output reached KRW 14 trillion, or KRW 4.29 million per sqm. First developed in the 1960s as the Korea Export Industrial Complex, it later transformed into a high-tech hub in the 2000s, with IT-related firms in dense, multi-story buildings driving productivity.

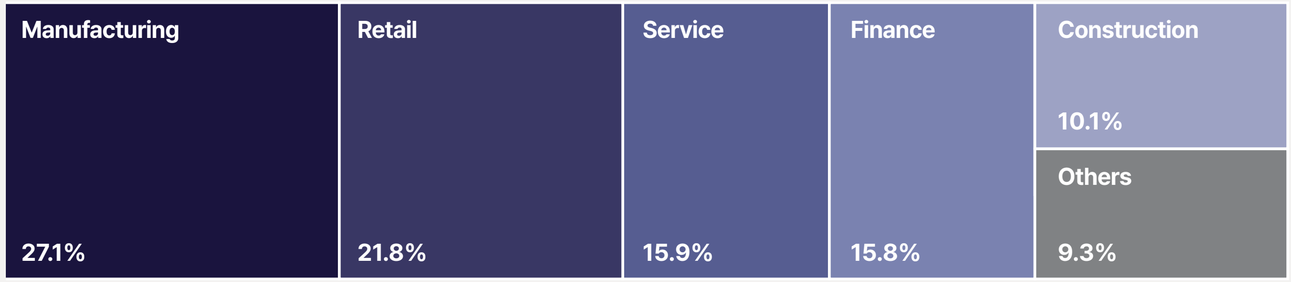
Ulsan (KRW 3.0 million/sqm), Incheon (KRW 2.36 million/sqm), and Gyeonggi (KRW 1.69 million/sqm) also showed high productivity. Ulsan's shipbuilding and automobile industries, led by Hyundai, underpin its strong ecosystem, while Incheon and Gyeonggi leverage strategic metropolitan locations and infrastructure to achieve higher output per unit area.

Industrial Complex Output by Region (2024)



Source: KICOX

Share of Domestic Revenue by Industry



Source: Statistics Korea, Economic Census

Top 10 Manufacturing Industries: Share of Production and Exports

Industry	Production		Exports	
	Share(%)	Rank	Share(%)	Rank
Automobiles	12.1%	1	14.0%	2
Petroleum Refining	9.7%	2	7.7%	5
Semiconductors	9.6%	3	20.7%	1
Petrochemicals	7.4%	4	8.7%	3
Steel	6.7%	5	4.0%	7
Special Machinery	3.8%	6	4.2%	6
General Machinery	3.5%	7	4.3%	5
Displays	3.0%	8	2.5%	10
Electrical Equipment	2.8%	9	3.0%	9
Shipbuilding	1.8%	10	3.5%	8
Total	63.2%	-	75.9%	-

Source: Statistics Korea, Mining and Manufacturing Survey; Korea Customs Service, Trade Statistics

Core Industries of Korea's Manufacturing Sector

In Korea's economic activity, manufacturing accounts for 27.1% of total industry revenue, ranking first among all sectors. As of 2024, manufacturing also represents the overwhelming majority of exports. Out of total exports of USD 683.6 billion, manufacturing contributed USD 680.9 billion, equivalent to 99.6%.

To identify the representative manufacturing industries influencing Korea's domestic economy and exports, production and export values were examined. The top 10 industries accounted for 63.2% of total production and 75.9% of total exports. By industry, automobiles recorded the highest share of production at 12.1%, while semiconductors accounted for 20.7% of total exports, highlighting their importance.

The automobile industry, which began in the 1960s, has grown steadily with Hyundai and Kia at its core. Domestic automobile production was first introduced as part of government policy in the 1960s, followed by significant growth in the 1980s. Since the 1990s, the industry has expanded into global markets, building competitiveness through design innovation, quality improvements, and the development of electric vehicles. Today, it represents 14.0% of Korea's total exports, recognized as one of the nation's leading export sectors.

The semiconductor industry took off after the 1985 Plaza Accord between the United States and Japan. As the yen appreciated, Japanese semiconductor prices rose, eroding their global competitiveness. Korean firms benefited from this shift in price dynamics, while strong government support further accelerated growth. Today, Samsung and SK hynix dominate the global memory semiconductor market, positioning Korea as a global leader in the sector.

