Independent
Market
Research
Report
2024/25

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Active Rejuvenation Building Resilience

Independent Market Report

Mapletree Logistics Trust Management Ltd.

Asia Pacific Annual Logistics Real Estate Market Report

May 2025

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Section A: APAC Market Analysis

1. APAC macroeconomic overview

The global economy continues to expand at a steady pace entering 2025. Global growth is projected at 3.3% both in 2025 and 2026[1]. As inflation concerns subsided in many major economies, geopolitical and trade tensions have replaced price pressure as key risks to the growth outlook in 2025. Quantifying the economic impacts of the ongoing trade war is challenging, with much dependent on the permanence of US tariffs and how countries retaliate. However, even if tariff rates are negotiated down in the coming quarters, risks to the outlook for global economic growth are tilted to the downside.

Growth expectations in Asia Pacific are positive. In Oxford Economics' (OE) February update, it forecasts annual Gross Domestic Product (GDP) growth of 3.9% for 2025 and 3.8% for 2026[2]. Domestic demand across much of the region is likely to be impacted by cautious market sentiment amid policy ambiguity. Moderating inflation should lead more central banks to cut interest rates, although they will remain mindful of the US Federal Reserve's next move as well as potential currency pressures.

The upturn in the chip cycle is expected to continue driving technology exports, but with considerable risks, particularly surrounding US trade policy. The additional tariff that the US applied on foreign goods is likely just the first round in a protracted trade war with regional ramifications.

Economic conditions are diverse across numerous Asia Pacific economies. China's GDP grew by 5.0% in 2024, in line with the official target of "around 5%". GDP growth may strengthen in the coming months due to tailwinds from policy stimulus measures. However, growth forecast for 2025 remains downbeat at 4.7% as structural imbalances and the escalation of the US-China trade war weigh on the economy. In Hong Kong, estimates showed that GDP grew by 2.5% in 2024. 2025 growth is forecast at about 2.0% y-o-y, but there are significant downside risks as private consumption remained weak and export performance showed signs of softening.

The Japanese economy likely gained some momentum towards the end of 2024, but real GDP should be flat for the full year. Growth is forecast to pick up to 1.2% this year, supported by a recovery in households' real income. However, tepid growth in investment spending and exports still limits the pace of the recovery. The Bank of Japan (BoJ) raised its policy rate from 0.25% to 0.50% in January. Core inflation remained above the BoJ's 2% inflation target, bolstering the case for further tightening.

GDP growth for India is expected to come in at 6.4% in 2024 and growth is forecast at 6.5% in 2025. The near-term outlook for consumption remains mixed with household incomes weighed down by inflation and elevated unemployment rates. As headline CPI inflation softened to 5.2% y-o-y in December, the Reserve Bank of India may plan to cut policy rate from 6.5%, prioritizing slowing domestic growth over inflation concerns.

The Australian economy remained soft through the end of 2024, contending with tight monetary policies to combat inflation. GDP is forecast to grow by 1.0% this year as potential future rate cuts and real wage growth needs time to flow through to the private sector. The outlook for private consumption is improving,

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[1] World Economic Outlook, The International Monetary Fund, January 2025. All GDP projections are prior to US-led tariff changes.

[2] Oxford Economics, February 2025

aided by a tight labour market and income tax cuts last year. The Reserve Bank of Australia cut rates by 25 bps in February 2025 (from 4.4% to 4.1%), with further rates cuts projected for the rest of the year.

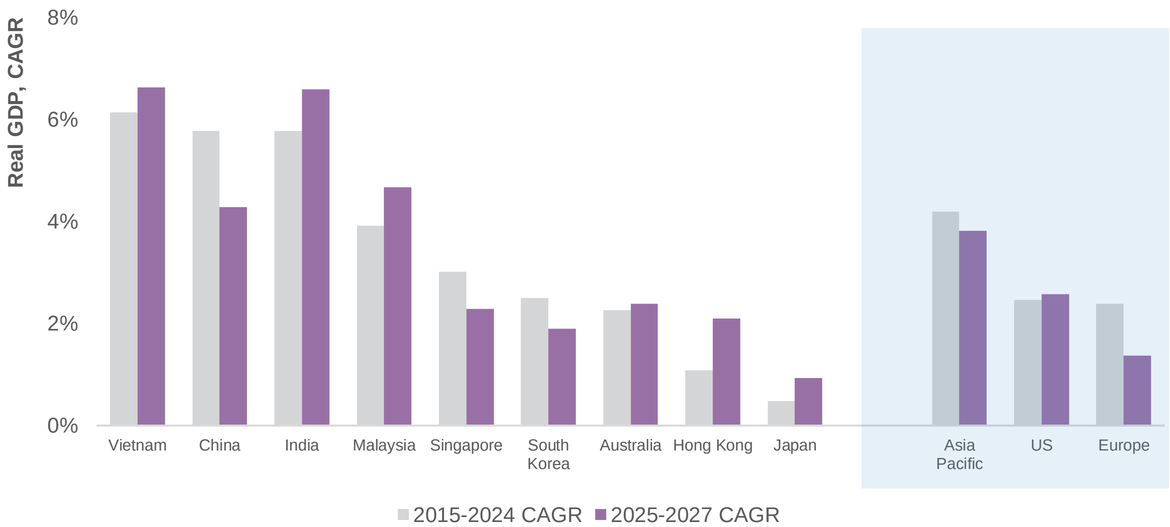
South Korea's GDP was up 2.0% in 2024. 2025 growth is forecast at 1.6%, with momentum supported by robust electronics exports. However, indicators suggest consumer demand is recovering more gradually than expected. The central bank is expected to cut its benchmark rate by 75 bps this year, but the pace will be cautious due to concerns about financial stability and a weak currency.

Singapore's economy expanded by 4.4% in 2024, and real GDP is forecast to grow by 3.0% in 2025. The ongoing electronics industry upswing will drive further growth this year, but consumer market conditions have not turned favourable yet. The Monetary Authority of Singapore loosened its monetary policy stance given moderating inflation in 2025.

Malaysia's economy grew by 5.1% over 2024 but GDP growth is expected to cool to 4.0% in 2025. That said, medium-term growth prospects are improving for domestic demand and ongoing global tech upcycle continues to buoy exports. Bank Negara Malaysia left its policy rate unchanged at 3.0% in January and it is unlikely to change policy settings anytime soon, given growing inflationary risks and currency pressures.

Vietnam's 2024 GDP growth was 7.1% and 2025 growth is forecast at 6.9%, led by the manufacturing and services sectors. Private consumption will improve in 2025, helped by decent wage growth and moderating inflation. The State Bank of Vietnam is open to the possibility of lowering the reverse repo rate, although further cuts will be gradual due to the recent strength of the US dollar.

Figure 1: Asia Pacific vs. US and EU Real GDP Growth



Source: Oxford Economics, February 2025
Note: Europe refers to EU and UK

Post-COVID market trends

The COVID-19 pandemic has highlighted the critical importance of supply chain modernisation, prompting businesses to rethink their supply chain strategies. There is a greater focus on inventory management as supply chain disruptions require companies to maintain more backup capacity and higher inventory levels, although these need to be balanced against higher warehousing and inventory management costs.

The pandemic has certainly driven innovation in the logistics industry. The impact of post-pandemic labour shortages has led to continual increases in wages and added to supply-chain vulnerabilities. Driven by a desire for greater resiliency of operations, logistics companies accelerated adoption of warehouse automation and alternative transportation modes.

Another significant factor that will impact the logistics landscape is the general availability of artificial intelligence (AI) and its use in supply chain operations. Storage and fulfilment facilities are impacted by the technology transformation now taking place. Robotic process automation (RPA) and autonomous vehicles for moving and storing products play an increasing role in supply chains. Smarter warehouses equipped with technologies such as big data analytics also provide better visibility and allow for faster order fulfillment.

Simultaneously, consumers are also adopting to new digital marketplaces, and retailers and logistics operators are responding accordingly. Urban logistics is the idea of reducing the distance between where goods are distributed and the end consumer. It is a key growth area. Logistics providers are taking steps to capitalize on the demand for last mile transportation services, and building smaller hubs near urban centres that can significantly improve agility and flexibility in delivery.

Sustainability is also in focus in the logistics sector, as developers and occupiers have begun to recognise the need to act in response to climate change and decarbonization. Although the logistics sector has been traditionally slow to transition, there's a growing focus on using renewable energy sources and automation solutions that reduce waste and energy consumption in warehousing and freight forwarding.

In short, supply chain modernisation and re-organisation are adding to the growing demand for new logistics facilities. Tenants are upgrading from outdated, often small and owner-occupied facilities to newer facilities, which are often in premium locations near to end-customers. Demand should also continue to grow for modern logistics facilities that are suitable for automation and deployment of labour-saving systems.

Supply chain overview

COVID-19 as well as geopolitical tensions have highlighted the critical importance of agile and flexible business operations. In a world which has become characterised by uncertainty economic and political environment, businesses are re-organizing their supply chains, with options including re-shoring, on-shoring and near-shoring part of the production process to ensure the resiliency of their operations.

Supply chain diversification is an important factor affecting the structures of global supply chains. Partly because of rising protectionism that is triggering a major re-ordering of the global trading system, more companies are making efforts to adopt supply chain strategies that avoid being overly dependent on a single country for supply.

In addition to factors such as lower costs and geopolitical stability, manufacturing and sourcing locations in other emerging markets may allow companies to access US and European markets and bypass targeted tariffs. In the past few years, some production facilities have moved from China to countries in emerging

Southeast Asia (SEA). in particular, countries such as Vietnam have benefited from trade diversion from China.

The impact of higher US tariffs may differ between countries and sectors, but there has been an escalation in the trade war with China. Although the US government has backed down from reciprocal tariffs proposed on most Asian economies, it remains to be seen whether these tariffs will be eventually implemented at their proposed levels.

In view of the latest trade negotiations, companies will need to review the costs and benefits of redistributing supply chains away from China. The prospects of “China Plus One” strategy will depend on negotiation not only between the US and China but also with the rest of the world.

In combination, trade protectionism and geopolitical tensions may lead to a re-ordering of global trading and manufacturing activities, and may translate into new warehousing space requirements. In short, supply chain modernisation and re-organisation are adding to the growing demand for new logistics facilities.

E-commerce impact on logistics demand

The COVID pandemic fuelled a new level of e-commerce growth, accelerating trends already evident across the sector. The proliferation of internet connectivity and smart devices has created a vast digital consumer base. At the same time, online shopping offers a wide selection of products, often at competitive prices, causing some shoppers to gravitate away from brick-and-mortar stores.

Asia Pacific has the world’s largest e-commerce market, accounting for more than half of the global market and more growth is expected in the future. The upside to L&I real estate is greater demand for warehousing space. This will be particularly so with the shift from offline to online retailing.

The rise of e-commerce has been a pervasive force throughout the global supply chain, driving faster, more efficient shipping, high inventory turnover and inventory staged in forward locations near consumers. In 2024, the global e-commerce logistics market continued to grow. The global market is valued at USD 515.0 billion, according to Transport intelligence (Ti), a leading data provider for the global logistics industry[3]. The Asia Pacific, North American and European e-commerce logistics markets represent more than 95.0% of the global market. E-commerce is expected to remain a positive tailwind for the logistics market, and e-commerce logistics spending globally is forecasted to grow at a 2025-2028 CAGR of 10.0%.

Asia Pacific was the second biggest market, with total industry spending of USD 192.0 billion. Looking forward, Asia Pacific is forecast to remain one of the world’s fastest growing consumer markets. Regionally, spending on e-commerce logistics is expected to moderate to a 2025-2028 CAGR of 10.1%, driven by rising online retail penetration and improving infrastructure.

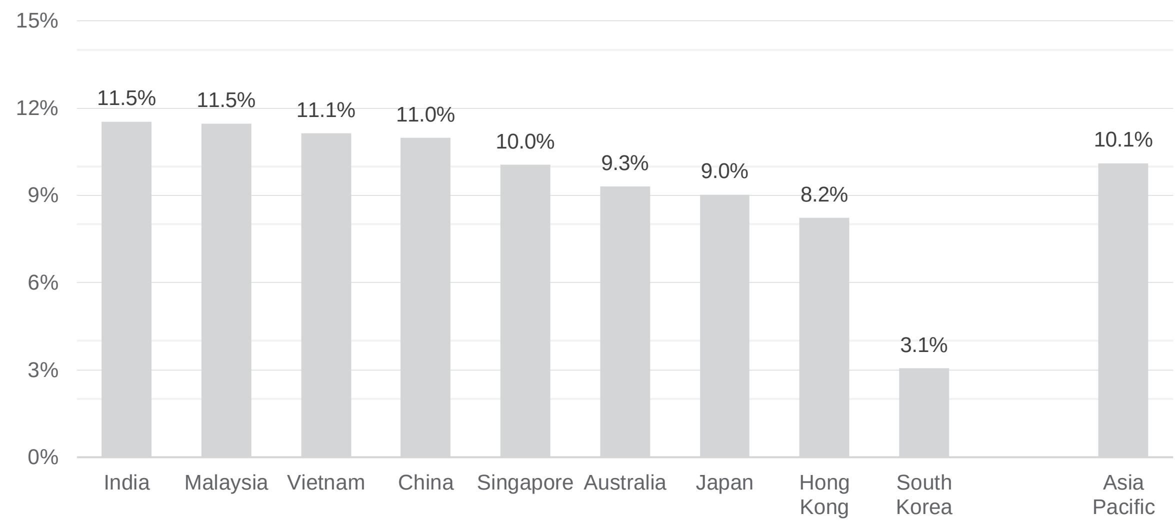
Also noteworthy is the growth of cross-border e-commerce logistics, which is benefiting from a wider growth in overall cross-border e-commerce sales. Cross-border e-commerce is increasingly popular as online platforms such as Temu and Shein have found traction in international markets, boosted by the cost-of-living crisis hitting consumers in many countries. It is estimated that Asia Pacific’s domestic and cross-border market represent 86.0% and 14.0% of the region’s total e-commerce logistics market, respectively.

That said, cross-border e-commerce faces significant challenges from taxes to customs regulations. A notable example is the end of “de minimis” exemption form US duties enjoyed by low-value e-commerce shipments from China and Hong Kong. Changes in government policies and other issues could constrain

[3] Unless otherwise stated, all data on this page are from Transport Intelligence, February 2025.

future growth in cross-border e-commerce. In the near-term, some electronic retailers may opt for an asset-light approach, using third-party providers rather than building their own storage and distribution networks in view of the uncertainties.

Figure 2: Forecast Growth of E-commerce Logistics Spending, 2025-2028 CAGR



Source: Transport Intelligence, February 2025

Third-party logistics (3PL) market trends

The rapid growth in commerce has amplified the importance of the supply chain function in almost every business that ships physical goods. Some companies are choosing to make significant investments to build out this function internally, while many others are looking to 3PLs to outsource the function.

The rise of the 3PL industry represents a business model which relies on third-party service providers to handle distribution needs. The 3PL market comprises of freight-forwarding and contract logistics. Freight forwarding is the outsourcing of services to move products between different locations and across different transportation modes. Contract logistics is the outsourcing of transport and logistics operations (most commonly warehousing and distribution) by any company to a dedicated 3PL service provider. Globally, freight forwarding and contract logistics accounted for 41.0% and 59.0%, respectively, of total 3PL spending in 2024.

3PL spending worldwide is forecast to grow by a 2025-2028 CAGR of 3.2%[4]. By region, 3PL revenue in Asia Pacific is projected to grow at a 2024-2028 CAGR of 5.0%, above the growth rate of North America and Europe (2.3% and 1.8% respectively).

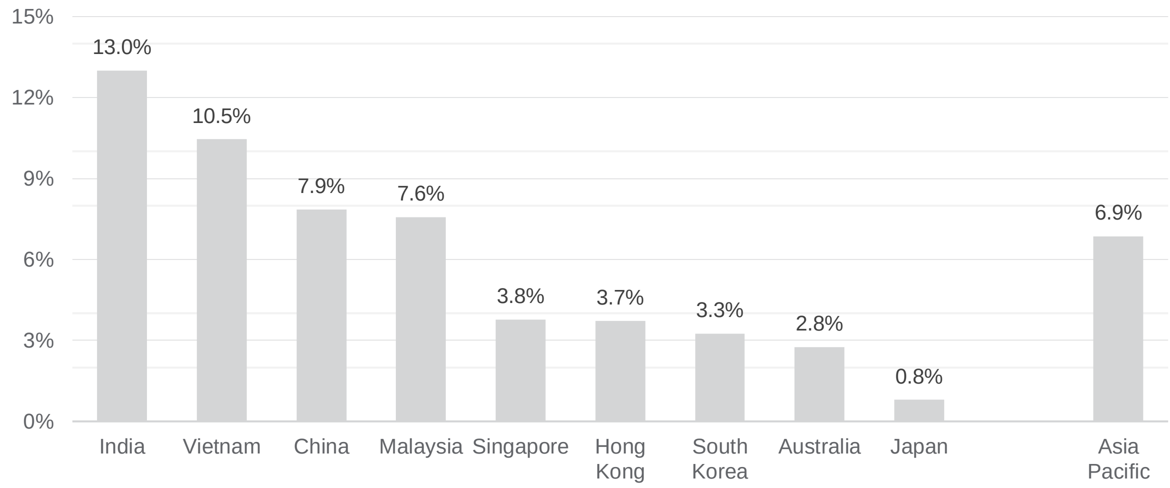
Contract logistics spending worldwide is forecast to grow by a 2025-2028 CAGR of 4.3%. Spending in Asia Pacific is projected to outpace other major regions with projected 2025-2028 CAGR of 6.9%, which is more than double the growth rates of North America and Europe (3.1% and 1.9% respectively).

Asia Pacific is expected to remain the world's largest contract logistics market by region in the medium-term. By country, China is the second biggest market worldwide after the US, with projected 2025-2028 CAGR of 7.9%. Vietnam, India and Malaysia will help drive the region's market expansion with CAGRs of

[4] Unless otherwise stated, all data on this page are from Transport Intelligence, February 2025.

between 8.0% and 13.0% over the same period. Conversely, low growth is expected in the more mature markets such as Australia, Singapore and Japan.

Figure 3: Forecast Growth of Contract Logistics Spending, 2025-2028 CAGR



Source: Transport Intelligence, February 2025

2. APAC logistics real estate market overview

Demand and supply trends

Occupier demand stabilised in 4Q24, though overall conditions remain subdued. However, 2024 marked a slowdown in occupier demand. Net absorption for the full year was 14.2 million sqm, much lower than the 16.3 million sqm in 2023.

Subdued demand is expected to persist in the near-term, a reflection of more cautiousness amongst occupiers amidst heightened macroeconomic uncertainty. A number of geopolitical flashpoints, subdued economic growth and interest rate expectations, as well as potential new tariffs have dampened occupier activity.

Asia Pacific logistics' market is currently in a strong supply cycle, though supply is moderating from the 2023 peak when around 25.9 million sqm of new space completed. Completions in 2024 fell to around 21.1 million sqm, before potentially moderating further in 2026 (20.9 million sqm).

Market conditions across Greater China are likely to remain relatively soft, as weak demand coupled with high supply is expected to keep upward pressure on vacancy. New leasing demand was mainly from 3PL and e-commerce companies, while cross-border e-commerce businesses drove the leasing demand in South China. Meanwhile, cost-saving relocations are expected to be a major source of leasing demand in the near term, particularly in more costly locations. In Hong Kong, strong economic headwinds continued to constrain logistics market activity although there were no significant downsizing cases in 4Q24.

In Japan, e-commerce and retail companies are expected to continue to be the mainstay of demand. As a result of rising logistics costs, there is increasing demand for logistics facilities in locations close to urban centres where transportation costs can be reduced. Supply pressures and more selective occupiers mean that vacancy in Tokyo should remain elevated in the short term.

APAC logistics market

In Australia, occupier demand in 2024 was on par with the historic average, but around 25.0% lower compared to 2023. Demand and supply is in a phase of rebalancing. After very tight conditions in the immediate period post-pandemic, the supply response kicked in while demand has started to moderate as e-commerce growth slowed and 3PL demand wavered. While vacancy has increased recently, it remains below long-term averages.

India's warehousing sector witnessed record demand of 4.7 million sqm in 2024, predominantly propelled by the corridors in Pune, followed by Mumbai, Chennai, Delhi NCR, and Bengaluru. Logistics operators continued to take-up space, and occupier demand has significantly shifted towards high-quality, compliant facilities, with Grade A spaces accounting for 80.0% of total demand.

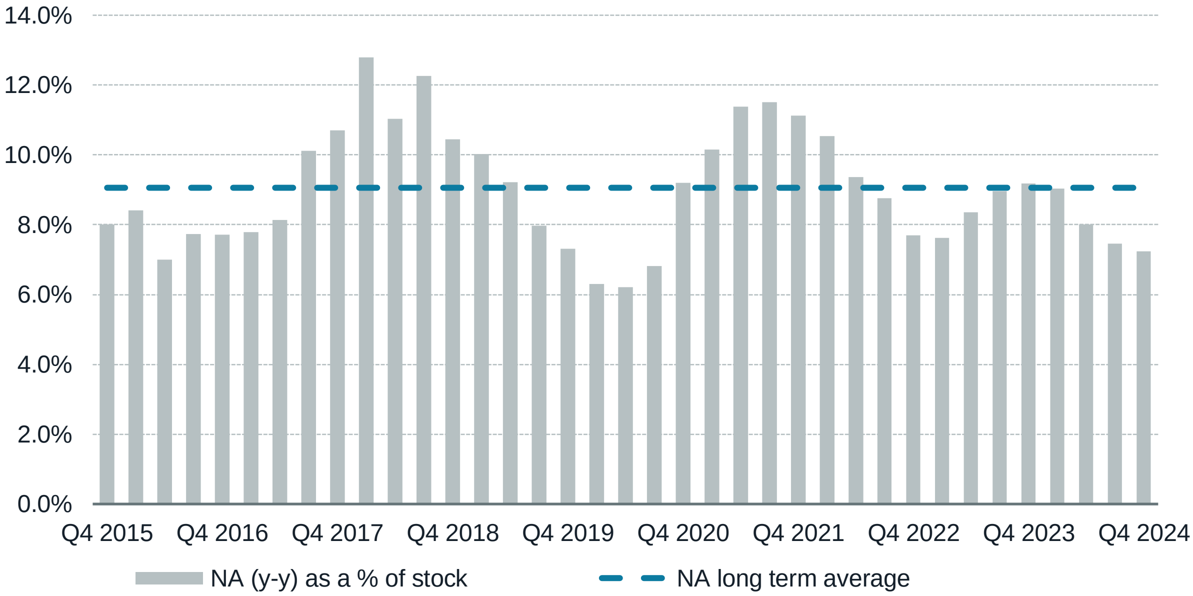
In South Korea, net absorption in 2025 is likely to remain strong, supported by continued growth in demand from e-commerce players and new market entrants. This should contribute to maintaining a healthy market. In Seoul, newly finished properties drove occupancy, with the majority of net absorption in 2024 occurring in projects completed that year. The cosmetics, manufacturing, and fashion sectors were the primary sources of new tenants.

Occupiers in Singapore remained largely cautious regarding space requirements, but sustained manufacturing sector growth should underpin demand for logistics/warehouse space going forward. As new supply is mostly for self-use, quality space options for lease are expected to stay tight.

Leasing activity in Kuala Lumpur was driven by strong growth in 3PL, pharmaceutical, and automotive subsectors. The market has seen a surge in demand for industrial spaces, particularly from international players entering the Malaysian market as part of supply chain diversification strategies.

Vietnam's ready-built warehouses saw generally stable activity, but market sentiment had not improved significantly. The Northern region has attracted more demand from 3PLs and manufacturers, especially in electronics and material manufacturing companies dominated by Chinese and Vietnamese firms. The Southern region continued demand from tenants serving the domestic market.

Figure 4: Asia Pacific Net Absorption as a % of Stock



Source: JLL, 4Q24

Note: Based on JLL REIS coverage (GFA) across 35 markets; Methodology may differ between markets due to different market norms.

Rental trends

Rents trended broadly higher in most markets towards the end of 2024, but at a much more subdued pace than in previous quarters. Overall rental growth should remain moderate in the next 2-3 years, reflective of the subdued economic conditions and cautiousness amongst occupiers.

Greater China: Given macro-headwinds and associated challenging market fundamentals, rent remain under pressure. However, rents are stabilizing for higher tier cities in good locations, and some even have small percentage renewal increase. In Hong Kong, prime warehouse rents fell further towards the end of 2024 in view of strong trade headwinds. Given the lacklustre recovery of local consumption and uncertain outlook for external trade, downward pressure on rents will persist as vacancy remains elevated.

Japan: Strong demand and rising construction costs have led to higher rents for new supply properties as well as existing facilities in core locations. Meanwhile, landlords are expected to continue increasing incentives, while downward pressure may be put on face rents, especially in fringe areas.

Average net face rents rose in most Australian markets in 2024, but slower than in 2022 and 2023. Well-located warehouses with high specifications will likely achieve stronger rental growth. As the market rebalances, incentives continue to play a more significant part in Industrial leasing negotiations as increasing vacancy levels impact property owners' ability to secure tenants.

In India, the increase in demand for high-quality spaces has pushed the Grade A rents higher. Rents are expected to maintain an upward trajectory, with Grade A properties projected to see an annual increase of ~5% in the short term.

South Korea: Rents are on an upward trajectory, as rising construction costs have compelled developers to raise asking rents, particularly for recent completions. Prime centres close to major junctions or those catering to last-mile delivery services tend to demonstrate stronger rental growth.

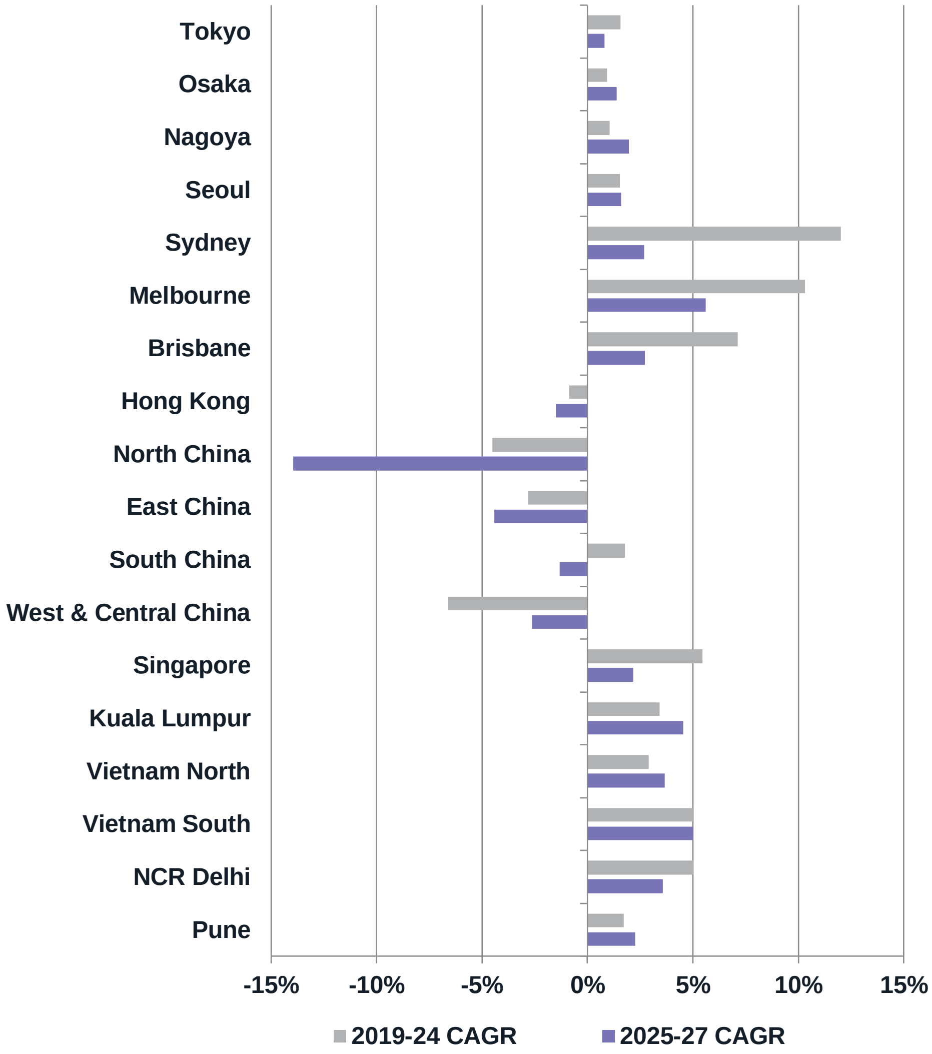
Singapore: Average logistics rent island-wide remained stable by end-2024, as occupiers remained cost sensitive in 4Q24. Vacancy to stay tight, especially for quality premises, as most of the upcoming supply is single-user developments meant for owner-occupation. This should, in turn, underpin rental growth.

Malaysia: Rents in Kuala Lumpur were largely flat q-o-q in 4Q24 and down 0.4% y-o-y. Larger deals led to negotiated discounts, while older assets lost appeal, requiring rent cuts to stay competitive. This reflects changing preferences in industrial real estate and challenges for aging properties.

Vietnam: Average asking rent generally remained stable in recent quarters. Rents are expected to maintain an upward trajectory, but growth should be modest given that vacancy rate is expected to remain high in 2025 in both the Northern and Southern regions.

APAC logistics market

Figure 5: Asia Pacific Logistics Rents (GFA basis)



Source: JLL, 4Q24
Notes:
1) Refers to prime net effective rents, except prime net face rents for Sydney, Melbourne & Brisbane, and prime gross rents for Vietnam;
2) Changes in local currency terms;

Capital market trends

Investor interest in the logistics real estate sector has gained momentum in recent years. Capital is still favouring growth-oriented sectors and investors are attracted by the positive long-term fundamentals of the industrial/logistics sector and the ongoing positive structural shifts in the sector. In particular, the expansion of e-commerce platforms and rising requirements for 3PL services suggest increasing demand for L&I space across regions, despite some caution by occupiers in the short term.

Investment market sentiment remains positive and strong transactional activity was recorded in some markets at the end of 2024. On the pricing front, yields in Greater China edged up again in 4Q24 against a backdrop of heightened economic headwinds. Generally stable market conditions translated to flat yields in Tokyo, Seoul, Singapore and emerging SEA. After a slowing decompression cycle, Sydney and Melbourne yields largely stayed flat in 4Q24, possibly indicating the end of the decompression cycle.

Investment activity in Greater China remains muted. Macro-headwinds and geopolitical tensions are keeping a lid on deal flow. Transactions were predominantly driven by small-scale projects, while most institutional investors remained cautious. Conservative decision-making by many investors has impacted both the scale and trend of market transactions. Going ahead, macro-headwinds and geopolitical tensions may continue to keep many offshore groups on the sidelines.

Tokyo: Demand remains strong from domestic and overseas investors, such as life insurance companies, especially for fully occupied logistics facilities. Although the rising interest rate trend continues, investment yield is expected to remain stable in the near-term.

Australia: Around AUD 2.4 billion transacted in Australia logistics market in 4Q24, higher than the 10-year average of AUD 2.0 billion. The start of the rate cutting cycle may spur more activity in 2025. Record investment activity was recorded in Sydney with investment volume reached AUD 4.9 billion in 2024. Local investors dominated activity, with local super funds a large buyer of assets.

The market outlook in India indicates a projected increase in supply aligned with demand growth, with built-to-suit transactions emerging as a significant trend. Additionally, the sector is experiencing heightened interest from institutional investors and developers.

South Korea: Investment market sentiment should improve in 2025 on the back of declining interest rates and stabilising new supply. Recent price corrections in logistics properties have enhanced the sector's investment appeal. Consequently, market yield is expected to slightly compress in the next 3 years in view of positive expectations towards the capital market.

Singapore: Investors remain keen on Singapore acquisition opportunities, with a number of major deals in the back half of 2024. Despite the modest rental growth outlook, logistics/warehouse yields could tighten on lower borrowing costs and investors' sustained interest in this asset class.

Investor interest in Malaysia was evidenced by recent investment transactions in the sector. Notably, a transaction was reported with a capitalization rate of 6.4%, which suggests a relatively attractive yield for investors in the Malaysian industrial real estate market. These entities are pursuing land acquisitions to construct or lease warehouses.

Vietnam: Ready-built Warehouse (RBW) market is experiencing a significant influx of foreign capital, marked by vibrant M&A activities and joint ventures. Notably, Indochina Kajima partnered with Hulic Group; Hankyu Hanshin, CRE, joined hands with Sembcorp to invest in Sembcorp Infra Services (SIS).

APAC logistics market

Figure 6: Asia Pacific Logistics Market Yield

Source: JLL, 4Q24
Notes:
1) Yields refer to market yields (current market effective rental divided by market capital value).
2) Market yields are net yields, except for Kuala Lumpur and Vietnam which are reported as gross yield.
3) All market yields are for logistics warehouses only, except for the Australian industrial and logistics (I&L) sector.
4) JLL does not track India logistics yields.

Section B: Country Overview

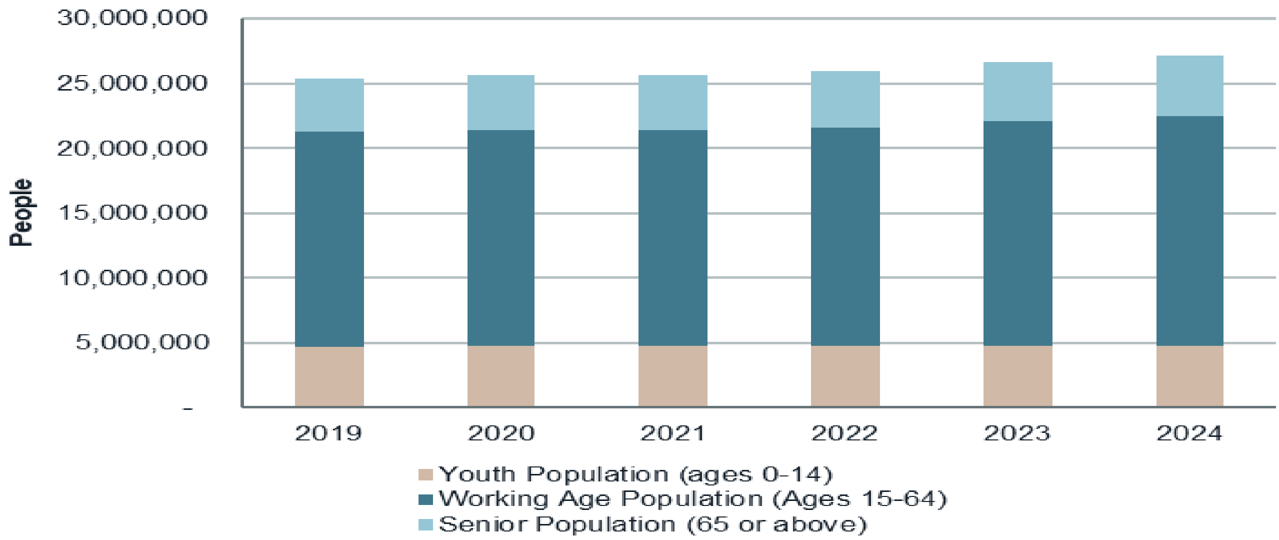
1. Overview of Australia's Logistics Market

Macroeconomic Overview

Country overview

Australia's population is growing with an estimated resident population of 27.3 million people at 30 September 2024. However, despite Australia's large landmass (7.7 million square km), approximately 95% of Australia's population lives within 100 km of Australia's coast. Due to accommodative immigration policies post COVID-19, Australia's working age population increased between 2.2%-2.9% throughout 2023 and 2024, with a total of 17.7 million Australians of working age in 2024. This compares to annualised growth of 1.2% recorded over the pre-COVID-19 ten-year period between 2010-2019.

Figure 7: Australia – Population by Age Cohort



Source: Australian Bureau of Statistics

Economic overview

Australian economic growth is slowing as the Reserve Bank of Australia's ("RBA") elevated cash rate policy cools consumer spending growth. However, inflation levels only recently dipped below the RBA's target inflation band of 2.0%-3.0%. As of September 2024 quarter, year-on-year (y-o-y) GDP growth decreased to 0.8% - the lowest y-o-y growth rate since December 2020.

RBA efforts to slow the Australian economy through official cash rate hikes is working. Since March 2022, the RBA has increased the official cash rate from 0.1% to 4.4%. However, the RBA cut the official interest rate in February 2025, reducing it to 4.1%.

More positively, inflation in Australia decreased to 2.4% in December 2024, remaining within the RBA's target inflation band between 2.0%-3.0% for consecutive readings. This follows on from a period of persistently high inflation which peaked at 7.8% y-o-y in December 2022.

The Australian labour market remains robust with the Australian unemployment rate currently sitting at 4.0% (December 2024) – well below the long-term, 10-year pre-COVID-19 average of 5.5% (2010-2019).

Economic growth in Australia's largest trading partner China is slowing. Given this, Australian export volumes are decreasing. As at December 2024, Australian exports by value have decreased 7.3% y-o-y, driven by falling demand for raw materials such as coal (-17.0% y-o-y), oil and gas (-8.5% y-o-y) and metal ore (-7.1% y-o-y), as well as decreasing demand for Australian agricultural produce (-23.9% y-o-y).

Looking forward, Australian coal exports are likely to continue to trend down over the long-term as most major global economies transition to cleaner, renewable energy generation. The expectation that global steel production will also trend downwards over the next 12 months will further dampen coal demand over the short-term.

The tariffs imposed globally by the United States government could potentially have positive impacts on Australian agricultural exports with Canada and Mexico being two key exporters of agricultural products into the United States.

Looking forward, Australian macroeconomic fundamentals of GDP growth and population growth remain positive over the medium term, which is expected to underpin ongoing growth of the Australian industrial and logistics (I&L) sector. Over the next 10 years to 2034, population growth in Australia is forecast to be the strongest of all mature economies globally, averaging 1.2% per annum. Overseas migration is keeping the working age population growing. While this has moderated from the post-COVID record levels, they are now back to their still strong pre-pandemic levels. Additionally, GDP growth in Australia is also forecast to be the strongest globally, outside of the emerging economies of India and China. Over the next 10 years to 2034, GDP growth is forecast to average 2.5% per annum.

Government planning and policies/structural changes to logistics market

There are several key policies implemented by the government that are intended to improve efficiency and productivity for the Australian I&L sector.

The Australian National Freight and Supply Chain Strategy is a 20-year plan aimed to provide a long-term framework for freight planning and investment across all transport modes. Road freight grew by over 75 percent between 2000-01 and 2015-16 with consumer goods being the dominant goods stored and produced in Australia. The key focus of the strategy is on future planning, emphasizing action areas of urban freight, regional and remote freight, international gateways (ports and airports), corridor protection and strategic planning, technology and data, and regulation and compliance.

Infrastructure Investment Program is a Federal Government of Australia initiative aimed at improving the country's infrastructure across various sectors including roads, rail, airports, and community infrastructure. As part of the 2024-25 Budget, the Australian Government is committing AUD 16.5 billion for new and existing projects including road infrastructure upgrades in Western Sydney (AUD 1.9 billion), an additional AUD 3.3 billion towards Melbourne’s North East Link Road infrastructure project and Brisbane’s A1 Bruce Highway South Corridor project (AUD 5.6 billion).

The **Emissions Reduction Fund** and the **National Electric Vehicle Strategy** are two sustainability-focused initiatives funded by the Federal Government of Australia. The Emissions Reduction Fund is designed to provide incentives for businesses, farmers, and landowners to adopt new practices and technologies that reduce their greenhouse gas emissions. The National Electric Vehicle Strategy aims to accelerate the adoption of electric vehicles (EVs) in Australia, reducing transport emissions and improving energy security. The strategy includes various financial incentives to make EVs more affordable, such as tax breaks or rebates for EV purchases, as well as expanding the EV charging station network nationally. The Federal Government of Australia plans to transition all government vehicle fleets to EVs over the short-term.

Logistics market overview (Grade A only)

Key logistics hubs

Sydney, Melbourne, Brisbane

Logistics real estate market landscape

Australia's logistics and industrial market tracked by JLL totals approximately 74.3 million sqm and spans the major capital city metropolitan areas of each state, excluding Tasmania, Northern Territory and the Australian Capital Territory (ACT). In line with proportional population patterns, almost 90.0% of total warehouse space is located along the eastern seaboard markets of Sydney, Melbourne and Brisbane (combined 65.8 million sqm).

Demand drivers for logistics properties

3PL industry

Australia's 3PL companies are the largest I&L occupier in Australia. Over one third (33.7%) of total gross take-up nationally in 2024 was attributed to the transport, postal & warehousing business sector (991,500 sqm). This occupier sector has been the largest proportion of gross take-up in Australia for the last decade (2014-2023), accounting for 9.8 million sqm (33.2%).

Retail Trade

Green shoots are appearing in the retail environment. Year-on-year national retail trade has increased for seven consecutive months, reaching to 2.4% y-o-y in December 2024 after reaching a 40-year low of 1.5% y-o-y in May 2024. This follows on from a period of elevated retail trade during the COVID-19 period where year-on-year spending peaked at 11.5% y-o-y in January 2023.

Over this elevated period of consumer demand from 2020 to 2022, demand for warehouse space from retailers was strong, with gross take-up from retailers accounting for 24.2% of the national total over the three-year period.

Manufacturing Sector

Australia has broadly transitioned away from a heavy-industry manufacturing market to a consumer-driven goods distribution and storage market. The country's geographic proximity to the major Asian manufacturing centres has resulted in previously domestically manufactured goods now being produced overseas and imported to Australia.

Despite this, the manufacturing sector still represented 27.7% of total occupier gross take-up in 2024 (815,700 sqm). However, it is unlikely that the majority of this leased space is used for actual manufacturing of goods. It is more likely that manufacturers have leased warehouse space for inventory holding usages and distribution of goods.

Growth of e-commerce and 3PLs/express growth

Australian online spending is recovering. As of December 2024, proportional retail spending online reached 13.8% of total monthly retail trade – representing the highest proportion of monthly retail spending in over two years (August 2022). Over the 12 months to December 2024, Australians spent AUD 59.9 billion dollars online.

Warehouse requirements for pure online retailers has been steadily increasing over the last five years with 893,800 sqm of gross take-up recorded from online retailers since 2020. This volume has been underpinned by Amazon, by far, the most active online retailer, which has leased a total of 602,400 sqm alone over the time period.

Structural trends on logistics & logistics property market

a) Construction Constraints

The shortage of construction workers in Australia has been felt acutely over the last 12 months. With the Government of Australia focused on increasing the residential housing supply, as well as pushing forward with major, labour-intensive infrastructure projects nationally, the construction industry labour force has been spread thin across multiple sectors. This, combined with ongoing elevated materials costs and supply chain disruption, has resulted in many mooted industrial sector projects being delayed, as developers have been unable to source an adequate workforce to deliver projects within forecast timeframes. However, it is now expected that the period of construction labour, materials, and land pricing constraints has now peaked, with feasibilities now normalising.

Additionally, wage growth in the construction sector is rising sharply. As of September 2024, construction industry wages have increased 3.4% y-o-y. The combination of elevated industrial land values and the rising cost of construction has jeopardised many development feasibilities over the last 12 months. However, as noted, construction costs constraints have now largely peaked, supporting future supply.

This shrinking construction labour force in Australia presents a downside risk to our future supply pipeline expectations and may result in further project delays or even abandonments over the medium-term.

b) Artificial Intelligence

AI adoption within the logistics and industrial sector is accelerating. The nascent technology advances support efficiency gains in inventory management and distribution of goods, waste minimisation, and warehouse management systems.

Inventory Management – AI advancements in inventory management includes self-supervising, deep-learning inventory packing fulfilment robots, and machine-learnt future inventory requirement management systems that can react to external events in real time to ensure goods are transported to areas of need without downtime.

Digital Twins – A digital twin is an electronic replica of a facility updated with real life data that replicates all processes, systems and changes to the environment. AI advancement in digital twin accuracy supports efficiency gains to warehouse internal layouts and optimal goods storage pathways, reduces business costs for businesses by reacting in real-time to power and temperature control requirements.

Construction – AI adoption in the development of I&L facilities has positive outcomes in feasibility and cost management, adherence and optimisation of increasingly complex ESG considerations from internal and external stakeholders, and the automation of large-scale construction machinery which will accelerate development timeframes.

However, the adoption of AI into warehousing and broader supply-chain processes will largely be driven by large multi-national and domestic corporations with the capital expenditure to invest in the technology.

c) Multi-Storey Warehousing

While more commonplace in land constrained markets like Singapore, Korea and Japan, multi-storey warehousing is still in its fledgling stage in Australia. However, as opportunities for developers to secure development land in and around key freight infrastructure becomes scarce, the attractiveness of multi-storey warehousing as a product is increasing, albeit slowly. Currently, occupier attraction to multi-storey development is low compared to traditional warehouse offerings.

As at 4Q24, JLL is tracking 20 projects nationally that are categorized as multi-storey warehouses, totalling 1.3 million sqm. Of these, only one has completed so far – Cabot's 19,757 sqm Portal development in Matraville in Sydney's South - and only a further three are under construction. All but one of these 20 projects is located outside of Sydney. Broadly, the higher associated costs of multi-storey warehouse development also remain a factor in the future delivery of the product, disproportionately impacted feasibilities.

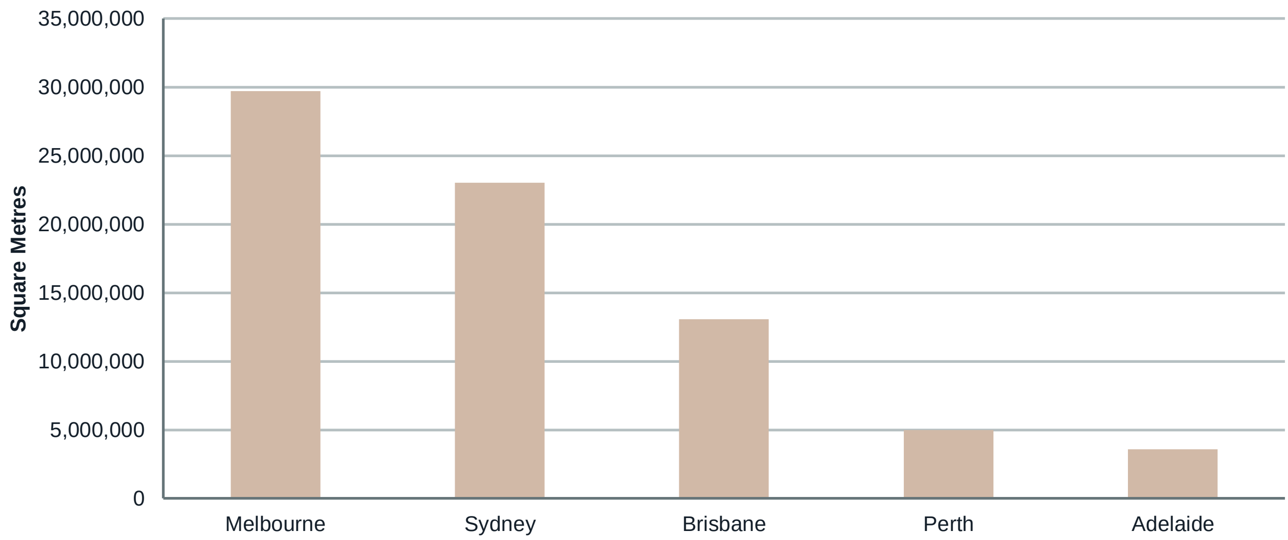
Logistics property overview (Grade A only)

Estimated logistics real estate per capita

Australia's logistics and industrial market tracked by JLL totals approximately 74.3 million sqm, roughly equating to 2.7 sqm of warehousing space per person, and spans the major capital city metropolitan areas of each state, excluding Tasmania, Northern Territory and the Australian Capital Territory (ACT). In line with proportional population patterns, almost 90.0% of total warehouse space is located along the eastern seaboard markets of Sydney, Melbourne and Brisbane (combined 65.8 million sqm). The comparatively smaller industrial markets of Perth and Adelaide account for the balance.

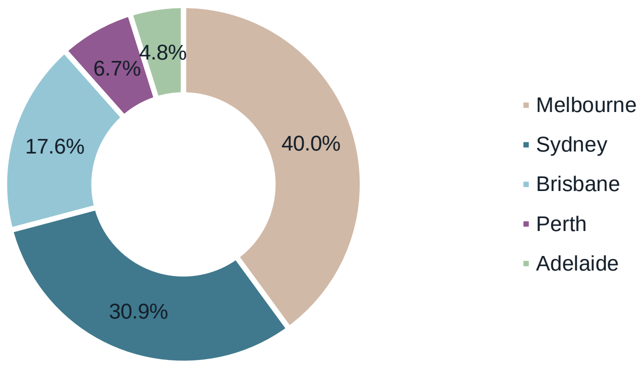
Market Size

Figure 8: Australia – Total stock by Market, 2024



Source: JLL, 4Q24 (Adelaide and Perth are estimates)

Figure 9: Australia – proportional total industrial stock by area by market, 2024



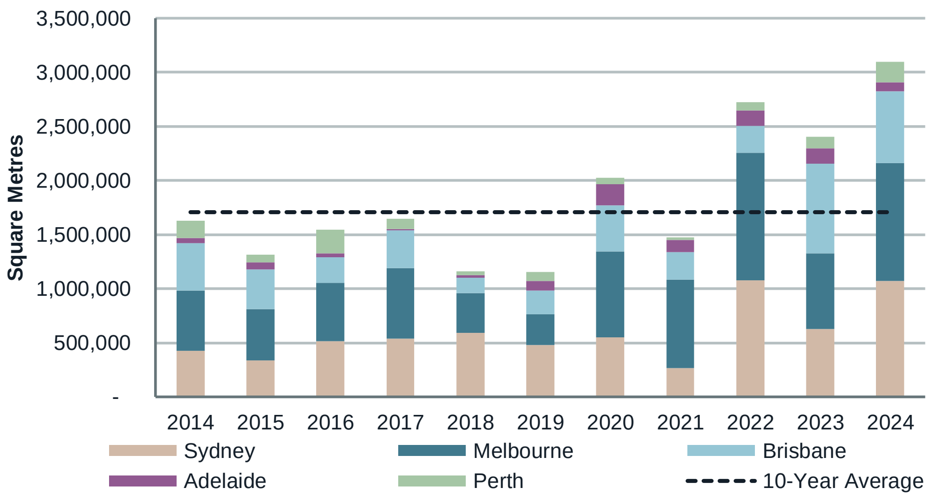
Source: JLL, 4Q24 (Adelaide and Perth are estimates)

Industrial vacancy slowly increased in 2024 after a period of very low warehouse availability in 2022 and 2023. As at 4Q24, headline vacancy in Sydney increased 25 bps to 4.2%, following a record year of supply delivery and a below-average year for demand. Vacancy also increased in Melbourne from 3.1% in 3Q24 to 3.3% in 4Q24. Similarly, vacancy in Brisbane also increased from 3.7% in 3Q24 to 3.9% in 4Q24. However, it must be noted that these vacancy figures are still low when compared to estimated third party historical vacancy rates.

Supply and characteristics of warehouses

Industrial supply completions for the 2024 calendar year set a record at 3.1 million sqm, 81.3% above the long-term 10-year annual average. Over 90.0% of all new supply was delivered to the eastern seaboard markets, with 1.1 million sqm of supply completed in Melbourne (35.1%), 1.1 million sqm delivered in Sydney (34.7%), and 661,800 sqm of new warehouse space completed in Brisbane (21.4%).

Figure 10: Australia – Annual supply by market, 2014-2024



Source: JLL, 4Q24

Warehouse sizes are increasing significantly in Australia. The average warehouse size nationally has increased 27.8% over the last 10 years, moving from an average of 13,500 sqm in 2014 to 17,200 sqm in 2024. It has been the higher volume of large-scale warehouse development that has been the catalyst for this growth. There has been more warehouse completions exceeding 35,000 sqm over the last five years from 2020-2024 (64 projects) than was delivered over the preceding 10 years from 2010-2019 (54 projects).

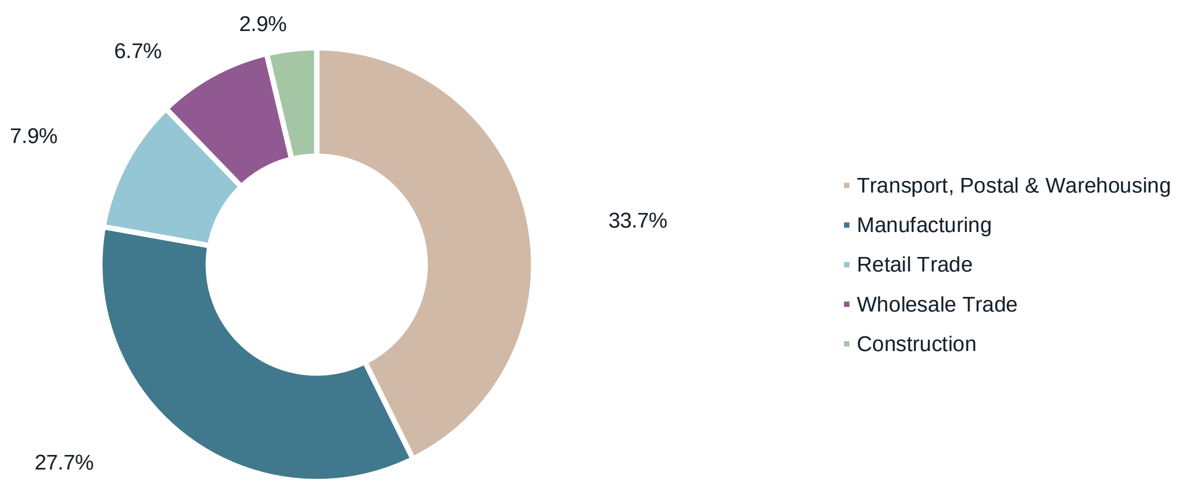
Speculative warehouse development is slowly edging towards long-term averages after a period of accelerated speculative supply delivery over the past two years. In 2024, approximately 72.9% of all new warehouse space was completed with pre-lease occupiers secured. Over the previous two years from 2022-2023, pre-commitment rates on new supply was significantly lower at 66.5%.

Requirements and trends (including impact from e-commerce growth)

On the occupier demand side, national gross take-up in 2024 was slightly down compared to the robust levels of occupier demand recorded over 2021-2023. However, the 2024 annual gross take-up total of 2.9 million sqm was still in-line with the long-term 10-year annual gross take-up average of 2.95 million sqm (which included the elevated demand period between 2021-2023) and well above the pre-COVID-19 long-term average of 2.3 million sqm recorded over 2010-2019. Occupier demand is relatively robust for smaller floorspace (<5,000 sqm), while warehousing of scale has been slower to absorb.

On a business level, the Australian logistics and industrial sector has been dominated by three occupier sectors – the transport, postal & warehousing sector, the retail trade sector, and the manufacturing sector. Over the past 10 years from 2014-2023, these three sectors have accounted for 77.0% of all occupier gross take-up nationally, totalling 22.8 million sqm. A similar trend was recorded in 2024 with the transport, postal & warehousing sector accounting for 33.7% of the national total (991,500 sqm). However, as previously noted, activity from the retail trade sector was below average (7.9% of the national total, equating to 231,600 sqm), somewhat balanced by an increase in activity from manufacturers, which leased 815,700 sqm over the 2024 calendar year (27.7% of the total).

Figure 11: Australia – Proportional Gross Take-Up by Business Sector, 2024



Source: JLL, 4Q24

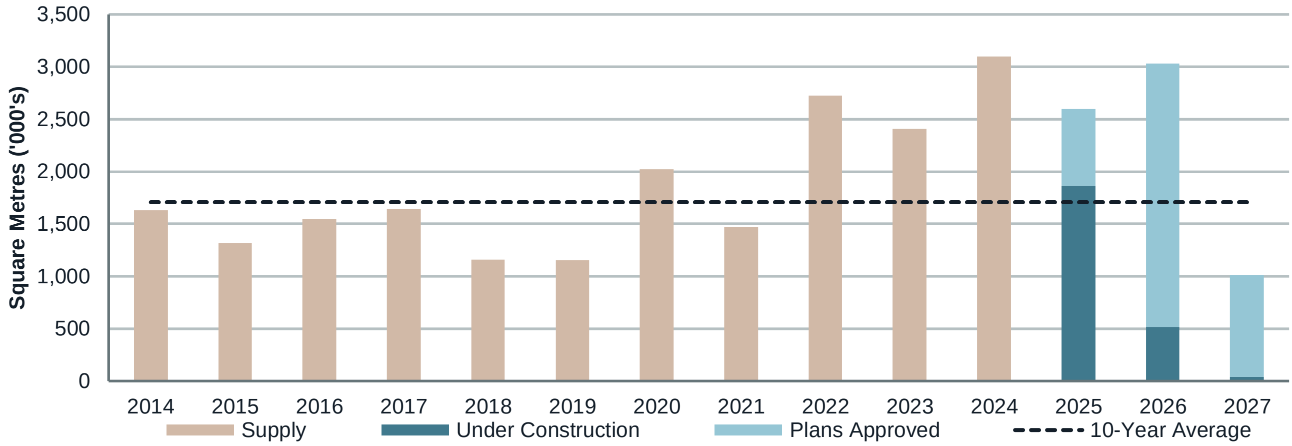
Performance and outlook (3 years of forecast data)

Annual Completion Outlook

Looking forward, there is 2.4 million sqm of warehouse space currently under construction nationally, expected over the medium term to 2027. Of which, 41.7% is to be delivered in Melbourne (1.0 million sqm), 31.8% is to be delivered in Sydney (769,900 sqm), and 17.0% is to be delivered in Brisbane (411,600 sqm).

Over the next 12 months, 1.9 million sqm is expected to be completed, almost half the supply delivered in 2024. Similarly, to the total future supply pipeline, almost half of the 2025 pipeline will be delivered in Melbourne (41.7% - 777,800 sqm) with the majority of the balance expected in Sydney (30.1% - 560,300 sqm) and Brisbane (18.9% - 351,400 sqm).

Figure 12: Australia – National industrial supply pipeline, 2014-2027



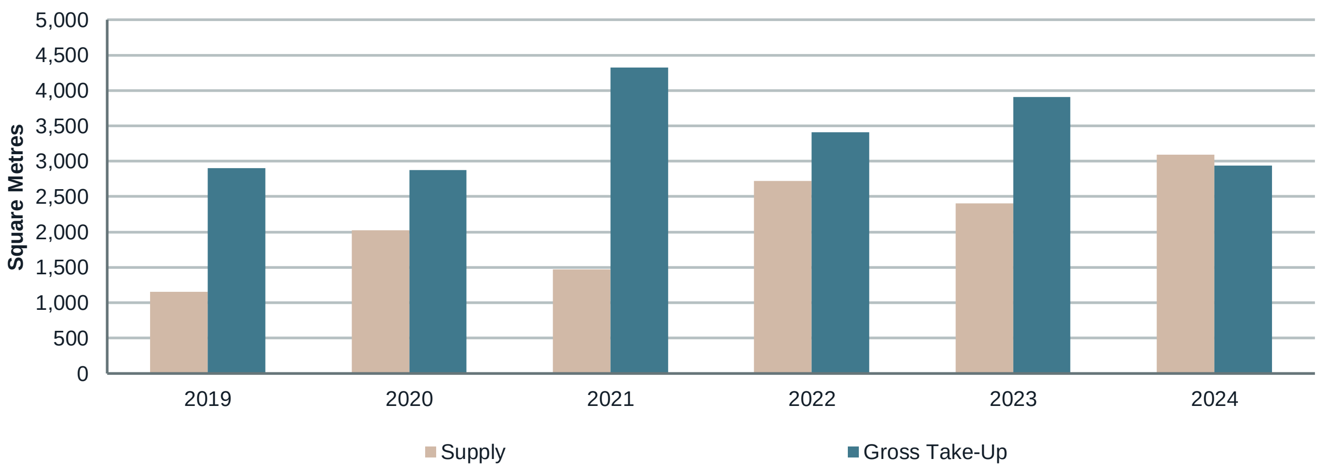
Source: JLL, 4Q24

Demand vs Supply

Occupier demand has historically been larger than the delivery of warehouse space in the Australian industrial market. Over the last 10 years, demand (measured in the form of occupier gross take-up) has outpaced supply by 65.9%, with the decade of gross take-up from 2015-2024 reaching 30.8 million sqm, compared to just 18.5 million sqm of supply delivered over the same time period.

However, over the last 12 months, that trend was reversed. In 2024, with the increased development of speculative warehouse space, annual supply eclipsed gross take-up. While only exceeding gross take-up by 5.2% over the calendar year, the increased supply has moderately alleviated the very tight availability of warehouse space recorded nationally through 2022 and 2023.

Figure 13: Australian Industrial Supply & Demand, 2019-2024



Source: JLL 4Q24

Major logistics facility providers and players

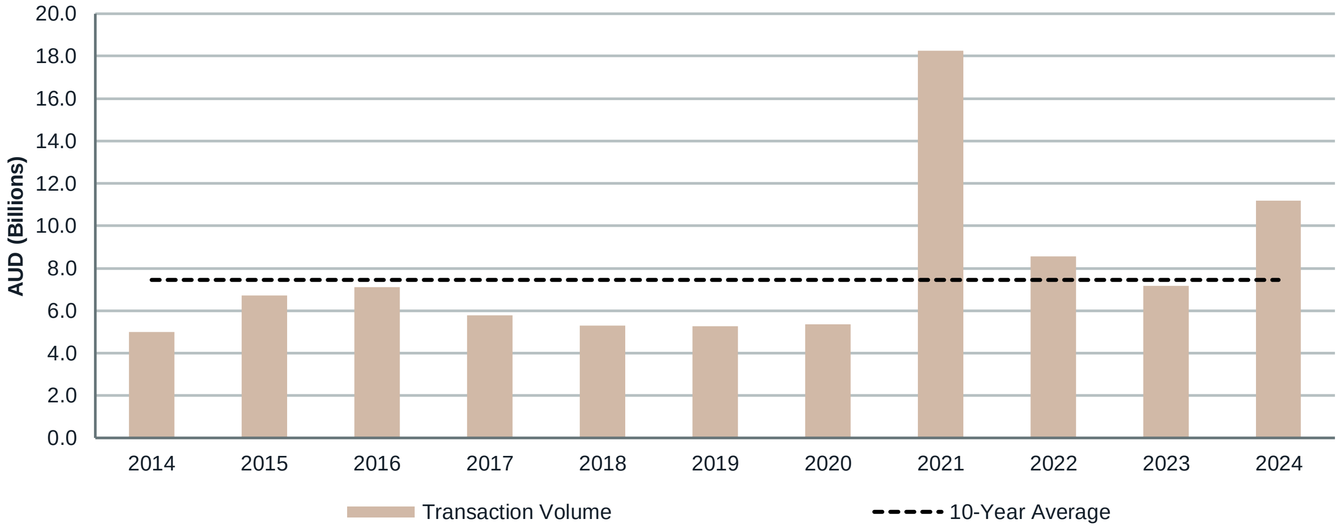
Below is the list of the top 50 largest industrial owners (by asset value) in Australia (as at 1Q25, listed in alphabetical order).

Abacus Property Group, ADIA, ARA LOGOS Logistics Trust, Arrow Capital Partners, Australian Retirement Trust, AustralianSuper, Aware Super, AXA Group, Barings, BlackRock, Blackstone, Brookfield AM, Cadillac Fairview, CapitaLand Ascendas REIT, CDPQ, Centennial Property Group, Centuria Capital Ltd, Centuria Industrial REIT, Charter Hall Group, Charter Hall Long WALE REIT, CPP Investment Board, Dexus, DigiCo Infrastructure REIT, ESR Cayman, ESR-LOGOS REIT, Fife Capital, Gateway Capital, GIC, Goodman Group, GPT, Growthpoint (AUS), Hale Capital Partners, Hankyu Hanshin, Hines, Irongate Group, ISPT, Kintetsu Group, KWAP, Lendlease, Mirvac Group, Mitsui OSK Lines, NextDC, NSW Government, Pellicano Group, PGGM (NL), PGIM Real Estate, REST Super, RF CorVal, Starwood Capital, Wentworth Capital.

Investors and investment trends, and major selected transactions. if any

Over the past 12 months, Australian industrial investment volumes have improved on the already above-average volumes recorded over the last two years. Total transaction volumes (≥AUD 5.0 million) reached AUD 11.1 billion – well above the long-term 10-year average of AUD 7.4 billion (2014-2023) (figure 14).

Figure 14: Australian Industrial Transaction Volumes, 2014-2024



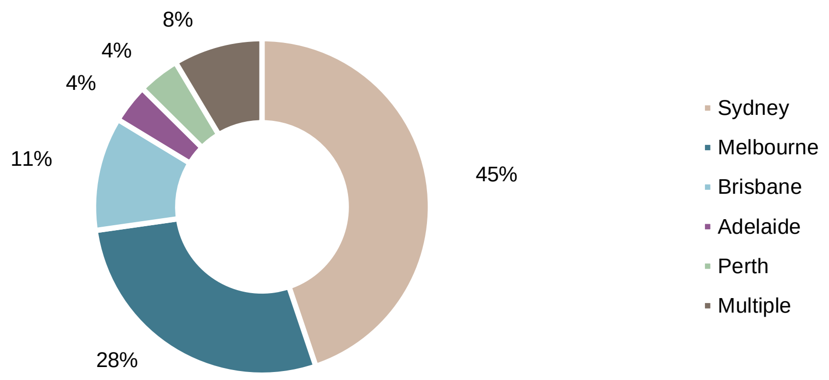
Source: JLL, 4Q24

Investment activity remained very positive over the last 12 months, despite the fact that over 1,400 investment grade warehouse assets of scale in Australia (≥AUD 5.0 million) have transacted over the last 5 years from 2020 to 2024.

Additionally, there has been a significant uplift in development land sales. Increasingly, industrially zoned land is becoming scarce in many markets, resulting in higher demand from developers and investors looking to future-proof development pipelines over the medium-term. Over the last 12 months, land transactions (≥AUD 5.0 million) totalled AUD 3.1 billion – over three times the long-term, 10-year average of AUD 822.9 million recorded from 2014-2023.

Almost half of the industrial transaction volumes recorded over the last 12 months have occurred in the Sydney market (figure 13), driven largely by four significant land transactions recorded in the Outer Central West and Outer North West precincts – all of which exceeding AUD 299.0 million.

Figure 15: Australian Industrial Transaction Volumes by Market, 2024



Source: JLL, 4Q24

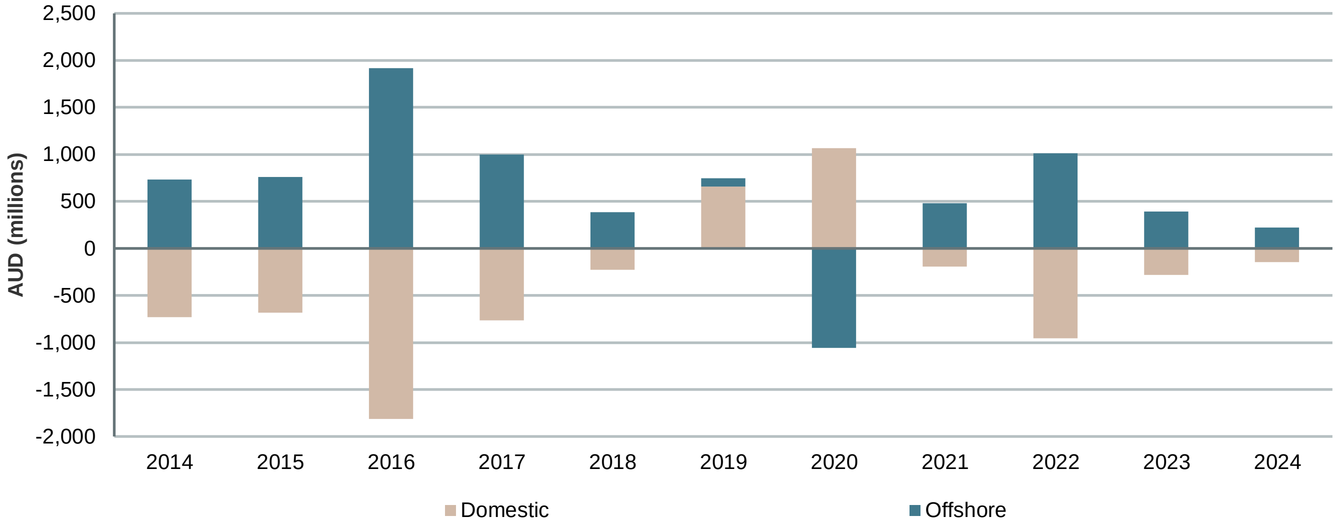
The largest transaction over the last 12 months was the AUD 862.4 million land acquisition of Burra Park, a 280-hectare site at Badgerys Creek in Sydney's Outer Central West. Superannuation funds ISPT and UniSuper purchased the site from private landowner Robert Jones.

Domestic capital accounted for ~75.4% of all industrial transactions (≥AUD 5.0 million) in Australia over the last 12 months to 4Q24 – above the long-term 10-year proportional average of 69.1% recorded from 2014-2023.

This is reflective of a lower volume of large-scale, investment grade industrial assets brought to market over the past year – the type of investment product, along with portfolio investment, which is typically favoured by offshore capital.

Despite lower transaction volumes from offshore capital over the last 12 months, net investment from offshore investors remained positive – a position maintained for most of the last 10 years (figure 16). However, a downside risk to future offshore investment is current taxation legislation on foreign ownership in both Melbourne and Brisbane, which increases acquisition costs for offshore capital looking to invest in those geographies.

Figure 16: Net Australian Industrial Transaction Volumes by Investor Geography, 2014-2024

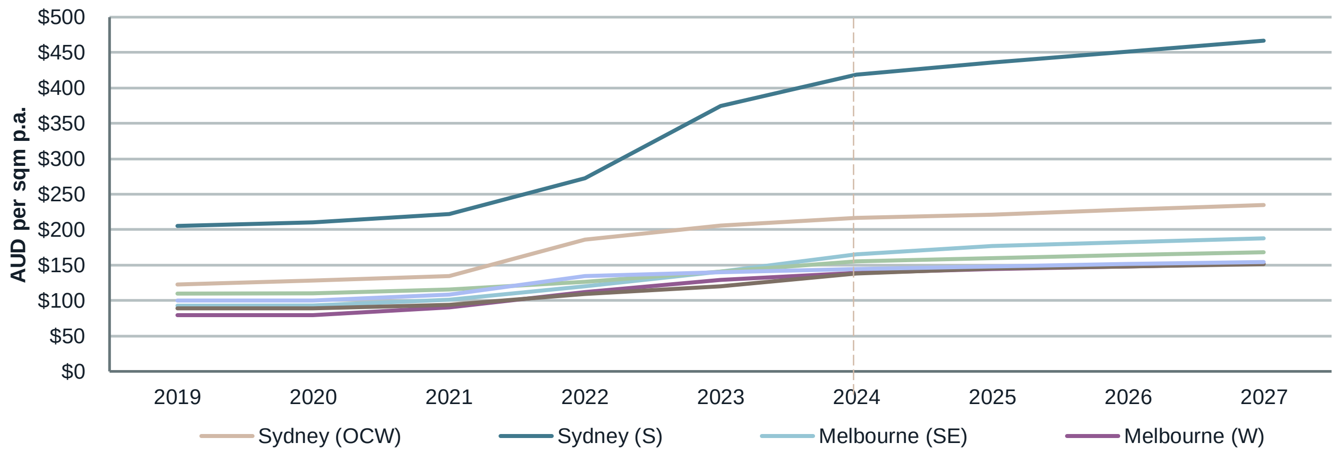


Source: JLL, 4Q24

Over the past 12 months to 4Q24, the largest net investor into the Australian industrial sector was superannuation funds which were net investors of AUD 2.5 billion. This was broadly a result of super funds investing into existing listed funds as joint venture partners, securing portfolios of scale without the required burden of post-acquisition management. Given this, the largest negative net investment position over the last 12 months was from listed property trusts, which sought co-investment from funds to raise capital for future development and alleviate debt positions.

Historical and forecast data for key logistics market indicators

Figure 17: National Industrial Average Prime Net Face Rents, 2019-2027



Source: JLL, 4Q24

Over the past 12 months, Sydney's market average prime rental rate has increased 9.0% to AUD 268 per sqm p.a. (typical lease term 3-5 years). Comparably, the pre-COVID-19 (2010-2019), 10-year market average growth rate is 2.3% y-o-y. We expect average prime net face rental growth to moderate as we move into 2025. Annual growth rates in the South Sydney and Outer Central West markets are forecast to reach 4.0% and 2.0% to the end of 2025, respectively. Over the medium term through to 2027, average prime net face rental growth in South Sydney will average 3.5% per annum. Average prime net face rental growth in the Outer Central West will average 3.0% per annum.

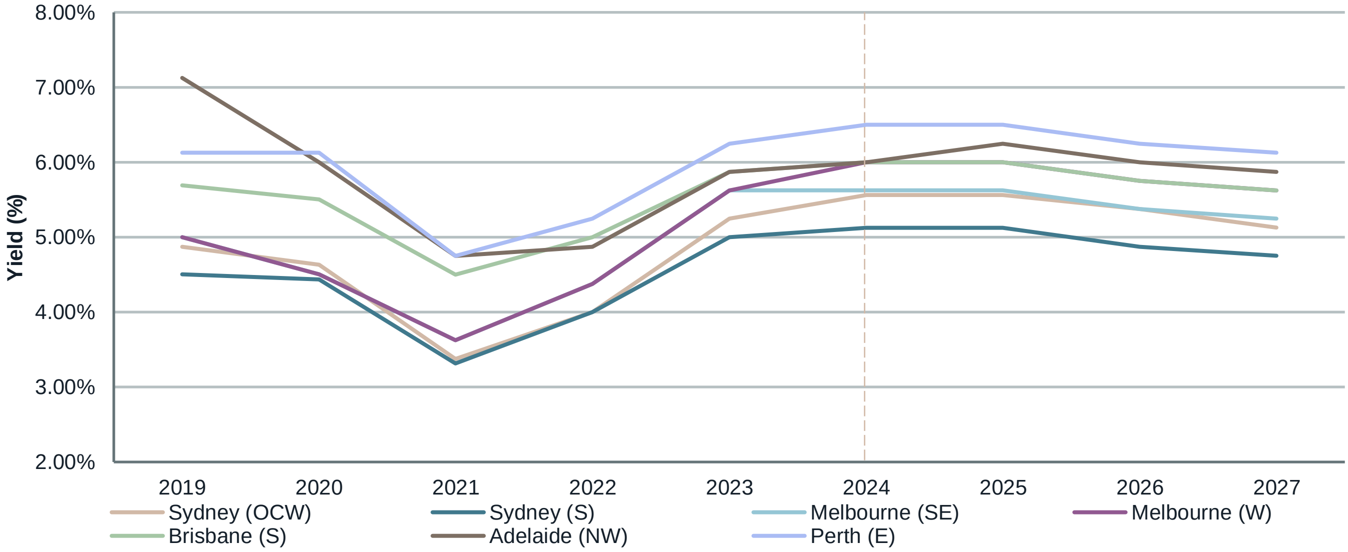
Over the past 12 months, Melbourne's market average prime rental rate has increased 7.5% to AUD 155 per sqm p.a. (typical lease term 3-5 years). Comparably, the pre-COVID-19 (2010-2019), 10-year market average growth rate is 1.1% y-o-y. We expect rental growth to remain positive over the short-term, albeit at a slower rate than the previous 12 months. Average net face rental growth in the West will increase by 4.0% y-o-y through to the end of 2025. Average prime net face rental growth will be marginally stronger in Melbourne's South East over the same time period, reaching 7.0%. Over the medium term through to 2027, average prime net face rental growth in South East will average 3.0% per annum. average prime net face rental growth in the West will average 2.6% per annum.

Over the past 12 months, Brisbane's market average prime rental rate has increased 13.0% to AUD 177 per sqm p.a. (typical lease term 3-5 years). Comparably, the pre-COVID-19 (2010-2019), 10-year market average growth rate is 0.0% y-o-y. Mirroring national rental growth expectations, prime rental growth is expected to moderate over the short-term in the Brisbane Southern precinct, reaching 3.0% y-o-y over the 2025 calendar year. Over the medium term through to 2027, average prime net face rental growth in the Brisbane Southern precinct will average 2.5% per annum.

JLL does not forecast industrial incentives. However, it is expected in the current environment of moderating occupier demand that property owners will continue to use incentives as a lever in lease negotiation.

Market Yield

Figure 18: National Industrial Average Prime Midpoint Yields, 2019-2027



Source: JLL, 4Q24

With the exception of Melbourne and Perth, average prime yields across Australia were unchanged in 4Q24 with the weighted prime national midpoint yield softening by 4 basis points to 5.8%. JLL forecasts a further 1 basis point of decompression by the end of 2025, reaching 5.9%, signalling that the current decompression cycle is concluded. We then expect the next compression cycle to commence in 2026.

While rental growth has slowed, the stabilization of yields in 4Q24 resulted in capital value growth, albeit at a lower rate than what has been seen earlier this year. The national industrial & logistics CVI increased 0.7% q-o-q in 4Q24, marking a fourth consecutive quarter of positive growth. It is expected that ongoing rental growth and a slower yield decompression trajectory will support a recovery in capital values, rebounding 4.4% y-o-y over the 2025 calendar year, before accelerating to 8.1% y-o-y in 2026 and 6.2% y-o-y in 202

2. Overview of China's Logistics Market

Macroeconomic overview

Country overview

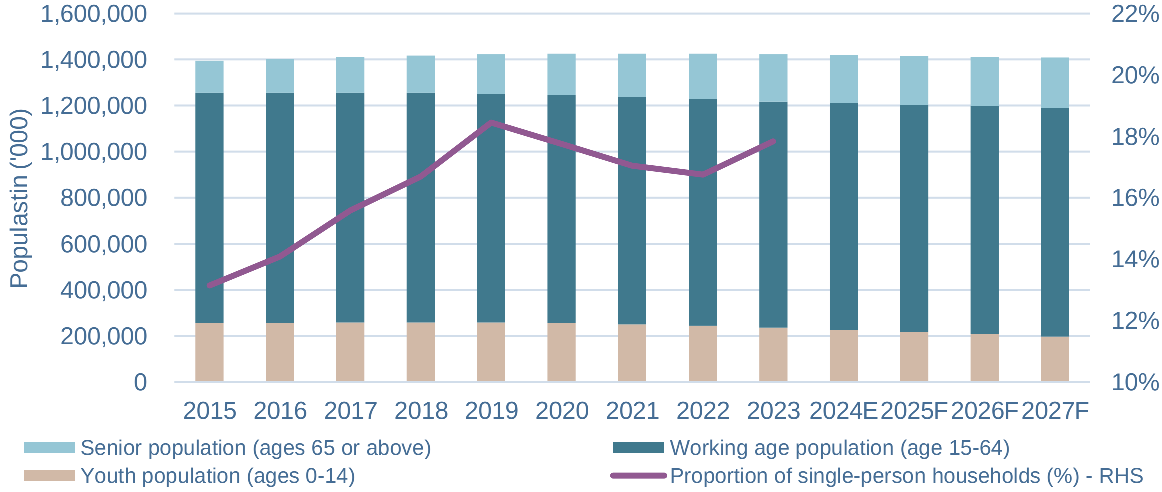
China is the world's second most populous country with approximately 1.4 billion people. The country has undergone rapid economic and social transformation over the past few decades, and its economy increasingly focuses on consumption, services and technological innovation. The urbanisation trend has been accelerating over the past few decades with an urbanisation rate exceeding 65.0% in 2024, driven by rapid industrialization and economic growth.

Infrastructure development, including high-speed rail networks and modern highways, continues to support nationwide connectivity and logistics efficiency. These advancements have played a crucial role in enabling the growth of industries such as e-commerce, manufacturing and logistics.

A large and productive labour force supports various economic sectors, as the working-age population (15-64 years) constitutes nearly 70.0% of the total population. However, China is also facing rapid population aging, with long-term implications for labour supply and consumption patterns. Shrinking working-age population will persist over the next decade, as the proportion of people aged 60 and above is expected to reach almost 30.0% around 2035. This will exacerbate the needs to raise labour productivity and strengthen social safety nets.

The rise of China's middle class is a pivotal factor in the country's economic development. Currently, the middle-class accounts for over 400.0 million people[5], and this number is projected to keep growing. This expanding middle class is driving demand for higher-quality goods and services, which in turn fuels the need for efficient logistics and warehousing solutions. The increasing disposable income of this demographic segment is also leading to a surge in e-commerce activities, which reshaped retail and supply chain dynamics, increasing the need for efficient warehousing and distribution networks across urban and suburban areas.

Figure 19: China's Demographic Profile



Source: Oxford Economics, China National Bureau of Statistics, 2025
Note: Single-person households data only available unti 2023.

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[5] National Bureau of Statistics defines the "middle-income group" as a typical three-person household that earns between RMB 100,000 to RMB 500,000 per year.

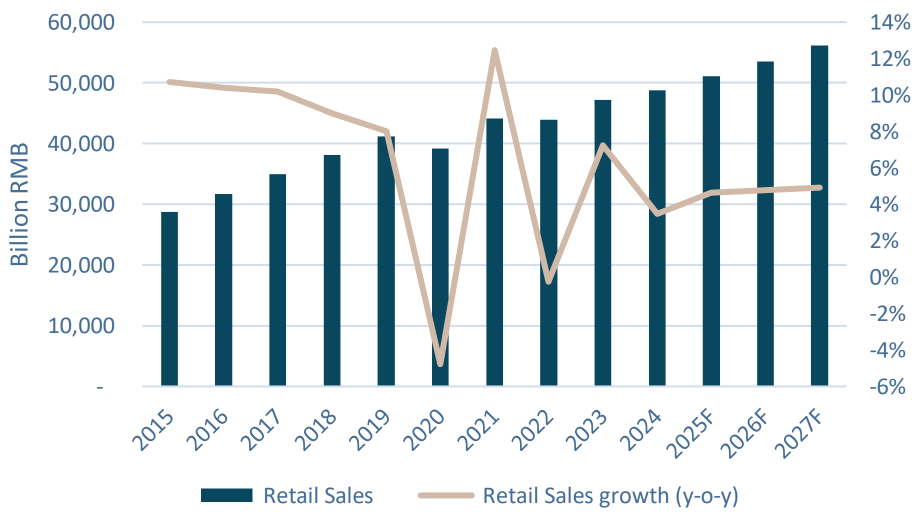
Economic overview

China's GDP reached RMB 134.9 trillion in 2024 and grew by 5.0% y-o-y in real terms, in line with the government's 5.0% growth target. The surge in momentum in 4Q24 appeared driven by stronger industrial activity and exports, supported by favourable policies and freight frontloading. The government has set its GDP target for 2025 at "around 5%".

Despite the ongoing property market correction, China is actively upgrading its industries through investment in manufacturing and high-tech sectors. Investment in high-tech industries and services increased by 8.0% y-o-y while the added value of high-tech sector grew by 8.9% y-o-y. Meanwhile, policymakers continue to prioritize stimulating consumption growth, with recent monetary policy signals indicating further actions to enhance liquidity by increasing money supply.

Total retail sales of consumer goods reached RMB 48.8 trillion in 2024, up 3.5% y-o-y. There are signs of early recovery in late 2024 and early 2025, partly because of the central government's consumer goods trade-in programme that has boosted sales. Online retail sales maintained steady growth of 7.2% y-o-y, outpacing overall growth in retail sales. Online retail sales of physical goods currently account for 26.8% of the total retail sales of consumer goods.

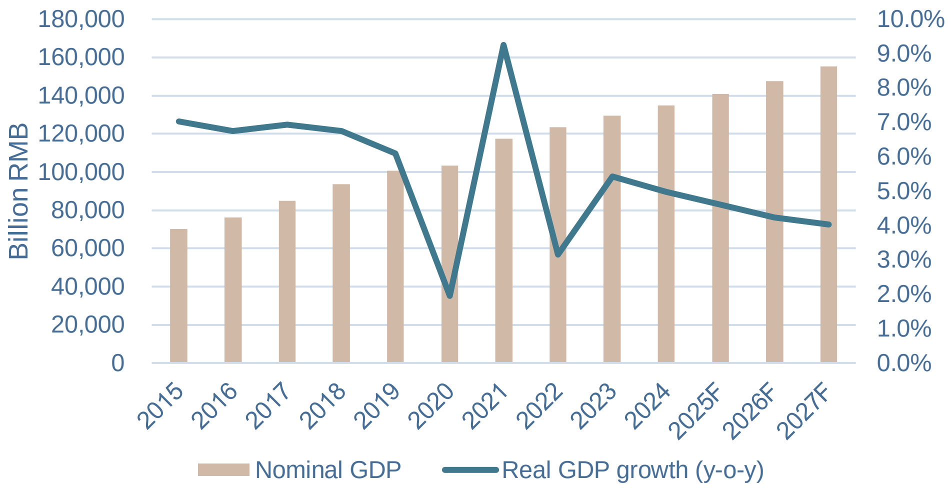
Figure 20: China Retail Sales Growth



Source: China National Bureau of Statistics, Oxford Economics, forecast as of December 2024

The performance of China's exports remained resilient, as goods exports grew 7.1% y-o-y in 2024. On the other hand, imports only increased 2.3% y-o-y over 2024, reflecting less Chinese imports of chips and other electronic components from overseas producers. Export momentum would face stronger headwinds this year, although the direct impact on China of any new US tariffs may not be felt until 2H25.

Figure 21: China GDP Growth



Source: China National Bureau of Statistics, Oxford Economics, February 2025

Government planning and policies/structural changes to logistics market

Government planning and policies have played a pivotal role in shaping the logistics market. Structural challenges faced by the economy may drive the Chinese government to launch more stimulus measures to boost domestic consumption and to support the property market which is dampening the consumer sentiment via negative wealth effect. These policies will potentially benefit the logistics real estate market.

Boosting consumption is top of the government's agenda for 2025. Foremost is an extension and expansion of the consumer goods trade-in program to include a wider range of home appliances and digital products. Subsidies for eligible items will boost retail sale and benefit consumption-related industries. Warehouse demand in major metropolitan areas and regional distribution hubs are expected to receive a boost.

In the housing market, policymakers aimed to raise housing demand with policies such as mortgage rate cuts, easing restrictions on home purchases, and funding support to targeted property projects. Broad policy coordination seems to increase housing transactions in recent months, especially in top-tier cities, which could boost confidence in the commercial real estate markets.

The Chinese government is also exerting more effort on fiscal and monetary strategies to bolster economic growth. The "Two Sessions“ policy meetings in March signalled that plans for fiscal spending will be accelerated. In May, the People’s Bank of China (PBOC) announced a raft of policy measures to lower financing costs and provide more liquidity, such as cutting policy rate by 10 bps from 1.5% to 1.4% and the reserve-requirement ratio for banks by 50 bps. There were also enhancements to the PBOC’s relending facilities to support consumption, equipment upgrading and agriculture.

Meanwhile, there have been various initiatives including financial support for logistics sector, establishing special funds, as well as preferential loans for transportation upgrades and advanced technology deployment. Financial institutions were also encouraged to offer assistance to SMEs facing funding challenges, thus enhancing their growth potential.

Local governments in cities such as Shanghai have taken the lead in promoting cross-border e-commerce. The local government has streamlined customs procedures, enhanced digital trade platforms, and established special economic zones to facilitate operation of e-commerce logistics.

Infrastructure developments (including highways/expressways and ring roads Initiatives)

Connectivity via sea and rail infrastructure drives demand for logistics facilities near major transportation hubs and urban centres. Busy ports such as Shanghai, Ningbo-Zhoushan, and Shenzhen facilitate international trade and support demand for port-centric logistics parks. The expansion of rail networks, especially through the "One Belt One Road" initiative, links inland cities to global markets. Meanwhile, China has invested in upgrading and expanding its airport infrastructure, increasing the number of airports and improving their capacity to handle growing passenger and cargo traffic, which further enhances cross-border freight capabilities.

The North China region is expanding its expressway network, particularly between Beijing, Tianjin, and Hebei, to ease traffic and enhance intercity travel. Integration efforts with other transport modes like high-speed rail and urban public transport are creating seamless travel experiences.

The South China region focuses on cross-border connectivity in the Great Bay Area (GBA), building expressway links between mainland cities and Hong Kong/Macau. This includes the Hong Kong-Zhuhai-Macau Bridge, boosting regional integration. New intra-regional infrastructures like the Hong Kong-Shenzhen Western Rail Link are facilitating economic and social interactions.

The Yangtze River Delta (YRD) in East China has seen significant expressway expansion, improving connectivity between key cities like Shanghai and Nanjing. This reduces travel times and enhances economic interactions. Multi-modal integration with ports, railways, and airports supports a comprehensive transportation network. This includes over 17,000 kilometres of highways and 15,000 kilometres of railways, supporting the movement of goods and passengers.

West and Central China are investing in expressway upgrades and new routes to improve regional connectivity. New expressways are connecting key cities and industrial zones, promoting economic integration and reducing travel times.

In 2025, infrastructure development will continue, with the Ministry of Transport aiming to further decrease the logistics cost in China. Concurrently, China's annual "Two Sessions" policy meetings have underscored a focus on stimulating domestic consumer demand and advancing scientific and technological innovation as the cornerstone for fostering "new-quality productive force".

Logistics market overview (Grade A only)

Key logistics hubs

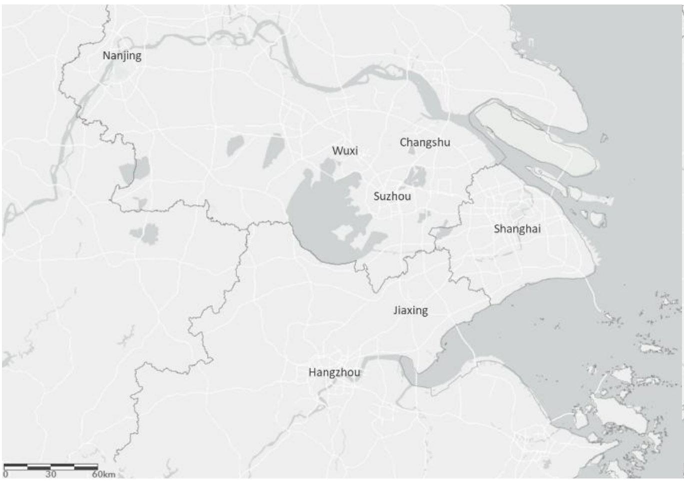
The development of logistics warehousing facilities over the past decade has predominantly followed an urban cluster model, with four major metropolitan regions—Yangtze River Delta (YRD), Greater Bay Area (GBA), Jing-Jin-Ji (JJJ), and Chengdu-Chongqing (Chengyu) - serving as critical engines of China's economic growth. Besides, Xi'an and Wuhan, locating in northwest and central part of China, has also been developed as the key logistics hub on back of their crucial location and rising consumption.

As intra-cluster integration deepens, peripheral cities near core logistics hubs are emerging as regional nodes, leveraging strategic geographic positioning, policy incentives, and industrial foundations. Rapid advancements in intercity transportation networks enable these cities to absorb logistics demand from central hubs like Shanghai, Beijing Guangzhou and Shenzhen. Concurrently, by optimizing local supply chains and strengthening cross-city collaboration, these emerging nodes enhance regional logistics efficiency and service quality, positioning themselves as focal points for integrated regional development.

As of end-2024, JLL estimated that the combined non-bonded prime warehouse inventory in Shanghai's surrounding markets—Kunshan, Changshu, Taicang, and Jiaxing—has surpassed Shanghai's total stock.

Similarly, Dongguan and Foshan, key logistics nodes near Guangzhou and Shenzhen, now exceed Guangzhou's inventory levels, collectively representing over 50.0% of the non-bonded high-standard warehouse supply across five major South China cities (Guangzhou, Shenzhen, Dongguan, Foshan and Huizhou).

East China



South China

North China

West & Central China

Note: for demonstration only, not including all the cities within the region

Source: JLL

Logistics real estate market landscape

China's logistics real estate market is experiencing rapid growth and transformation, driven primarily by the country's expanding middle class and rising consumer spending. This has led to a sharp increase in demand for modern distribution and warehousing facilities. The rise of key city clusters in different regions are expected to fuel logistics requirements as they attract the attention of developers and investors.

In East China, the YRD region stands out as the largest city cluster in China, leading in GDP and population. Despite resilient demand, the influx of new supply has negatively affected rents, particularly in submarkets with substantial new completions. However, the strong consumer market in the YRD continues to fuel demand for Grade A warehouses, with additional demand from other emerging industry, such as high-end manufacturing.

In South China, the GBA area is China's most dynamic city cluster, where cross-border e-commerce platforms have emerged as significant demand drivers. Amidst substantial new supply, vacancy rates in several GBA cities have stayed relatively low due to the strong demand from these platforms. Nevertheless, future supply growth coupled with uncertainties in cross-border e-commerce may adversely impact vacancy rates and rents in the region.

In North China, spillover demand from Beijing continues to benefit surrounding satellite cities and driving the overall development of logistics market in Tianjin. Previously, due to limited space in Beijing, some tenants may choose to expand in Tianjin where large number of new projects completed and are more cost-effective. However, future new supply in the region will be shifting to Beijing's Pinggu submarket which could intensify competition and affect these satellite cities. Shenyang is the main hub for parts of Northeast China, but a slow economy has led to soft demand.