Regionally specialized manufacturing industries

LQ & Employment by Manufacturing Sector in Major Regions

TOP 10 Mfg. Ind.	Indicator	Seoul	Gyeonggi	Incheon	Daejeon	Daegu	Busan	Gwangju	Ulsan
Semiconductors	LQ Index	0.2	2.0	1.0	0.7	0.1	-	1.3	-
	Employment(persons)	1,397	104,805	9,350	1,613	607	288	4,127	259
Automobiles	LQ Index	0.1	1.6	1.8	0.9	2.9	1.7	5.4	8.0
	Employment(persons)	950	80,781	17,059	2,256	17,172	12,583	16,511	53,397
Petroleum Refining	LQ Index	-	-	0.1	-	-	-	-	0.8
	Employment(persons)	52	638	737	19	41	211	11	5,094
Petrochemicals	LQ Index	0.8	1.0	1.1	1.7	0.3	0.5	0.3	2.3
	Employment(persons)	6,683	50,511	10,077	4,159	1,685	3,431	783	15,501
Steel	LQ Index	0.1	0.6	1.1	0.3	0.6	1.7	0.6	1.1
	Employment(persons)	843	33,627	10,594	737	3,617	12,641	1,980	7,286
General Machinery	LQ Index	0.7	1.4	2.1	2.0	1.3	2.9	1.6	1.2
	Employment(persons)	5,889	72,938	19,839	4,918	7,861	21,425	4,794	7,832
Special Machinery	LQ Index	0.6	1.9	2.1	1.6	2.1	1.1	1.8	0.6
	Employment(persons)	5,163	101,213	19,612	3,841	12,392	8,429	5,569	4,079
Electrical Equipment	LQ Index	1.3	1.7	1.9	1.3	1.5	1.6	2.9	1.3
	Employment(persons)	10,689	89,622	18,111	3,198	8,854	12,185	8,927	8,970
Displays	LQ Index	0.6	1.4	1.5	1.1	0.5	0.9	0.4	-
	Employment(persons)	5,015	74,948	14,314	2,570	3,076	6,634	1,210	224
Shipbuilding	LQ Index	-	-	-	-	-	0.5	-	4.9
	Employment(persons)	17	117	154	38	33	4,061	15	32,692
Total	Employment(persons)	36,698	609,200	119,847	23,349	55,338	81,888	43,927	135,334

Source: Statistics Korea, Mining and Manufacturing Survey

NOTE: Based on the Seoul Capital Area and metropolitan cities / LQ values of 1.0 or higher are marked in red

To examine the industry concentration across major regions in Korea, we reviewed the Location Quotient (LQ) index. The LQ is an indicator that analyzes the share of a specific industry within a regional economy relative to the overall economy. It is used to evaluate the importance of a particular industry within a region. An LQ greater than 1 indicates that the industry is considered specialized in that region.

LQ formula

$$LQ = \frac{\left(\frac{E_i}{E_t}\right)}{\left(\frac{N_i}{N_t}\right)}$$

Variables

- E_i: Employment or output of industry i in a region
- E_t: Total employment or output of all industries in the region
- N_i: Employment or output of industry i nationwide (or reference region)
- N_t: Total employment or output of all industries nationwide (or reference region

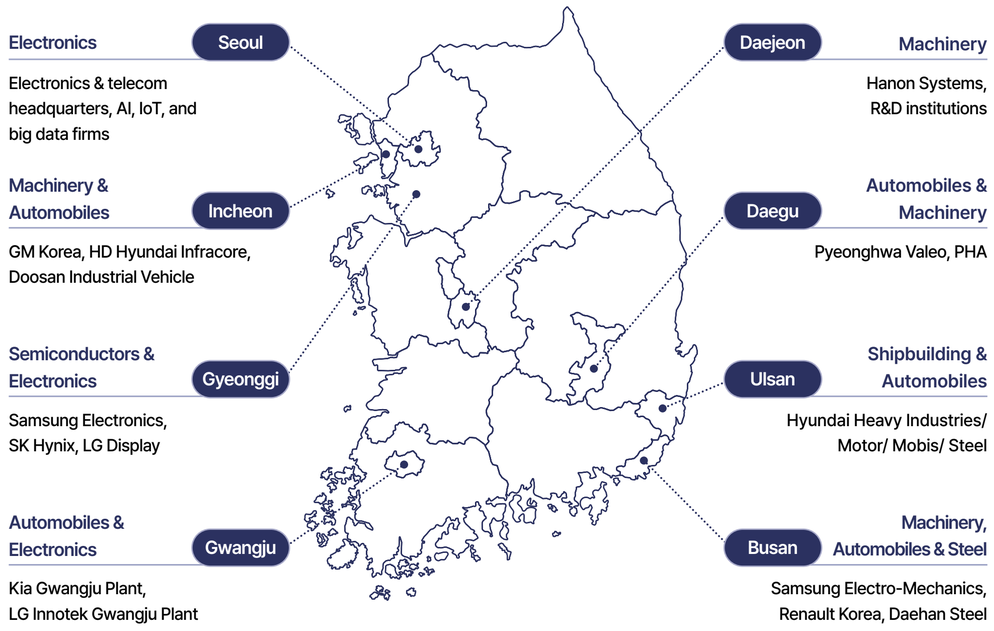
The LQ (Location Quotient) analysis shows that Gyeonggi Province and Incheon have the highest concentration of employees in the top 10 manufacturing industries. Except for petroleum refining and steel, all industries in Gyeonggi recorded an LQ above 1.0. Despite an LQ of 0.6, steel employment remains relatively high compared to other regions. Semiconductors and displays are concentrated in Gyeonggi and Incheon, while automobiles are also prominent in Ulsan. Employment in machinery and electrical equipment is high across major cities, and Ulsan further stands out with its strong specialization in shipbuilding.