In West & Central China, Chengdu and Chongqing are experiencing strong growth. Overall net absorption in these two markets remain resilient and tenant profile becomes increasingly diversified. Overall vacancy continued to trend down after the peak supply between 2019-2021. Limited new supply and resilient demand in Xi'an market has also helped vacancy remain moderate level in recent years. However, in Central China, Wuhan is experiencing large number of continuous new supply which led to elevated vacancy rates despite resilient leasing demand. Rents continue to decline as landlords chose to lease out vacant space instead of rental growth.

These key regions are projected to be major drivers of logistics market growth in China, with investors and developers focusing on high-quality, technologically advanced warehousing facilities to meet the evolving needs of the market.

Demand drivers for logistics properties

Four main sectors drive logistics demand in China: 3PLs, traditional retailers, e-commerce as well as manufacturing.

3PL sector is the largest demand driver for modern warehouses in China, with leasing activity stemming from freight forwarders and a mix of domestic and international express and parcel delivery companies. These firms are attracted to strategic locations with good infrastructure, which enable efficient distribution and supply chain operations. Retailers and manufacturers increasingly outsource their logistics functions to maintain cost-effectiveness, such as relying on 3PL operators to secure and manage logistics space on their behalf. This trend further boosts demand from 3PLs for warehouses.

Retailers and e-commerce companies are important demand drivers for logistics space. Apart from well-known retailers who lease warehouse space as storage or regional distribution centre, demand from affordable retailers is growing. For example, in lower tier cities, snack retailers have seen fast growth, leasing considerable amount of space to fulfil the business expansion.

E-commerce has seen significant growth as more consumers choose to shop online. China continues to be the world's largest e-commerce market, though the growth rate of online sales has slowed compared to earlier peaks. In 2024, China's online retail sales amounted to RMB 15.5 trillion, representing a 7.2% year-on-year increase. Further, demand from cross-border e-commerce players has surged over the past two years.

As a global manufacturing hub, China relies on efficient logistics infrastructure to facilitate the storage, handling, and transportation of goods. Demand from manufacturers drives the expansion of warehouse facilities, particularly in critical manufacturing regions and transportation hubs, thereby bolstering supply chain efficiency and fostering economic development.

Meanwhile, China's economy is confronting multiple challenges. Producer price deflation could exert pressure on manufacturers and logistics service providers. Additionally, external risks—including rising tariffs and growing protectionism—may pose notable challenges to China's export sector. Moreover, the near-term growth of cross-border e-commerce faces strong headwinds due to changes in U.S. tariff policies, particularly the end of ‘de minimis’ exemption for Chinese packages valued under $800. Additionally, after a sharp rise in demand over the past two years, warehouse requirements in the cross-border e-commerce sector are expected to gradually moderate.

Structural trends on logistics & logistics property market

(a) Growth of cross-border e-commerce sector

Cross-border e-commerce platforms also experienced rapid growth over the past two years especially in South China. The region is well-suited for the cross-border e-commerce business model, with its established consumer goods industry chains in fashion, consumer electronics, furniture, and home appliances, as well as a comprehensive logistics infrastructure.

(b) Growth of express deliveries

As online shopping continues to gain popularity, demand for speedy and dependable delivery services has skyrocketed. In 2024, China’s express delivery volume reached 174.5 billion items[6]. The express delivery market in China is also characterised by intense competition, with various players introducing innovative services to cater to the escalating demand. This competitive landscape has contributed to adoption of technologies such as automation, digitalization, and AI. Looking ahead, the sustained growth of e-commerce and technological innovation are anticipated to further bolster the growth of express delivery market in China.

(c) Increasing automation drives warehouse transformation

Logistics projects are transitioning from traditional warehouses to smart facilities that integrate with the industrial chain to enhance space utilization and management efficiency. In China, e-commerce giants such as JD.com and Alibaba Group are investing heavily in building a new portfolio of smart warehouses, in order to create their own competitive edge in delivery time.

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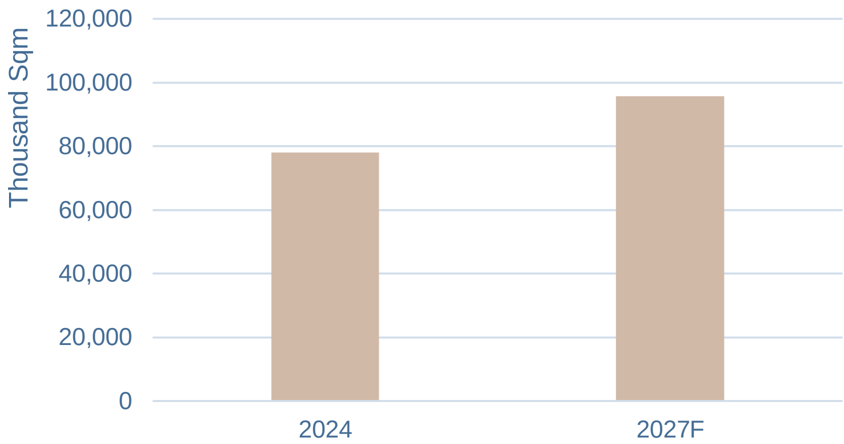
[6] Source: China State Post Bureau, January 2025.

Logistics property overview (Grade A only)

Estimated logistics real estate per capita

Market Size

Figure 22: China Logistics Market: Current and Expected (end-2027) Market Size

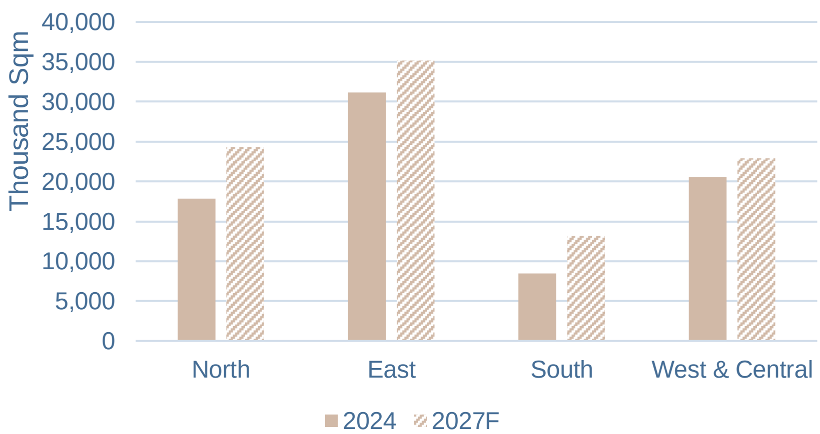


Source: JLL, 4Q24

In 4Q24, the stock of prime warehouses in China totalled 78.1 million sqm, roughly equals to 0.06 sqm of warehousing space per person. Prime stock has grown substantially by 48.0% in the past three years[7]. Among the four primary regions in China, the majority of the prime warehouse stock was concentrated in East China, accounting for over 31.2 million sqm, or approximately 39.9% of the nation's total inventory. Followed by West & Central China, housing 20.6 million sqm, or 26.3% of the total national stock.

It is projected that overall stock of grade A warehouses in China will surpass 95.7 million sqm by 2027. While East China will maintain the largest share with over 35.1 million sqm, its proportion of the national total will slightly decrease to 36.7% compared to 2024. Meanwhile, North China is expected to witness a notable increase in its warehouse stock, rising from 17.8 million sqm in 2024 to 24.4 million sqm in 2027, indicating a growth rate of 36.6%.

Figure 23: China Prime Stock by Key Markets

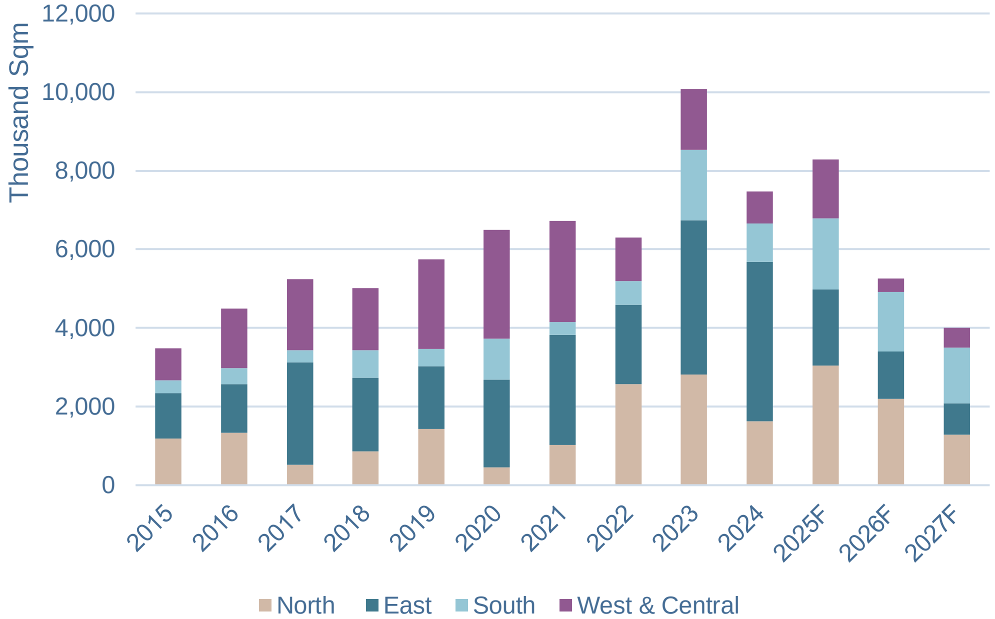


Source: JLL, 4Q24

[7] Total stock in 17 key markets covered by MLT.

Supply and characteristics of warehouses

Figure 24: China Prime Supply by completion year and region



Source: JLL, 4Q24

In 2024, China's warehouse new supply amounted to 7.5 million sqm across 17 cities, down from 10.1 million sqm recorded in 2023. The considerable new supply was primarily fuelled by several key factors: a significant influx of land supply, construction delays from previous years, and additional greenfield developments spurred by the resilient performance of logistics assets especially when comparing with other property sectors in previous years.

Looking ahead, new supply is projected to peak in the short term and then stabilise at a more moderate level over the medium term. Specifically, new supply is anticipated to total 8.3 million sqm in 2025. North China is expected to account for the major share of this new supply, with over 3.0 million square meters slated for delivery in 2025. In South China, new supply will increase to 1.8 million sqm in 2025. Meanwhile, in West & Central China, annual new supply will also climb, reaching 1.5 million sqm in 2025. Following a surge in new supply in 2024, future supply in East China is expected to drop considerably to 1.9 million sqm in 2025. During the medium-to-long term, annual new supply will edge down and fall back to a more moderate level of around 4.6 million sqm new supply per annum in 2026 and 2027.

Requirements and trends (including impact from e-commerce growth)

China’s vast consumer market and rising household incomes underpin long-term demand for logistics real estate. At the same time, evolving needs from consumers and new consumer-oriented industries such as live-streaming and cross-border e-commerce will potentially reshape requirements for logistics space.

Meanwhile, the logistics real estate sector is rapidly transitioning to green and low-carbon practices. Developers are using energy-efficient materials, refining designs, and enhancing energy performance, while pursuing certifications for green buildings..

Some warehousing projects are transitioning from traditional operational models to smart operations and deeper integration with industrial chains to enhance logistics synergy efficiency. That said, the transition to intelligent logistics will be a gradual process as operators are more focused on cost-saving under the current market environment. Improved performance of intelligent logistics does not exist in isolation but depends upon reliable warehousing infrastructure. For instance, automated guided vehicles (AGVs) help transport goods along designated pathways. Simultaneously, precise floor levelling is needed to ensure accurate navigation, while reducing operational costs and extending equipment service life.

Amid the new industrialization strategy, many local governments have tightened logistics land supply and strengthened regulations for warehouses on industrial land. Certain authorities require that a portion of the land be leased to manufacturers prior to traditional logistics providers, thereby guaranteeing that land usage conforms to regional economic strategies and promotes the integration of industrial chains. Consequently, logistics facilities will serve not only as conventional storage units but also facilitate deeper integration with manufacturing processes, which can contribute to supply chain optimisation and fostering industrial collaboration.

Performance and outlook

Annual Completion

China logistics market has experienced substantial supply waves with a total of over 23.8 million sqm of modern warehouse space delivered over 2022 to 2024. The majority of major logistics hubs have seen record annual supply during the period.

In East and North China, landlords implemented proactive leasing tactics to attract tenants, as a response to the influx of new supply and cautious demand sentiment. The intensified price competition resulted in significant rental declines during 2024. Notably, markets such as Changshu, Jiaxing and Tianjin experienced rental declines exceeding 20.0% over the course of the year. That said, those warehouses with good locations are expected to perform well.

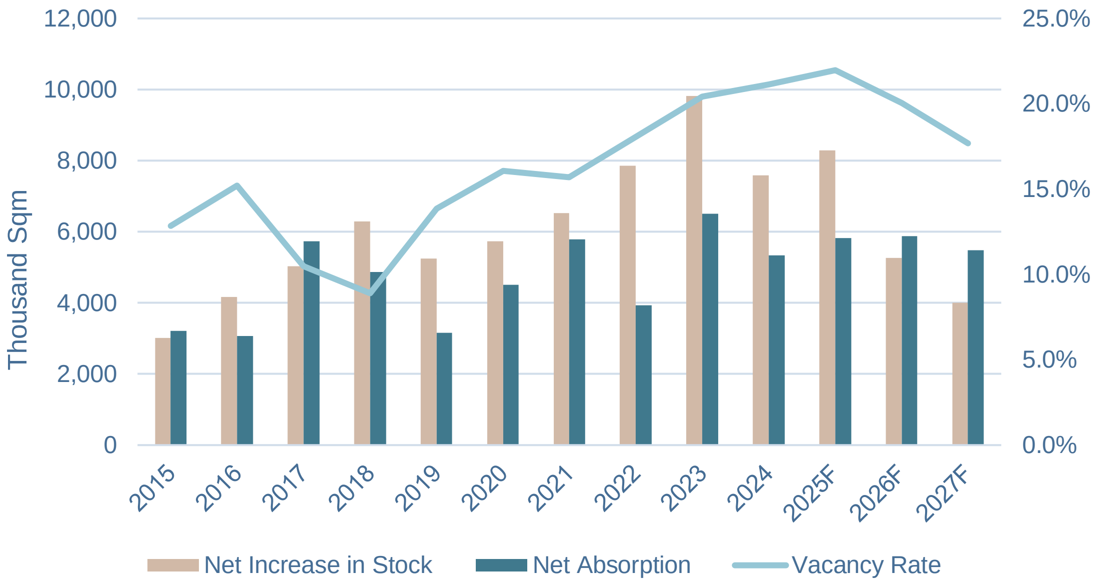
Looking forward, it is anticipated that rents will continue to trend downward, given that vacancy rates remain elevated in most markets of North and East China. As the incoming supply begins to moderate in 2025 in most East China markets, the rate of rental decline is expected to slow in the near future. Conversely in North China, the Beijing market will see over 1.5 million sqm of new supply in 2025, which will increase its market size by about 40.0%. The currently vacancy level in Tianjin is elevated at over 30.0%. Together with the upcoming supply in Beijing, the competition is likely to remain intense in the North China region.

In South China, Guangzhou and Dongguan collectively delivered over 3.3 million sqm of new supply during 2022 to 2024. Annual supply in Guangzhou totalled 137,000 sqm in 2024, down from previous peak of 617,000 sqm in 2023. In Dongguan, 748,000 sqm of new supply completed in 2024, slowing down from the level observed in 2023. Shatian, Xiegang, Machong and Fenggang submarkets all witnessed new projects during 2024.

In West China, Chengdu has surpassed its previous supply pipeline, with annual new supply averaging approximately 145,000 sqm over the past two years, representing only 34.0% of the level during the 2020-2022 period. In Chongqing, supply pressure eased in 2024, with 121,800 sqm of new space delivered during the year, amounting to less than 10.0% of the 2020 record level. Meanwhile, in Central China, Wuhan's supply showed notable moderation, delivering roughly 391,000 square meters in 2024, equivalent to 42.0% of the record level achieved in 2021.

Demand vs Supply

Figure 25: China Distribution Warehouse/Logistics Total Completions, Net Absorption and Vacancy Rate



Source: JLL, 4Q24

In 2024, overall net absorption amounted to approximately 5.3 million sqm, notably lower than the volume of new completions. Overall new supply remained high in 2024, with about 7.5 million sqm delivered throughout the year. Continued supply pushed vacancy level further up to 21.1% in 2024.

The uneven economic recovery has fostered widespread caution among tenants, with cost-saving measures being the foremost concern for most. As a result, the 'price-for-volume' strategy implemented in many markets has spurred a certain degree of consolidation demand, particularly in markets such as Tianjin, Changshu, and Jiaxing. Nevertheless, incremental demand has remained limited.

Over the near term, primary demand drivers differed across regions. In South China, the cross-border e-commerce sector persisted as the primary demand generator, effectively stabilizing the market confidence. In Dongguan and Guangzhou, cross-border industry giants leased or pre-leased a significant portion of the new space. Additionally, the export of home appliances contributed to a temporary surge in warehousing demand in Guangzhou during late 2024. In East China, 3PLs continued to be the key demand contributor. However, this demand was predominantly tied to end-user needs, with a focus on consolidation, while direct incremental demand from 3PLs remained limited. In West and Central China, affordable retailers exhibited active participation in 2024. Affordable e-commerce platforms and mass snack retailers were in an expansion phase, supplanting demand from traditional e-commerce and retailers during the year. From a longer-term perspective, China's economic recovery may gradually gain momentum, which should subsequently translate into increased demand in the logistics market.

Major logistics facility providers and players

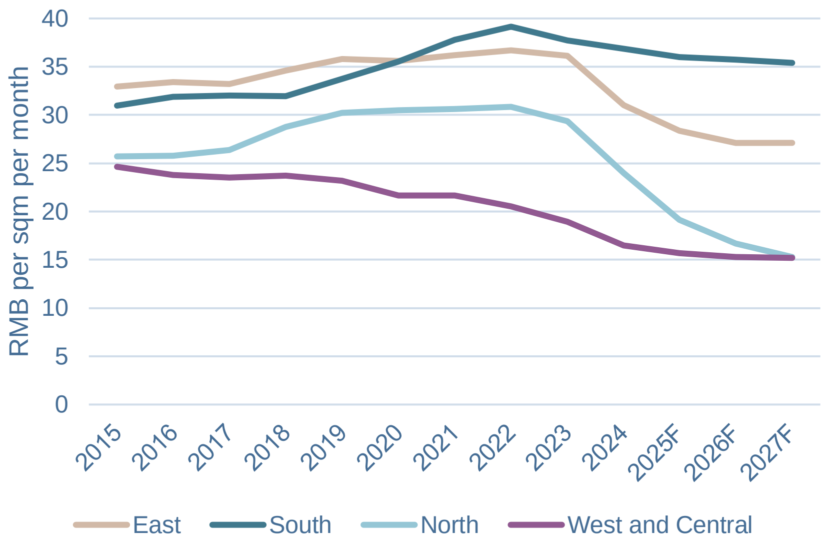
In China, major logistics facility providers and players comprise a diverse group. Foreign developers with their strong capital and operational experience, were the first to enter the Chinese logistics real estate market. Through large-scale investments and efficient operations, they swiftly secured a prominent position within the marketplace. These giants include GLP, Prologis, Mapletree, Goodman, etc. Later, traditional real estate developers and foreign institutional investors followed suit, competing to gain market opportunities. For example, Vanke, GIC, LaSalle etc. As time went on, domestic forces further emerged, including local logistics real estate developers, e-commerce giants, insurance companies, becoming important and increasingly active participants in the logistics real estate market. These players include ESR, Ping'an, JD, Cainiao.

Investors and investment trends, and major selected transactions

In investment market, insurance companies, local developers, e-commerce giants and Chinese REITs (C-REITs) have recently become the major buyer group. In view of the uncertain economic conditions, both domestic and foreign investors generally adopt more cautious investment strategies, capitalization rate and rental growth assumptions of logistics assets in different cities. That said, prime warehouses with good locations can still attract investors for long term investment.

Historical and forecast data for key logistics market indicators

Figure 26: China Distribution Warehouse/Logistics Effective Rent



Source: JLL, 4Q24

In East and North China, landlords implemented proactive leasing tactics to attract tenants, as a response to the influx of new supply and cautious demand sentiment. The intensified price competition resulted in significant rental declines during 2024. Notably, markets such as Changshu, Jiaxing and Tianjin experienced rental declines exceeding 20.0% over the course of the year. Looking forward, it is anticipated that rents will continue to trend downward, given that vacancy rates remain elevated in most markets of North and East China. As the incoming supply begins to moderate in 2025 in most East China markets, the rate of rental decline is expected to slow in the near future. Conversely, rents in North China have already declined for several years and is bottoming out. However, it remains to be seen whether the significant upcoming supply in Pinggu will lower rental rates in Beijing.

In South China markets, rents demonstrated a more gradual descent due to robust local demand driven by the expansion of the cross-border e-commerce industry. Major players in cross-border e-commerce absorbed a significant portion of the new supply introduced in the region in 2023 and 2024. As a result, despite tenants still have greater bargaining power, rental decline was less pronounced compared to other regions. However, looking ahead, the ongoing influx of new supply and potential volatilities in cross-border demand, stemming from the trade protectionism risks, are anticipated to maintain the downward trajectory of rents in South China markets.

In the West and Central regions of China, primarily due to an earlier supply wave, rents have been on a downward trajectory since 2019. Chengdu, Chongqing and Wuhan have undergone notable rental adjustments as landlords sought to fill vacant spaces by offering reduced rents. In 2024, tenant affordability remained constrained due to the bumpy economic recovery, leading to a steeper decline in rents as landlords tried to retain existing tenants and attract new ones. However, looking ahead, it is anticipated that rents will continue to decline but at a more gradual rate as supply pressures begin to ease.

Market Yield

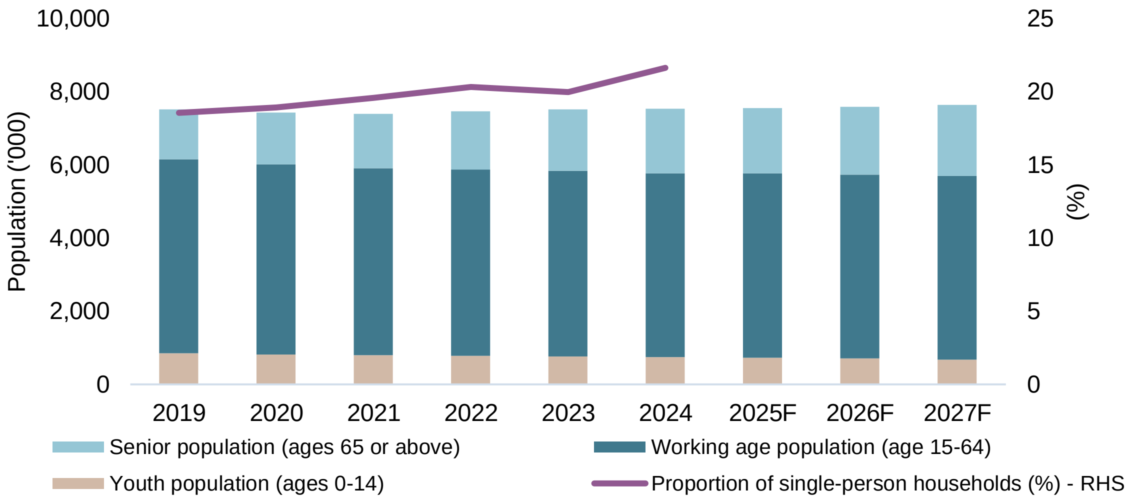
Looking ahead, capital values are projected to remain under pressure as long as consumption demand remains muted and imbalance from supply/demand matrix continues. With new supply gradually slowing down from 2026 and 2027 onwards, the medium-term market view is that warehouses, especially those with good locations will continue to perform well. This is especially the case for those facilities located in more resilient locations/hubs, commanding good accessibility and modern Grade A specs together with good occupancy.

3. Overview of Hong Kong's Logistics Market

Macroeconomic overview

Country overview

Figure 27: Hong Kong's Demographic Profile



Notes: Proportion of single-person households forecast for 2025-27 is not available.

Source: Census and Statistics Department, 2025

Hong Kong is a densely populated city with an estimated 7.5 million residents at the end of 2024. It is a global financial and business hub, underpinned by a free-market economy that is characterised by low tax regime, robust legal framework and high degree of transparency. As a major global trade and logistics hub, the city serves as a preferred gateway for international trade with mainland China. It is also witnessing a closer integration into the Guangdong-Hong Kong-Macao Greater Bay Area (GBA), which boasted a population exceeding 86 million and a GDP of around USD 2.0 trillion in 2023[8].

Hong Kong's demographic landscape features low birth rate and an increasingly aging population, presenting significant long-term socioeconomic challenges. Residents aged 60-64 comprise the largest demographic cohort, comprising 8.5% of the overall population in 2024. Unemployment rate remained stable at 3.1% in end-2024, slightly higher than the 2.9% recorded before the pandemic outbreak in end-2019.

With real GDP per capita of more than USD 50,000 in 2024, Hong Kong is an affluent city ranks only after Singapore and Australia in the Asia Pacific region. From a regional perspective, almost 2.6 million households in Hong Kong, or over 90.0% of total number of households, may be considered to be of middle-class status[9].

Economic overview

Hong Kong's economic performance has been falling short of expectation after the pandemic. A myriad of factors such as a prolonged property market downturn, ongoing US-China tensions and structural

[8] Estimates by the Hong Kong government, 2024

[9] Middle-class households are defined by JLL as those households with an annual income of USD 20,000 or above in 2015 purchasing power parity (PPP) terms. This definition is broadly in line with the Brookings Institution (The Unprecedented Expansion of the Global Middle Class, An Update, 2017).

slowdown of the economic growth in mainland China contributed to lacklustre business investment and consumer spending.

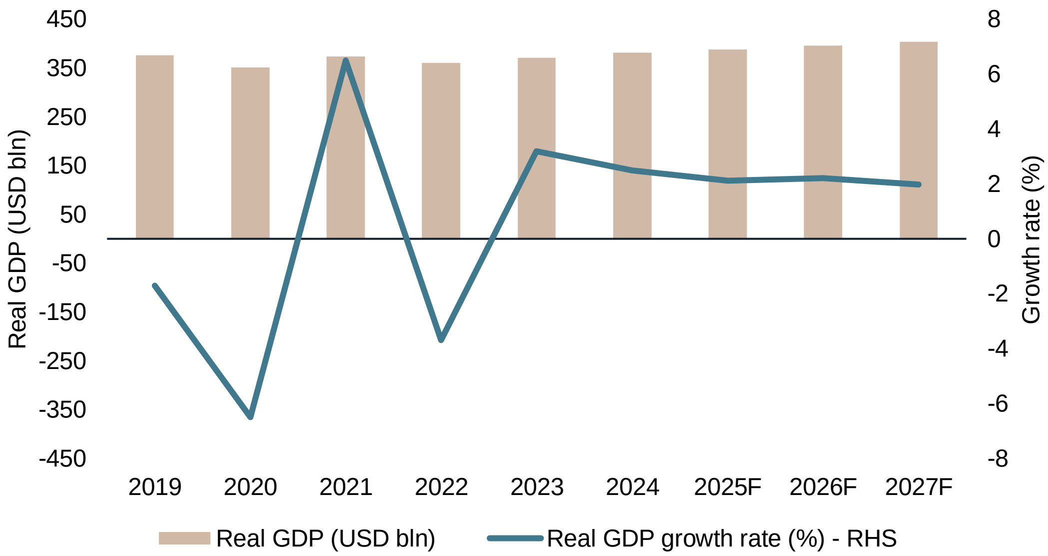
Real GDP grew by 2.5% in 2024. 2025 growth is forecast at about 2.0-3.0% y-o-y[10], but there are significant downside risks as private consumption remained weak and export performance showed signs of softening.

Retail sales declined by 7.3% y-o-y in value and 9.0% y-o-y in volume in 2024. This persistent downturn reflects ongoing challenges including structural shifts in consumption patterns compounded by the strong Hong Kong dollar. Exports grew by 8.7% in 2024, but re-exports from Hong Kong will face strong headwinds this year after announcement of additional US tariffs on goods transported from mainland China and Hong Kong.

CPI inflation rate should remain stable at around 2.0% in 2025. The Hong Kong Monetary Authority should cut its policy rate in lockstep with the US Federal Reserve, given the currency peg to the US dollar.

Looking ahead, the city's deepening connection with mainland China and Government's initiatives aimed at bolstering the local economy will present growth impetus over the medium-term. Major infrastructural projects in progress, such as the Northern Metropolis, will provide new public investment and much needed land supply for future development.

Figure 28: Hong Kong Real GDP Growth



Source: Census and Statistic Department, Oxford Economics, 2025

Government planning and policies/structural changes to logistics market

In response to regional competition, the Hong Kong Government unveiled a series of initiatives pertaining to the logistics sector. These strategies were outlined in the Action Plan on Modern Logistics Development published in 2023. Major policies include:

- Promoting Hong Kong's multimodal logistics capabilities to attract more non-local logistics operators. The Airport Authority Hong Kong (AAHK) has collaborated with Dongguan Port Group to establish the Hong Kong International Airport Logistics Park in Dongguan. This facility, expected to be completed in 2025, will be connected to the Airside Intermodal Air Cargo Handling Facility within the restricted area of Hong Kong International Airport via dedicated cargo vessels, enabling logistics firms to

10 The 2025-26 Budget

complete customs procedures in advance at the warehouse before direct transfer to the airport for subsequent air transport.

- The Government has committed to increase logistics land supply to maintain affordable rental levels for logistics tenants. The land will be sourced from approximately 19 hectares in the Kwai Tsing area in New Territories, and five proposed logistics clusters in the Northern Metropolis.
- Hong Kong's logistics strategy extends beyond traditional cargo. The proposed Art Hub and Art & Valuables Storage in Skytopia, coupled with the Government's initiatives to establish Hong Kong as a gold trading centre, are set to drive high-value goods logistics via air. In October 2024, the HKIA confirmed plans to expand its gold vault capacity. In January 2025, the London Metal Exchange declared its decision to incorporate Hong Kong into its global warehousing network as an approved delivery point.

Through the implementation of these strategic policies, the government aims to enhance competitiveness of the local logistics industry and reinforce Hong Kong's status as a regional logistics hub.

Infrastructure developments

Infrastructure in Hong Kong is well-developed. Apart from one of the world's busiest ports, the Hong Kong International Airport is a major aviation hub and the World's busiest cargo airport. Over the next two decades, new transportation links will transform Hong Kong's outer fringes in the New Territories and further integrate the city with Shenzhen, a Chinese technology hub.

Hong Kong has strong infrastructure to support the rapid development of air-freight industry. The HKIA has put continuous effort to bolster its cargo handling capacity, including the launch of the Three Runway System in late 2024. Meanwhile, the development of HKIA Logistics Park in Dongguan and Airside Intermodal Air Cargo Handling Facility will enable smooth transportation of export goods from mainland China to the HKIA, facilitating their transshipment to destinations worldwide.

Meanwhile, Hong Kong also features an extensive cross-boundary land transport network connecting to mainland China. A major portion of this connectivity is facilitated by the Hong Kong-Zhuhai-Macao Bridge, which has reduced travel times between Hong Kong, Macao and Zhuhai to just 40 minutes, thereby strengthening the growth of road transport.

The development of the Northern Metropolis, bordering Shenzhen in mainland China, will further enhance the transport network. For instance, the proposed Northern Metropolis Highway will link five planned logistics hubs within the area[11]. Beyond these new development zones, significant infrastructure projects such as Route 11 (connecting Yuen Long to North Lantau) and the Tsing Yi-Lantau Road are slated for completion in 2033, fostering improved regional connectivity.

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11 Namely, Hung Shui Kiu/Ha Tsuen NDA, San Tin/Lok Ma Chau Development Node, Fanling North NDA, New Territories North New Town/Man Kam To and the proposed reclamation at Lung Kwu Tan.

Figure 29: Hong Kong Transportation Infrastructure

Existing Major Trunk Route

Source: Highways Department, Hong Kong government, 2025

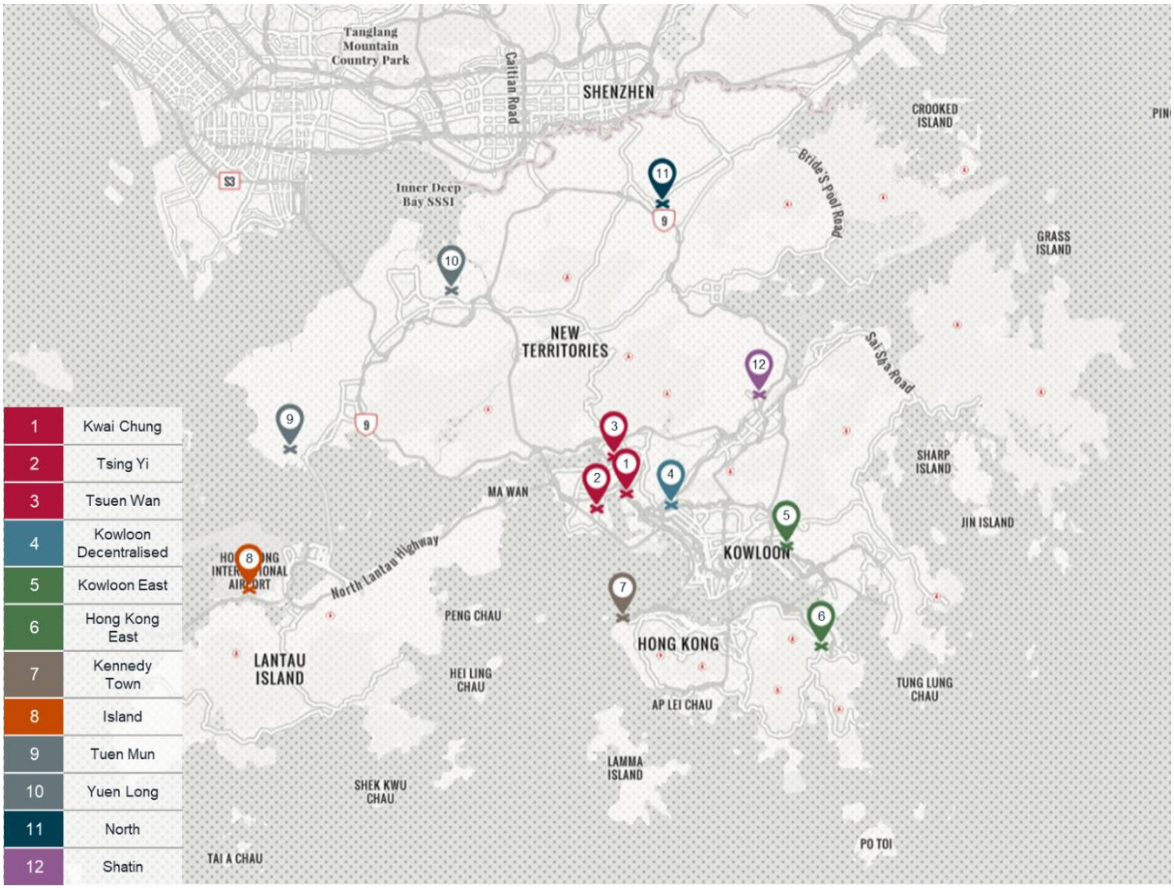
Future Major Road Network

Source: Hong Kong Major Transport Infrastructure Development Blueprint, 2024

Logistics market overview for Hong Kong (Prime warehouses only)

Key logistics hubs

Figure 30: Hong Kong Key Logistics Markets



Source: JLL, MapIT, 2025

Logistics real estate market landscape

The majority of Hong Kong prime warehouses can be found in five major clusters: 1) Kwai Tsing and Tsuen Wan, 2) Island, 3) Shatin, 4) Kowloon East and Hong Kong East, and 5) North. While some warehouse facilities are situated in Kowloon decentralised area, Kennedy Town, Tuen Mun, and Yuen Long, these locations exhibit a lower density of warehousing infrastructure compared to the aforementioned major nodes.

The five major logistics clusters exhibit distinct tenant profiles, each characterised by specific operational preferences. Sea and air cargo operators, along with local distributors, predominantly occupy storage facilities in Kwai Tsing and Tsuen Wan, capitalising on the proximity to Kwai Chung Container Port. The warehouses in Island, benefiting from its adjacency to the Hong Kong International Airport, attracts a higher concentration of air cargo operators, logistics express services, and import/export businesses.

Shatin's prime warehouses typically accommodate exporters and local distributors. Kowloon East and Hong Kong East have been the preferred locations for retailer-operated distribution centres, catering to businesses seeking urban accessibility.

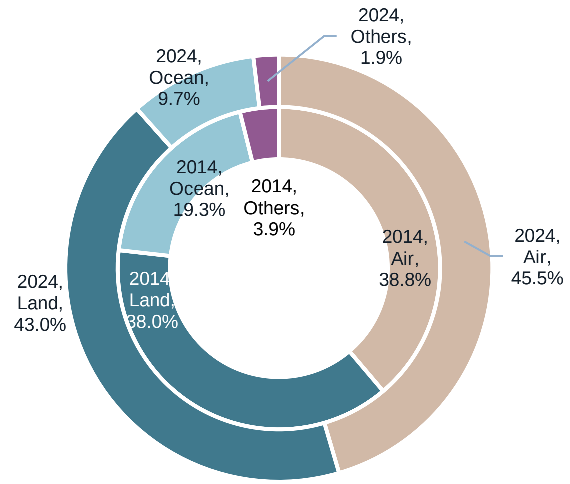
The Northern cluster primarily serves end-users engaged in re-export activities with mainland China. This preference is largely attributed to the cluster's advantageous position near border crossing points, facilitating efficient cross-border logistics operations.

Demand drivers for logistics properties

Import/export is a main contributor to Hong Kong's GDP. Leveraging its proximity to mainland China, Hong Kong has long been regarded as the gateway connecting mainland China and overseas markets, particularly as a re-export hub for the world's largest manufacturer.

As of 2024, air and land transport have emerged as the dominant contributors to total trade value, accounting for 45.5% and 43.0% respectively. Meanwhile, the share of ocean freight has experienced a substantial decline, contracting from 19.3% to 9.7% over the last decade.

Figure 31: Hong Kong Total Trade Value by Mode of Transports 2024



Source: Census and Statistics Department, 2025

Air Freight

Hong Kong government estimated that HKIA's transshipment volume will reach 10 million tonnes of freight by 2035, more than doubling from the 4.9 million tonnes recorded in 2024. As air cargo volumes surge, the demand for efficient, strategically located warehousing and distribution centres is anticipated to grow correspondingly.

Land Transportation

Land transportation, a crucial pillar of Hong Kong's trade performance, is anticipated to be a sustainable driver for local storage space demand. The flow of goods vehicles through boundary control points has shown a year-on-year increase of 14.5% in 2024, indicating a continued upward trend in cross-border logistics activities.

Sea Freight

The sea freight market in Hong Kong is currently grappling with structural challenges, resulting in a gradual contraction of ocean freight's share in total trade value from 19.3% in 2014 to 9.7% in 2024. The container throughput at Hong Kong Port has experienced ongoing decline, as container throughput was down 4.9% in 2024.

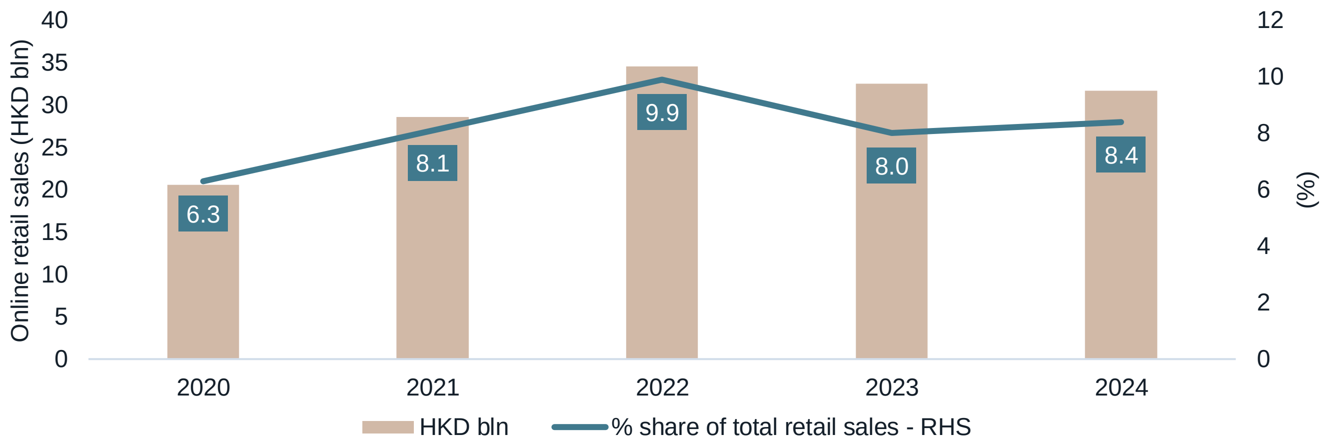
Growth of e-commerce and 3PLs/express growth

The city-wide lockdowns implemented in response to the pandemic catalysed a significant shift towards e-commerce adoption among the local population from 2021 onwards.

Growth of the e-commerce market is expected to continue as a result of changing consumer behaviours in Hong Kong. It is expected that storage demand from key e-commerce operators will continue expand in the medium term. That said, the shift from traditional to online retail could result in declining sales for brick-and-mortar stores, which may partially offset rising demand from the e-commerce sector.

The influence of e-commerce on the real estate market has intensified significantly. 4Q24 witnessed notable new leasing commitments by key industry players, specifically Cainiao Supply Chain and Pinduoduo. Notably, Cainiao Supply Chain's move was primarily driven by its internalisation of logistics services, transitioning from its previous 3PL provider S.F. Express in H2 2024.

Figure 32: Hong Kong Online Retail Sales (HKD bn)



Source: Census and Statistics Department, 2025

Structural trends on logistics & logistics property market

(a) Supply chain diversification

The global supply chain is currently undergoing a significant transformation, with manufacturers increasingly diversifying and extending their manufacturing bases. A 2025 survey by the Hong Kong Trade Development Council showed that the majority of GBA manufacturers view mainland China as the preferred supply chain location, and Southeast Asian markets as the second most favoured destination. As such, Hong Kong will likely expand from its role in the GBA supply chains network to facilitating regional trade in mainland China and neighbouring countries.

(b) Increasing automation will prompt retrofitting of existing warehouse facilities into smart logistics facilities

A prime example is the Goodman Westlink in Tuen Mun, completed in 2022, which integrated requisite building specifications to accommodate cutting-edge automation technologies, such as Autonomous Mobile Robots (“AMRs”) and Goods-to-Person systems. Similarly, the 2023 completion of Cainiao Smart Gateway in Chek Lap Kok again featured various automated systems and equipment[12]. Projecting to 2027, the Hong Kong warehouse market should see its first fully automated warehouse in Yuen Long – Comboxx, developed by the consortium of Reitar, Lonlink Smart Storage, and SmartMore Logtech[13].

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[12] The Hang Seng University of Hong Kong: https://gscm.hsu.edu.hk/en/visit-to-cainiao-smart-gateway/

[13] Sohu: https://www.sohu.com/a/784077534_649545

Logistics property overview for Hong Kong (Prime warehouses only)

Estimated logistics real estate per capita

Market Size

Figure 33: Hong Kong Logistics Market: Current and Expected (end-2027) Market Size (GFA sqm)

Source: JLL, 4Q24

As of 4Q24, Hong Kong's prime warehouse inventory totalled 5.7 million sqm, roughly equals to 0.8 sqm of warehousing space per person. The distribution of this stock was predominantly concentrated in Kwai Tsing, accounting for 44.3%, while Chek Lap Kok housed 23.2%. Shatin followed with 9.3% of the inventory, succeeded by New Territories North (encompassing Yuen Long and Tuen Mun) at 6.5%, and Tsuen Wan at 5.7%.

By the end of 2027, the warehouse stock is forecast to increase by 3.5% to reach 5.9 million sqm. This expansion is primarily attributed to the completion of four significant projects. In light of softening demand, some landlords have reduced lease terms from the standard three-year period to one year. The overall vacancy rate is projected to reach 9.3% by end-2025 and remain elevated in 2026-2027. The net absorption is forecast to average approximately 23,800 sqm per annum between 2025 and 2027.

Supply and characteristics of warehouses

Among warehouse space providers, Goodman has emerged as the market leader with a 14.9% market share. China Resources secured the second position with a 7.7% stake. Other significant players include Kerry Logistics, Hutchison, Mapletree and The Wharf Holdings. The prime warehouse space owned by major developers with logistics service operations was estimated at 15.1% or about 853,300 sqm of total stock.

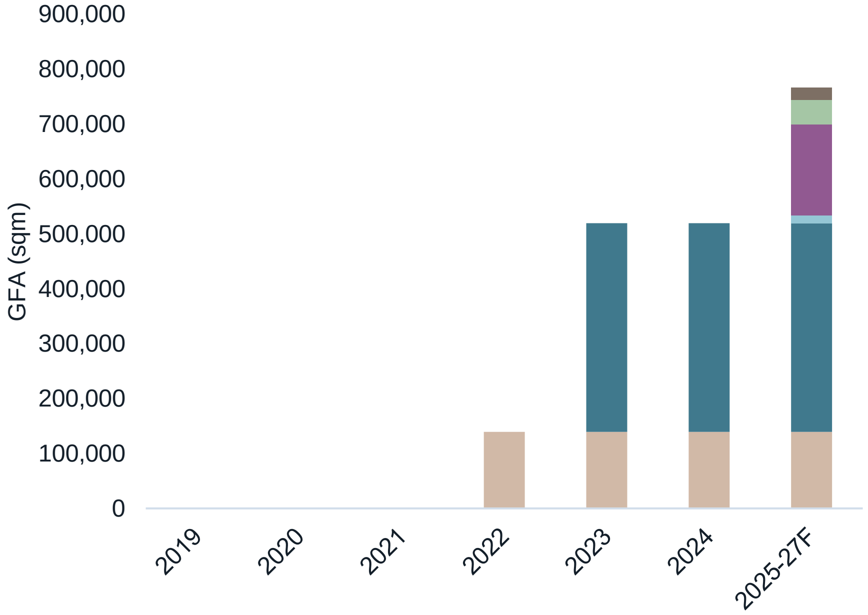
Due to the scarcity of industrial land offered by government tenders in recent years, most investors have opted to acquire existing warehouses rather than pursue new construction. For instance, JD.com expanded its local portfolio by purchasing its first warehouse, Li Fung Centre in Shatin, in 3Q24 for a reported HKD 1.8 billion. Concurrently, Goodman has been progressively increasing its ownership stake in Sunshine Kowloon Bay Cargo Centre since 2021.

Looking ahead to the 2025-2027 period, the warehouse market is set to expand by 246,223 sqm. The most significant addition is a development spearheaded by institutional investor ESR and its partners. The majority of the new supply over the next three years is expected to be concentrated within the five principal logistics clusters.

The following outlines the warehouse pipeline for the next three years:

1. The Transit Mail Centre in Chek Lap Kok (13,614 sqm), scheduled for 2025, is a joint venture between the Hong Kong Airport Authority, Hongkong Post, and China Post. This facility aims to bolster air freight transshipment capacity.
2. The Air Mail Centre redevelopment in Chek Lap Kok (46,000 sqm), slated for 2027, is being undertaken by Hongkong Post. This project will cater to growing air freight service demands stemming from GBA integration.
3. The Kwai Chung Cold Storage Logistics Centre, due in 2027, is a substantial development spanning 165,344 sqm. This project is a collaborative effort between ESR, Chinachem, and a Chinese investor.
4. Comboxx in Yuen Long (21,275 sqm), also expected in 2027, will mark a milestone as Hong Kong's first autonomous warehouse. This innovative project is being spearheaded by Reitar Asset Management.

Figure 34: Hong Kong Prime Warehouses Supply by Completion Year and Developer (GFA, sqm)



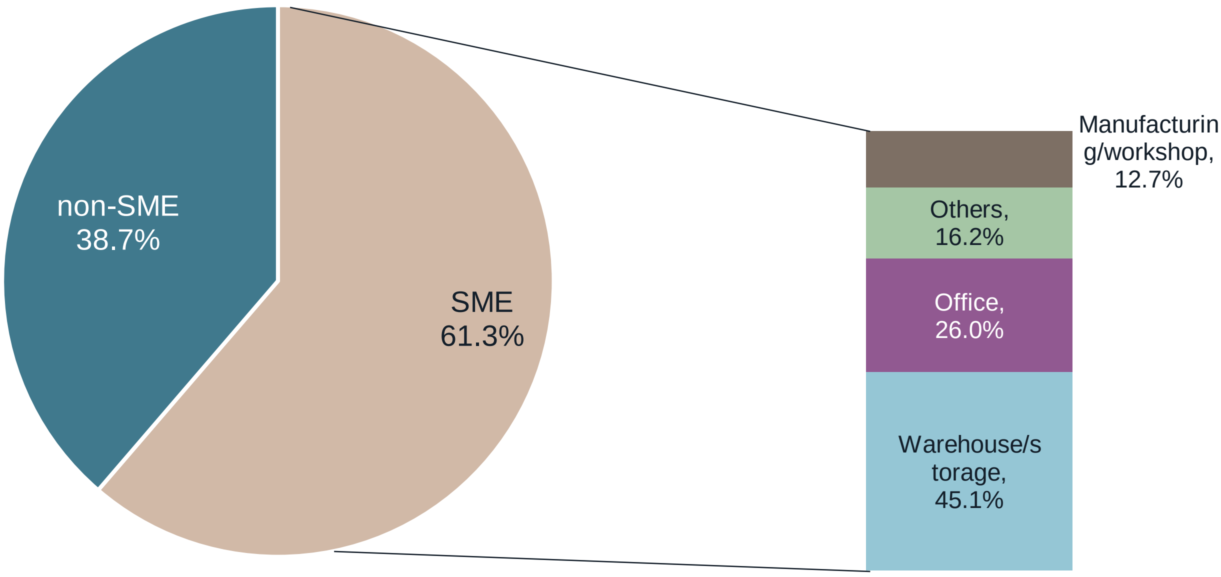
Key player	Type
Goodman	RE Institutional Developer
Cingleot Consortium	E-commerce operator
Hong Kong Airport Authority, Hongkong Post, China Post JV	Quasi-government
ESR, Chinachem, Chinese investor JV	RE Institutional Developer, RE Developer
Hongkong Post	Quasi-government
Reitar JV	Logistics property developer

Source: JLL, market news, Building Digest, 2025

Notes: JLL's data is sourced through publicly available information, building digest and other primary research methods. Data may not be consistent with data maintained by the companies due to differences in recording methodology.

Requirements and trends (including impact from e-commerce growth)

Figure 35: Industrial Buildings Floorspace Distribution in 2020



Source: Planning Department, 2020

In terms of tenant composition, over one-half of the occupiers in industrial buildings were small and medium-sized enterprises (SMEs) based on the 2020 Planning Department study on Hong Kong's industrial building usage. Most SMEs utilised industrial units for warehouse/storage purposes.

For Hong Kong warehouse tenants, easily divisible units are advantageous, as most SMEs require the flexibility to adjust their space based on recent business performance. Conversely, warehouses with extremely large floor plates that cannot be effectively subdivided without compromising goods transport pathways are less likely to attract SME tenants.

Beyond flexibility, location is a crucial criterion for tenants. Kwai Tsing, situated near the Kwai Chung Container Port and centrally located in the city, is particularly attractive. Local distributors and e-commerce operators frequently involved in consumer product transportation consider Kwai Tsing and Tsuen Wan as prime locations for warehouse facilities. Shatin, despite slightly deviating from the centre area, is also perceived as a favourable location for local distributors as it remains near the centre point. For instance, Cainiao Supply Chain recently committed to some space in Hutchison Logistics Centre in Kwai Chung and Ever Gain Centre in Shatin.

However, e-commerce operators have additional requirements. Given their need for regular air freight arrangements as well as cross-border transportation to and from mainland China, Chek Lap Kok and the North emerge as strategic alternatives. These locations offer proximity to the airport and border control points to mainland China, providing efficient access to both air and land transportation routes. For example, Pinduoduo leased the space in Cainiao Smart Gateway in Chek Lap Kok and HKTVmall established a warehouse in Jumbo Plaza in Sheung Shui.

Performance and outlook

Annual Completion

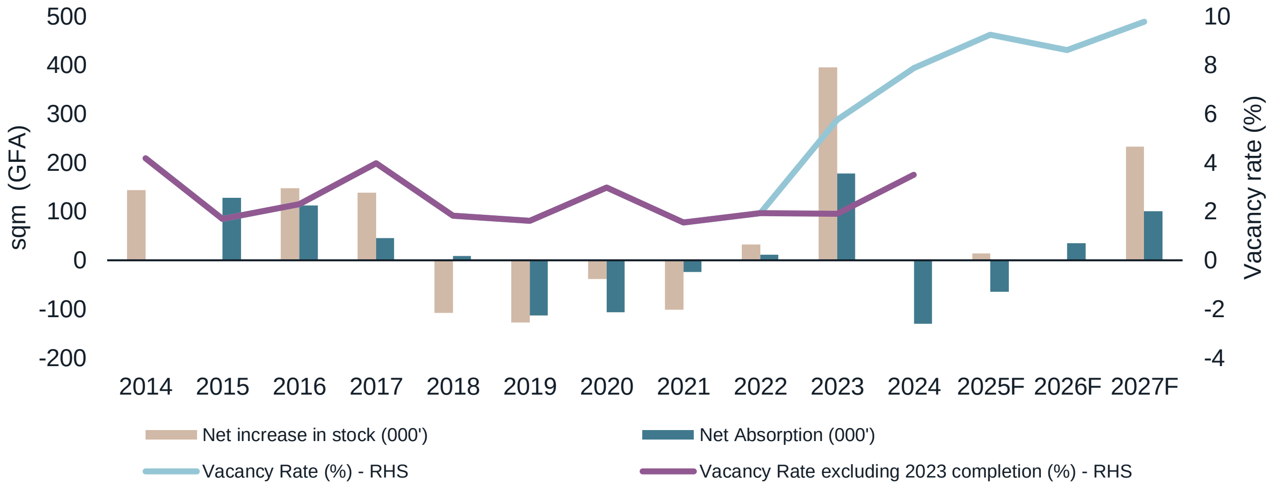
Between 2020 and 2024, the prime warehouse market in Hong Kong experienced significant growth, with a total addition of 519,886 sqm. This expansion was primarily driven by one expansion project and two new completions in 2022-23. The two major completions during this period were:

1. Goodman Westlink: Located in Tuen Mun, this greenfield development boasts a gross floor area (GFA) of approximately 138,983 sqm. The project was developed on an industrial site acquired through a government tender in 2018.
2. Cainiao Smart Gateway: This substantial facility, also a greenfield development, features a GFA of 380,903 sqm. The site was sold by the Airport Authority Hong Kong in 2018.

In 2023, DHL's Central Asia Hub in Chek Lap Kok underwent a significant expansion, increasing its size by approximately 50.0% to reach 49,517 sqm. This expansion boosted the facility's air freight handling capacity by nearly 70.0% and the city's logistics capabilities at the same time.

Demand vs Supply

Figure 36: Hong Kong Distribution Warehouse/Logistics Total Completions, Net Absorption and Vacancy Rate (GFA, Annual)



Source: JLL, 4Q24

Note: Net absorption in 2014 is not available.

The Hong Kong prime warehouse market has undergone substantial changes in recent years, driven by policy initiatives and evolving market dynamics. A significant shift occurred in 2023 with the completion of Cainiao Smart Gateway. This development introduced specifications that diverge from traditional Hong Kong prime warehouses, catering more to global e-commerce operators than local SME tenants. Consequently, it contributed to a notable increase in the overall vacancy rate.

Simultaneously, the trend of redeveloping or converting prime warehouses to other property assets decelerated as interest rates peaked in 2023. This slowdown potentially mitigated the reduction of available stock and lifted the cap on vacancy rates, resulting in a sharp increase in the vacancy rate that same year.

As of end-2024, the prime warehouse vacancy rate reached 7.9%. However, excluding the 2023 completion, this figure would be just 3.5%. Looking ahead, despite increased commitments from major Chinese e-commerce operators like Cainiao and Pinduoduo, net absorption by this sector is expected to remain limited. The leasing market should continue being dominated by 3PL providers engaged in both trade and local distribution.

With the heightened trade uncertainties, the vacancy rates are likely to climb further to 9.3% in 2025. Vacancy level should remain elevated in 2027 and thereafter, driven by the completion of the Kwai Chung Cold Storage Logistics Centre by the ESR-led consortium, which is likely to add significant supply to the market.

Major logistics facility providers and players

Major logistics facility providers and players in Hong Kong include Goodman, China Resources Logistics, Kerry Logistics, Hutchison, Mapletree and The Wharf Holdings.

Investors and investment trends, and major selected transactions. if any

In 2024, the prime warehouse investment market has been largely driven by business operators, taking advantage of more available stock at affordable selling price in the market. Notable transactions include the acquisition of a floor in Gemstar Tower in Hung Hom reportedly by the health product brand Meka for self-use at a consideration of HKD 210.0 million. 3PL provider Crown Pacific invested HKD 100.0 million in two units within the Safety Godown Industrial Building in Chai Wan. Meanwhile, the e-commerce giant JINGDONG Property acquired Li Fung Centre in Shatin for HKD 1.8 billion, with market news suggesting that the buyer was considering potential redevelopment or conversion options for the property.

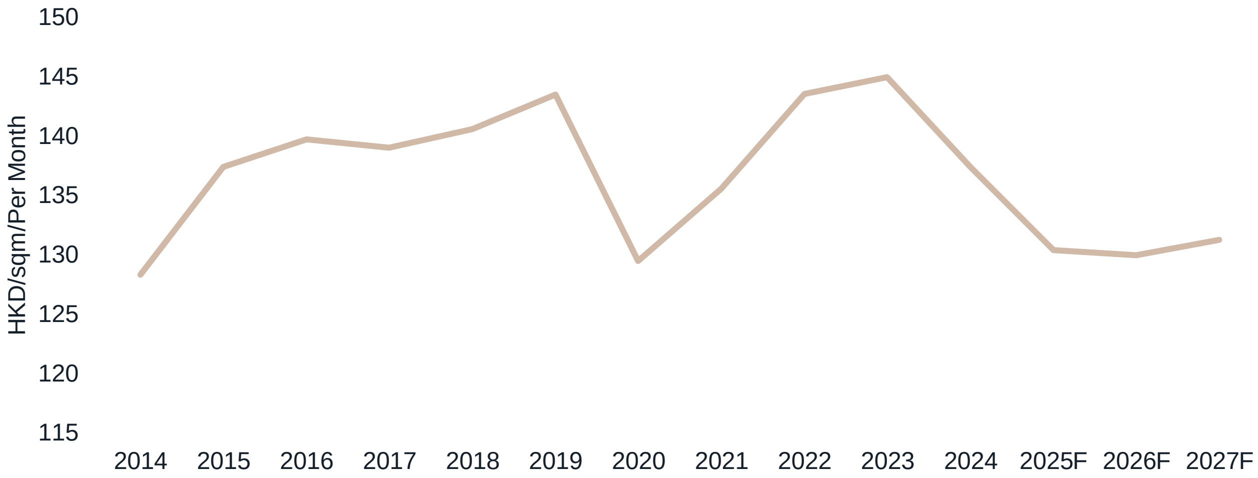
Institutional investors were also involved in some activities in 2024. Zenith Assets Management acquired multiple units in Eastern Centre, Quarry Bay, for HKD 67.5 million. Notably, Goodman continued its strategic consolidation of the Sunshine Kowloon Bay Cargo Centre, purchasing multiple units for HKD 279.6 million. This latest acquisition brings Goodman's ownership stake in the property to over 50.0%.

Table 2: Hong Kong Notable Prime Warehouse Transaction in 2024

Quarter	Unit	Building	Address	District	Price (HKD mln)	Unit price (per sqm)	Seller	Buyer
2Q24	Unit A-H, 12/F	Gemstar Tower	23 Man Lok Street	Hung Hom	HKD 210.0	HKD 56,123	The Sincere Company	Honest Standard Ltd (Meka-related)
2Q24	Unit A-B, 11/F	Safety Godown Industrial Building	56 Ka Yip Street	Chai Wan	HKD 100.0	HKD 29,687	Emperor International	Crown Pacific Ltd (3PL)
3Q24	Unit 11 on B1/F, Unit 7-8 & Store on 3//F	Eastern Centre	1065 King's Road	Quarry Bay	HKD 67.5	HKD 54,487	Tai Hung Fai	Zenith Assets Management Ltd
3Q24	-	Li Fung Centre	2 On Ping Street	Shatin	HKD 1,800.0	HKD 39,751	M&G Real Estate	JINGDONG Property (E-commerce)
4Q24	Unit B on B/F, Unit A-B on G/F, Roof	Sunshine Kowloon Bay Cargo Centre	59 Tai Yip Street	Kowloon Bay	HKD 279.6	HKD 26,318	Hunan Sunshine Holdings Ltd	Goodman

Historical and forecast data for key logistics market indicators

Figure 37: Hong Kong Distribution Warehouse/Logistics Gross Rent (GFA, Per month)

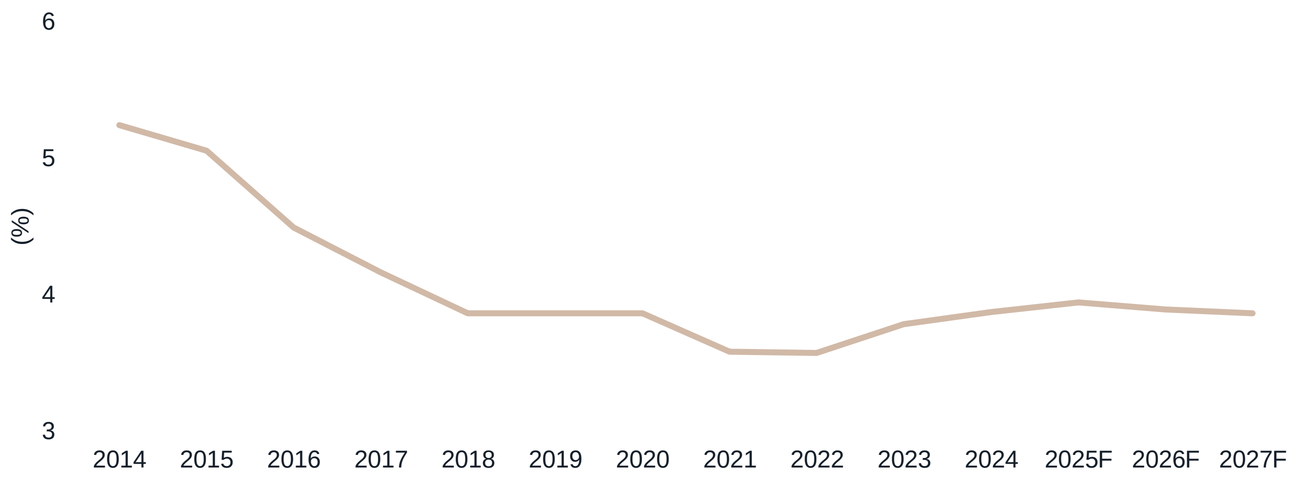


Source: JLL, 4Q24

By 2024, rents declined to HKD 137.4 per sqm per month, partly due to contraction in local consumption. Looking ahead, the anticipated rise in vacancy rates in 2025 is expected to exert downward pressure on rents. Rents may potentially resume positive growth in 2027, given forecast growth in trade and consumption.

Market Yield

Figure 38: Hong Kong Distribution Warehouse/Logistics Market Yield (GFA, Annual)



Source: JLL, 4Q24

Similar to the rental trend, capital values of prime warehouses have trended downward since 2022. Concurrently, overall market yield expanded slightly from 3.6% in 2022 to 3.9% in 2024 amidst lacklustre investment market conditions.

Looking ahead, capital values are expected to continue declining in 2025, as downward pressure on rents will persist as vacancy remains elevated. Market yields are expected to expand further in 2025, but the investment outlook should improve starting from 2026, as rental decline begins to moderate. Yield compression is expected in 2027, supported by a low-interest rate environment and more pronounced rental growth.

4. Overview of India's Logistics Market

Macroeconomic overview

Country overview

India is poised for economic growth, with its consumer market projected to expand by 46.0% by 2030, positioning it as the second largest globally. This surge is primarily attributed to three key factors: escalating income levels, a youthful workforce, and accelerating urbanisation. Currently, 36.3% of India's population resides in urban areas, a figure expected to rise significantly in the coming years. By 2030, the nation's working-age population is anticipated to reach 1.04 billion, constituting a substantial 68.9% of the total population. This demographic dividend presents a unique opportunity for economic advancement, as a larger workforce can potentially drive productivity and innovation across various sectors, further solidifying India's position as a major player in the global economy.

India's middle class, ~432 million people, is rapidly growing, driven by better accessibility to healthcare and education, and overall economic growth. It is projected that by 2030-31, this income group may reach 715 million, constituting 40% of India's total population.[14] The retail sector, both traditional and modern, is expected to experience robust growth to cater to this expanding consumer base. Consequently, this will necessitate more efficient and expansive distribution networks, as well as logistics solutions.

Economic overview

India continues to maintain its status as the world's fastest-growing major economy, with projections indicating an impressive average annual GDP growth of 6.0-7.0% in 2025. This robust economic performance has propelled India to become the 5th largest economy globally, with an estimated GDP of USD 3.9 trillion in 2024. The country's economic resilience is further underscored by a forecasted GDP growth rate of 6.6% for 2025, significantly outpacing many developed and emerging economies.

India's global economic position has significantly improved, making it an increasingly attractive destination for international investment. The country now ranks as the 8th largest recipient of foreign direct investment ("FDI"), reflecting its growing appeal to global investors. This attractiveness is further evidenced by India's 40th position in Global Competitiveness, 38th in Logistics Performance Index ("LPI"), and 63rd in the World Bank's Ease of Doing Business rankings as of 2020. These rankings underscore India's progress in creating a more business-friendly environment.

Several factors contribute to India's rising status as a preferred investment destination. These include relatively lower wages, special investment privileges such as tax exemptions, an improving business environment, and a rapidly expanding consumer base. Consequently, the country has witnessed a consistent upward trend in total FDI inflows over the past decade, with the manufacturing sector capturing a substantial share of these investments.

India's economic growth has been particularly driven by strong performances in the manufacturing and construction sectors. Notably, the manufacturing sector has shown remarkable expansion, growing at an impressive annual rate of 11.6%. This growth not only contributes significantly to the overall GDP but also enhances India's position in global supply chains.

Consumer spending, a key driver of economic growth, is also on an upward trajectory. Current consumption expenditure stands at approximately USD 2.0 trillion and is projected to grow steadily at a rate of 10.0-12.0% annually until 2025, potentially reaching USD 3.2 trillion.

Government planning and policies/structural changes to logistics market

The Indian government has implemented significant structural changes and policies to enhance the efficiency and competitiveness of the country's logistics market:

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[14] IBEF, People Research on India's Consumer Economy (PRICE). This group is defined as households earning between INR 500,000 and INR 3,000,000 annually.

Implementation of Goods & Service Tax (GST): The introduction of GST has been a landmark reform in India's tax structure, with far-reaching implications for the logistics sector. This unified tax system has replaced multiple state and central taxes, significantly simplifying the complex tax landscape that previously existed. By removing state-level barriers and eliminating the need for inter-state checkpoints, GST has streamlined the movement of goods across the country. This has led to faster transportation times, reduced paperwork, and improved overall efficiency in supply chain operations. The simplified tax structure has also encouraged businesses to optimise their warehouse locations based on operational efficiency rather than tax considerations, leading to more rational and cost-effective logistics networks.

National Logistics Policy: The National Logistics Policy represents a comprehensive approach to addressing the challenges in India's logistics sector. This overarching institutional framework aims to drive efficiency improvements across various aspects of logistics services:

- Process Optimisation: The policy focuses on streamlining and standardisation of logistics processes to reduce complexity and improve operational efficiency.
- Digital Systems: It emphasises the adoption of digital technologies to enhance transparency, traceability, and efficiency in logistics operations.
- Regulatory Framework: The policy aims to create a more conducive regulatory environment that supports the growth and development of the logistics sector.
- Human Resources: It addresses the need for skilled professionals in the logistics industry through targeted training and development initiatives.

The policy sets clear targets for reducing logistics costs in the country, which are currently higher than in many developed economies. By lowering these costs, the policy aims to boost India's global competitiveness and improve its LPI ranking.

Grant of Infrastructure Status to Logistics Sector: The Indian government's decision to grant infrastructure status to the logistics sector in 2017 marks a pivotal shift in the industry's growth trajectory. This status encompasses cold chain and warehousing facilities, significantly enhancing the sector's access to long-term, low-cost financing from banks and financial institutions. The move is designed to stimulate investment, both domestic and foreign, into logistics infrastructure projects, potentially leading to reduced operational costs and improved efficiency across supply chains. By facilitating easier credit access and potentially streamlining regulatory processes, this status encourages the development of integrated logistics parks and the adoption of advanced technologies.

Infrastructure developments (including highways/expressways and ring roads initiatives)

The Indian government has transitioned its infrastructure development strategy from a short-term, need-based model to an integrated long-term growth plan aimed at catering to the 'New India's' requirements. The significant growth in infrastructure over the last decade has been a key propeller in the development of the country. This is also reflected in India jumping 16 places in the LPI ranking: 38th in 2023 from 54th in 2014.

National Master Plan: Launched in October 2021, PM Gati Shakti is radically transforming the approach to integrated planning for multimodal infrastructure connectivity, boosting India's socio-economic growth. Through the national master plan, all ministries and states have been uploading details of current and future projects on a dynamic digital platform based on geographic information system (GIS), to break silos and working collaboratively for successful implementation of infrastructure.

National Infrastructure Pipeline: The National Infrastructure Pipeline was launched with 6,835 projects and has expanded to capture over 9,288 projects with a total project outlay of $1.4 trillion between 2020 and 2025. The aim is to create affordable assets across energy, roads, railways, ports etc. This has been driven by the government's vision of building world-class infrastructure aimed at bringing down the cost of logistics, to turn India into an economic powerhouse.

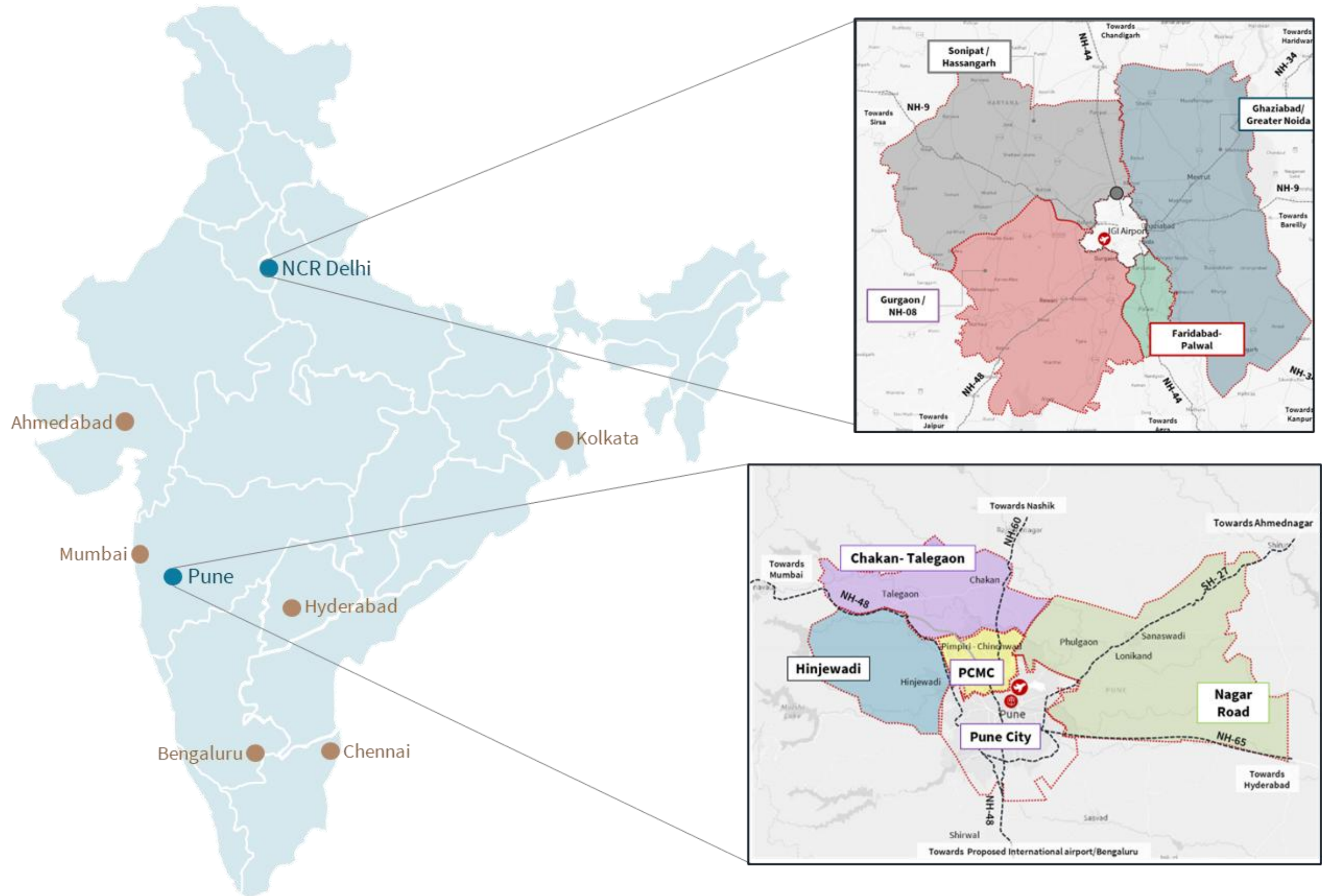
Dedicated Freight Corridors (DFCs): The DFCs are expected to be a gamechanger for the logistics sector in India and going to play a major role in increasing the railways' modal share of freight in India from circa 25.0% to a dominant 45.0%. While two dedicated corridors spanning 3,360 km (the Western and the Eastern DFCs) are expected to be fully commissioned at a cost of $11.0 billion, three new commodity-wise rail economic corridors have been announced in 2024, with more expected in the future. Key features of these corridors include double speeds, higher load-carrying capacity and double-stacking capability.

Multi-Modal Logistics Parks (MMLPs): As many as 35 MMLPs with a capital outlay of $6 billion will be developed to cater to 50.0% of the freight movement in the country. This is expected to rationalise the cost of logistics in the country through integration of transport services, better utilisation of assets, apart from lowering carbon emissions. The development of 15 MMLP sites is being targeted by FY24/25. These MMLPs are envisaged as modern freight handling facilities (typically 100 acres and above) with access to multiple modes of transport, mechanised warehouses and specialised storage solutions including cold storage, bulk cargo terminals and intermodal transfer containers.

Logistics market overview (Grade A only)

Key logistics hubs

Figure 39: India Key Logistics Markets



Source: JLL, MapIT

Logistics real estate market landscape

NCR Delhi is a vast planning region that encompasses India's capital city Delhi and extends into several surrounding districts from the states of Haryana, Uttar Pradesh, and Rajasthan. This region is characterised by concentrated industrial activities, primarily along two major axes: the NH-48 Highway and the Ghaziabad – Noida corridor.
The NH-48 Highway has fostered the development of several significant industrial clusters, including Gurugram, Manesar, Bhiwadi, Bawal, Neemrana, and Ghiloth. This corridor plays a crucial role in connecting the Northern hinterland to the Jawaharlal Nehru Port in Navi Mumbai, facilitating efficient logistics and trade.

The Ghaziabad – Noida corridor has emerged as a major industrial and economic hub, benefiting from its strategic location at the intersection of the Western and Eastern Dedicated Freight Corridors (DFCs). It has established itself as one of India's largest electronics manufacturing centres and has attracted substantial foreign direct investments.

Pune presents a unique economic landscape distinguished by its balanced mix of Information Technology (IT) and manufacturing sectors. The city attracts approximately 20.0% of the entire industrial investment in India, underscoring its significance in the country's economic landscape. Pune has established itself as a major centre for automobile manufacturing, hosting numerous domestic and international automotive companies. It is also a key location for the production of durable consumer goods, further diversifying its industrial base. In addition to its manufacturing strengths, Pune has successfully positioned itself as a prominent IT hub, attracting both Indian and foreign technology companies. The city is home to several major Indian and foreign industries across various sectors, contributing to its diverse and robust economic profile.

Demand drivers for logistics properties

High Urban Density and Large Consumer Base: India's rapid urbanisation is positioning its Tier 1 cities as potential hubs for warehousing and logistics. According to United Nations projections, India is expected to add 416 million urban dwellers by 2050, contributing to 35.0% of the world's urban population growth along with China and Nigeria. This unprecedented urban expansion is creating a vast and concentrated consumer base, driving demand for efficient logistics and warehousing solutions in and around major urban centres.

Quick Commerce Fuelling Urban Logistics Growth: The rise of quick commerce, particularly post-2020, has significantly impacted urban logistics. Factors such as high last-mile delivery costs, the demand for same-day and ultra-fast deliveries (as quick as 10-20 minutes), and the shift towards online shopping, especially for groceries, have necessitated the development of urban logistics spaces. This trend has led to the repurposing of various urban assets, including indoor parking, back-storage facilities of retail stores, function halls, theatres, and defunct malls or offices, into sorting centres, dark stores, or cloud kitchens. While organised urban logistics developments are expected to emerge in the future, high land costs remain a significant challenge.

Government's Push for Manufacturing: The Indian government's initiatives to boost domestic manufacturing have become key drivers for logistics property demand. Programs such as Make in India, Digital India, and the National Logistics Policy have created favourable ecosystems for manufacturing across the country. The introduction of Production-Linked Incentives (PLI) Schemes and Design-Linked Incentives (DLI) Schemes has provided additional motivation for companies to establish manufacturing facilities in India. These policies not only aim to increase India's manufacturing output but also create a robust demand for sophisticated logistics and warehousing facilities to support the growing industrial sector.

Growth of e-commerce and 3PLs

The growth of e-commerce, 3PLs and express delivery services has been a significant driver in the evolution of India's logistics and warehousing sector. India's e-commerce sector has experienced explosive growth in recent years, accelerated further by the COVID-19 pandemic. The **increasing internet penetration, rising smartphone usage, and changing consumer preferences** have contributed to this surge. As more consumers turn to online shopping for a wide range of products, from electronics to groceries, the demand for efficient and strategically located warehousing and distribution centres has skyrocketed.

Key factors driving e-commerce growth include the rising middle-class population with increasing disposable income, improved digital infrastructure and internet connectivity, adoption of digital payment methods, and expansion of e-commerce platforms into tier-2 and tier-3 cities. This growth has necessitated the development of **large-scale fulfillment centres**, as well as smaller, **urban warehouses for last-mile delivery**. E-commerce companies are increasingly seeking advanced warehousing solutions with features like automation, temperature control, and real-time inventory management systems.

The expansion of e-commerce has been accompanied by significant growth in the 3PL and express delivery sectors. These logistics service providers play a crucial role in managing the complex supply chains required for efficient e-commerce operations. Key trends in the 3PL and express delivery sector include **increased adoption of technology for route optimisation and real-time tracking, development of specialised services for different product categories, expansion of network coverage to serve smaller consumption hubs, and integration of sustainable practices in logistics operations**. Additionally, there's an increased need for specialised warehousing solutions, last-mile delivery hubs in urban areas, and facilities with advanced automation and technology integration.

Structural trends of logistics and logistics property market

The warehousing industry in India has undergone a significant transformation over the years, evolving from basic storage spaces to sophisticated logistics systems. This shift has been driven by several factors and has had profound implications for the demand and nature of warehousing spaces in the country.

Initially, the warehousing sector in India was highly fragmented, characterised by smaller storage units with limited automation or mechanisation capabilities. However, warehouses have now become crucial elements of the Indian Logistics Industry. This evolution has been propelled by the **growth of organised e-commerce, 3PLs, retail, and other sectors**, as well as **increased interest from global investors and developers**. The result has been a marked **shift towards more organised and sophisticated warehousing facilities**.

This transformation towards state-of-the-art warehousing has led to a **significant increase in the average size of Grade A warehouses in India**, effectively doubling their footprint. Moreover, the vertical expansion has been equally impressive, with the **average height of warehouses increasing from 9 meters in 2017 to 12 meters in 2024**, according to JLL assumptions. This three-dimensional growth has resulted in a threefold increase in the average volume of Grade A warehouses, allowing for **more efficient use of space and advanced storage solutions**.

The **advent of omnichannel retailing** has further transformed the warehousing landscape. Customers now expect flexible options such as buying online with in-store pickup or ship-from-store services. This shift has effectively turned traditional retail stores into fulfillment centres, necessitating the optimisation of store inventory and the development of flexible fulfillment options that also meet profitability targets.

There is an increased focus on **distribution network optimisation**, leading to improved efficiency and a growing need for organised operations in standardised spaces. This trend has resulted in many businesses outsourcing their logistics operations to 3PL providers, who can offer specialised expertise and economies of scale.

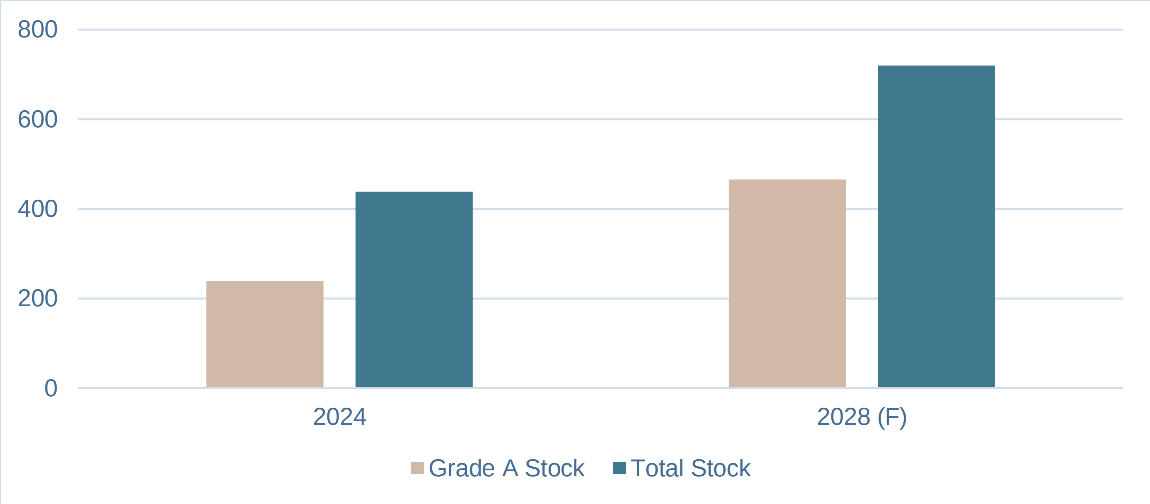
Interestingly, there remains **ample scope for growth in rents** when compared to major Asia Pacific cities. The average rent for warehousing space in India is approximately 50.0% lower than in other MITI-V countries (Malaysia, Indonesia, Thailand, India, and Vietnam). This differential suggests potential for future rental growth as the quality and sophistication of India's warehousing infrastructure continue to improve.

Logistics property overview (Grade A only)

Estimated logistics real estate per capita

Market Size

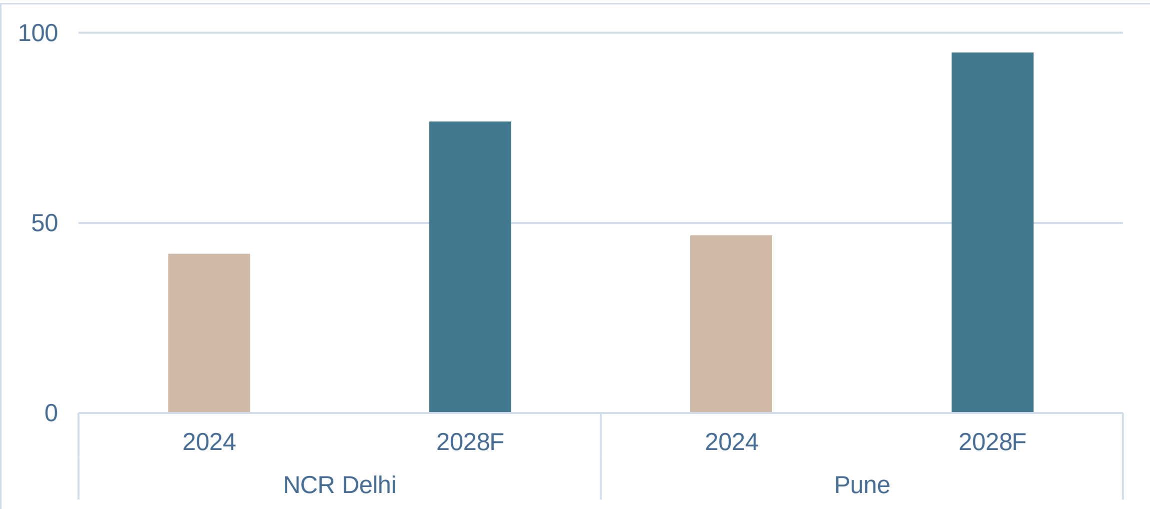
Figure 40: India Logistics Market: Current and Expected (end-2028) Market Size (Million Sq.ft.)



Source: JLL, 2024

India's warehousing sector has experienced significant growth and transformation, as evidenced by the 16.0% year-on-year increase in Grade A and B warehousing stock across the country's top eight cities. By the end of 2024, the total warehousing space reached an impressive 438.4 million square feet. Notably, Grade A facilities now account for over 50.0% of this stock, reflecting a marked shift towards higher-quality warehousing solutions. This trend is driven by organised developers who are increasingly focusing on Grade A warehouses due to their superior attributes. These advanced facilities offer 50.0% greater floor-load capacity, 40.0% improved operational efficiency, more effective material handling spaces, and enhanced safety and security measures compared to lower-grade alternatives.

Figure 41: India Grade A Stock by Key Markets (Million Sq.ft.)



Source: JLL, 2024

Supply and characteristics of warehouses

The warehousing sector in India has experienced remarkable growth and transformation over the past five years. Annual warehousing supply has seen a dramatic increase from 41.9 million sq.ft. in 2019 to 61.7 million sq.ft. by 2024. More significantly, there has been a notable shift towards higher-quality warehousing facilities. The share of Grade A supply in the total warehousing stock has risen dramatically from approximately 55.0% in 2019 to an all-time high of about 80.0% in 2024.

National Capital Region (NCR) Delhi has solidified its position as India's largest warehousing market in 2024 with its total warehousing stock surpassing 100.0 million sq.ft. The market is experiencing a notable shift towards higher-quality warehousing facilities, with Grade A stock showing remarkable growth. By the end of 2024, Grade A warehousing in NCR Delhi recorded an impressive year-on-year growth of approximately 28%, reflecting a market-wide shift towards higher-quality logistics infrastructure.

Pune has emerged as a vital I&L hub in India, strategically positioned near major industrial corridors and serving as a gateway to Western India. By 2024, the city's warehousing stock reached 60.9 million sq.ft., with a remarkable 77.0% classified as Grade A, underscoring the dominance of high-grade facilities in the market. The city's warehousing market uniquely benefits from a balanced demand driven by both manufacturing and end-user consumption sectors. Pune's strong manufacturing base, particularly in automotive and engineering industries, coupled with its growing urban consumer market, fuels demand from diverse sectors including e-commerce, retail, and fast-moving consumer goods (FMCG).

Performance and outlook (4 years of forecast data)

Annual Completion

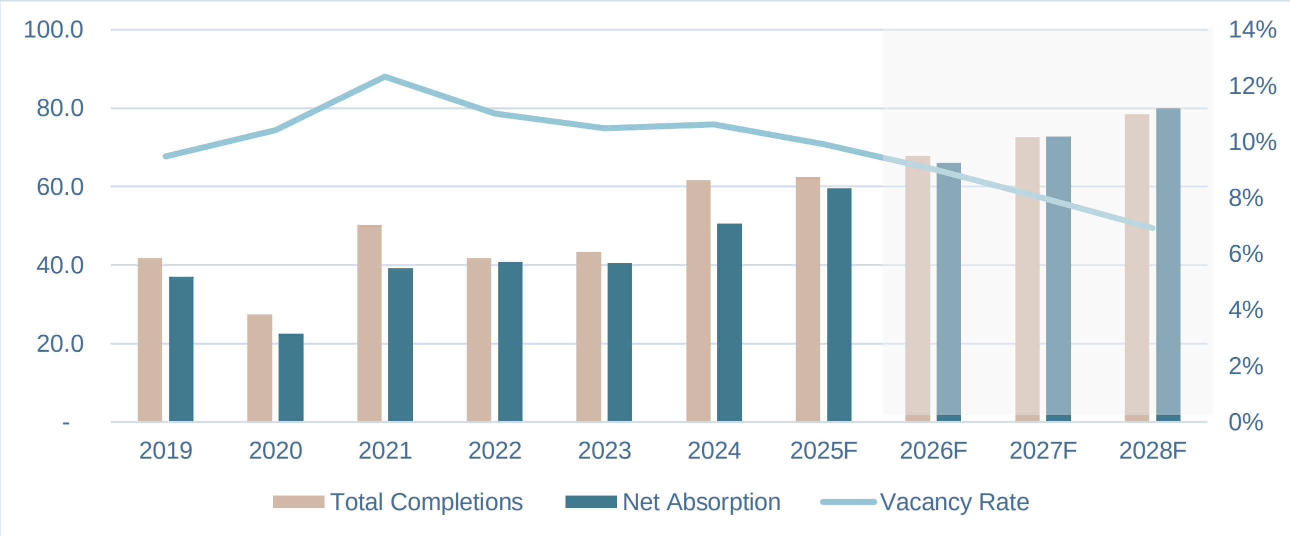
India's warehousing sector is poised for substantial growth, with projections indicating a CAGR of 12.8% over the next four years. This robust expansion is expected to elevate the total warehousing stock beyond 700 million sq.ft. by 2028. In 2024, the market witnessed the addition of 61.7 million sq.ft. of new supply, and forecasts suggest an additional 280 million sq.ft. will be introduced by 2028. The anticipated supply is primarily expected to originate from institutional developers and investors, including prominent entities such as IndoSpace, ESR, Horizon Industrial Park (Blackstone), Ascendas, LOGOS, and Welspun One, as well as regional developers such as Global Group, K-Square Global Logistics Pvt. Ltd. and KSH Holdings Limited are projected to contribute significantly to this growth. Notably, there is an increasing inclination towards high-quality Grade A facilities, driven by growing interest from institutional developers. Consequently, Grade A stock is forecasted to experience a remarkable CAGR of 18.3% between 2024 and 2028. This accelerated growth is expected to result in Grade A facilities constituting approximately 65.0% of the total warehousing stock by 2028.

NCR Delhi is projected to experience significant growth in its warehousing sector over the next four years. The total warehouse stock in the region is forecasted to expand at a CAGR of 9.8% by 2028, reflecting the area's increasing importance as a logistics hub. In the coming four-year period, NCR Delhi is anticipated to witness the addition of approximately 46 million sq.ft. of new warehousing space. Notably, 75.0% of this new supply is expected to be Grade A with Grade A stock crossing 75.0 million sq.ft. by 2028, representing a substantial CAGR of ~16%.

Pune's warehousing sector is set for remarkable expansion, with projections indicating a CAGR of 18.0% by 2028. The city is expected to add 55.2 million sq.ft. of new warehousing space over the next four years, with an impressive 87.0% of this new supply anticipated to be Grade A facilities. This continued dominance of high-quality warehousing is driven by increasing investments from both institutional and regional developers. Pune's growth is further bolstered by major infrastructure initiatives such as the Bengaluru-Mumbai Industrial Corridor, Pune-Vijayawada Economic Corridor, and Pune-Aurangabad Economic Corridor. These projects are poised to catalyse new industrial developments by enhancing freight movement and logistics efficiency.

Demand vs Supply

Figure 42: India Distribution Warehouse/Logistics Total Completions, Net Absorption and Vacancy Rate (Million Sq.ft., Annual)



Source: JLL, 2024

The warehousing sector has demonstrated remarkable resilience and growth since the COVID-19-induced downturn in 2020-21, exhibiting a significant surge in demand. By 2024, the total net absorption has experienced a twofold increase from 2020 levels, reaching 50.6 million square feet. Notably, Grade A spaces account for approximately 80.0% of the occupied area, underscoring a clear preference among occupiers for high-quality warehousing facilities.