Regional Industry and Corporate Location with Economic Indicators

Industries with a high LQ are typically found in regions where large corporations, factories, and related businesses are concentrated. Seoul shows strength in electronics, telecommunications, and AI-based enterprises.Gyeonggi Province hosts major conglomerates in semiconductors and displays.Daejeon has developed as a hub of advanced technology and research, centered on KAIST, with clusters in AI, biotechnology, and nuclear energy. Ulsan stands out as Hyundai Group's industrial base, where shipbuilding and automobile manufacturing have shaped the city into a leading corporate center and driven regional economic growth.

Industrial complexes are hubs of manufacturing, positively influencing regional economies through job creation and GDP growth. The concentration of manufacturers is closely tied to the distribution of key industries, with designated complex areas showing strong positive correlations (+0.5 to +0.9) with top 10 manufacturing employment, regional GDP, and income. Regions with higher employment in major manufacturing industries also record higher GDP and income, supported by a correlation coefficient of +0.6.

Key Industries and Related Companies by Region



Regional Industrial Complex Area and Employment in Key Industries

Region	Complex Area (1,000sqm)	Employment in TOP 10 Mfg. Ind. (Persons)	GRDP (Trillion KRW)	GRI (Trillion KRW)
Seoul	3,282	36,698	547	620
Gyeonggi	259,748	609,200	594	660
Incheon	23,276	119,847	117	124
Daejeon	53,265	23,349	54	60
Daegu	44,979	55,338	73	81
Busan	47,285	81,888	114	116
Gwangju	32,765	43,927	52	56
Ulsan	92,529	135,334	90	67

Source: Statistics Korea; KICOXX
Top 10 Industries: Semiconductors, Automobiles, Petroleum Refining, Petrochemicals, Steel, General Machinery, Special-Purpose Machinery, Electrical Equipment, Displays, Shipbuilding

Correlation Coefficient between Variables

Category	Employment in TOP 10 Mfg. Ind.	GRDP	GRI
Complex Area	0.958743	0.513154	0.493778
Employment in TOP 10 Mfg. Ind.	-	0.64139	0.624795

NOTE: A correlation coefficient closer to 1 indicates a stronger positive relationship.

Institutional Changes in Industrial Complexes: Amendments to Related Laws

Industrial complexes, which have contributed to production, exports, and economic growth through quantitative expansion, are now moving toward transformation within the investment market as well.

Under the Act on the Promotion of Industrial Clusters and Factory Establishment (hereinafter referred to as the Industrial Clusters Act), industrial complexes had long been restricted in terms of eligible industries, with land allocated only to end-users. As such, ownership and transactions for purely investment purposes were not permitted.

With the amended Industrial Clusters Act enforced on July 10, 2024, industrial complexes now allow broader industry entry, relaxed disposal rules, and tenant-led asset securitization. The revision permits service and financial investment businesses, and enables companies to sell assets to REITs, securing funding and greater financial flexibility.

The amendment is significant as it opens industrial complexes—once limited to self-owned companies—to both domestic and foreign investors. Leveraging Korea's manufacturing base, it enables proactive asset securitization strategies such as sale-and-leaseback, provided leasing terms and investment stability are ensured.

Industrial land ownership and tenant-led securitization remain limited to areas outside the GSA, with fund investments still restricted. As the policy is in its early stage, active corporate participation will be crucial for its refinement and long-term stability.

	Key Amendments	Revised Articles
1	• **Expansion of Permitted Business Types within Industrial Complexes** - Admission of legal, accounting, and tax-related service industries, as well as other financial investment businesses	Enforcement Decree of the Industrial Clusters Act, Article 6(5)(14–17): Eligibility for Industrial Complex Occupancy
2	• **Easing of Disposal Restrictions** - Tenant companies may dispose of industrial land or in-kind assets contributed to joint ventures before five years after factory completion	Industrial Clusters Act Art. 39 & Enforcement Decree Art. 49(1)(2-3): Disposal Restrictions on Industrial Land
3	• **Asset Securitization** - Sale to financial investors or REITs with leaseback allowed (outside of GSA)	Industrial Clusters Act Art. 44-2 & Decree Art. 57-2(1)(2): Financing Support

Source: Korean Law Information Center, Policy Briefing of Republic of Korea

C&W Industrial Service

Industrial Real Estate

(Factories, Logistics Centers, R&D Centers, etc.)

Service
01

Advisory on Industrial Real Estate Leasing Contracts

Service
02

Advisory on Industrial Real Estate Sales and Acquisitions

Service
03

Real Estate Strategies Tailored to Corporate Operational Needs

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