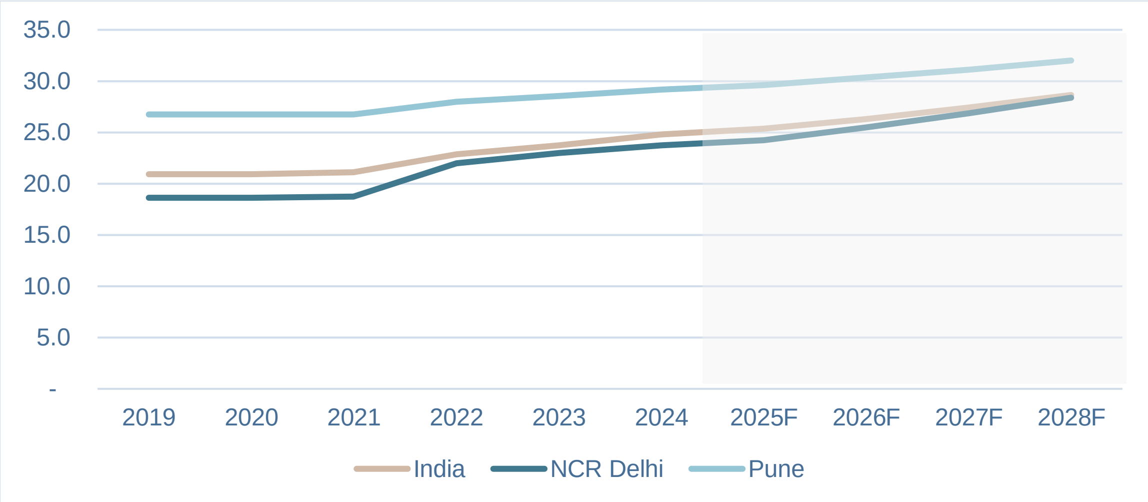
The warehousing sector in India is poised for substantial growth, driven by a confluence of factors including supportive government policies, upcoming infrastructure projects, expansion of 3PL and e-commerce sectors, and shifting consumer preferences towards online shopping. Projections indicate that by 2028, annual demand for warehouse space will reach 78.6 million sq.ft., with Grade A facilities accounting for approximately 82% of this demand. This trend towards high-quality warehousing is fuelled by the growing needs of 3PL, e-commerce, and light manufacturing sectors for larger, more sophisticated facilities, often under the Built-to-Suit (BTS) model. As supply aligns with this increasing demand, overall vacancy rates are expected to decline, with Grade A vacancy rates predicted to stabilise around 4.0% and Grade B rates falling below 15.0% by 2028.

In NCR Delhi, the warehousing market is set to benefit from growth in the Engineering, Auto & Ancillaries, and Electronics sectors, leveraging the region's established manufacturing ecosystem with major OEMs and large companies. The trend of manufacturing companies outsourcing to 3PL providers is driving significant demand in this sector. Additionally, the region is witnessing demand from E-Commerce, FMCG, and Retail sectors, capitalising on the consumption base of Delhi and its extensive catchment area in Northern India.

Pune's warehousing landscape mirrors NCR Delhi in its focus on Engineering, Auto & Ancillaries, and Electronics sectors, supported by a robust manufacturing ecosystem and well-developed industrial infrastructure, including Maharashtra Industrial Development Corporation (MIDC) industrial parks and strong connectivity. The city is also experiencing a similar trend of manufacturing companies outsourcing to 3PL providers, driving demand in this sector. Furthermore, Pune is seeing growing demand from E-Commerce and Retail sectors, fuelled by its expanding urban agglomeration and the resulting increase in both essential and non-essential consumer goods sales.

Historical and forecast data for key logistics market indicators

Figure 43: India Distribution Warehouse/Logistics Gross Rent (INR per sq. ft. per month)



Source: JLL, 2024

Warehouse rents across major Indian cities demonstrated positive growth in 2024, reflecting the sector's robust demand and evolving quality standards. Grade A spaces commanded an average rent of INR 24.8 per sq.ft. per month. The strong demand for logistics services is expected to drive consistent increase in rents in most cities in the coming years.

In NCR Delhi, the average Grade A rent stood at INR 24 per sq.ft. per month. Despite historically being a Grade B dominant market, which has kept rents relatively lower, NCR Delhi is poised for growth. The region's strong connectivity to major urban centres and ports through the Delhi-Mumbai Industrial Corridor (DMIC) is expected to boost manufacturing and logistics activities, potentially driving up rents. The increasing presence of institutionally funded Grade A projects and growing demand for high-specification facilities are already pushing rents upward. Grade A projects by established developers or with institutional backing are projected to see rent growth of 5.0-6.0% annually, driven by strong tenant portfolios and limited supply of high-specification warehouse spaces.

Pune commands higher than average Grade A rents at INR 29.2 per sq.ft. per month, reflecting its status as a key industrial and manufacturing hub. The city benefits from large MIDC Industrial Parks housing major automobile original equipment manufacturers (OEMs) and engineering manufacturing companies. Pune's position as an engineering manufacturing and research and development (R&D) centre attracts significant demand from sectors such as Auto & Ancillaries, Engineering, and Electronics & White Goods. Grade A projects in Pune, particularly those developed by established players or backed by institutional funds, are expected to see rent growth of 4.0-5.0% annually, driven by strong tenant demand and the need for specialised facilities.

5. Overview of Japan's Logistics Market

Macroeconomic overview

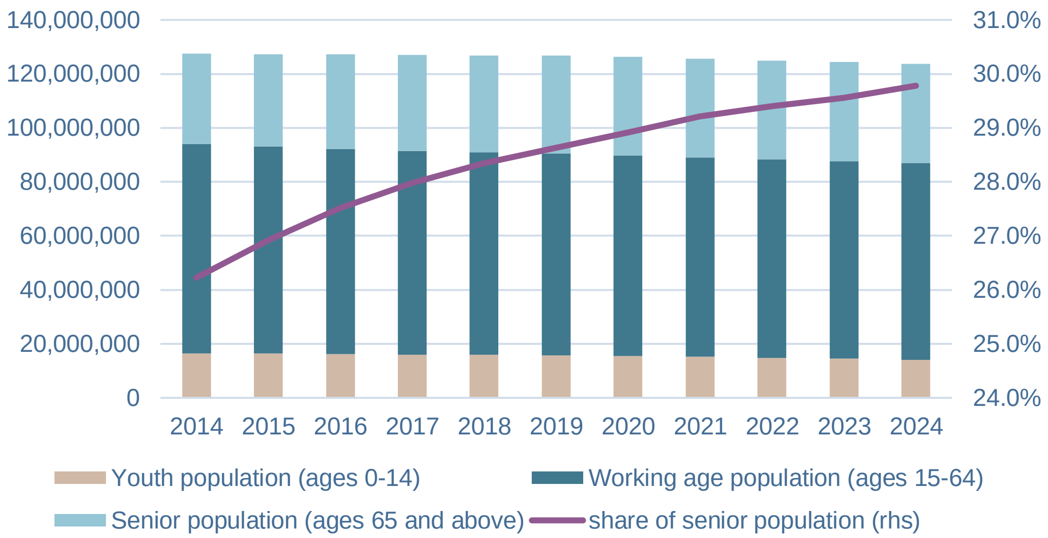
Country overview

Japan's total population in 2024 is 123.8 million. Population decreased 0.5% compared to the previous year and marked the 15th consecutive year of decline[15]. Tokyo is the only prefecture experiencing population growth as a result of internal migration.

The labour force continues to decline while the elderly population is increasing. The proportion of the population aged 15-64 reached a record low of 58.8% in 2024. Conversely, the proportion of those aged 65 and above reached a record high of 29.8%.

The number of middle-class households in Japan has been largely stable in the past decade, totalling 50.5 million in 2024 and is projected to rise slightly to 51.0 million in 2029[16]. Despite its substantial middle-class population, an aging population should continue to constrain consumption levels.

Figure 44: Japan's Demographic Profile



Source: Oxford Economics, February 2025

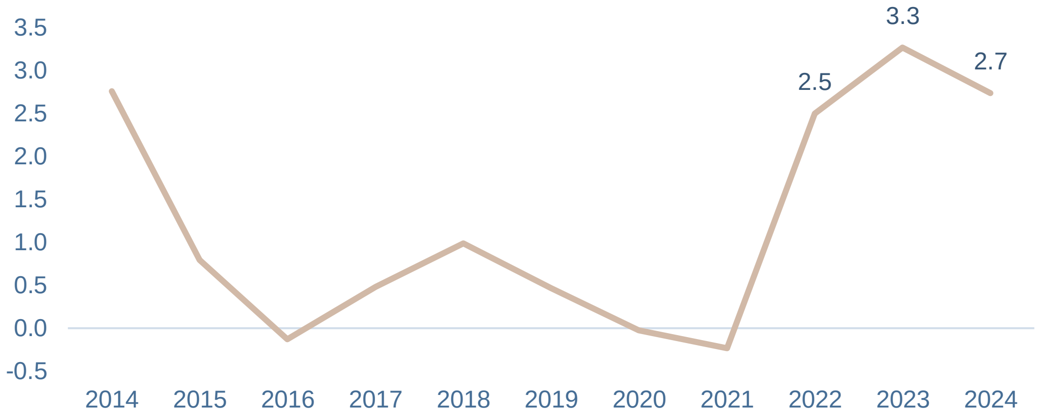
Economic overview

Japan's economy continues to recover albeit at a slow pace. Consumption is more resilient but gains in exports and industrial production have been relatively modest. Corporate profits are improving and business sentiment remains favourable. As a result, business fixed investment is on a moderate upward trend. The employment and income situation have improved moderately, as Japanese firms continue to raise wages. Strong wage settlements were evidenced by the outcome of the Spring wage negotiation this year, especially for small firms.

15 Oxford Economics, February 2025.

16 Middle-class households are defined by JLL as those households with an annual income of USD 20,000 or above in 2015 PPP terms.

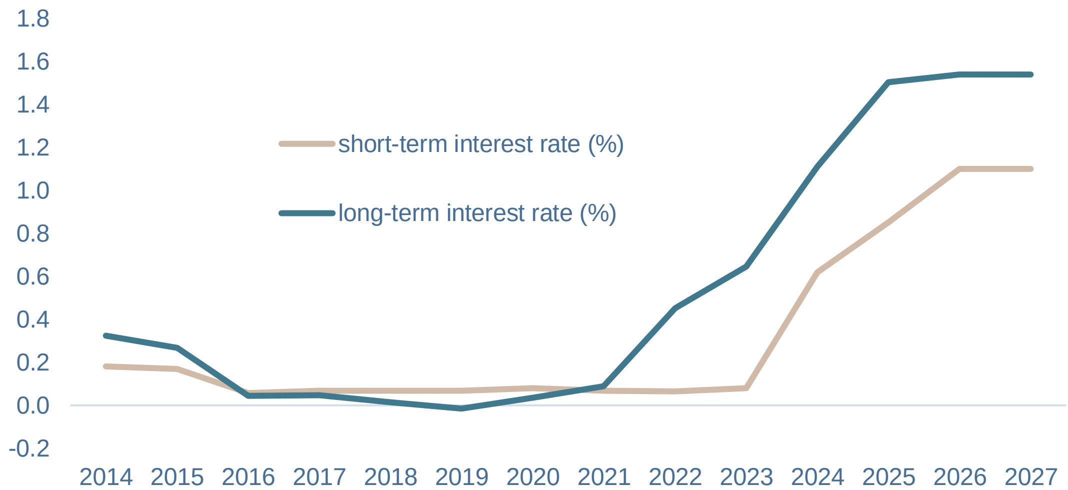
Figure 45: Consumer price index



Source: Oxford Economics, February 2025

On the price front, headline CPI inflation has been around 3.0% in recent months and is expected to stabilise at 2%. In response, the Bank of Japan (BoJ) raised its policy rate by 0.3 percentage points to 0.5% in January 2025. The case for further policy tightening is bolstered by the virtuous cycle between wages and prices. OE expects that the BoJ will hike rate to 0.8% in July and policy rate to reach 1.0% between spring and summer of 2026.

Figure 46: Japan's Interest Rate Trends



Source: Oxford Economics, February 2025

Government planning and policies/structural changes to logistics market

The main constraint for Japan's logistics industry is limited transportation capacity in the medium-term, particularly due to the shortage of truck drivers. To address this, the government is promoting improvements in truck drivers' working conditions, revisions of commercial practices, and enhancing logistics efficiency.

Improvement of Truck Drivers' Working Conditions: From April 2024, regulations on truck drivers' working hours have been implemented. Annual working hours and daily consecutive working hours have been limited. This has led to an increase in transportation costs.

Revision of Commercial Practices: The government is promoting a review of commercial practices between shippers and logistics providers. This includes addressing inefficient practices such as long waiting times for truck drivers and forced ancillary work not included in contracts.

Logistics Efficiency Enhancement: Efforts are being made to improve logistics efficiency through expanded use of pallets, automation and labour-saving measures in logistics operations, and the introduction of double connecting trucks.

While still in the planning stage, policies are being considered to support the reconstruction of aging logistics facilities. These include relaxing floor area ratios and providing subsidies when multiple logistics facilities are redeveloped as an integrated project. Infrastructure developments (including highways/expressways and ring roads initiatives)

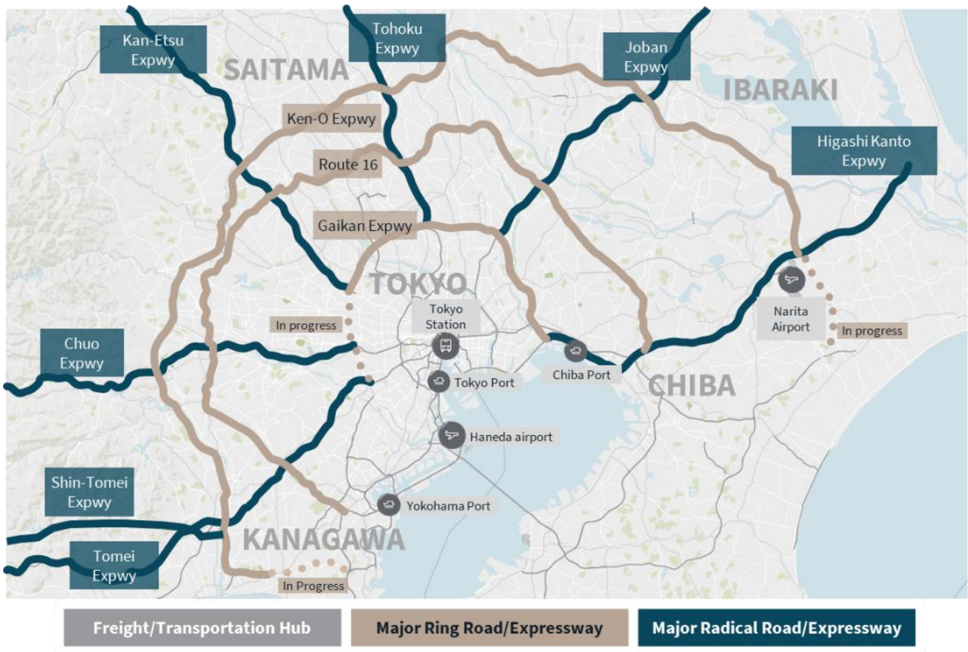
Inter-Region

Shin-Tomei Expressway, connecting the Greater Tokyo and the Greater Nagoya, is currently under construction. It was planned as an alternative route to the existing Tomei Expressway. Most of the highway has been completed, with full completion expected by 2027. Once finished, it will lead to reduced congestion and shorter transportation times between Tokyo and Nagoya, positively impacting logistics operations in the region.

Greater Tokyo

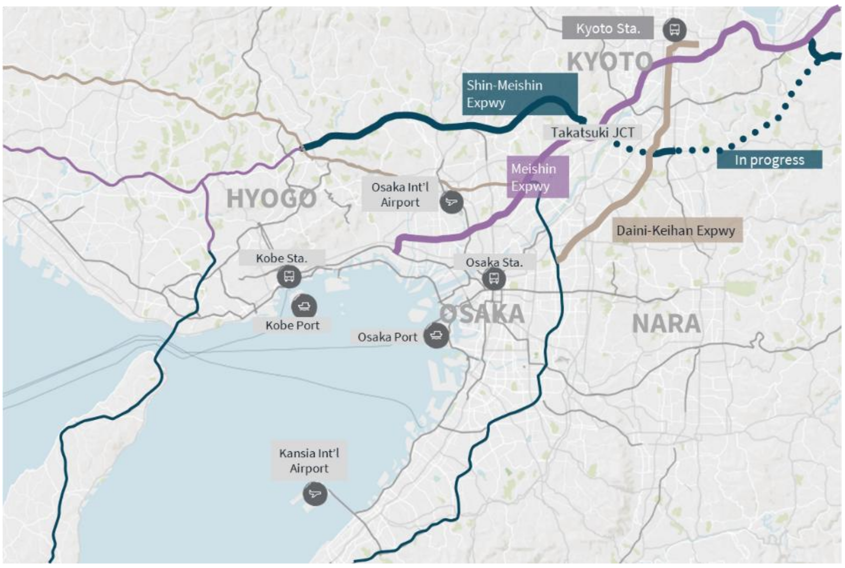
Gaikan Expressway: It is an 85-kilometer-long expressway that connects the city center in a ring that's around 15 kilometres. The section connecting the Kan-Etsu Expressway, Chuo Expressway, and Tomei Expressway is under construction.

Ken-O Expressway: A ring road located about 40-60 km from central Tokyo, with most sections already open. Sections on the eastern side of Chiba and the southern side of Yokohama are still under construction.



Greater Osaka

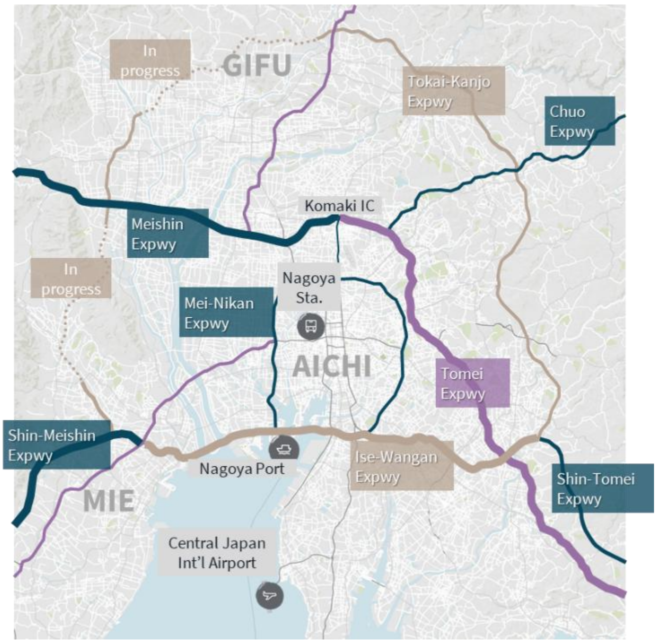
Shin-Meishin Expressway: The section east of Takatsuki Junction is under construction. Upon completion, it will significantly improve access to Greater Nagoya and Greater Tokyo. Along the completed Shin-Meishin Expressway, many large-scale logistics facilities have been developed near the highway interchanges.



Greater Nagoya

Mei-Nikan: Completed in May 2021, improving access between city center of Nagoya and the Nagoya Port area.

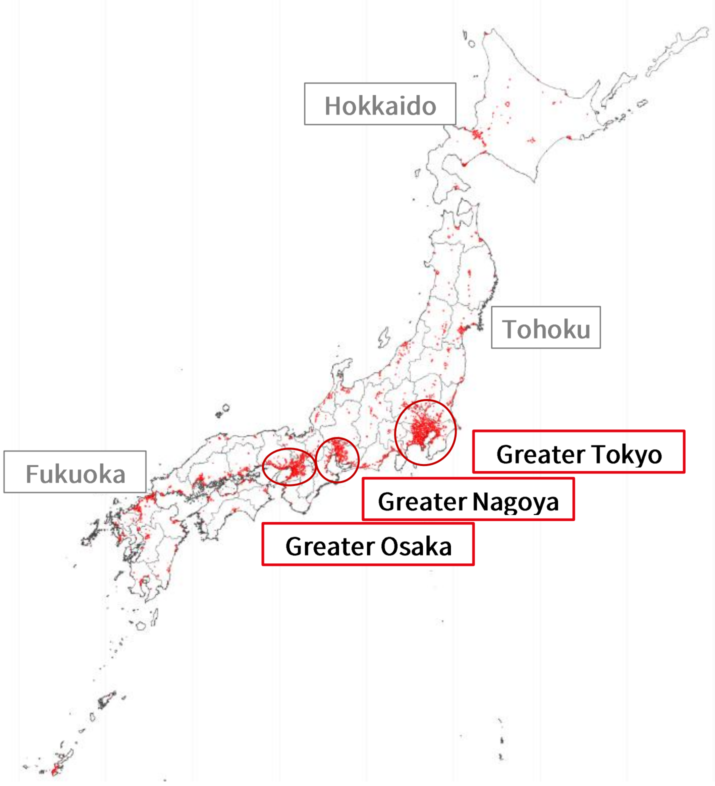
Tokai-Kanjo Expressway: A ring road connecting Aichi, Gifu, and Mie prefectures. Once fully completed, it will strengthen the ring road network of Greater Nagoya.



Logistics market overview for Japan (Grade A only)

Key logistics hubs

Figure 47: Japan Key Logistics Markets



Population Concentration Area: This refers to an area within the boundaries of cities, towns, and villages where basic unit districts with a population density of 4,000 or more people per 1 square kilometre are adjacent to each other, and the combined population of these adjacent areas is 5,000 or more people at the time of the census.

Source: Japan Census 2020

Logistics real estate market landscape

Prior to the introduction of modern logistics facilities in early 2000s, traditional warehouses were the only option for storage and distribution in Japan. They were mostly owner-occupied and leasing opportunities were scarce.

Nowadays, sophisticated tenants are increasingly attracted to modern logistic facilities over conventional facilities, as modern logistics facilities offer a variety of advantages, including: (i) leasing opportunities, (ii) multi-purpose uses of facilities with high specifications, (iii) adequate seismic standards in construction for business continuity plans, and (iv) inclusion of amenities and good working environments.

Total population in the Greater Tokyo, the Greater Osaka and the Greater Nagoya represent approximately 56.0% of Japan's entire population. The same trend can be seen not only in population, but also in consumption, manufacturing and trade in those regions. The main tenants of modern logistics facilities include logistics companies, e-commerce companies, retailers and wholesale companies. Therefore, these three regions are also important areas for logistics real estate, and they have become concentrations of logistics real estate.

Greater Tokyo

The Greater Tokyo, comprising Tokyo, Chiba, Saitama, Kanagawa, and Ibaraki prefectures, has a population of 39 million people and serves as the economic centre of Japan. It is home to important transportation hubs such as Tokyo Port, the largest container terminal in Japan, and Narita International Airport and Haneda Airport, which are significant airports for domestic and international flights. The road network in the Greater Tokyo is characterised by three circular roads, namely Gaikan Expressway, Route 16, and Ken-O Expressway, as well as six radial roads including Higashi Kanto Expressway, Joban Expressway, Tohoku Expressway, Kanetsu Expressway, Chuo Expressway, and Tomei Expressway.

In the 2010s, before the completion of Gaikan Expressway and Ken-O Expressway, logistics facilities were concentrated in the waterfront areas near central Tokyo, Haneda Airport, Tokyo Port, and Yokohama Port. However, with the significant expansion of Gaikan Expressway and Ken-O Expressway, the convenience of road transportation in inland areas has improved, leading to the development of numerous logistics facilities in these regions. In recent years, the logistics market areas have been expanding throughout the entire Greater Tokyo region, including the northern side of Ken-O Expressway in Ibaraki Prefecture, the area between Chuo Expressway and Kanetsu Expressway, and the southern part of Yokohama Port.

Greater Osaka

The Greater Osaka region, which comprises Osaka, Kyoto, Hyogo, and Shiga prefectures, is the second-largest metropolitan area in Japan with a population of 19 million people. Connectivity through highways and trunk roads within the region and access to eastern and western Japan are highly valued. Access to Kansai International Airport and the container ports in the Kobe and Osaka Bay areas is also crucial.

Logistics facilities have historically been concentrated around Kobe Port and Osaka Port, with the development of large-scale logistics facilities primarily located in the Osaka Bay Area during the 2000s. In the Osaka inland area, the development of logistics facilities began around 2010, driven by improved transportation convenience with the completion of the Daini-Keihan Expressway in 2010 and ongoing development of the Shin-Meishin Expressway. The availability of development sites due to factory closures also contributed to this development. Since 2014, there has been an increasing trend of logistics facility development in the inland area.

Greater Nagoya

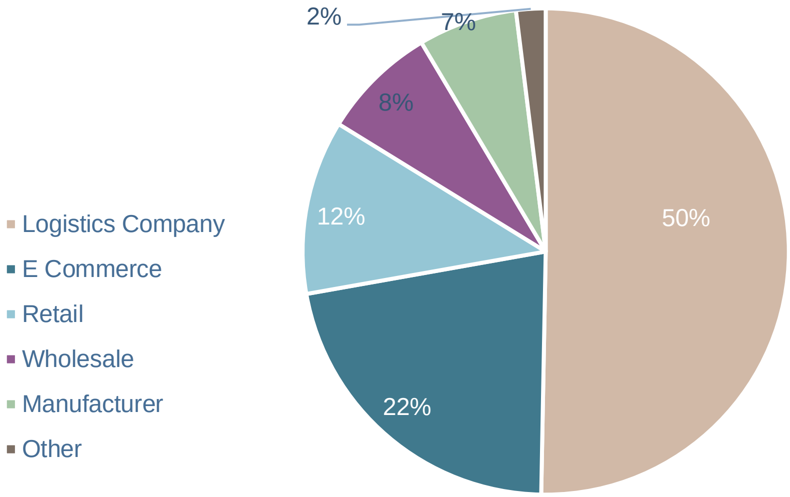
The Greater Nagoya has a population of approximately 11 million people and is located in the central part of Japan. It serves as a key hub for both the movement of people and goods. It is known for its manufacturing industry, particularly the automotive industry centred around Toyota Motor Corporation. It accounts for about 30.0% of the national manufacturing shipment value. The area is home to diverse economic bases, including Nagoya Port, which holds the top position in trade balance for 22 consecutive years. It is the third-largest economic region after the Greater Tokyo and the Greater Osaka regions.

The completion and full opening of the Mei-Nikan Expressway in 2021 has improved access between the central area of Nagoya and Nagoya Port and the Ise Bay Area. The ongoing development of the Tokai-Kanjo Expressway and the full opening of the Tokai-Hokuriku Expressway have also improved access to the Hokuriku region. The development of the Tokai-Kanjo Expressway and the Shin-Meishin Expressway in the Kansai region is expected to further strengthen Nagoya's role as a major logistics hub for long-distance transportation.

Demand drivers for logistics properties

The following charts show the trends of tenant types of modern logistics facilities. The main tenants of modern logistics facilities include logistics companies, e-commerce companies, retailers, and wholesale companies. Therefore, with the expansion of domestic consumption, active international trade, and steady growth of the manufacturing industry, there is an expected continuous increase in demand for modern logistics facilities.

Figure 48: Tenants Type of Modern Logistics Facilities in Japan

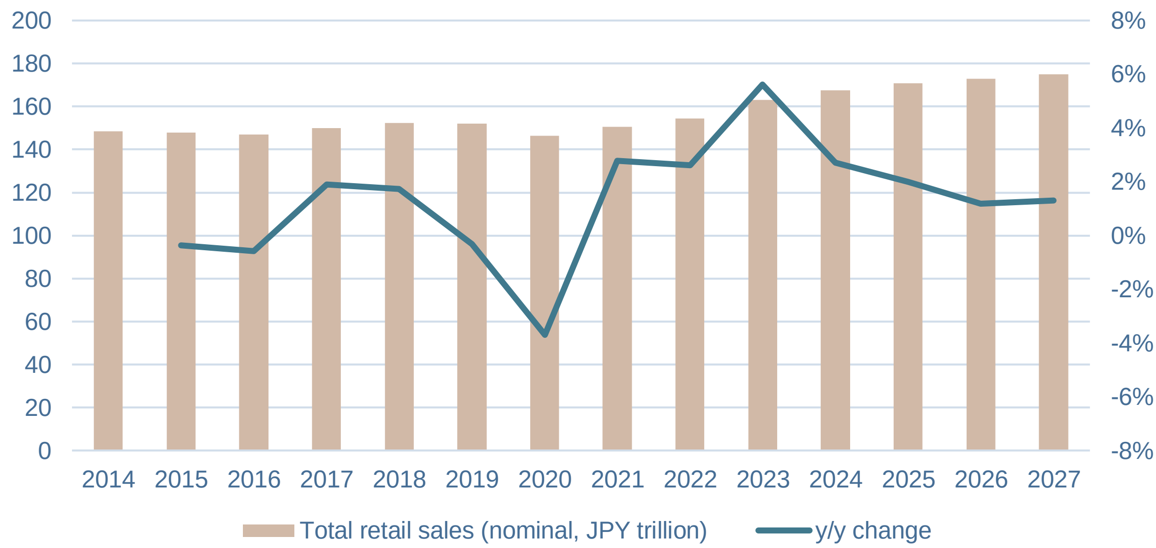


Source: JLL, February 2025

In recent years, changes in consumption trends and corporations' repositioning towards their core businesses have been shifting the dynamics of the logistics industry, leading to its expansion. Many retailers have outsourced their logistics to third parties to focus on their main businesses, thus benefiting 3PL providers. E-commerce retailers, in particular, have been strong contributors to the growth of 3PL providers.

However, as economic activity has gradually recovered, retail sales have been on the rise. The increase in sales of e-commerce and drug stores has been a major demand driver. These businesses, along with convenience stores, heavily rely on various logistics carriers, including in-house operations, 3PL companies, and wholesale companies. Consequently, the growth in these sectors is generating increased demand for modern logistics facilities.

Figure 49: Total retail sales (nominal, JPY trillion)



Source: Oxford Economics, February 2025

E-commerce

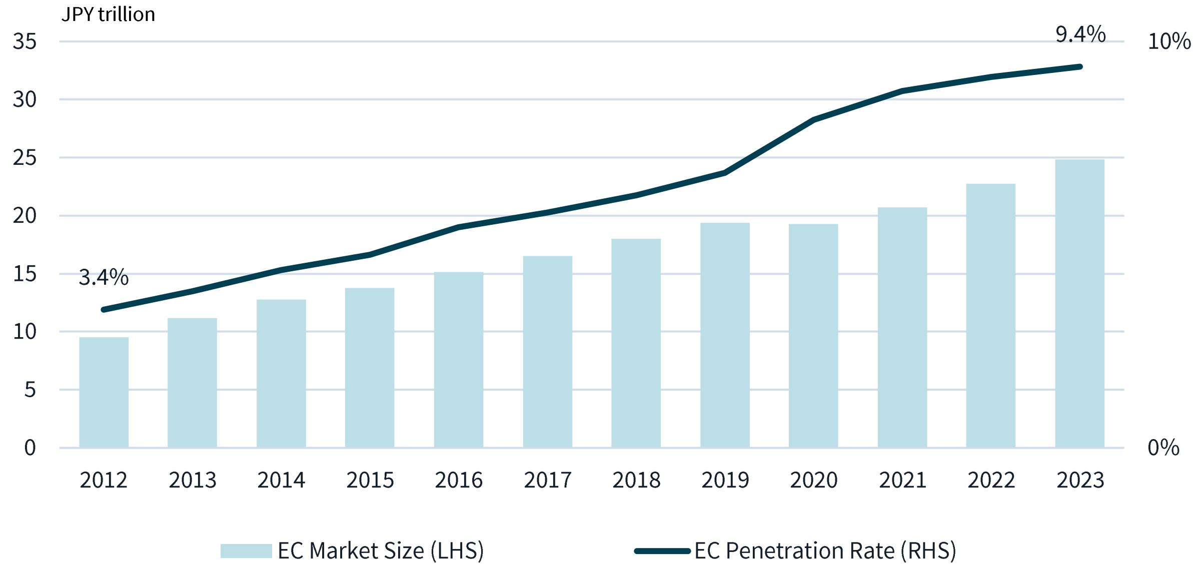
The logistics real estate market has experienced increased demand due to the expansion of e-commerce and this trend is expected to continue. E-commerce sales in Japan was estimated to reach JPY 25 trillion in 2023 and accounted for around 10.0% of total retail sales in 2023. Continuing expansion of the e-commerce market should increase demand for modern logistics facilities going forward[17].

In general, e-commerce firms require large-scale logistics facilities to respond to online orders from across the country. Many developers are now considering e-commerce companies as primary potential tenants in their development projects. To attract these companies, an increasing number of logistics facilities are being equipped with ramps on each floor where trucks can park.

For example, Amazon holds an overwhelming share of e-commerce sales in Japan and rents numerous modern logistics facilities throughout the country. The space they lease continues to expand. Although other e-commerce companies currently rent few locations, demand for logistics real estate from e-commerce companies is increasing.

[17] Japan's Ministry of Economy, Trade and Industry, 2024.

Figure 50: B2C E-Commerce Market



Source: Ministry of Economy, Trade and Industry

Third Party Logistics ("3PL")

As retailers and manufacturing firms are under pressure to reduce costs, the outsourcing of logistical operations to 3PL companies has been growing.

Demand for 3PL services is also due to better quality facilities and adoption of new technologies. 3PL facilities tend to have higher building specification requirements, such as heavier floor loads and taller ceiling heights, which are compatible with various inventory types.

In addition, companies increasingly adopt more efficient operational strategies to address rising labour costs, including the use of automation and labour-saving equipment. Investment in material handling equipment has grown alongside the expansion of e-commerce and 3PL markets. Outdated logistics facilities often face challenges in fully utilising material handling equipment due to limitations such as a shortage of electric power sources, insufficient ceiling height, and floor load capacity. Thus, there is further demand for modern logistics facilities that can accommodate advanced material handling equipment.

Structural trends on logistics & logistics property market

Rising operational costs

Structural changes in the retail industry, driven by convenience stores and drugstores and the expansion of e-commerce, have led to an increase in deliveries and rising labour costs. This is due in part to an aging workforce and more frequent delivery schedules. The boom in e-commerce has increased demand for truck drivers, creating a shortage and rising truck freight rates. Additionally, new labour regulations that began in 2024 also affected the supply of truck transportation by setting a cap on overtime hours and implementing break times.

As driver labour costs are expected to continue rising in the future, logistics companies are reviewing their facility locations and adopting efficient strategies such as consolidating facilities and relocating to accommodate high-frequency deliveries. Companies are investing in technologies such as automation and reservation systems to increase efficiency and improve driver working conditions.

Companies are placing importance on location to attract workers to logistics facilities. Tenant companies prefer logistics facilities with a large surrounding population or close proximity to train stations. Companies are increasingly adopting automated systems, which require logistics facilities with large floor space and sufficient power supply - features that cannot be secured in older centres.

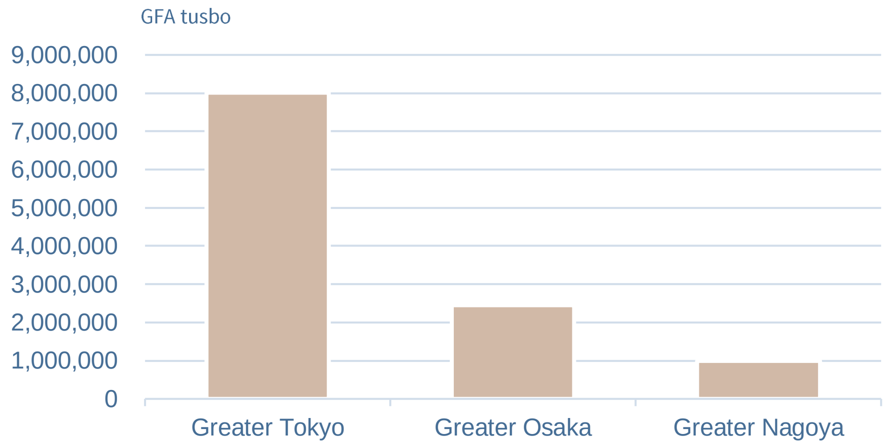
Currently, many manufacturing companies are facing the challenge of dealing with rising logistics costs. It is expected that the future logistics real estate market will be greatly influenced by the review of cost management strategies and logistics strategies of each manufacturing company. While it is unclear whether companies that have relied on 3PLs for logistics operations will be able to make appropriate decisions, as each company considers various options for logistics facilities, it is expected that tenant liquidity will increase.

Logistics property overview for Japan (Grade A only)

Estimated logistics real estate per capita

JLL Definition of Modern Logistics Facilities in Japan	
Floor Area	50,000 sqm or larger (Greater Tokyo and Greater Osaka) 30,000 sqm or larger (Greater Nagoya and others)
Completion	Year 2000 or later
Property Type	Logistics Facilities for lease

Figure 51: 2024 Logistics Real Estate Stock per Capita



	Grade A - Greater Tokyo	Grade A - Greater Osaka	Grade A - Greater Nagoya
Stock per capita	0.20 tsubo	0.13 tsubo	0.09 tsubo
Population(thousand)	39,728	19,371	11,135
Stock (tsubo)	26,473,186	8,108,833	3,263,849

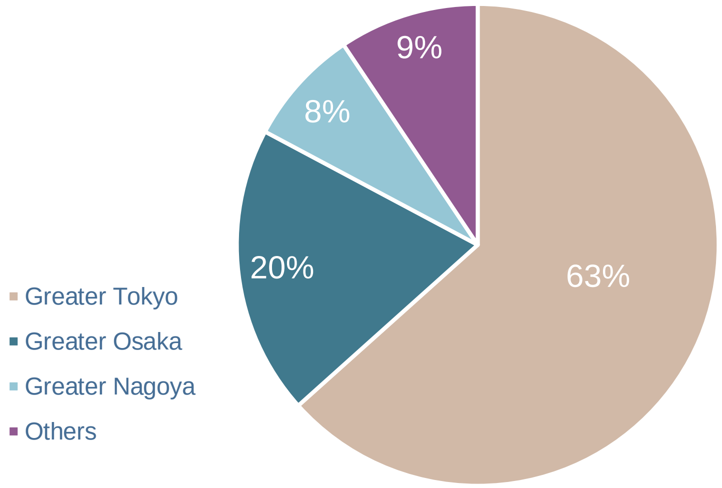
Source: JLL, 4Q24

Market Size

Modern logistics facilities are primarily located in major urban regions, with 63.0% in the Greater Tokyo and 20% in the Greater Osaka.

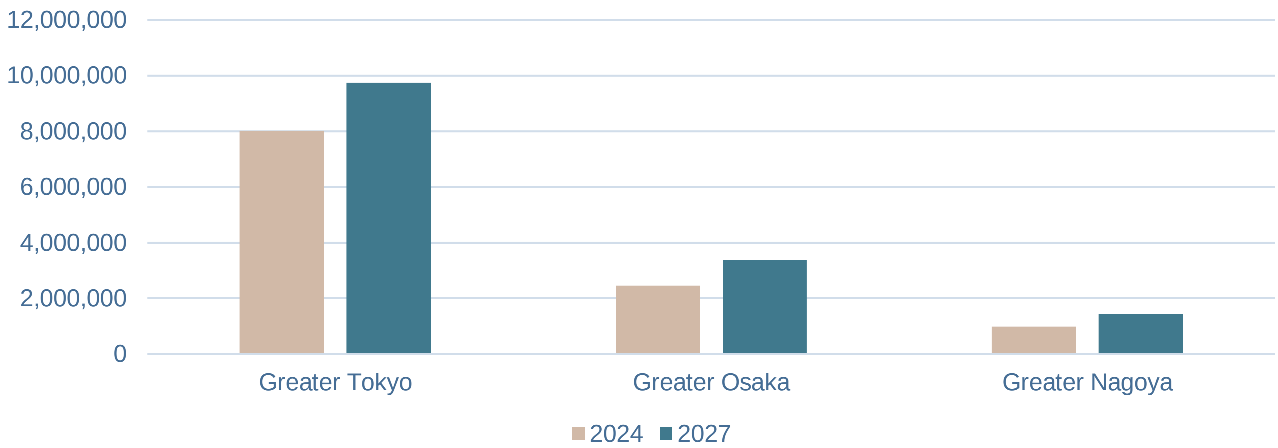
The stock of modern logistics facilities is the highest at 0.2 tsubo per person in the Greater Tokyo. However, it is only 65.0% of that in the Greater Osaka and 45.0% of that in the Greater Nagoya, indicating room for growth.

Figure 52: Share of Modern Logistics Facilities by region in Japan



Source: JLL, February 2025

Figure 53: Japan Modern Logistics Market: Current and Expected (end-2027) Market Size (GFA tsubo)



Source: JLL, February 2025

Greater Osaka and Greater Nagoya are expected to see larger expansion in market size in the future, with Greater Tokyo projected to expand by 22.0% by the end of 2027, Osaka by 37.0%, and Nagoya by 45.0%.

At the start of 2000, most logistics developers were foreign-affiliated. However, more domestic developers are entering the industry to develop modern logistics facilities, along with trading companies and life insurance companies. As a sector where stable profits can be expected in the future, new entrants of domestic and foreign players are continuing, including many developers of logistics facilities.

Supply and characteristics of warehouses

Greater Tokyo

Annual new supply of logistics facilities in Greater Tokyo consistently increased from 2018 to 2023. The COVID-19 pandemic prompted many developers and investors to expand their investments in logistics facilities, thereby increasing new supply. The supply area has also expanded beyond traditional boundaries to encompass the entire Greater Tokyo, with much of the new supply concentrated in inland areas.

However, new supply decreased in 2024 and is expected to remain lower than 2023 levels. This decline can be attributed to a shortage of development land, increasing vacancies, and rising construction costs. In particular, e-commerce companies are selective in leasing logistics facilities, So rising construction costs and other factors have led to more developers to adopt a more cautious approach in their development plans.

Greater Osaka

Until 2017, modern logistics facilities in the Greater Osaka were primarily located in the Bay Area. However, due to the construction of new expressways, improved labour availability, and the development of logistics facilities in inland areas with favourable access to city centre and eastern Japan, the supply area of logistics facilities has expanded significantly. This expansion now encompasses a wide area, including Shiga and Nara Prefectures, mirroring the trend seen in the Tokyo metropolitan area.

A substantial supply of new facilities is expected in the inland areas of Hyogo Prefecture in 2025. Additionally, several development projects are underway in the area south of Kyoto Prefecture, which will benefit from the full opening of the Shin-Meishin Expressway.

Greater Nagoya

The Greater Nagoya area has a relatively small market for advanced logistics facilities and is sensitive to new supply. However, an increase in new supply is expected from 2023 onwards. Since 2000, the opening of the Isewan Expressway and the Shin-Meishin Expressway has significantly improved overall accessibility to central Nagoya. As a result, the development of logistics facilities, which was previously centred on the inland Komaki area, is now expanding to the Ichinomiya area west of Komaki and the bay area.

Requirements and trends (including impact from e-commerce growth)

E-commerce and convenience store logistics require frequent deliveries, necessitating a higher number of truck berths. Consequently, logistics facilities with ramps allowing direct truck access to upper floors are preferred over those using lift access for storing goods on upper floors. E-commerce logistics involves tasks such as picking and packaging within the warehouse, requiring air conditioning, rest areas, and convenience stores for workers. Office spaces within these facilities also need to meet specifications comparable to those in urban areas.

Moreover, logistics facilities with large floor plates are preferred as they allow for the consolidation of multiple bases and ease of operations. Facilities with abundant electrical capacity to support automated equipment are also in high demand.

Performance and outlook

Greater Tokyo

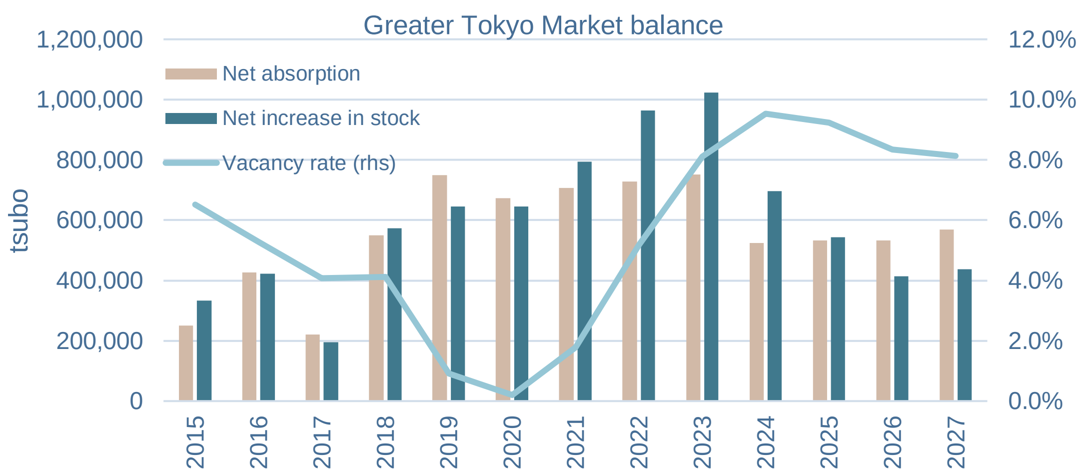
In 2024, the supply of new modern logistics facilities was approximately 0.7 million tsubo, down more than 30% from 2023 but remained slightly above the past 10-year average of 0.6 million tsubo. Among these, the National Route 16 area had the highest supply. Due to longer lease-up periods across the entire

Greater Tokyo area, the vacancy rate reached 9.5%. In 2025, a significant supply increase is expected in the Kanagawa Bay Area, totalling 151,000 tsubo, which is about 3.4 times the past 10-year average for that area. Consequently, the vacancy rate in the Kanagawa Bay Area is expected to rise.

Tenant demand in Greater Tokyo remains strong, particularly from e-commerce and 3PL companies. That said, the impact of continued large supply can be seen in the fringe area such as Ken-O Expressway area. Previously, new properties would be almost fully occupied within a year of completion, but nowadays it can take up to two years for some properties in Ken-O Express way area to reach full occupancy.

From a comprehensive logistics cost perspective, considering factors like transportation efficiency and cost, demand has decreased outside the Ken-O Expressway, with higher demand for properties closer to consumer hubs. The increase in transportation costs is driving higher demand for logistics facilities near the city centre, while logistics facilities located in more peripheral areas, with longer transportation distances, are experiencing extended vacancy periods.

Figure 54: Greater Tokyo Logistics Net Absorption, Net Increase in Stock and Vacancy Rate (GFA tsubo)

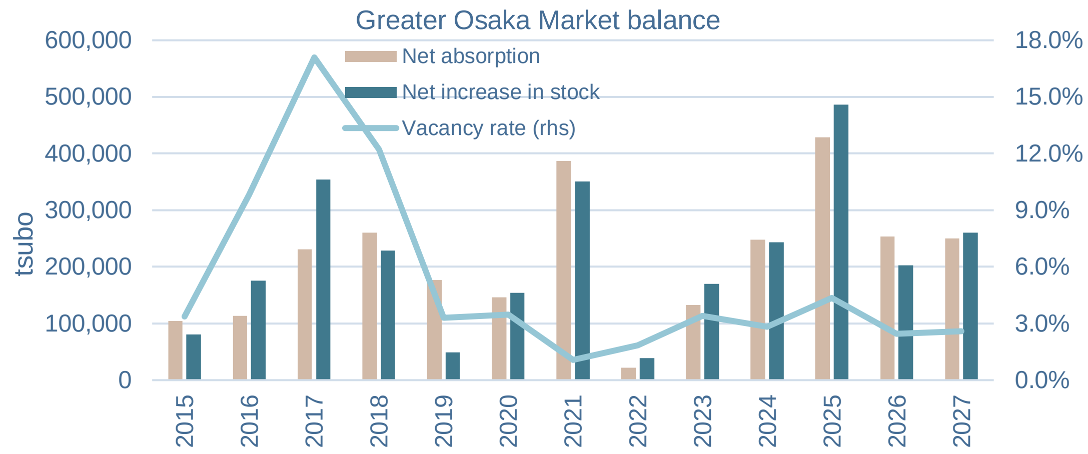


Source: JLL, 4Q24

Greater Osaka

In 2024, the supply of new modern logistics facilities was about 243,000 tsubo, which was more than the past 10 years' average of 184,000 tsubo. In Inland Osaka area, large logistics facilities such as GLP ALFALINK Ibaraki 1 have been supplied, and in the Osaka Bay area, facilities like DPL Osaka Maishima have been supplied. As a result, the overall vacancy rate in Greater Osaka has increased. However, supported by strong demand, the vacancy rate at the end of 2024 stood at 2.8%. Greater Osaka saw demand from e-commerce companies such as Amazon as well as manufacturers and logistics companies. The trend of rising rental levels continues, as high rents for newly constructed properties push up overall rent levels, while rents for existing properties also gradually increase, following the trend of newly constructed properties. Reflecting the increase in rental rates, the price per unit of logistics facilities in Greater Osaka is also on an upward trend. Infrastructure development, such as highways, is progressing in the Osaka area, stimulating demand as large properties with good accessibility are being completed.

Figure 55: Greater Osaka Logistics Net Absorption, Net Increase in Stock and Vacancy Rate (GFA tsubo)

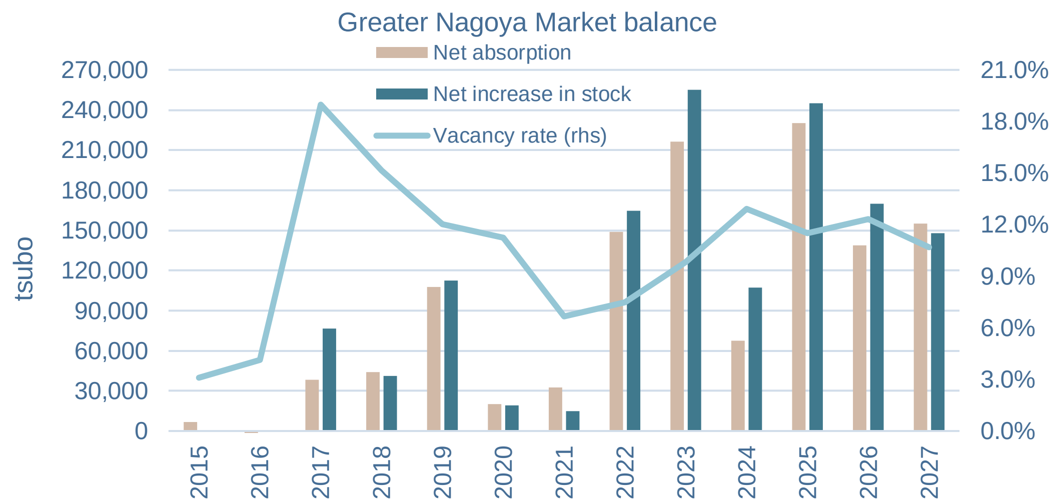


Source: JLL, 4Q24

Greater Nagoya

In 2024, the supply of new modern logistics facilities is set to be 107,000 tsubo, slightly above the past 10 years' average of 79,000 tsubo. This caused the vacancy rate to rise to 12.9% at the end of 2024. In 2025, new supply is projected to be 245,000 tsubo, setting a new record high. Consequently, the vacancy rate is predicted to be 11.5% by end-2025 and is expected to remain above 10.0% thereafter. In Aichi, there is a steady demand related to the automotive industry. While manufacturers mostly rely on their own warehouses, the future of the logistics real estate market is expected to be significantly influenced by the cost management strategies and logistics strategy revisions of manufacturing companies.

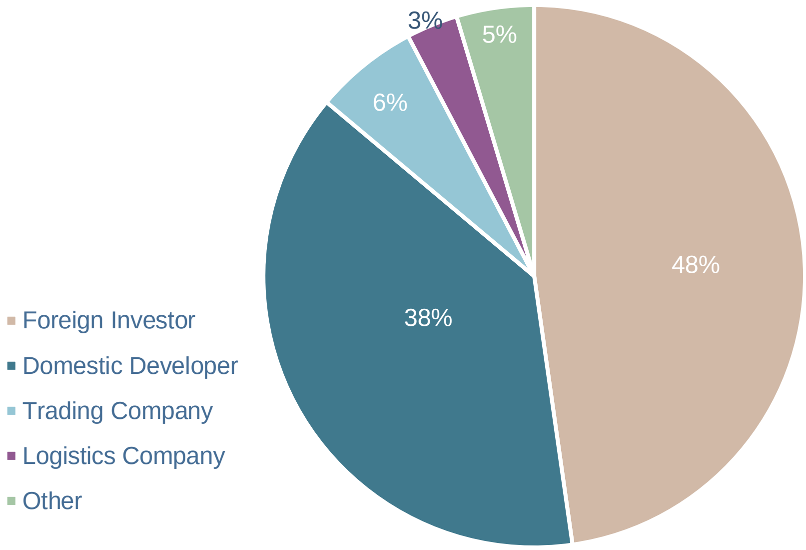
Figure 56: Greater Nagoya Logistics Net Absorption, Net Increase in Stock and Vacancy Rate (GFA tsubo)



Source: JLL, 4Q24

Major logistics facility providers and players

Figure 57: Share of Modern Logistics Developers in Japan by Type



Source: JLL, 4Q24

Due to historical factors, the majority of logistics facility developments in Japan have been led by foreign investors. However, Japanese developers have become increasingly active in recent years. Notably, Daiwa House Industry has emerged as the leading developer of logistics facilities over the past decade. Many players have Japanese REITs ("J-REITs") or private REITs within their groups to own the properties they have developed.

Figure 58: Major Modern Logistics Developers in Japan

Foreign Investor		
Prologis / J-REIT	GLP / J-REIT	LaSalle / J-REIT
Goodman	Mapletree	ESR (Redwood Group)
CBRE IM	Cushman & Wakefield AM	Goldman Sachs

Japanese Developer		
Mitsui Fudosan / J-REIT	Mitsubishi Estate / J-REIT	Nomura RE / J-REIT
Tokyu Land / Private REIT	Tokyo Tatemono	Daiwa House Industry / J-REIT
Nippon Steel Kowa / Private REIT	Chuo-Nittochi	Hulic

Trading Company		
Mitsubishi Corp / J-REIT, Private REIT	Mitsui & Co. / J-REIT, Private REIT	Sumitomo Corp / J-REIT, Private REIT
Itochu Corp / J-REIT	Marubeni / J-REIT	

Logistics Company		
SG Realty / Private REIT	Senko / Private REIT	SBS Holdings

Others
Nippon Life (Insurance Company)
Dai-ichi Life (Insurance Company)
ORIX (Leasing Company) / J-REIT

Daiwa Securities (Securities firm) / Private REIT
CRE (Logistics Real Estate Company) / J-REIT

Investors and investment trends, and major selected transactions, if any

In the logistics investment market, developers have traditionally sold their assets to long-term holding funds such as J-REITs within their groups, resulting in few third-party transactions. Recently, however, third-party transactions have increased due to rising vacancy rates and interest rates, making it challenging for J-REITs to acquire additional properties.

The number of entities investing in logistics facilities has been growing, including life insurance companies, railway company subsidiaries, and electric power company subsidiaries. Life insurance companies are expanding their investments in logistics facilities as part of their strategy to diversify into alternative assets. Concurrently, railway companies and electric power company subsidiaries are increasing their real estate investments, including logistics facilities, in response to challenges in their core businesses due to population decline.

Foreign investors are also becoming more prominent in this sector. Notable players such as GIC, Hines, PAG, and Morgan Stanley Capital are expanding their investments in logistics facilities.

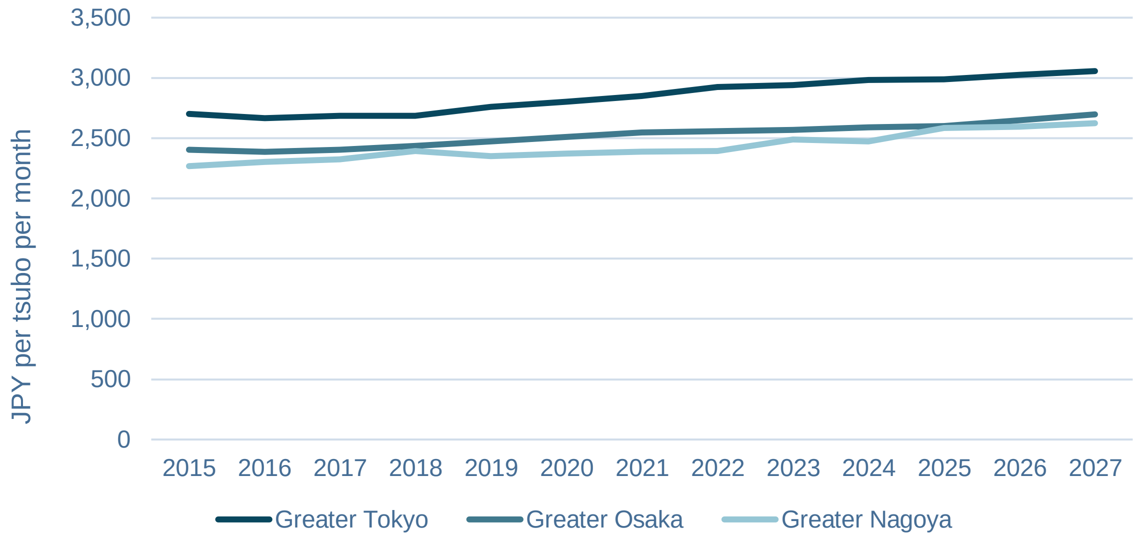
Figure 59: Major Logistics Facilities Transactions in Japan

Property/Portfolio Name	Location	Vendor	Buyer	Closing Date	Price (including estimate price) (JPY million)
DPL Soka	Saitama	Goldman Sachs	Nippon Life Insurance	Mar-2024	24,000
Mino Logistics Center	Osaka	Orix	Hines	Mar-2024	18,000
MJ Logipark Sendai	Miyagi	Mitsubishi Estate Logistics REIT	Morgan Stanley Capital	Mar-2024	10,000
Ogori Logistics Center	Fukuoka	Domestic Developer	Japan Post Insurance	May-2024	5,000
GLP J-REIT 3 Properties Portfolio	Aichi, Chiba, Fukushima	GLP J-REIT	Fortress Investment	Aug-2024	11,000
DPL Yokohama Totsuka	Kanagawa	Daiwa House Industry	GIC	Aug-2024	56,000
Landcube Sayama Hidaka	Saitama	Morgan Stanley Capital	Japan Post Insurance	Sep-2024	8,650
GLP 3 Properties Portfolio	Saitama, Osaka, Osaka	GLP	Nippon Life Insurance	Oct-2024	50,000

Source: JLL, February 2025

Historical and forecast data for key logistics market indicators

Figure 60: Japan Logistics Facilities Net Effective Rent (by GFA)



Source: JLL, 4Q24

In Greater Tokyo, a gradual increase in rental rates is expected because of continued robust demand growth and rising construction costs. However, there is a possibility of rental declines in some inland areas along the Ken-O Expressway due to persistently high vacancy rates.

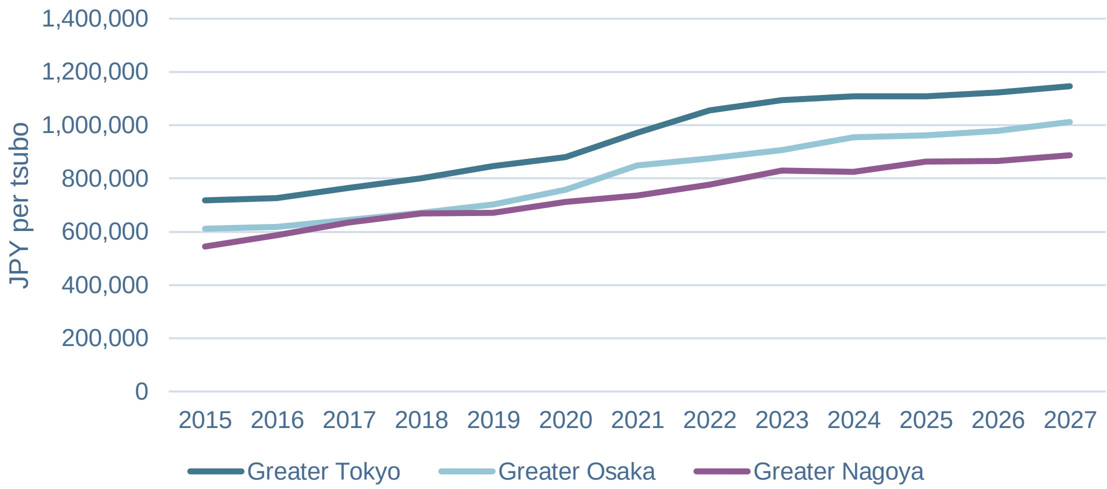
Similarly, it is expected that the rising construction costs will lead to continued rental increases for new logistics facilities in Greater Osaka, and rents for existing properties are anticipated to rise as well, driven by the new constructions. In Greater Nagoya rental levels for new properties are higher than existing properties due to increasing land prices and construction costs, contributing to an overall increase in rents.

Capital Value/Market Yield

The logistics sector is attracting increased attention from both domestic and foreign investors. As such, yields for logistics facilities across Japan are showing a downward trend. Yields for logistics facilities in Tokyo and Osaka areas have compressed to the low 3.0% range. The trend will likely continue despite rising interest rates.

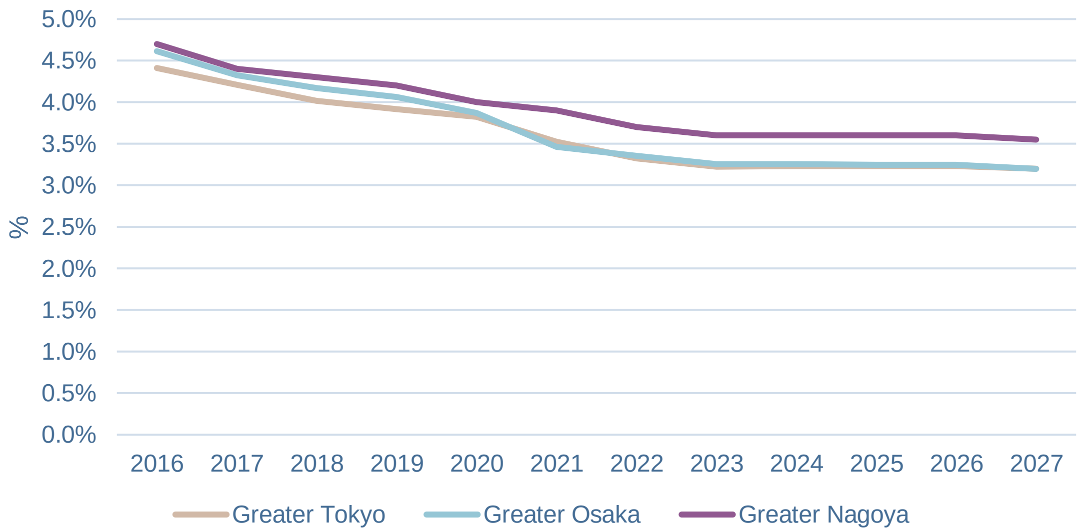
Investors are particularly focused on opportunities in the Tokyo metropolitan area. However, due to limited investment opportunities in this region, investor interest has spread to the Osaka and Nagoya areas. This strong investor demand is driving the compression of yields for logistics facilities in all regions. Reflecting these yield trends and rental trends, capital values should continue to rise.

Figure 61: Capital Value for Logistics Facilities in Japan (GFA)



Source: JLL, 4Q24

Figure 62: Market Yields for Logistics Facilities in Japan (GFA)



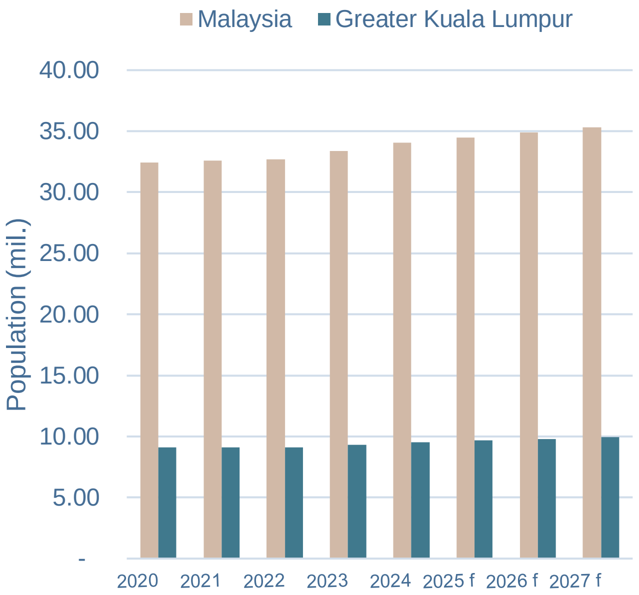
Source: JLL, 4Q24

6. Overview of Malaysia Logistics Market

Macroeconomic overview

Country overview

Figure 63: Key Demographic Indicators



Population Estimates (2024p)	Malaysia	Greater Kuala Lumpur
Total Population Estimates (mil.)	34.1	9.6
Changes (y-o-y)	*2.0%*	*2.3%*
Median Age	30.9	30.4
Population by Age Group		
0 – 14 years old	22.0%	20.0%
15 – 24 years old	17.0%	15.0%
25 – 44 years old	34.0%	37.0%
45 – 64 years old	19.0%	20.0%
> 64 years old	8.0%	8.0%
Labour Force (3Q2024)		
Labour workforce (mil.)	17.3	5.0
Changes (y-o-y)	*2.6%*	*3.0%*
Unemployment rate	3.2%	2.1%
Changes in percentage point	*-0.2%*	*-0.4%*

Source: JLL, Department of Statistics Malaysia, 2024

Malaysia's total population in 2024 was estimated at 34.1 million and is expected to rise to about 35.3 million in 2027. As the capital of Malaysia, Greater Kuala Lumpur recorded a higher population growth compared to the country average and its population is forecasted to reach about 9.9 million by 2027.

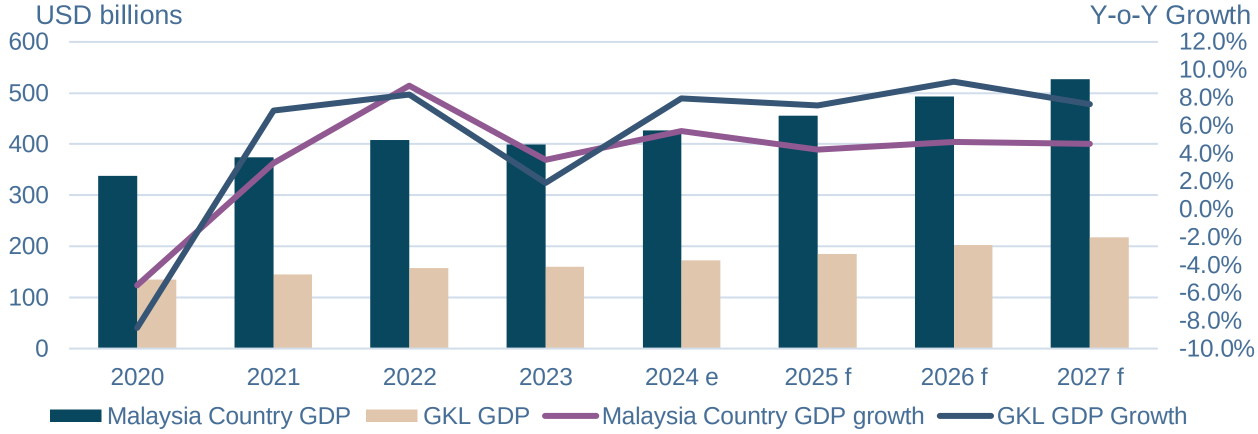
The median age is 30.9 years with a large cohort of youths and working-age adults (15 – 64 years old comprise about 70.0% of total population). In 2024, the labour workforce totalled 17.3 million with a low unemployment rate of 3.2%. The unemployment rate in Greater Kuala Lumpur was lower at 2.1% in 2024, indicating more employment opportunities than the national average.

The number of middle-class households in Malaysia increased 37.0% in the past decade, rising from 6.2 million in 2014 to 8.5 million in 2024, and it is projected to rise further[18]. Going forward, substantial middle-class population coupled with rising income levels are expected to support rising consumption levels.

[18] Middle-class households are defined by JLL as those households with an annual income of USD 20,000 or above in 2015 PPP terms. This definition is broadly in line with the Brookings Institution (The Unprecedented Expansion of the Global Middle Class, An Update, 2017).

Economic overview

Figure 64: Malaysia Real GDP Growth



Abbreviation: GKL – Greater Kuala Lumpur, GDP - Gross Domestics Product

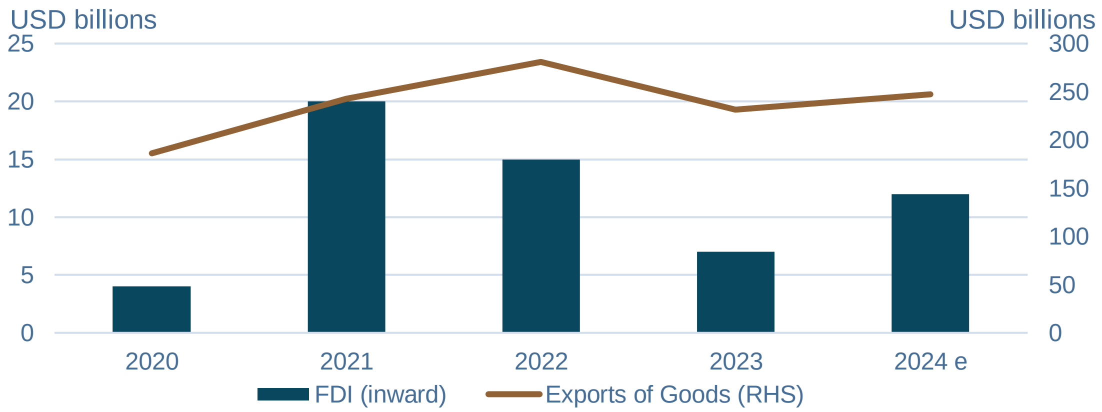
Source: Central Bank of Malaysia (BNM), Oxford Economics, 2024

Malaysia's economy expanded by 5.1% in 2024, driven by sustained growth in domestic demand and recovering external demand. The manufacturing sector is the second-largest contributor to GDP. Steady GDP growth of between 4.0% and 5.0% is projected for 2025, mainly driven by the growth in export-oriented industries.

The country's export was up 7.0% y-o-y in 2024, driven by electronic products, petroleum and chemicals. Since 2020, Malaysia has attracted significant foreign direct investments focusing on production of semiconductor, light-emitting diodes ("LEDs") and ceramic tiles, which have helped propel the country's goods exports.

CPI inflation rate in 2024 was low at 1.8% despite the Sales and Services Tax ("SST") hike from 6.0% to 8.0% from 1 March 2024. However, inflation rate in 2025 is expected to trend higher to between 2.0% and 3.5%, with the upcoming policy changes on fuel subsidy and a revision of electricity tariffs. As such, Malaysia's central bank's policy rate is expected to stay at 3.0% amid uncertain global economic conditions.

Figure 65: Malaysia Foreign Direct Investment



Abbreviation: GKL – Greater Kuala Lumpur, GDP - Gross Domestics Product

Source: Central Bank of Malaysia ("BNM"), Oxford Economics, 2024

Note: RHS stands for right hand side

Government planning and policies/structural changes to industrial market

Several policies are introduced to enhance industrial developments while allowing transformation to ESG initiatives and proper park management. These changes are expected to generate a positive and comprehensive impact on the industrial sector particularly the logistics market.

- The New Industrial Master Plan ("NIMP") 2030 and Industry 4WRD ("Industry 4.0") collectively establish the strategic framework for industrial growth in the country. NIMP aims to shape the manufacturing sectors driving the high-impact sectors while Industry 4.0 focuses on transforming the manufacturing services sector through technologies adoption.
- Several tax incentives such as Global Trading Centre (GTC) and Integrated Logistics Services (ILS) tax incentive and International Integrated Logistics Status (IILS) are available for international trading companies and companies undertaking logistics service activities in the country. Budget 2025 introduced a 60.0% investment tax allowance over a 5-year period to logistics companies that engage in smart logistics complex activity.
- The launch of National Energy Transition Roadmap (NETR) aims to achieve net zero carbon emissions by 2050. The new endorsement of green certification, i.e. GreenRE aims to drive green building developments and introduction of green industrial parks such as GRIP @ Kota Puteri, Compass @ Kota Seri Langat and Selangor Aerospace Park (SAP). The Net Energy Metering 3.0 encourages solar photovoltaic (PV) system installation and allows the consumer (particularly industrial users) to offset their electricity bills by selling the excess solar energy back to Malaysian utilities company (Tenaga Nasional Berhad) at market rate or at System Marginal Price (SMP).

Infrastructure developments

Figure 66: Infrastructure networks

Greater Kuala Lumpur	
Major Highways	Federal Highway New Klang Valley Expressway (NKVE) Shah Alam Expressway (SAE) North–South Expressway (ELITE) North–South Expressway (PLUS) Duta-Ulu Klang Expressway (DUKE) Kuala Lumpur–Karak Expressway West Coast Expressway (WCE)
Public transit	Komuter (KTM) Light Rail Transit (LRT) and monorail Mass Rapid Transit (MRT) East Coast Rail Line (ECRL)
Ports	West Port, Northport and South Port are collectively known as Port Klang Kuala Lumpur International Airport (KLIA) and KLIA 2 Sultan Abdul Aziz Shah Airport (SAAS) or Subang Airport

Source: JLL, Ministry of Transport Malaysia, 2024

Major Malaysian cities have well-developed transportation infrastructures. There are few ongoing infrastructure projects, focused in enhancing the interstate road networks and rail connectivity.

- East Coast Rail Line (ECRL) has reached 78.5% as of Jan 2025. Phase One (Kota Bahru – Gombak Integrated Terminal) is scheduled for operation by 2027 while Phase Two (Gombak – Port Klang) is expected to begin operation by 2028.
- West Coast Expressway (WCE) – Connecting Banting, Selangor and Taiping, Perak, the overall expressway is scheduled for completion by 2026, with seven out of 11 sections open to traffic to date. The Section 2 (7.2km covering SKVE and SAE/KESAS) was recently completed and provides quicker access to Port Klang, the largest port in Malaysia.
- Gemas-Johor Bahru Electrified Double-Track Rail Project (Gemas-JB EDTP) is on track for completion by 3Q 2025. It is a 192km electric train service project covering four major districts in Johor (Segamat, Kluang, Kulai and Johor Bahru).
- Interstate rail networks
    - Johor Bahru-Singapore Rapid Transit System (RTS) is currently undergoing construction, with 95.0% of infrastructure works completed as of November 2024. With two terminus stations, i.e. Malaysia Bukit Chagar station and the Singapore Woodlands North station, it is scheduled for operation by 2026.
    - Penang Light Rail Transit (LRT) Mutiara Line features 21 stations over 29.5km. The first package was awarded in January 2025 and is planned for construction within the next 6 years, while the remaining two packages are undergoing tender process.

Malaysia's port cargo has increased steadily, with Port Klang handling over 40.0% of the country's trade. Similarly, Malaysia's airports recorded a consistent uptrend growth in cargo and handled close to 0.7 million metric tonnes in the first nine months of 2024. Being the key airport in Malaysia, Kuala Lumpur International Airport (KLIA) handles approximately 78.0% of the country's total cargo throughput.

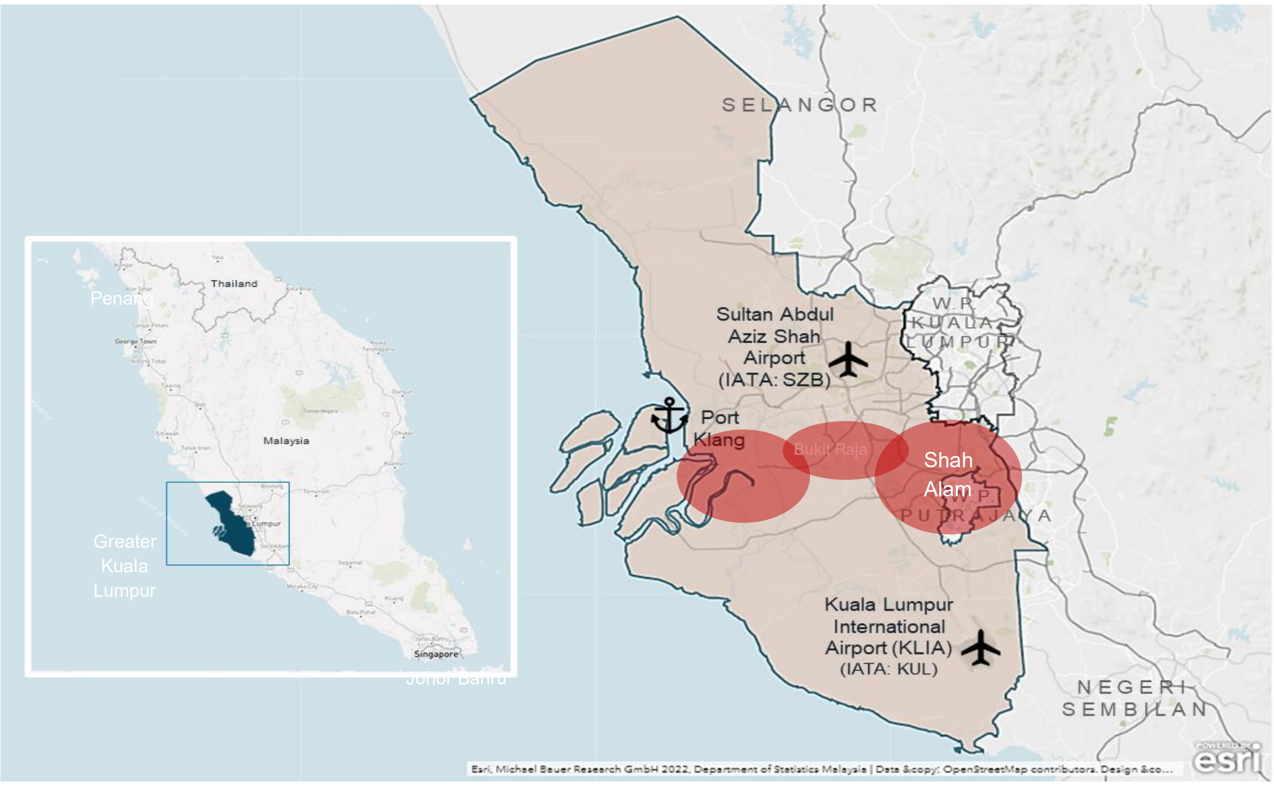
Logistics market overview (Grade A only)

Key logistics hubs

Well facilitated by key seaports and extensive road networks, Greater Kuala Lumpur is Malaysia's key logistics hub. The key logistics hubs in Greater Kuala Lumpur, namely Shah Alam, Bukit Raja and Klang are primarily located in between ports/airports and easily accessible to high-density population areas and trade centres.

- Shah Alam: Established industrial area with good accessibility to ports and major towns made it a preferred location for all industry players involved in light to medium manufacturing and warehousing.
- Bukit Raja: Located north of Klang and emerged as a new logistics hub for warehousing for 3PL players
- Klang: Given its close proximity to Port Klang, Klang is a matured industrial area surrounded by heavy industries with conventional industrial storage for manufacturing export, local logistics companies handing loose cargo and regional distribution centres.

Figure 67: Malaysia Key Logistics Markets



Source: JLL, MapIT, 2024

Logistics real estate market landscape

Greater Kuala Lumpur has been the country's manufacturing centre. Since 2010s, shifts in global supply chains and growing demand for logistics space have led to the introduction of modern prime logistics premises. Its prominence stems from its good infrastructure and multi-modal connectivity.

Within the Greater Kuala Lumpur area, Shah Alam, Bukit Raja, and Port Klang have emerged as the most strategic hotspots for logistics operations. From a logistics perspective, these locations offer optimal costs for goods handling and efficient supply chain operations, making them particularly attractive for prime logistics assets.

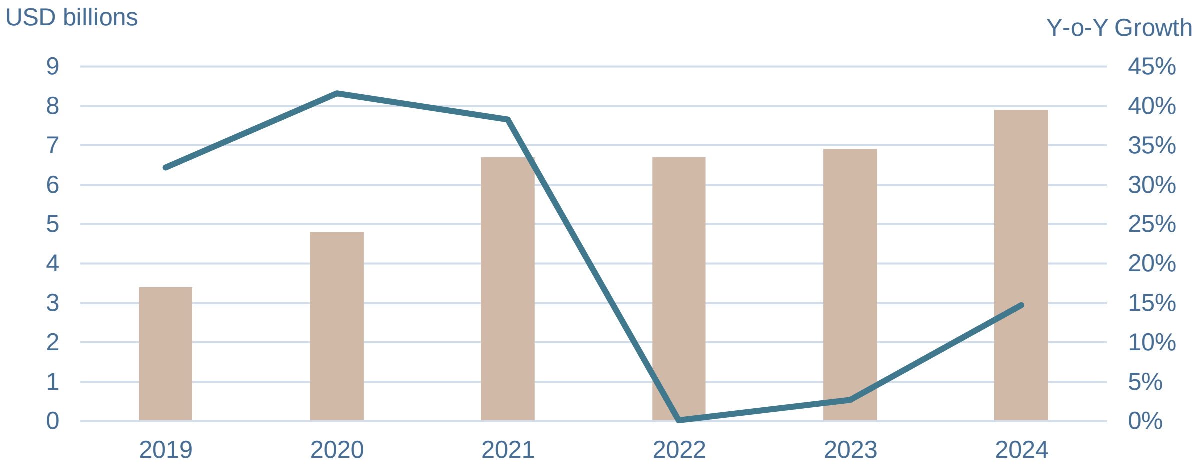
Demand drivers for logistics properties

The main demand drivers for logistics activities are growing international trade activities, the emergence of e-commerce and increasing requirements for modern facilities.

- The ongoing "China Plus One" strategy encourages the companies to diversify their manufacturing and supply chain operations to emerging SEA, fostering more trade activities in locations such as Malaysia.
- Given the consistent growth in e-commerce revenue (CAGR: 15.0% in 2019-2023) and sustained online shopping trend, e-commerce players are expanding their warehouse capacities for operational consolidations.
- Sustained growth in retail sales led to growing demand for warehouses. The retail consumption grew 6.2% y-o-y as of October 2024, while the retail sale is anticipated to grow at 4.0% y-o-y in 2025. Retail companies are increasingly outsourcing logistics services to 3PL operators, which seek spaces with higher specifications to enable more efficient and faster goods handling. This trend drives demand for prime logistics assets which can accommodate the advanced operational requirements.

Growth of e-commerce and 3PLs/express growth

Figure 68: Malaysia E-Commerce Income



Source: JLL, Statista, 2024

As of 2024, the e-commerce revenue is estimated to be USD 7.9 billion, marking 15.0% y-o-y growth from 2023. The rise in e-commerce revenue is attributed to a surge in utilization of IT gadgets and electrical appliances for various online shopping platforms. Top items purchased online in 2024 are fashion, groceries, accessories, beauty/cosmetic and home care.

E-commerce players are expanding their presence in Greater Kuala Lumpur's logistics market, and their share of warehouse space rose from 6.2% of total stock in 2022 to 17.2% in 2024. Notable e-commerce players are expanding their footprint to a new location in Bukit Raja, i.e. SPX Express committed a long lease in Axis Bukit Raja Distribution Centre 2 while 3PLs such as PosLaju Logistics in Bukit Raja International Industrial Complex (BRIIC) and J&T Express as a tenant to-be in Metrohub 2 @E-MetroPark.

Structural trends on logistics & logistics property market

Structural shift on the occupiers' requirements and supply chain in the Greater Kuala Lumpur logistics sector.

(a) Growth in prime warehouse and integration of automated systems

With more occupiers seeking quality logistics properties, landlords are responding to occupiers' demand by upgrading the building specifications and investing in prime grade warehouse. Some warehouses also implement automated system (Automated Storage and Retrieval System) to enhance operational efficiency. This includes the newly completed OMEGA 1 Bukit Raja by ALP and upcoming Storio @ Elmina Shah Alam.

(b) Growing demand from diverse sectors and supply-chain diversification

3PLs and e-commerce growth will drive new warehouse leases. 3PLs and e-commerce players such as PosLaju, SPX Express and J&T Express are increasingly inclined to consolidate their operations while maintaining their footprints in prime logistics areas. The presence of Cainiao Aeropolis eWTP Hub, ALP Bukit Raja Omega and expansions by Mapletree Logistics Trust (MLT) (Mapletree Logistics Hub in Shah Alam and Subang) indicate the entry of international players into the Malaysian market, reflecting broader chain diversification strategies.

Additionally, new demand is anticipated to come from Cold Storage and FMCG retailers. The market sees a notable new supply from Gold Cold Integrated Logistics, IGLO and Daiwa House, supporting growing demand for frozen food, Food & Beverage ("F&B") and fast-food chain expansion. JLL expects the market to remain in short supply of leasable cold warehouse capacity as most refrigerated logistics are owner-occupied.

(c) REIT players lean to higher Inventory holdings

Private developers are actively involved in the joint venture for logistics park and prime grade warehouses, such as IJM, YTL, Sime Darby and Aspen Vision. A few overseas players such as Taiwan's Ally Logistic Property (ALP) and Japan's Daiwa House are investing into automated warehouses and ambience warehouse/cold storage.

In 2024, REIT players continue to dominate the land/warehouse acquisitions in Greater Kuala Lumpur, while 3PL players are committed to long-term leases. This trend indicates a positive outlook among both REITs and 3PL providers.

(d) Setting up of Regional Distribution Centre

Malaysia offers tax incentives (5.0% to 10.0% tax exemption until 2027), which has led to more companies setting up regional distribution centre (RDC) in Greater Kuala Lumpur, including Daiso RDC, Nestle RDC in Port Klang and IKEA Distribution Centre in Pulau Indah. Other international key players such as Decathlon and BMW Group Regional Parts Distribution Centre have established their presence in Johor Bahru.

(e) Sustainability requirements

Environmental, Social and Governance (ESG) initiatives are applicable to logistics real estate with the introduction of managed industrial park and green park policy by the planning authority. Three Axis REIT warehouses showcase their commitment to green certified buildings, i.e. GreenRE Gold certified Axis Bukit Raja Distribution Centre 2 and Axis Mega Distribution Centre (Phase 2), followed by GreenRE Silver certified Axis Mega Distribution Centre (Phase 1). The incorporation of ESG and green building initiatives are expected to foster a sustainable growth in logistics services and industrial development.

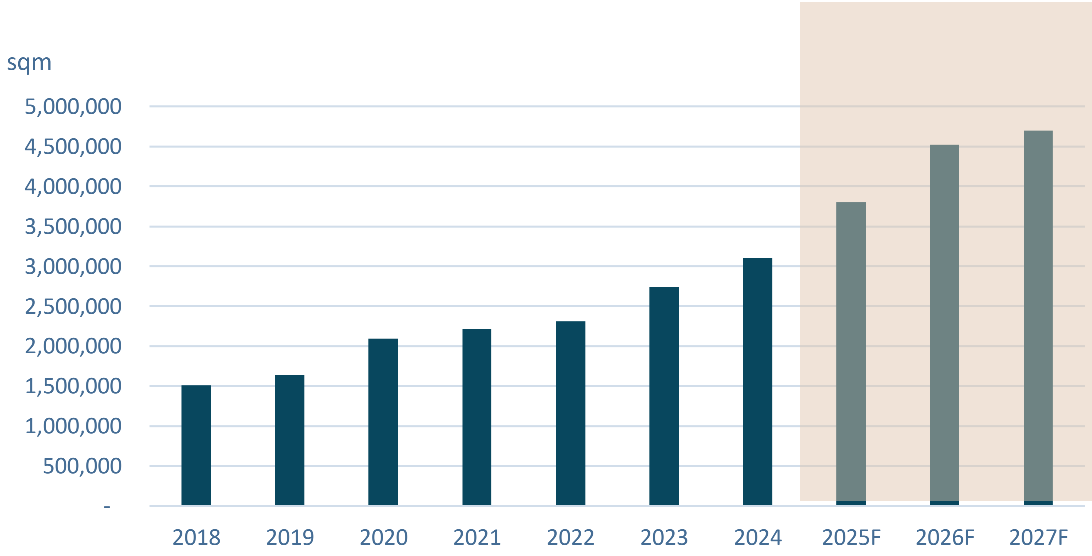
Logistics property overview (Grade A only)

Estimated logistics real estate per capita

With the warehouse stock of 3.1 million sqm in Greater Kuala Lumpur, average logistics space per capita is estimated at 0.3 sqm. This presents headroom for quality grade logistics development as more prime warehouses will be needed to meet expectations of modern logistics operators and retailers.

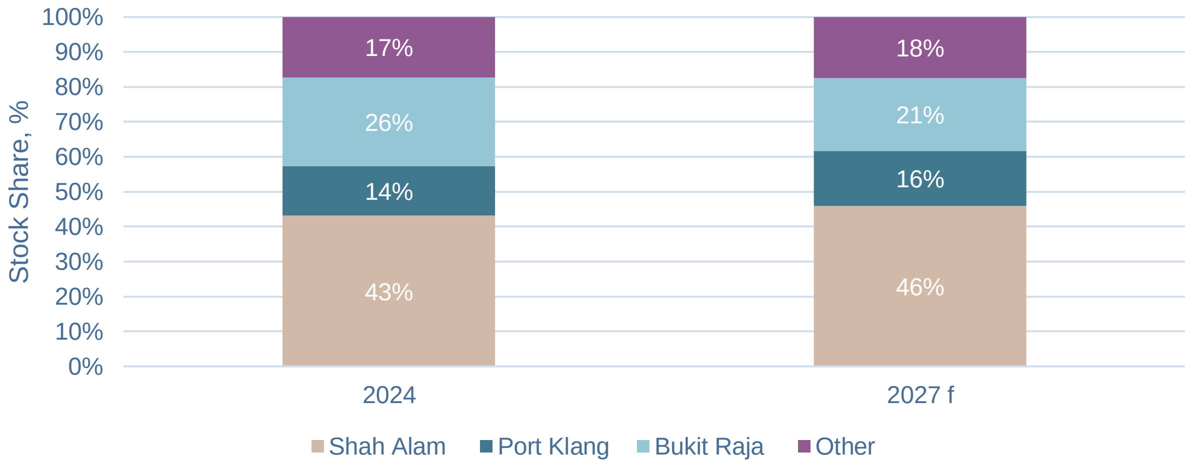
Market Size

Figure 69: Greater Kuala Lumpur, Malaysia's Logistics Market: Current and Expected (2018-2027) Market Size



Source: JLL, 2024

Figure 70: Greater Kuala Lumpur Logistics by Key Markets



Notes: Other includes Sepang, Kapar, Kota Elmina, Puchong, Puncak Alam, Subang Jaya and Telok Panglima Garang

Source: JLL, 2024

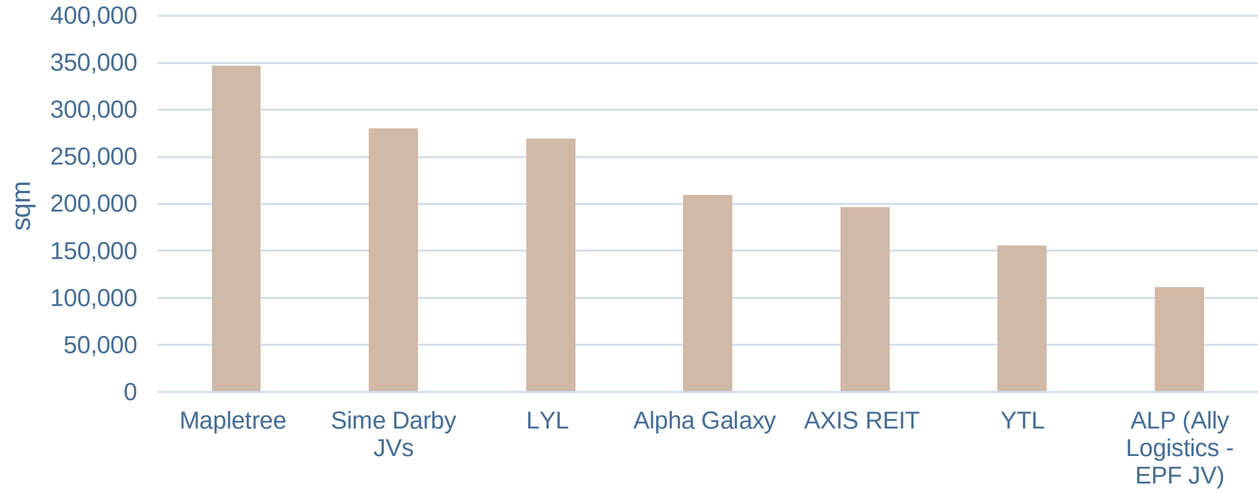
Supply and characteristics of warehouses

Greater Kuala Lumpur recorded new supply of 373,000 sqm in 2024. A total of five warehouses were completed in 2024, including E-Metro Logistics Metrohub 1 and ALP Bukit Raja Omega. Bukit Raja locality saw three new warehouses, whilst two other warehouses located in Telok Panglima Garang and Shah Alam respectively. It is noteworthy that the new completions have been well-occupied with both 3PLs (i.e. DHL) and other retailers, in a good trade mix of fashion, sports and convenience store chain.

Looking ahead to the end of 2025, five warehouses with approximately 658,500 sqm is scheduled for completion, with PHB-Maersk, Daiwa House (Phase 3), Shah Alam International logistics Hub and PTT Logistics Hub 1 contributing to the bulk of supply. New supply in 2026-2027 will continue to concentrate in Bukit Raja, Shah Alam and Port Klang.

Vacancy rate is expected to rise in view of significant completions in 2025. That said, quality graded warehouses located in prime locations should see sustained demand growth and investor interest.

Figure 71: Greater Kuala Lumpur Logistics by Key Players



Note: Key players refer to developers and owners.

Source: JLL, 2024

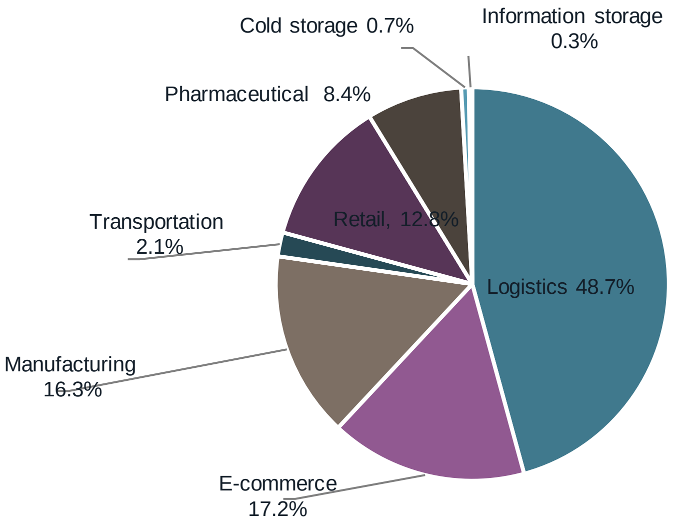
The supply landscape has evolved significantly, transitioning from REITs dominance to the current prevalence of private developers. MLT is the main contributor to date, with inventories of 347,000 sqm, followed by local REITs (AXIS REIT, Atrium REIT) and other private developers venturing into warehousing (Sime Darby Joint Ventures, LYL Group, YTL, Alpha Galaxy and ALP).

Requirements and trends (including impact from e-commerce growth)

3PLs and e-commerce companies are the primary demand drivers. Additional warehouse requirements are coming from retail businesses, particularly for regional distribution centres and wholesale storage facilities. Beyond the thriving Electrical and Electronics (E&E sector), there is a surging demand for storage facilities from automotive, pharmaceutical and electrical appliances distributors.

There is a noticeable shift in occupiers' preference to graded warehouse, with old warehouses in declining appeal due to outdated specifications and less efficient layouts. Tenants are showing positive interest to secure high-capacity, prime warehouses, especially within coveted locations. The landlords and developers are increasingly opting to develop graded warehouses, equipped with heavy floor loads, early suppression fast response ("ESFR") sprinklers and high clear ceiling heights (from 10 meters), tailored to meet the growing demands for high-specification warehouses.

Figure 72: Greater Kuala Lumpur Prime Ready-built Warehouse (RBW) Occupier Profile

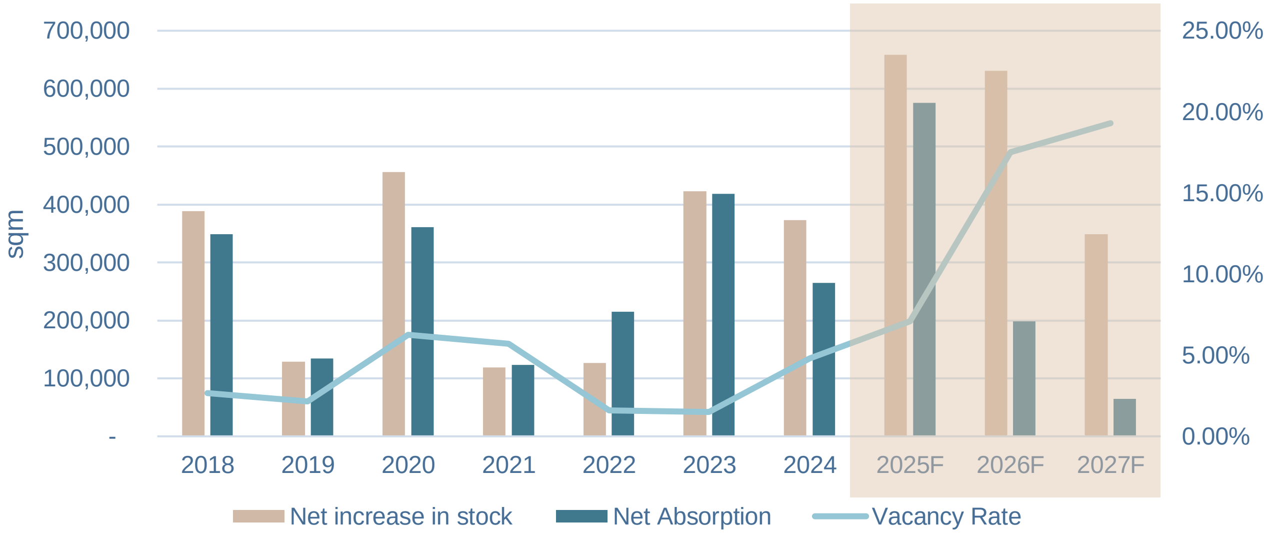


Source: JLL, 2024

Performance and outlook

Demand vs Supply

Figure 73: Greater Kuala Lumpur Distribution Warehouse/Logistics Total Completions, Net Absorption and Vacancy Rate (NLA)



Source: JLL, 2024

New completion in the Greater Kuala Lumpur totalled 422,000 sqm in 2023 and 373,000 sqm in 2024. With a significant addition of new warehouse space in 2024, the vacancy rate increased to 4.8% in 2024, up 3.3 percentage points from 2023, indicating a temporary increase in space availability.

Annual absorption averaged 342,000 sqm per year in 2023 and 2024. JLL anticipates sustained demand for prime warehouses between 2025 and 2027, supported by pre-committed rate of approximately 40.0% in the supply pipeline. That said, average vacancy rate is anticipated to rise with significant supply coming on stream between 2025 and 2027.

Looking ahead, the Greater Kuala Lumpur logistics market is evolving with new hotspots such as Bukit Raja and Elmina, while established areas such as Shah Alam and Klang remained primary focuses for developers/occupiers. Notably, the potential privatization of KLIA airport coupled with prominent developers exploring logistics and industrial developments within KLIA Aeropolis Masterplan could reshape and create new opportunities in southern Kuala Lumpur.

Major logistics facility providers and players

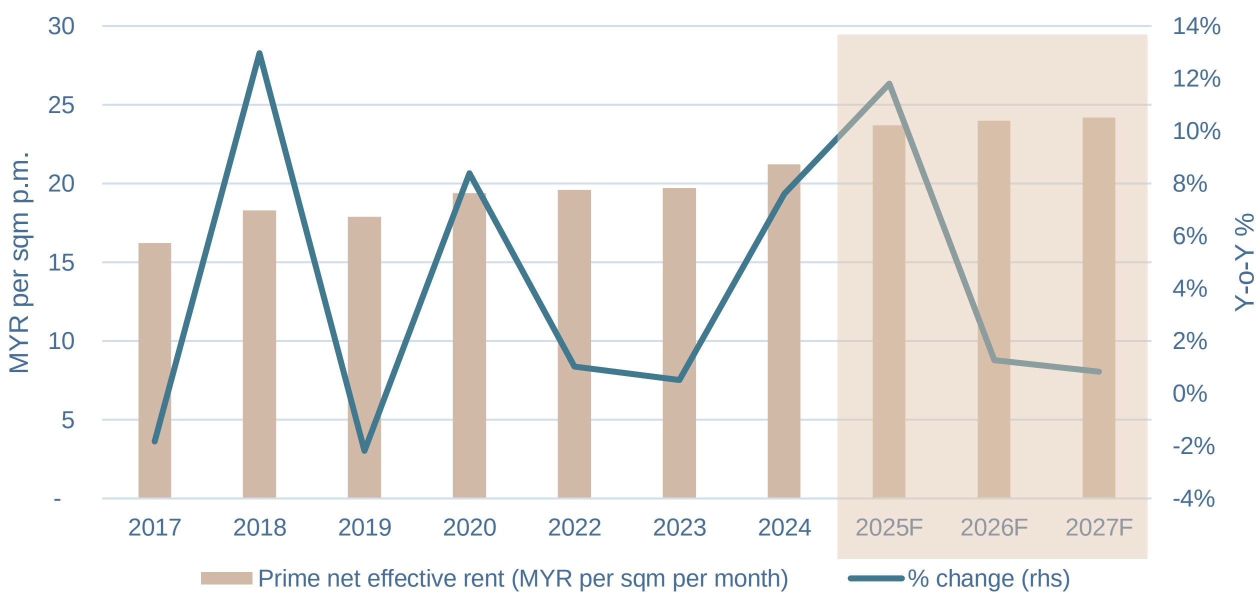
REITs continue to dominate the real estate investor profile, in which MLT is expanding its future warehouse portfolios while AXIS REIT/ATRIUM REIT is active in industrial land/buildings acquisition for future development. Prominent developers and AXIS REIT are increasingly engaging Built-to-Suit warehouses and/or establishing joint ventures, backed by logistics partners and investor funding such as ALP Omega, Alpha Galaxy Logistics Hub, YTL-BRIIC (Phase 2), AXIS Mega Distribution Centre, AXIS Bukit Raja Distribution Centre and Storio Logistics Hub @ Elmina East. Other township developers are developing mega logistics hubs such as E-Metro Logistics (Metrohub 1 & 2) and Shah Alam International Logistics Hub (SAILH) Phase 1.

Apart from 3PL players and e-commerce, new warehouse demand is observed from logistics players (cold-chain logistics, automated warehouse operator), retailers (FMCG, convenience store chains) and wholesale distributors such as automotive spare parts, electrical appliances.

Malaysia’s logistics market is seeing an influx of foreign companies, aligning with the ongoing trend of supply chain diversification exemplified by the China Plus One Strategy. The key international players entering the market include IKANO, Maersk Logistics and Stellantis, among others.

Historical and forecast data for key logistics market indicators

Figure 74: Greater Kuala Lumpur Distribution Warehouse/Logistics Gross Rent (NLA)



Source: JLL, 2024

Rents increased significantly to MYR 21.2 per sqm in 2024, up 8.0% y-o-y from the previous year. The completions of new buildings with high specifications at good locations also contributed to the increase of rents, such as Bukit Raja is having an asking rent from MYR 21.5 per sqm.

Over the past 12 months, 3PL players have shown growing demand for space and/or relocations, driven by the expansion needs and operational consolidation efforts. This increase in rents was balanced out by some landlords of older warehouses who have reduced rents slightly to retain long-term tenants. In 2024, tenants tend to take larger spaces, expecting larger discounts in return.

Rents are anticipated to see modest increases in the coming years as more warehouses enter the market and tenants are gaining bargaining power. These new facilities within good locations are likely to command prime rents compared to existing stock, which is generally of lower quality.

Investors and investment trends, and major selected transactions

In 2024, there were eight major logistics-related transactions valued at MYR1.3 billion, primarily factories cum warehouses. The acquisition by REITs for warehouse investments dominated the transaction at MYR 1.0 billion (80.0%), followed by Built-to-Suit arrangement worth MYR 216.0 million (17.0%) and landbank acquisition by 3PLs for future own use. The active REIT investors include MLT, AXIS REIT, KIP REIT and CapitaLand Malaysia Trust REIT ("CLMT"). Additionally, 3PL companies such as FM Global Logistics and PTT Logistics are expanding their footprints in Greater Kuala Lumpur.

Figure 75: Selected major transactions in 2024

Nos.	Location	Building	Vendor	Purchaser	Land Size (acres)	GFA (sq. ft.)	Total Consideration (MYR million)	Unit Rate (MYR psf/GFA)
Shah Alam								
1	Seksyen 22, Shah Alam	Mapletree Logistics Hub – Jubli Shah Alam	Symphony Warehouse Sdn Bhd	Mapletree Logistics Trust	N/A	NLA = 1,500,000	558.8	373 (on NLA)
Bukit Raja								
2	Solok Waja 2, Kawasan Industri Bukit Raja	Axis Facility 1 @ Bukit Raja	Amsteel Mills Sdn Bhd	Axis REIT	7.9	199,500	49.1	246
3	Solok Waja 2, Kawasan Perusahaan Bukit Raja	Axis Facility 3 @ Bukit Raja	Amsteel Mills Sdn Bhd	Axis REIT	N/A	924,000	351.8	381
4	Setia Alam	Setia Alaman Industrial Park	Petaling Garden Sdn Bhd	FM Global Logistics (M) Sdn Bhd	5.7	N/A	37.7	153 (on LA)
Klang								
5	Port Klang Free Zone	Port Klang Free Zone	Channel Legion Sdn Bhd	KIP REIT	N/A	193,284	23.7	123
Others								
6	Cheras	Kawasan Perusahaan Cheras Jaya	Sin Chee Heng Sdn Bhd	KIP REIT	N/A	67,524	22.6	335

7	Sungai Buloh	Elmina Business Park	PTT Logistics Hub 1 Sdn Bhd	CapitaLand Malaysia Trust ("CLMT")	N/A	160,024	180	1,125 *
8	Rawang	Rawang	PTT Logistics Hub 1 S/B	Koperasi Kakitangan Bank Rakyat Bhd	6.5	N/A	36	127 (on LA)

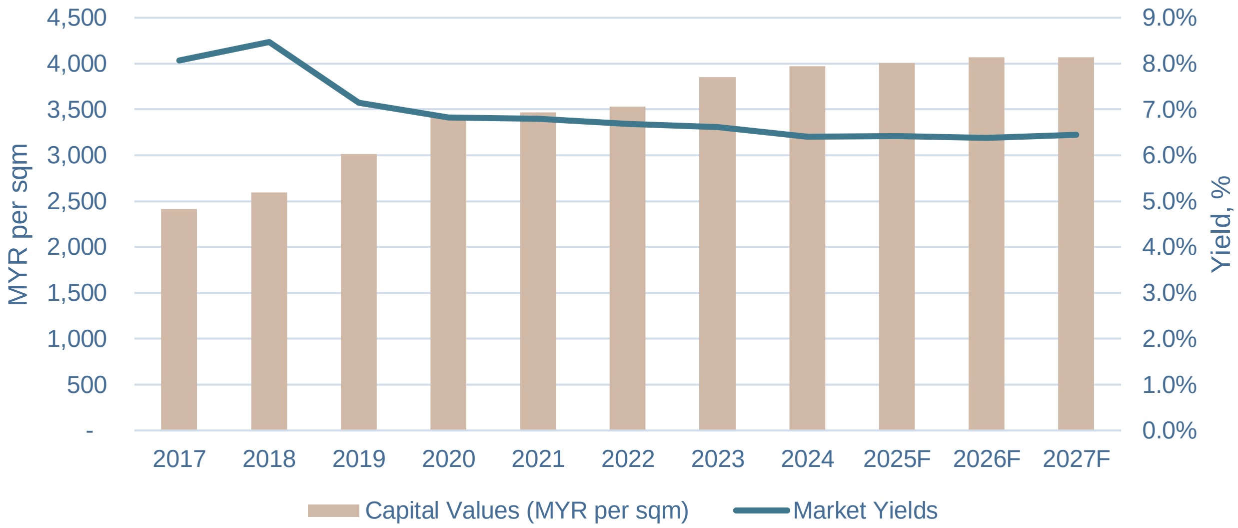
Abbreviations: LA – Land area, NLA – net lettable area, GFA – Gross floor area, N/A – Not available

Note: * Built-to-Suit warehouse

Source: JPPH, JLL, 2024

Market Yield

Figure 76: Greater Kuala Lumpur Distribution Warehouse/Logistics Market Yield (NLA)



Source: JLL, 2024

Capital values of the industrial properties have seen a modest increase, up 3.0% y-o-y in 2024, driven primarily by continued interest from international investors and rising development costs for modern warehouses. This upward pressure on capital values has outpaced rental growth in 2024, resulting in a slight compression of overall yields in the logistics sector.

Notably, a transaction was reported with a capitalization rate of 6.4%, which suggests a relatively attractive yield for investors in Greater Kuala Lumpur. These entities are pursuing land acquisitions to construct or lease warehouses.

Foreign interest in the logistics market is expected to remain robust, reflecting a growing trend by international companies to diversify their supply chain operations and increase investment into alternative logistics hubs. Hence, capital values are expected to increase slightly, keeping downward pressure on market yields.

7. Overview of Singapore's Logistics/Warehouse Market

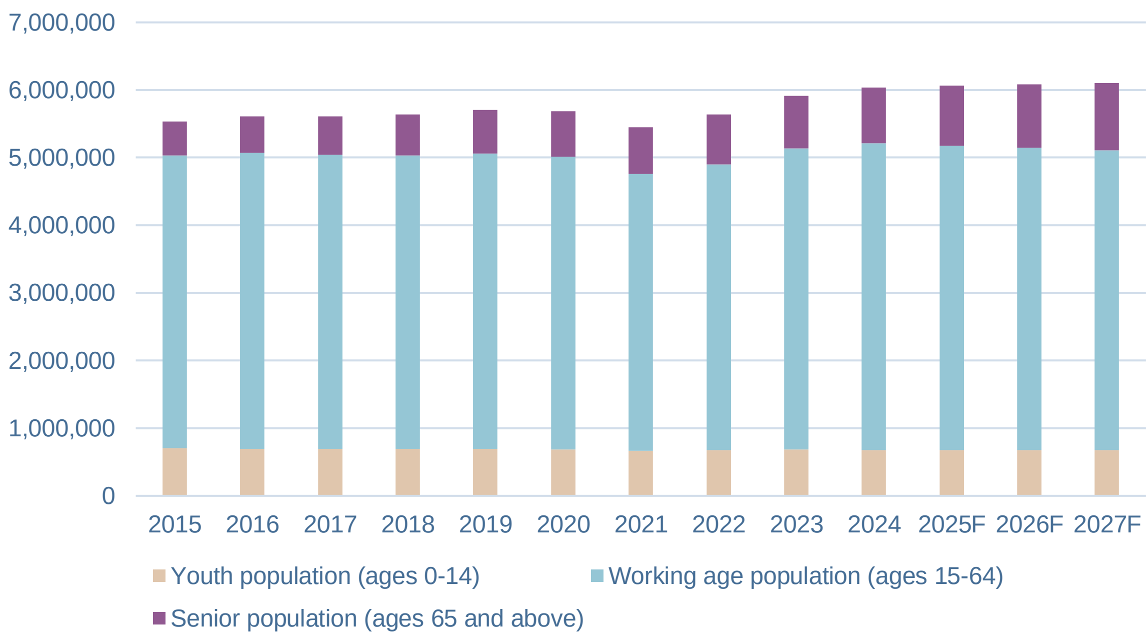
Macroeconomic overview

Country overview

Singapore is a city-state with a total population of 6.1 million as of mid-2024 comprising 4.2 million Singapore residents (citizens and permanent residents) and 1.9 million non-residents. With real GDP per capita of more than USD 66,000 in 2024, Singapore is the most affluent country in the Asia Pacific region. From a regional standpoint, almost all households in the city can be considered to be of middle-class status[19].

Both Singapore's population and workforce are aging. In 2024, 14.0% of the population is aged 65 and above, up from 10.0% in 2015. This figure is projected to increase to 16% by 2027, based on population forecasts by OE. Low birth rates and the aging workforce are accentuating the need to raise labour productivity through upskilling as well as adopting new technologies. Singapore's logistics sector will also need to adapt to these demographic shifts.

Figure 77: Singapore's Demographic Profile (Mid-Year Estimates)



Source: Singapore Department of Statistics (Singstat), February 2025

Economic overview

Singapore's economy is export-oriented and driven by two main growth pillars i.e. manufacturing and services. The latter includes the financial services, business services, transportation & storage as well as wholesale & retail trade sub-sectors. The manufacturing sector has seen strong growth particularly from the electronics cluster, which includes semiconductors. Companies across the semiconductor value chain have

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19 Middle-class households are defined by JLL as those households with an annual income of USD 20,000 or above in 2015 PPP terms. This definition is broadly in line with the Brookings Institution (The Unprecedented Expansion of the Global Middle Class, An Update, 2017).

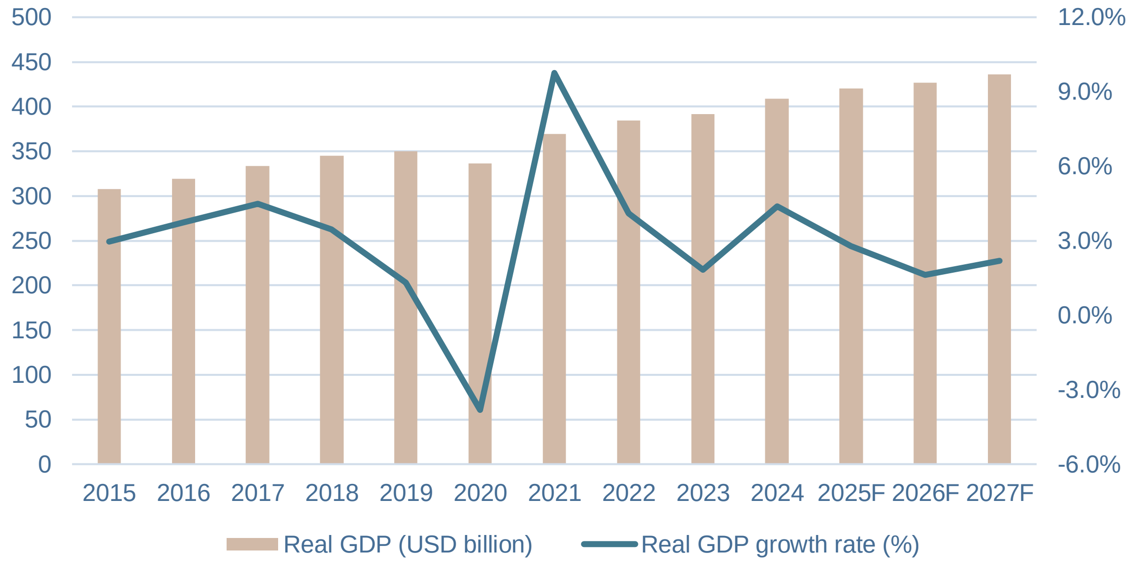
established greenfield and expansion projects in the city to diversify supply chains and respond to the recovery in global demand, driven by the rise of AI applications

Singapore's economy expanded at a CAGR of 3.3% over the 10 years from end-2014 to end-2024. Growth accelerated to 4.4% y-o-y in 2024, driven by stronger growth in the services producing industries and the rebound in manufacturing output from a 4.2% y-o-y contraction in 2023, to a 4.3% y-o-y expansion in 2024.

Ministry of Trade and Industry ("MTI") is projecting slower GDP growth of 1.0-3.0% y-o-y in 2025, in view of uncertainties over the US trade policies and escalating geopolitical conflicts. MTI also expects slower expansion in Singapore's manufacturing and trade-related services sectors in 2025. Strong demand for semiconductor chips, driven by AI applications and smartphones, is expected to drive expansion in the electronics cluster. Strong order books in the aerospace and marine and offshore engineering segments are expected to drive growth in the transport engineering cluster. Growth is expected to remain steady in 2026 and 2027.

CPI inflation eased to 2.4% in 2024. Subdued inflationary pressures allowed the Monetary Authority of Singapore ("MAS") to maintain its monetary policy stance to favour a more gradual appreciation of the Singapore dollar. Further easing is likely given moderating inflation in 2025.

Figure 78: Singapore's Real GDP Growth



Source: Oxford Economics, February 2025

Government planning and key policies affecting the industrial property market

Singapore's industrial property market is highly regulated. Guided by the Master Plan and economic directives, the government, mainly through JTC Corporation ("JTC"), ensures the availability of ample industrial land supply and a wide range of facilities to cater to the varying needs of the different industry clusters.

Industrial land use and zoning

Singapore's industrial land parcels are broadly zoned for Business 1 ("B1"), Business 2 ("B2") and Business Park ("BP") uses. The Urban Redevelopment Authority ("URA") requires at least 60.0% of the total gross floor area ("GFA") to be set aside for predominant industrial uses, and up to 40.0% for ancillary uses (e.g. childcare centre and industrial canteen).

In the Master Plan Written Statement 2019, warehouse is indicated as an allowable use under B2-zoned land which is intended for clean industry, light industry and general industry uses. This aligns with the National Environment Agency's ("NEA") Code of Practice for Pollution Control SS593 where warehouse is classified as a general industrial use. Hence, warehouse is not listed as an allowable use in the Written Statement for B1-zoned land which is intended mainly for clean and light industry uses. Notwithstanding, proposals for new warehouse use may be allowed on B1-zoned land subject to compliance with NEA's nuisance buffer requirements. Existing warehouse developments approved on B1-zoned land are not affected.

For developments on BP-zoned land, at least 85.0% of the total GFA shall be retained for BP uses, of which minimally 60.0% is to be set aside for predominant use and up to 40.0% for approved ancillary uses. A maximum of 15.0% of the overall proposed GFA may be allowed for "white" uses (mix of approved uses e.g. offices and shops, beyond standard industrial and typical ancillary uses).

Industrial land sales

The Government regulates the sale of industrial land through the Industrial Government Land Sales ("IGLS") Programme, which is conducted biannually. JTC releases land plots through a land sales mechanism that considers both the project concept and submitted bid price is considered for tender award.

Since the second half of 2012, the government has halved the land tenures of IGLS sites targeted at developers from 60 years to 30 years and introduced smaller industrial land parcels with tenures around 20 years to lower land costs for industrialists. The reduction in tenure aims to increase the government's flexibility for land redevelopment and to provide industrialists with more affordable industrial property space options.

Key JTC policies

JTC manages over 80.0% of industrial land in Singapore, with stringent regulatory requirements in place to ensure the availability of affordable industrial land and space. Apart from ready-built facilities, JTC offers a wide array of prepared industrial land sites in various locations. Industrialists can either apply to the JTC directly for a facility or site allocation or engage a third-party facility provider like a developer or real estate investment trust ("REIT") under the "Third-Party Build and Lease" ("Third-Party B&L") or "Sale and Leaseback" ("S&LB") schemes.

Since 1 January 2013, third-party facility providers will have to pay an upfront land premium for JTC's leased sites; only buyers who are industrialists have the option of paying land rental. Property funds like REITs will need to pay an upfront land premium for the remaining part of the lease term when acquiring industrial properties on JTC-leased sites.

New JTC initiatives

JTC announced enhancements to the industrial land lease framework in March 2025 to provide companies with longer lease tenures and greater flexibility in lease renewals. With immediate effect, companies with new 20- or 30-year land leases on greenfield industrial sites will be offered a three-year lease extension, with payable land rent or premium, covering the building and development period. In conjunction, MTI announced that all new and ongoing IGLS sites will be launched with or amended to reflect an additional three-year lease tenure. This is inclusive of IGLS sites announced in the first half of 2025.

In the second half of 2025, businesses that demonstrated strong economic outcomes in their current lease term and commit to new plant and machinery ("P&M") investments will be eligible for JTC's new Flexible Lease Extension Initiative. Eligible firms will have the option to extend their 20-year land leases by another 10 years through two five-year period of lease extension.

Additionally, JTC will bring forward the lease renewal application period before lease expiry from six years to 10 years, to provide businesses with greater certainty. To promote value creation and productivity, JTC will expand its definition of P&M investments – a key criterion for lease renewal – to include auditable investments in innovation, R&D, digital transformation, and Intellectual Property creation.

Infrastructure developments (including highways/expressways and ring roads Initiatives)

The Singapore government is developing a new port in Tuas and expanding the air cargo hub in Changi and undertaking works to improve Singapore's road network and rail connectivity. These projects will improve accessibility to major industrial estates and facilitate talent attraction and retention.

Tuas Mega Port

The development of Tuas Mega Port will create new opportunities for logistics players in the West Region. Tuas Mega Port will be the world's largest fully automated terminal with total capacity of 65 million twenty-foot equivalent units ("TEUs"). This is higher than the current combined capacity of 50 million TEUs of the container port terminals at Tanjong Pagar, Keppel, Brani, and Pasir Panjang – all of which will be consolidated at the new mega port by the 2040s. According to an update from PSA Singapore on 24 February 2025, Tuas Mega Port has cumulatively handled 10 million TEUs since the start of operations in September 2022.

Source: The Straits Times (24 April 2017), JLL

Changi East Development Project

The 1,080-hectare (ha) Changi East development project includes expanding Changi Airport's capacity with a fifth terminal (Terminal 5), landside and aviation support facilities as well as the Changi East Industrial Zone ("CEIZ"). Changi Airport's cargo facilities, currently located at the Changi Airfreight Centre, will be expanded to CEIZ to increase handling capabilities from 3.0 million tonnes per annum to 5.4 million tonnes per annum. The future expanded air cargo hub will be more connected and efficient with the utilisation of data and technology focusing on automation. Work on Terminal 5 is expected to begin in 2025.

Northern Tuas Basin Reclamation Area

Announced in December 2023, the planned reclamation works in Tuas will yield around 172 ha of land for industrial use and improve road connections to Tuas South and the Tuas Mega Port. This is part of ongoing plans to rejuvenate older parts of Jurong and Tuas Industrial Estates which were developed in the 1960s and 1970s. Reclamation of the Northern Tuas Basin is expected to commence in 2025 and complete around 2029.

Figure 79: Northern Tuas Basin Reclamation Area

Source: The Straits Times (25 December 2023)

North-South Corridor

The 21.5 km North-South Corridor ("NSC") is a multi-modal transportation corridor with an expressway and dedicated bus and cycling lanes starting in Admiralty Road West and ending in East Coast Parkway near Republic Boulevard. It aims to enhance connectivity from the northern region to the city, relieve traffic along Singapore's north-south transportation axis and support new developments along the corridor. Work commenced in 2018 and is on track for completion from 2027 onwards. When ready, NSC is expected to improve the accessibility of the industrial areas in the North and cut travel time from Woodlands, Sembawang, Yishun and Ang Mo Kio to the city by up to 30 minutes.

Expansion of Rail Network

Upcoming enhancements to the Mass Rapid Transit ("MRT") network include Stage 5 of the Thomson-East Coast Line (2026), extensions of the existing Circle Line (2026) and Downtown Line (2026-2035), as well as two new MRT lines, namely, the Jurong Region Line (2027-2029) and the Cross Island Line (2030-2032).

Additionally, the 4-km Johor Bahru-Singapore Rapid Transit System ("RTS") Link will connect Bukit Chagar station in Johor Bahru, Malaysia and the RTS Link Woodlands North station in Singapore, with a journey time of about five minutes.

Logistics market overview for Singapore (Island-wide)

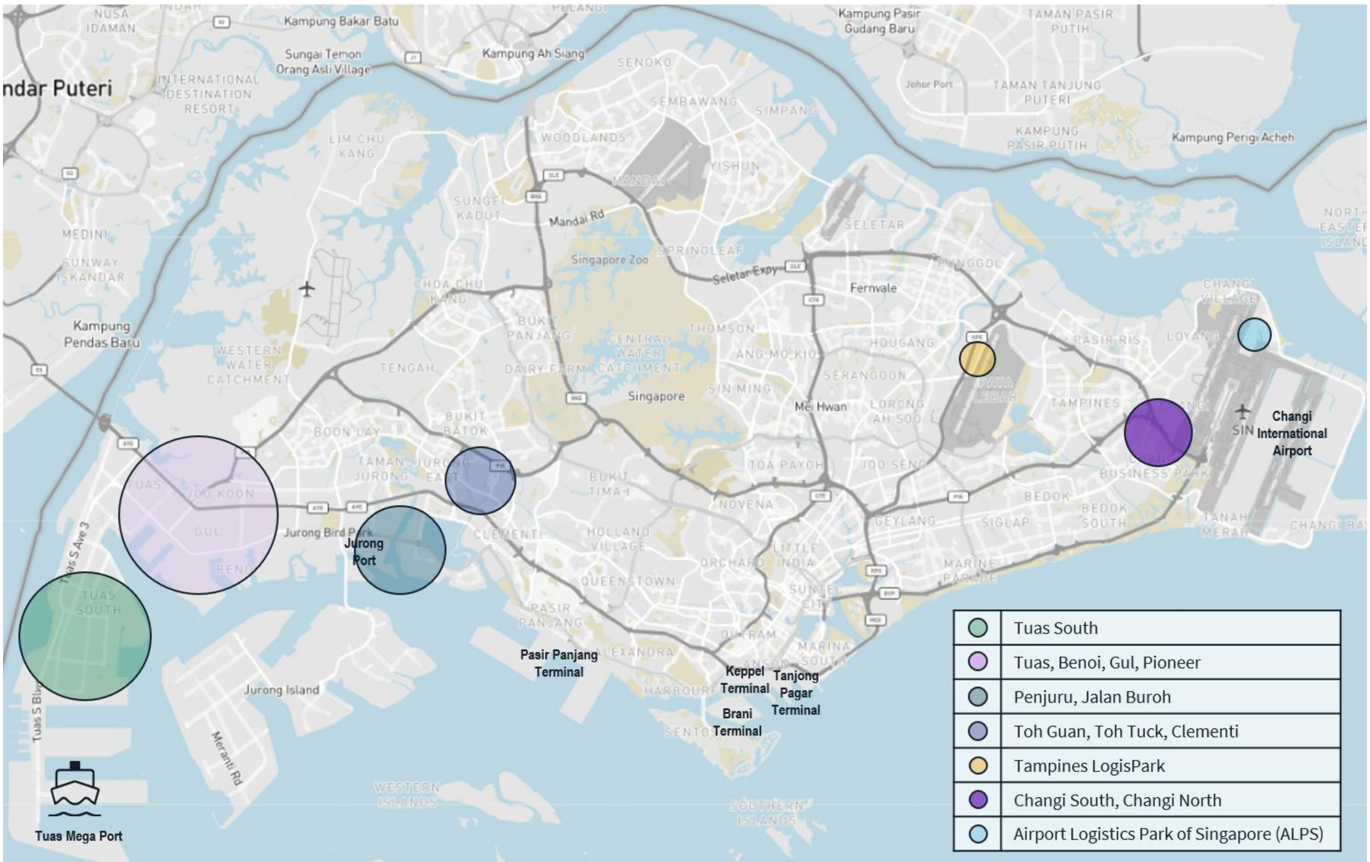
Logistics real estate market landscape

Singapore has two major clusters of logistics/warehouse space. In line with the heavier concentration of industrial land in the western part of Singapore, most of the completed logistics/warehouse stock is concentrated in the West Planning Region. This includes three logistics parks established by JTC, namely, Toh Tuck LogisPark, Toh Guan LogisPark and Clementi West LogisPark.

Many of the companies located in the west are involved in heavier industrial activities such as chemicals, oil & gas, shipping, pharmaceuticals, etc. Hence, logistics/warehouse space will be utilised by these industrialists, as well as logistics companies (e.g. 3PLs) servicing these industries. Companies who utilise shipping routes will also prefer a location near the seaport. The planned consolidation of all seaports at the upcoming Tuas Mega Port thus sparked a wave of logistics/warehouse development activity in the west to meet the anticipated demand.

Those utilising air routes (e.g. time critical goods, air freight) will prefer to be located nearer the airport in the east. Logistics/warehouse facilities in the East Planning Region cater to the storage and distribution needs of manufacturers/end-users, as well as the business requirements of logistics service providers. To facilitate this, JTC has established several logistics parks in the East region such as the Changi International LogisPark (North), Changi International LogisPark (South), ALPS and the Tampines LogisPark. There are also plans for a second ALPS as part of the Changi Air Cargo Hub expansion plans, from 2030 onwards.

Figure 80: Key Logistics/Warehouse Areas in Singapore



Source: JLL, 4Q24

Major logistics facility providers and players

The private sector holds about 97.0% of Singapore's island-wide logistics/warehouse stock as of 4Q24. Only about 3.0% of the existing stock is held by the public sector i.e. JTC.

Key players in the private market include REITs like MLT, CapitaLand Ascendas REIT ("CLAR"), AIMS APAC REIT, ESR-REIT and Sabana Industrial REIT, with Frasers Logistics and Commercial Trust ("FLCT") entering the segment in 2024 with its maiden acquisition.

In recent years, the logistics/warehouse segment has attracted interest from private developers and investors including LOGOS, Soilbuild Group Holdings, Boustead, CapitaLand Development Limited, Hillhouse Capital and PGIM Real Estate.

Over the years, many logistics service providers such as Toll Group, CWT, Maersk (acquired LF Logistics in 2022), YCH Group, DB Schenker and Bollore Logistics have invested in purpose-built facilities mainly for owner-occupation. End-users/industrialists (e.g. Crown Worldwide, NTUC Fairprice Co-operative Ltd and Nova Furnishing Holdings Pte. Ltd.) have also acquired or developed logistics/warehouse assets for their own use.

Demand drivers (including structural trends) for logistics properties

Demand for logistics/warehouse space is driven by a confluence of factors including government directives, the evolving needs of the manufacturing sector and business plans/growth of logistics service providers.

According to the World Bank's 2023 Logistics Performance Index, Singapore is the Top Logistics Hub out of 139 countries surveyed. The city's port handled a record 41.1 million TEUs in container throughput in 2024, up from 39.0 million TEUs in 2023.

Air cargo demand also rose. In 2024, total air cargo tonnage handled by Changi International Airport grew 14.6% y-o-y to about 2.0 million tonnes. The growth was driven by the recovery of Singapore's electronics exports and re-exports, strong global demand for cross-border e-commerce shipments and the modal shift from ocean to air freight arising from disruptions in maritime transport.[20]

Evolving needs of the manufacturing sector

Manufacturing will continue to be an important pillar of the Singapore economy, with increasing emphasis to engage in high value-adding activities such as R&D, biomedical, healthcare and advanced manufacturing (e.g. semiconductor, 3D printing, electric vehicles). Investments into vaccine production and demand for ultra-low temperature storage also highlight the need for robust vaccine storage/logistics capabilities.

Major logistics service providers are already tapping into opportunities arising from the rise in logistics/storage needs from these growth industries. For example, in 2023, UPS Healthcare opened a new 8,700-sqm facility in western Singapore to support the logistics needs of the expanding healthcare sector, with provision to store healthcare products in temperatures ranging from -80 degrees Celsius to 25 degrees Celsius as well as additional value-added services like packaging, labelling and returns logistics.

DB Schenker's upcoming Red Lion2 facility in the Tampines LogisPark (expected to be ready in 2025) aims to support the semiconductor and healthcare industries, while Chasen Logistics Services is developing a new five-storey integrated facility catering to the needs of the growing semiconductor sector. Expected to

[20] Source: Changi Airport Group, "Changi Airport handled 67.7 million passengers in 2024", 22 Jan 2025

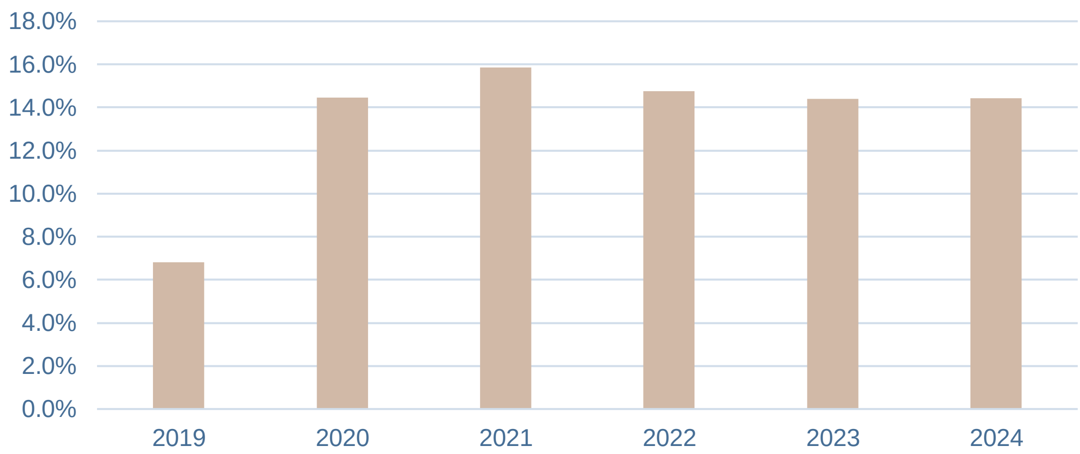
be ready in 2025, the facility will have three floors of air-conditioned and humidity-controlled space for storing high-value, sensitive goods, and the ground floor will have about 65,000 sq. ft. (around 6,039 sqm) of cleanroom-ready space.

E-commerce growth

Singapore's e-commerce sector (especially in online shopping and food delivery) surged during the COVID-19 pandemic, translating into more demand for logistics/warehouse space. For example, RedMart (an online grocery platform), Shopee Express and J&T Express took up more logistics/warehouse space in 2020. Several players specialising in last-mile delivery (e.g. Ninja Van and J&T Express) also expanded their operations in 2021.

Data from Singstat showed the proportion of online retail sales (excluding motor vehicles) averaged around 14.0-15.0% in the 2022-2024 period. Permanent shifts in shopping habits and initiatives by the Singapore government to promote digitalisation will continue to support e-commerce growth. At the same time, many retailers have also adopted an omnichannel strategy, which will support demand for logistics/warehouse space.

Figure 81: Proportion of Online Retail Sales in Singapore (excluding motor vehicles; annual averages)



Source: Singstat, JLL, 4Q24

Other structural trends

The COVID-19 pandemic accentuated the need for Singapore to enhance food security, translating into demand for cold storage/logistics space. For example, Commonwealth Kokubu Logistics' new cold-chain food logistics facility at 8 Jalan Besut (expected to be fully completed by 2025) can store up to 80 million kilograms of food.

Singapore has also benefitted to some extent from nearshoring as companies look to diversify their supply chains away from China. For instance, Singapore saw an influx of semiconductor investments since 2021. This was sparked by the global chip shortage during the COVID-19 pandemic and the rush to build supply chain resilience amid elevated geopolitical and global supply chain disruption risks. Arising from this, major logistics service providers (e.g. DB Schenker and Chasen Logistics Services) are investing in new facilities to cater to the rise in storage and logistics service needs of the semiconductor industry.

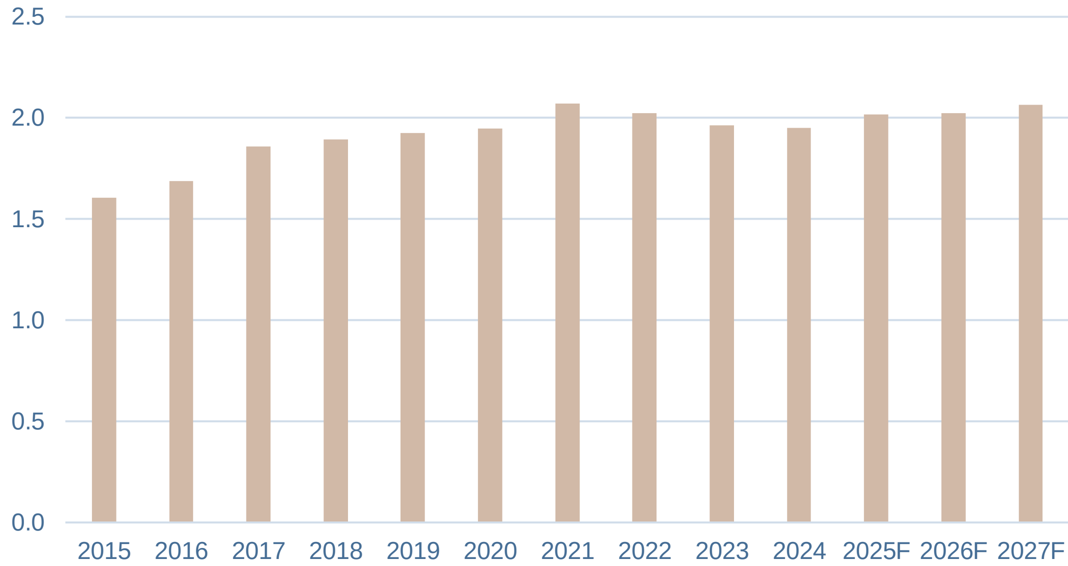
The drive towards digitalisation and innovation, including the adoption of advanced technologies and supply chain processes, has thus boosted demand for higher specification (e.g. higher floor-loading capacity, higher electrical loading, and fibre optic infrastructure) logistics/warehouse premises in Singapore.

Logistics property overview for Singapore (Island-wide)

Estimated logistics real estate per capita

Island-wide logistics/warehouse space per capita was estimated at 2.0 sqm in 2024 and is expected to edge up to 2.1 sqm in 2027. However, prime logistics/warehouse space per capita is much lower at 0.54 sqm as of 2024 and estimated to rise to 0.61 sqm by 2027. This low penetration rate of prime grade stock, especially for a major global trade and logistics hub like Singapore, suggests the potential to further grow Singapore's prime logistics/warehouse stock to meet future economic needs.

Figure 82: Singapore's Island-wide Logistics/Warehouse Stock Per Capita (sqm)



Note: Estimated based on mid-year population estimates on NLA basis

Source: JTC, Singstat, Oxford Economics, JLL

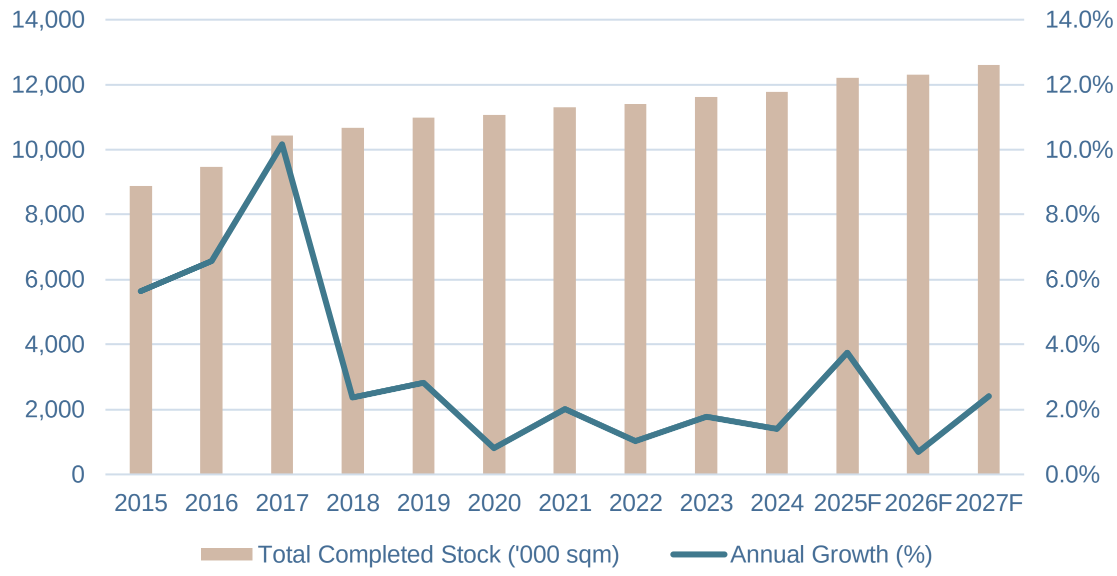
Market Size

As of 4Q24, Singapore has close to 12 million sqm of completed logistics space, of which an estimated 28.0% are prime warehouse space[21]. Over the 10 years from end-2014 to end-2024, the island-wide stock of logistics/warehouse space expanded at a CAGR of 3.4%.

Singapore's completed logistics/warehouse stock is expected to grow to around 12.6 million sqm by the end-2027, representing a 7.0% increase from end-2024 and based on the assumption that all projects in the pipeline materialises with no major stock withdrawals. Over the same time period, the proportion of prime logistics/warehouse space is expected to expand to around 30.0% by the end of 2027.

[21] These are facilities that meets JLL's criteria including building age (<20 years), ramp-up access for 40-footer, as well as clear height and floor loading capacity requirements.

Figure 83:Singapore Island-wide Logistics/Warehouse Stock



Source: JTC, JLL, 4Q24

Supply and characteristics of warehouses

The storage and distribution requirements of manufacturers have become more complex (e.g. pharmaceutical products requiring temperature-controlled facilities) in recent years. Coupled with the push for adoption of Industry 4.0 initiatives, logistics/warehouse facilities became more sophisticated, evolving from the basic warehouse intended mainly for storage purposes, to larger complexes fitted with cargo-lifts and eventually towards ramp-up logistics/warehouse facilities as the logistics/distribution economic pie grew.

At the same time, major logistics players have been investing in their own purpose-built facilities since the 2000s. The planned consolidation of all seaports at the upcoming Tuas Mega Port also generated new opportunities in the logistics/warehouse sector. New completions, including the development of higher specification ramp-up logistics/warehouse developments with green sustainability features, offer more quality space options for end users and logistics service providers looking to lease premises in western Singapore or near the Tuas Mega Port. This trend of adopting advanced technologies and supply chain processes is expected to boost demand and supply of higher specification logistics/ warehouse premises.

Performance and outlook

Annual Net Additions and Potential Supply

Major completions from 2021 to 2024 include LOGOS Tuas Logistics Hub, LOGOS Penjuru Logistics Centre, LOGOS eHub, JTC Logistics Hub @ Gul and 2PS1. Going forward, an estimated 869,000 sqm (net floor area) of new logistics/warehouse space is expected to be completed from 2025 to 2027. This is based on known projects published by JTC and JLL's research as of end-2024. As around 82.2% of the total upcoming supply is expected to be single-user premises intended mostly for owner-occupation, and multiple-user premises meant for lease only constitute the balance 17.8%, there is limited oversupply risk.

More than one-half of the projected new supply is expected to be ready in 2025 (about 468,000 sqm), of which about two-thirds are from single-user premises. The remaining one-third will stem from three multiple-user logistics/warehouse developments comprising an aircon logistics/warehouse facility at 36

Tuas Road by Boustead Projects, CLAR's redeveloped 5 Toh Guan Road East and Mapletree Joo Koon Logistics Hub (redevelopment of 51 Benoi Road). After considering the expected withdrawal of Cold Centre at 2 Fishery Port Road for redevelopment, annual net addition is projected to surge by 171.0% y-o-y in 2025.

Net additions are projected to fall alongside fewer completions in 2026 (about 95,000 sqm) and rise in 2027 when new supply surges to 306,000 sqm. All the new supply for both years are expected to be from single-user facilities. Overall, this would translate to an average net addition of about 274,000 sqm per year from 2025 to 2027, which is higher than the previous three-year average of 161,000 sqm from 2022 to 2024.

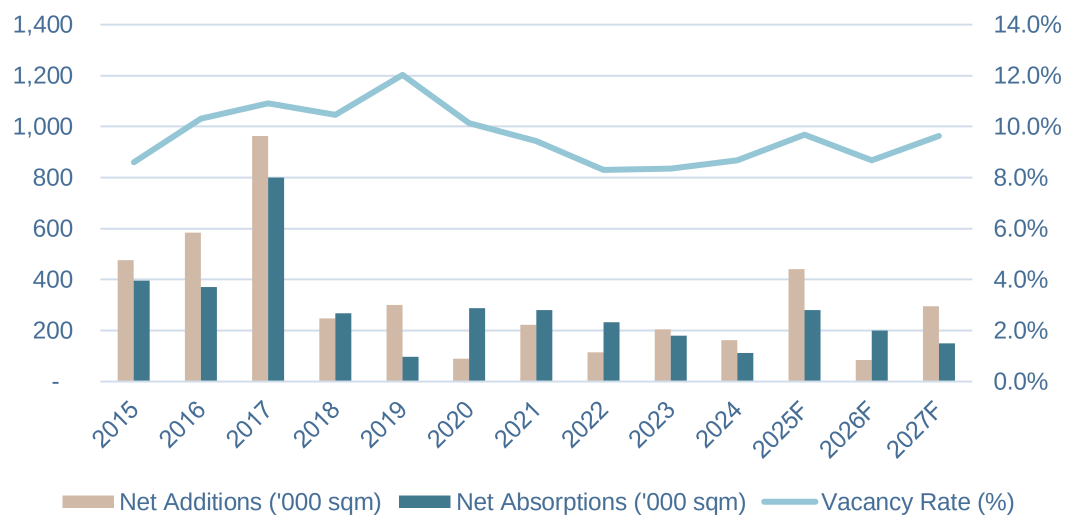
Demand vs Supply

The COVID-19 pandemic drove new requirements for temperature-controlled premises from life sciences/medical-related (including vaccine storage/logistics) and food industries. E-commerce business growth also increased demand, particularly for better quality premises with ramp-up access and higher building specifications.

However, slower economic growth as well as global uncertainties turned occupiers cautious in an elevated business cost operating environment and weighed on new space requirements in 2024. Consequently, the vacancy rate edged up slightly to 8.7% as of end-2024.

Net absorption is expected to stay expansionary from 2025 to 2027. Forecast economic and manufacturing sector growth into 2027 could generate new storage requirements and underpin demand for logistics/warehouse space. However, as the average annual net absorption at 210,000 sqm falls below the average net addition of 274,000 sqm for the 2025-2027 period, a higher (albeit still tight) vacancy rate of 9.6% is foreseen by end-2027.

Figure 84: Singapore Island-wide Logistics/Warehouse Net Addition, Net Absorption & Vacancy Rates (NLA)



Note: Estimates based on NLA basis

Source: JTC, JLL, 4Q24

Investors and investment trends, and major selected transactions. if any

The logistics/warehouse sector's resilience during the COVID-19 pandemic, coupled with the availability of high-spec stock as well as the growth potential of Tuas and the wider West Planning Region, contributed to strong interest from investors including investment funds and REITs over the last five years.

The largest logistics/warehouse transaction over this period was the joint acquisition of a portfolio of five warehouses by Hillhouse Capital and China's JD Property in 1H23. The five warehouses at 3 Pioneer Sector 3, 21 Changi North Way, 6 Chin Bee Avenue, 4 & 6 Clementi Loop, and 30 Toh Guan Road was acquired from ESR-LOGOS REIT[22] for SGD 313.5 million. In 2024, FLCT bought the logistics/warehouse facility at 2 Tuas South Link 1 for about SGD 140.3 million. This is the REIT's first logistics/warehouse property acquisition in Singapore.

Going forward, logistics/warehouse assets are expected to remain appealing to investors due to their positive yield spreads over borrowing costs and foreseen rent upside. While the need to comply with JTC's regulatory requirements and the short land tenure will likely remain key barriers to entry, the increased availability of quality stock arising from new completions should boost deal flow.

Figure 85: Major logistics/warehouse deals in Singapore (2020 to 2024)*

Year	Building Name / Address	Price (SGD million)	Approx. GFA (sqm)	Price (SGD per sq. ft.)	Seller	Buyer	Land Tenure
2020	Luxasia Building (12 Tai Seng Street)	$66.1	N.A.**	N.A.	Luxasia Group	PGIM Real Estate	30+30 Yrs From 26/06/2007
2020	7 Bulim Street	$129.6	68,910.0	$1,901.0	Titan (Wenya) Pte Ltd	AIMS APAC REIT	30 Yrs From 01/09/2012
2021	Global Trade Logistics Centre (46A Tanjong Penjuru)	$112.0	48,652.0	$2,302.0	Montview Investments	ESR-REIT	30+14 Yrs From 01/05/2006
2022	1 Buroh Lane (100.0% interest in A3 SG ETA PTE.LTD.)	$191.9	59,971.0	$3,200.0	A3 Lux Alpha S.a.r.l (PGIM Real Estate)	CapitaLand Ascendas REIT	30 Yrs From 21/02/2013
2022	Enterprise Logistics Centre (2 Tuas View Place)	$120.6	N.A.	N.A.	Far East Organization	A Singapore unit of Hong Kong-based Intex Development Company	60 Yrs From 20/11/1995
2023	ESR-LOGOS REIT's portfolio of five warehouses						
	• 3 Pioneer Sector 3	$95.0	66,566.0	$1,427.0	ESR-LOGOS REIT	Hillhouse Capital & JD Property	30+30 Yrs From 16/12/1990
	• 4 & 6 Clementi Loop	$37.6	27,956.0	$1,346.0	ESR-LOGOS REIT	Hillhouse Capital & JD Property	30+30 Yrs From 01/10/1993

[22] Effective from 4 December 2024, ESR-LOGOS REIT is known as ESR-REIT.

Year	Building Name / Address	Price (SGD million)	Approx. GFA (sqm)	Price (SGD per sq. ft.)	Seller	Buyer	Land Tenure
	• 6 Chin Bee Avenue	$93.0	30,116.0	$3,088.0	ESR-LOGOS REIT	Hillhouse Capital & JD Property	27.73+30 Yrs From 22/01/1986
	• 21 Changi North Way	$30.1	18,301.0	$1,646.0	ESR-LOGOS REIT	Hillhouse Capital & JD Property	30 Yrs From 01/06/2010
	• 30 Toh Guan Road	$57.8	30,844.0	$1,873.0	ESR-LOGOS REIT	Hillhouse Capital & JD Property	30+30 Yrs From 16/08/1995
2023	9 Pioneer View	$58.5	N.A.	N.A.	N.A.	N.A.	30 Yrs From 01/06/2016
2024	Kian Ann Building (7 Changi South Lane)	$63.0	N.A.	N.A.	N.A.	N.A.	30+30 Yrs From 16/05/1997
2024	2 Tuas South Link 1	$140.3	65,350.0	$2,146.0	Diamond Land Pte. Ltd. (ESR)	Frasers Logistics & Commercial Trust (FLCT)	30 Yrs From 03/08/2016
2024	71 Tuas South Avenue 1	$58.0	N.A.	N.A.	N.A.	N.A.	30+30 Yrs From 01/06/1997

*Sales price of SGD 50 million and above **N.A. denotes “Not Available”

Source: REALIS, JLL, 4Q24

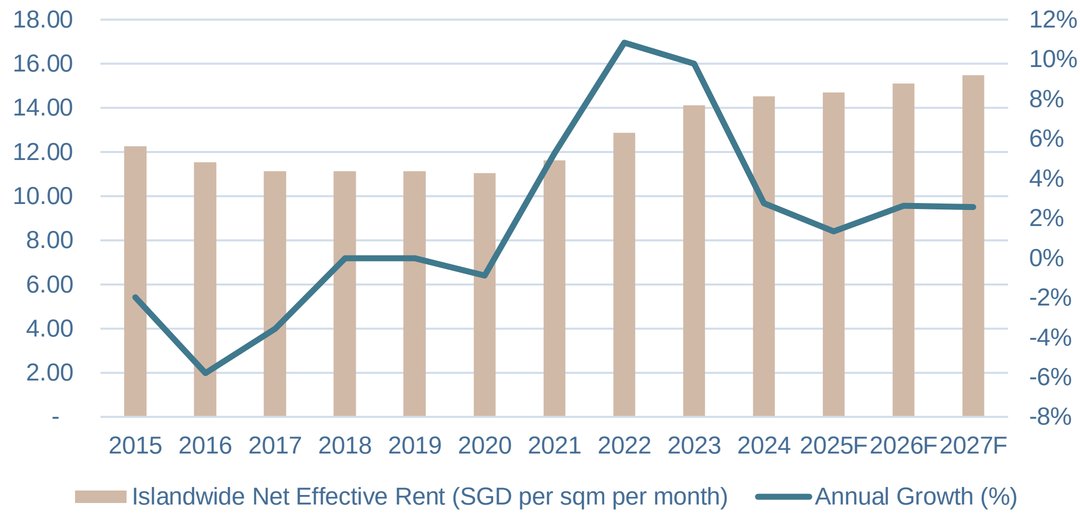
Historical and forecast data for key logistics market financial indicators

Market Rent

Island-wide logistics/warehouse net effective rent rose at a CAGR of 1.5% from end-2014 to end-2024, reaching a record high of SGD 14.5 per sqm per month in 2024. Rental growth accelerated in 2022 and 2023 when competition for space drove the vacancy rate to an eight-year low. However, cost-conscious tenants and landlords’ placement of more space listings on the market slowed 2024’s growth to 2.7% y-o-y.

Rental growth could resume in 2025, albeit modestly, as occupiers’ cost sensitivity is envisaged amid the elevated business cost environment and global uncertainties. Barring unforeseen external shocks, annual rental growth could strengthen by 2026 when vacancy dips and extend into 2027 on the back of the foreseen domestic economic and manufacturing output growth and tight vacancy.

Figure 86: Singapore Island-wide Monthly Net Effective Logistics/Warehouse Rent (NLA)



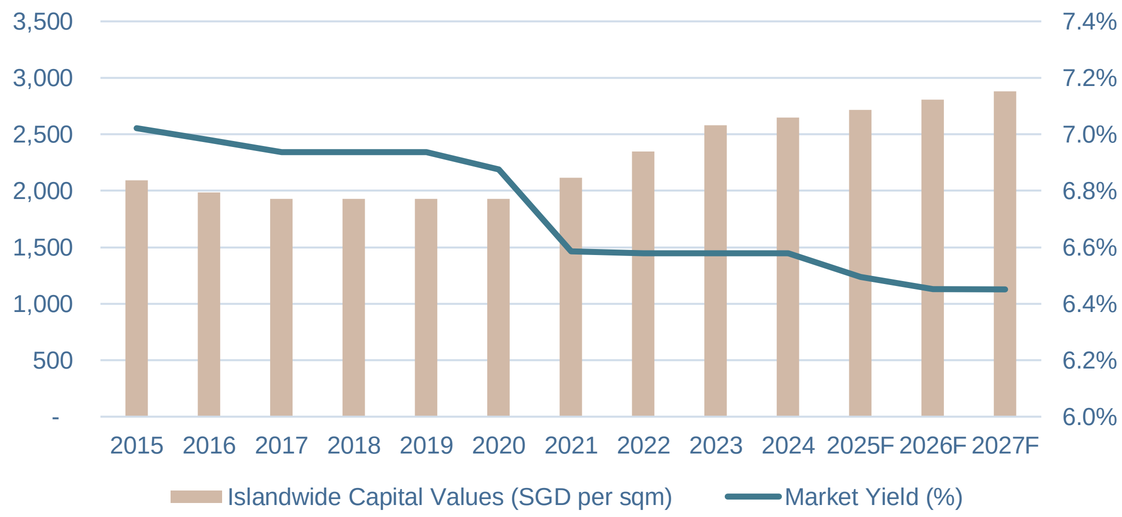
Source: JLL, 4Q24

Market Yield

The average capital value for logistics/warehouse premises in Singapore grew at a CAGR of 2.2% from end-2014 to end-2024. As capital values moved in tandem with rents in 2024 and market yield continued to move sideways.

Going forward, logistics/warehouse assets are expected to remain appealing to investors due to foreseen rent upside. This should underpin capital value growth from 2025 to 2027. Against this backdrop, yields are expected to compress again in 2025-2026 and hold steady in 2027 on firm investor demand due to a still positive yield spread in a foreseen rising interest rate environment and sustained occupier demand.

Figure 87: Singapore Island-wide Logistics/Warehouse Capital Values & Market Yields (NLA)



*60-year leasehold basis

Source: JLL, 4Q24

8. Overview of Greater Seoul's Logistics Market

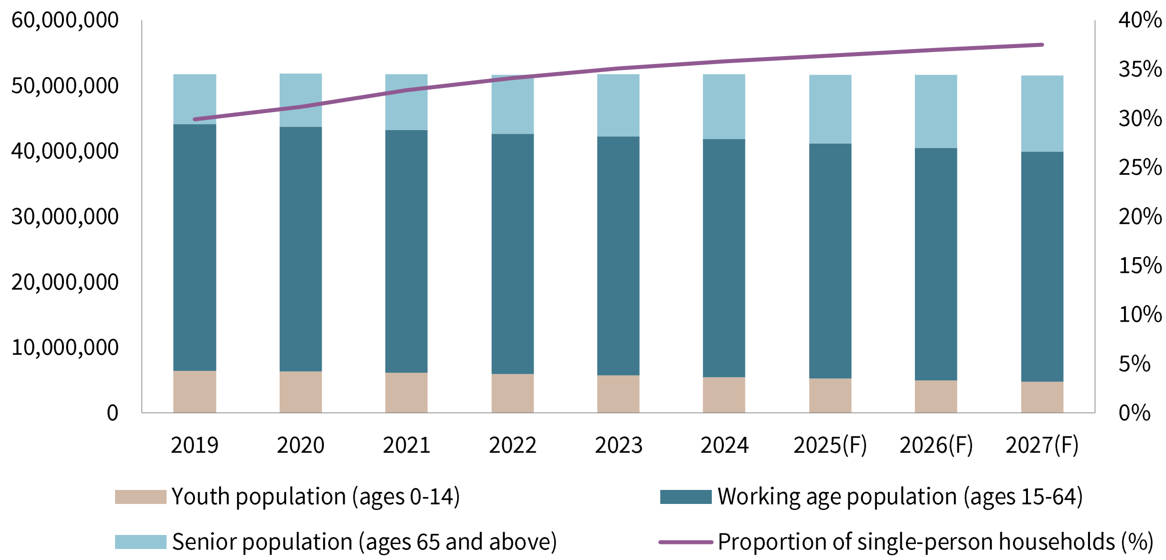
Macroeconomic overview

Country Overview

Totalling 51.8 million persons in 2024, South Korea's population is predicted to enter a downward trend starting from 2025. Population ageing is also accelerating as a result of low birth rate. In 2024, population aged 65 and over stood at 10.2 million, accounting for 20.0% of total population.

Meanwhile, the number of middle-class households in South Korea increased 24.0% in the past decade, rising from 16.5 million in 2014 to 20.0 million in 2024, and it is projected to rise further[23]. Going forward, substantial middle-class population coupled with rising income levels are expected to support rising consumption levels.

Figure 88: Demographic Profile



Source: KOSIS, February 2025

Economic overview

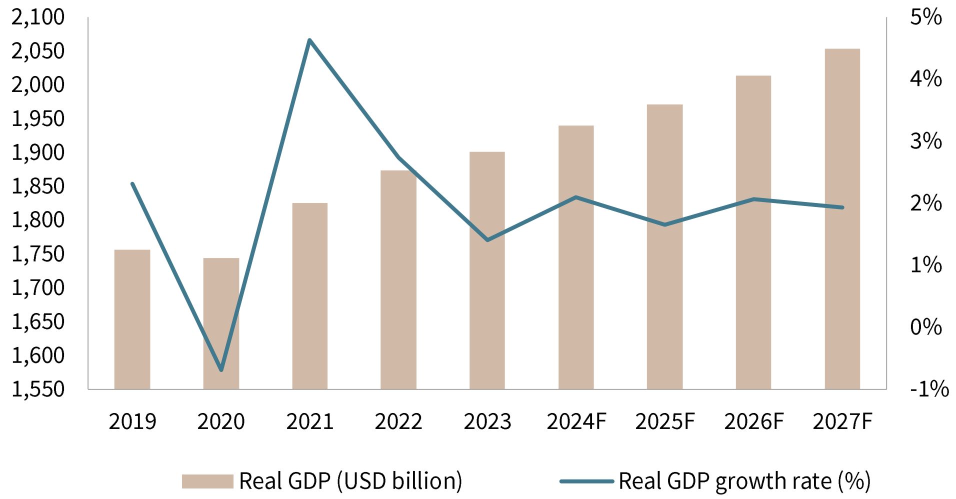
In 2024, South Korea's real GDP reached USD 1,940 billion. Real GDP per capita was around USD 37,000. However, economic growth has slowed down amid domestic and global policy uncertainty. Real GDP grew 2.0% in 2024 and the Bank of Korea is projecting a relatively subdued economic outlook, with 2025 GDP growth projection of 0.8%.

South Korea's export performance finished strong in 2024, with export volume maintaining a positive trend for the 15th consecutive month. The semiconductor industry particularly saw strong performance amid the AI boom. However, the external sector could face stronger headwinds in 2025, as higher US tariffs raise

[23] Middle-class households are defined by JLL as those households with an annual income of USD 20,000 or above in 2015 PPP terms. This definition is broadly in line with the Brookings Institution (The Unprecedented Expansion of the Global Middle Class, An Update, 2017).

concerns about South Korea's exports growth and high level of household debt could weigh down domestic consumption.

Figure 89: South Korea Real GDP Growth

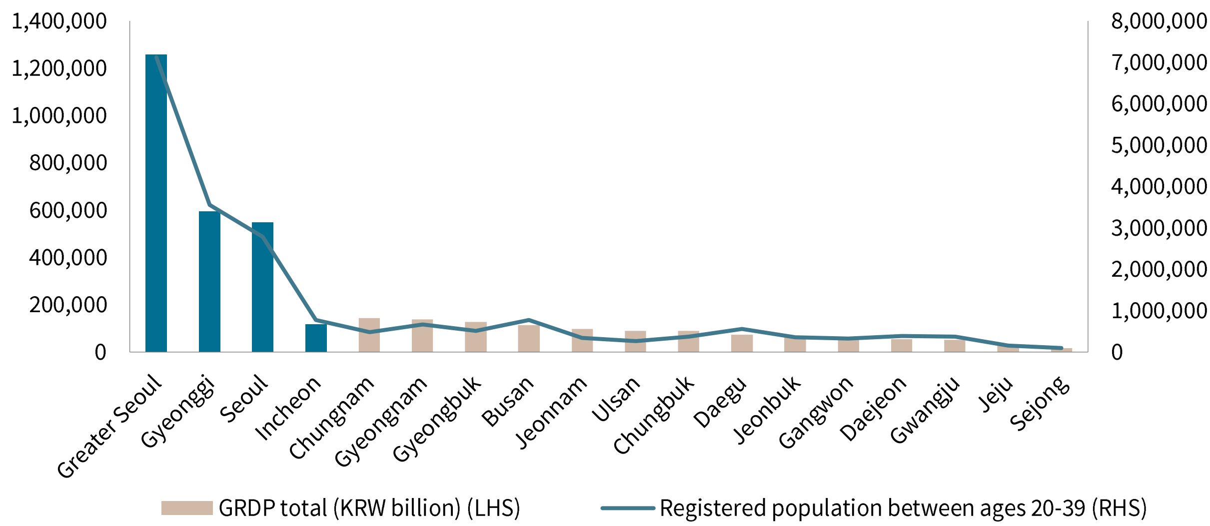


Source: Oxford Economics, February 2025

The labour market remained tight in 2024, with the number of employed people (aged 15 and above) reaching at 28.6 million and an increase of approximately 160,000 job gains compared to the previous year. Overall unemployment rate rose 0.1%p y-o-y to 2.8%.

In terms of South Korea's regional economy, there is a high level of centralization in the Seoul Capital Area. 52.3% of the country's GDP was concentrated within the Greater Seoul as of 2023 and the polarization between the capital and outlying areas persists, despite the government's efforts toward decentralization of economic growth.

Figure 90: Regional GDP and Population



Source: KOSIS as of 2023; Greater Seoul includes Gyeonggi, Seoul and Incheon

Government planning and policies/structural changes to logistics market

The Korean government is implementing support policies to keep pace with evolving trends in the logistics sector. Efforts are focused on enhancing facilities and operational processes of existing centres, while facilitating construction and operating of new facilities.

E-commerce: As individuals continue to purchase directly from overseas, a dedicated customs clearance platform is being developed to address the surging demand for e-commerce import clearance. This initiative is expected to further expand the overseas direct purchase market, consequently increasing logistics demand.

Smart Logistics Centre Development: The government has implemented a certification system that can offer policy support and interest rate subsidies of 0.5%-2.0% on construction loans to logistics centres demonstrating efficiency, safety, and environmental sustainability. This system assigns detailed grades (1-5) to logistics centres equipped with automated logistics systems such as logistics robots and automated equipment.

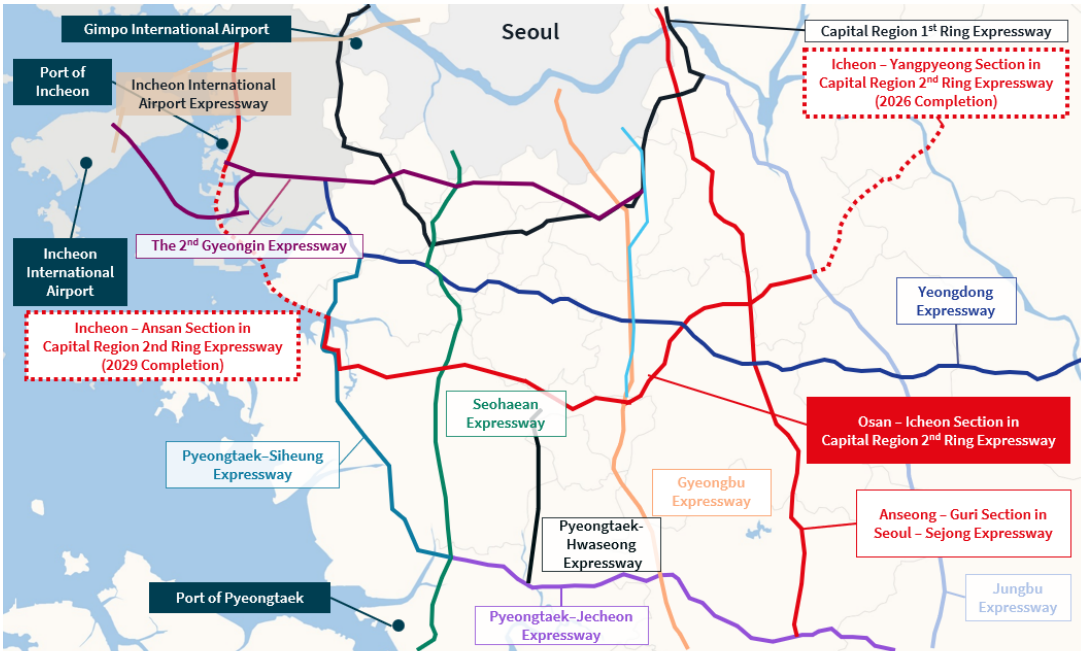
Regional initiatives: Gyeonggi Province is set to standardize permitting criteria for the development of logistics centres, which will help to reduce the risk of construction interruptions.

Infrastructure developments (including highways/expressways and ring roads Initiatives)

An extensive road transportation network serves as a major advantage of the Greater Seoul logistics market, with 92.0% of domestic freight volume transported via roads (Source: KOSIS, as of 2022). Centred around the Gyeongbu Expressway, the main highway connecting from Seoul to Busan, numerous highways and ring roads facilitate freight flow to Greater Seoul.

The Capital Region 2nd Ring Expressway, which encompasses the entire Greater Seoul with a larger diameter than the existing Capital Region 1st Ring Expressway, has now been largely completed and opened to traffic. The Gimpo-Yangju section was completed in December 2024, and currently, only two sections remain under construction.

Figure 91: Major Expressways



Source: JLL

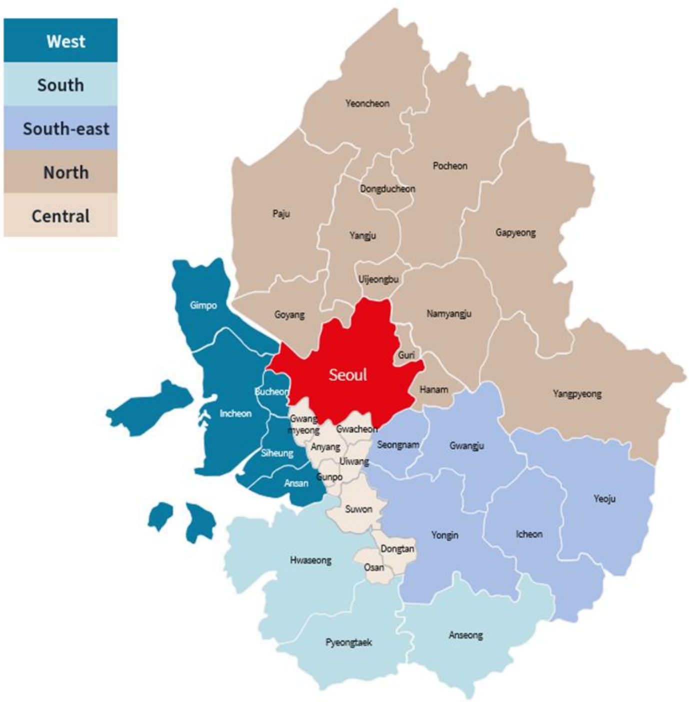
Icheon-Yangpyeong Section (2026 Completion): The 19.37km-long section started groundbreaking in 2021, with completion targeted for late 2026. This project will finalize the southeastern section of the Capital Region 2nd Ring Expressway. The section will include two interchanges connecting the Jungbu Expressway and the Jungbu Naeryuk Expressway, improving accessibility to Greater Seoul for existing users. Upon completion, travel time from Icheon to Yangpyeong, for instance, is anticipated to be reduced by approximately 12 minutes (31min → 19min) with an estimated annual logistics cost savings of KRW 35.6 billion.

Incheon-Ansan Section (2029 Completion): Connecting Incheon and Ansan in the West, the section is 19.8km long. Groundbreaking is scheduled for 2025, with completion targeted for 2029. Upon completion, this section is expected to alleviate chronic congestion on the Seohaean Expressway and Yeongdong Expressway.

Logistics market overview (Grade A only)

Key logistics hubs

Figure 92: Greater Seoul Key Logistics Markets



Source: JLL

Logistics real estate market landscape

South Korea's modern logistics industry developed rapidly in recent years. Initially fuelled by low interest rates and abundant liquidity, the sector saw robust growth in line with the e-commerce boom during the COVID-19 pandemic. However, rising borrowing rates coupled with concerns about oversupply have led to tenant-favoured market conditions.

The logistics market is dominated by Greater Seoul, which is home to 51.0% of the country’s population. Logistics hubs have formed along major expressways for cost-effective access to key transport nodes.

The greater Seoul logistics market is divided into five key precincts: North, Central, South, South-east, and West, each with unique characteristics driven by industry factors and geography.

The North shows rental variations based on proximity to Seoul, with Goyang and Namyangju offering higher rents as last-mile locations. Recently, as new supply has entered regions relatively far from Seoul, such as Pocheon and Paju, overall rent levels in the market have adjusted. Due to risks associated with greenbelt and military areas, potential sites for new construction are limited.

The Central is easily accessible from Seoul. This region faces limited new supply due to high population density which makes logistics development tricky and land scarcity. This results in stable rents and vacancy rates compared to other sub-markets.

The South is connected by the Gyeongbu Expressway, which is a key route in the traditional logistics network that runs from Seoul to Busan. This region handles large quantities of Chinese products facilitated by its proximity to Pyeongtaek Port. The port also drives demand from semiconductor, plant, and automotive industries, boosting logistics activity in the region.

The South-east is a traditional logistics hub that is connected by major expressways such as Gyeongbu, Jungbu, and Yeongdong Expressways. The region is linked to Busan port, which handles 40.0% of port freight and 78.0% of container traffic. It attracts 3PL and e-commerce companies despite having older facilities, offering lower rents due to affordable land costs. Due to the region's topography, natural slopes are commonly utilized in logistics development, rather than building artificial ramps.

The West is close to major airports and ports that support import-export logistics, and offers easy access to expressways and key transportation hubs. The precinct introduced numerous new supplies in the last few years, particularly in Incheon amid the large-scale brownfield development.

Demand drivers for logistics properties

E-commerce and 3PL

The e-commerce and 3PL are the largest demand drivers in the domestic logistics market. The importance of supply chain and logistics infrastructure have become critical factors for e-commerce players, which will consequently, increase in the need for stronger collaborations with major 3PL companies to enable seamless delivery services.

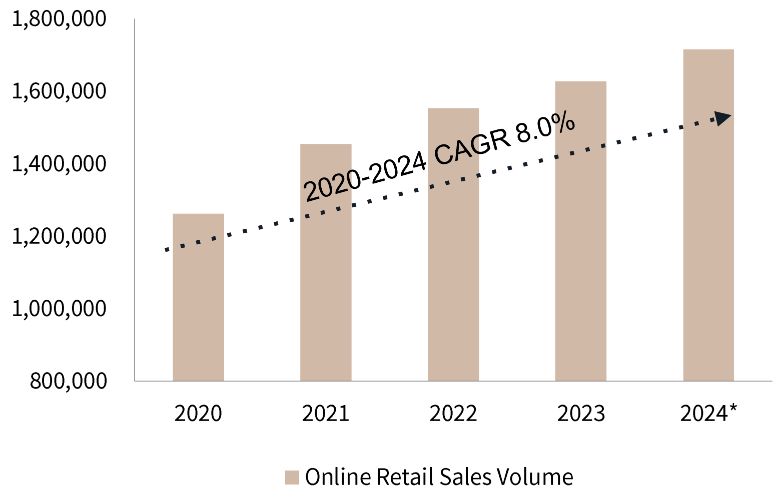
South Korea's online shopping transactions continue to rise, with a y-o-y growth of 5.4% recorded in 2024. Coupang leads the e-commerce market with a 24.5% share as of 2022 (Source: Fair Trade Commission), investing heavily in logistics centres for its Rocket Delivery service. Reportedly it plans to invest KRW 3.0 trillion by 2026 for nationwide free delivery by 2027. Other domestic players include but are not limited to Naver, 11Street, and LotteOn.

Recently, the South Korean e-commerce landscape has experienced another shift with the introduction of Chinese platforms such as AliExpress, Temu and Shein, posing new competition. To expand their market presence further, these players have partnered with major 3PLs like CJ Logistics and Hanjin Logistics and are planning to host local sellers on their platforms.

A key challenge for these new entrants is slow delivery, particularly due to the substantial volume of products shipped from overseas, which takes a long time to clear customs and distribute. To mitigate these issues, investment in supply chain optimisation has become their top priority. At the same time, small- to mid-sized 3PL companies with limited resources for investment struggle to host customers in the competitive market.

Growth of e-commerce and 3PLs growth

Figure 93: Annual Online Retail Sales Volume (unit: KRW 100 million)



Source: KOSIS, 4Q24

3PL providers, who are traditional tenants of logistics centres, have also experienced significant expansion. This growth is driven by e-commerce companies striving to strengthen their market competitiveness through improved logistics services. The intensification of online delivery competition has led to an increased focus on speed, with many companies now seeking to differentiate themselves through faster delivery times.

CJ Logistics stands out as one of the most significant players in this field. They have expanded their business scale by launching an e-fulfillment service and operating logistics hubs and distribution centres. In 2025, CJ Logistics further enhanced their competitive edge by introducing a seven-day-a-week delivery service, which successfully secured additional cargo volume even at the cost of profit margin cuts. Other major market players include domestic companies such as Hyundai Glovis, Hanjin Logistics, and Lotte Global Logis, as well as foreign companies like DB Schenker and DHL.

Moreover, 3PL companies are actively pursuing digitalization by leveraging 'smart logistics' technologies. These include cutting-edge IT solutions such as AI, 5G, Internet of Things (“IoT”), robotics, drones, autonomous driving, and cloud computing. Some 3PL players are forming strategic partnerships with IT startups to implement these advanced technologies. A notable example is the collaboration between Floatic, a logistics robot startup, and Korea Logis Pool (“KLP”), a 3PL provider. Floatic conducted a Proof of Concept (“PoC”) operation, implementing its Autonomous Mobile Robot (“AMR”) solution within KLP's fulfillment centre.

Demand for large-scale logistics centres is expected to continue, as companies must either build automated facilities independently or leverage the infrastructure of 3PL providers to establish efficient logistics operations. This ongoing need for advanced logistics infrastructure underscores the sector's dynamic growth and technological evolution, resulting in a fierce competition among mid-scale logistics centres to retain tenants.

Structural trends on logistics market

Manufacturing

Manufacturing accounted for 27.0% of Korea's GDP, with semiconductors leading at 20.5% of domestic exports in 2024. The semiconductor manufacturing plants, concentrated in the South and South-east sub-markets are expected to underpin robust demand.

Automobiles, Korea's third-largest export category, are expected to see increased logistics demand driven by the growing electric vehicle market, especially in Europe and China. This growth is likely to necessitate new logistics systems to support EV startups and established manufacturers transitioning to electric vehicles.

Fashion

Korea's fashion market reached KRW 49.6 trillion in 2024, up 2.3% y-o-y according to Korean Fashion Industry Big Data Trends 2024. The growth of platforms such as Musinsa and ZigZag have increased fashion tenants in logistics. The industry's need for rapid return processing drives demand for centres with automated facilities.

Furniture

As the furniture industry, which saw an increase in contactless orders due to the COVID-19 pandemic, entered a full-fledged speed competition for delivery, leading companies such as Hanssem and Hyundai Livart to invest in logistics centres. They're building systems for next-day delivery services.

F&B

Major food companies strengthened direct-to-consumer online platforms, allowing rapid dispatch of fresh products. On the back of increased fresh-food delivery, there has been substantial new cold-storage development. However, demand from cold-chain players is insufficient to fill these new facilities, as they typically require less space. This has resulted in persistently high vacancy rates in cold storage facilities.

Logistics property overview (Grade A only)

Estimated logistics real estate per capita

Figure 94: 2024 Logistics Stock per Capita

	Grade A - Greater Seoul	All Grades - Greater Seoul	All Grades - Nationwide
Stock per capita	0.8 sqm	1.4 sqm	1.0 sqm
Population	26,304,110	26,304,110	51,751,065
Stock (pyeong)	6,553,134	10,809,067	15,842,761

Source: JLL, 4Q24

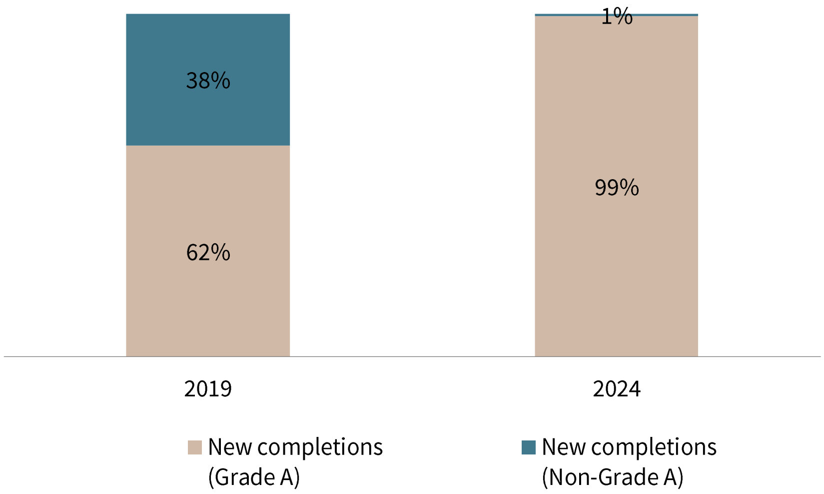
Despite a substantial number of new supply additions in the last three years, the logistics space per capita in Greater Seoul was merely 0.8 sqm in 2024. When considering all types of logistics facilities, regardless of their grade, Greater Seoul's per capita logistics stock stood at 1.4 sqm. This figure was only marginally higher than the national average of 1.0 sqm, despite the region's economic importance and population density.

As such, Greater Seoul's logistics market continues to require more modern logistics space. This is especially the case considering the still-growing e-commerce market, which is further accelerated by expanding cross-border e-commerce players.

Market Size

Modern logistics centres began to proliferate in Seoul less than a decade ago. Given the relatively brief history of modern logistics facilities in Greater Seoul, developers have been actively constructing Grade A logistics centres over the past five years. Recent developments have predominantly focused on Grade A assets. While Grade A projects accounted for approximately 62.0% of total new completions in 2019, this proportion increased significantly to 99.0% in 2024. The growing demand for high-quality facilities by tenants has prompted developers to concentrate on modern logistics centres. Conversely, logistics facilities with smaller floor plates and limited floor access have experienced reduced demand, resulting in decreased development activity for these types of properties.

Figure 95: Proportion of Grade A and Non-Grade A



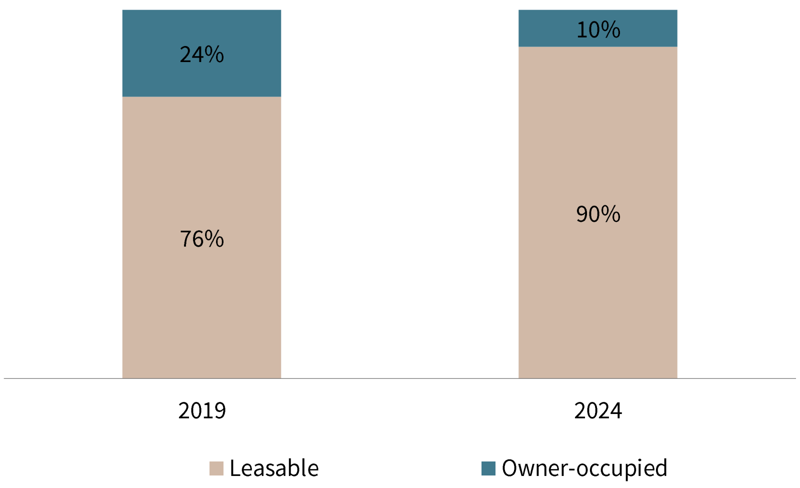
Source: JLL, 4Q24

Another notable trend was the growing proportion of leasable stock. The owner-occupied stock decreased significantly from approximately 24.0% in 2019 to 10.0% in 2024. This shift can be attributed to large-scale developments creating a more tenant-friendly market environment, with landlords offering generous incentives such as rent-free periods to compete against new supply.

Tenants increasingly favoured multi-year leases, finding them more affordable, convenient, and flexible compared to the potential risks associated with ownership, such as fire accidents and property depreciation. This transition was facilitated by the prevalence of build-to-spec projects, which feature standard physical characteristics and, unlike build-to-suit developments, do not secure tenants at an early stage.

As the leasable stock market expands, competition among property owners to attract tenants intensified. Some landlords, facing a shortage of cold-chain tenants, have resorted to converting cold storage facilities to dry storage. Given high construction costs, the preference for leasable stock as a more cost-effective option is likely to persist.

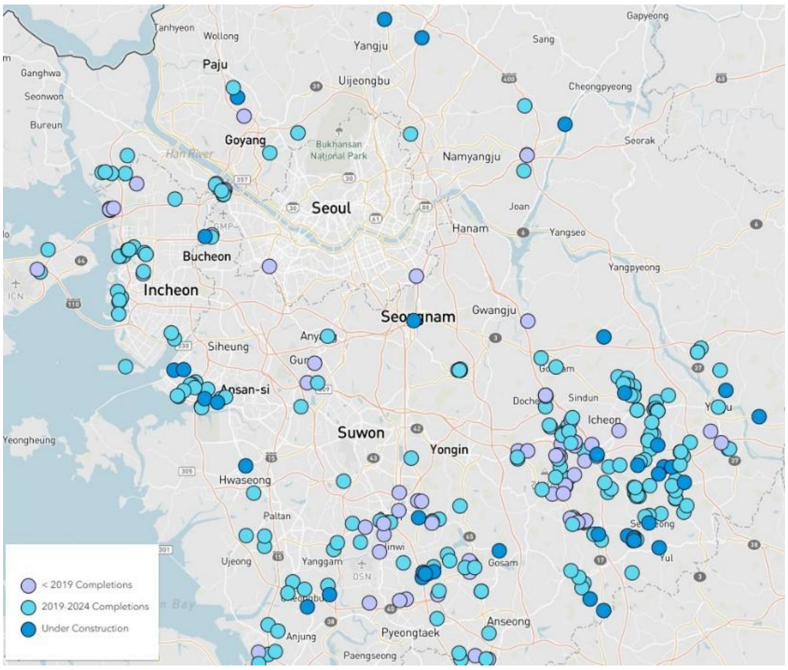
Figure 96: Proportion of Leasable and Owner-occupied Stock



Source: JLL, 4Q24, Grade A

Supply and characteristics of warehouses

Figure 97: Logistics Centres Under Construction



Source: JLL, 4Q24

As illustrated in the map, the traditional logistics hub has primarily developed in southern Greater Seoul, supported by a network of expressways extending to the southern tip of the Korean peninsula. Since 2019, significant development has occurred in the traditional South and South-east regions, as well as in the West sub-market. Future supply under construction will also focus on these three areas.

Figure 98: Proportion of Supply Volume by Precincts

	South-east	South	West	Central	North
< 2019 Completions	41.0%	12.0%	17.0%	28.0%	2.0%
2019-2024 Completions	36.0%	22.0%	37.0%	3.0%	3.0%
Under Construction	25.0%	42.0%	18.0%	3.0%	11.0%

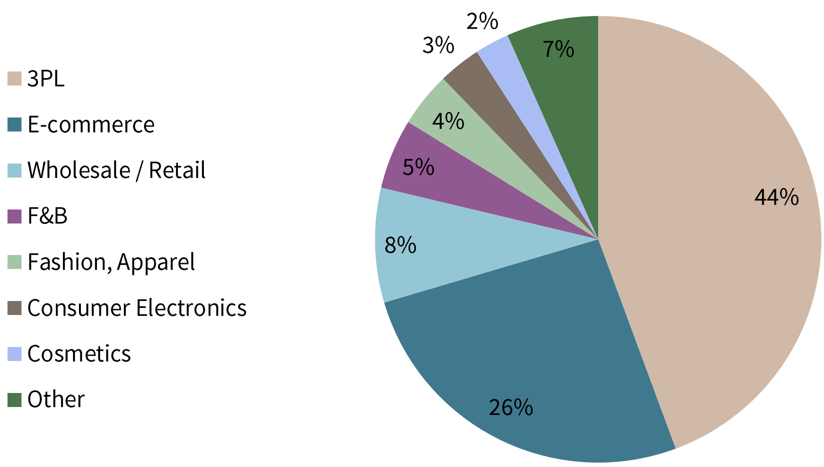
Source: JLL, 4Q24, leasable Grade A stock

Prior to 2019, the South-east was the dominant precinct, accounting for 41.0% of the total stock in Greater Seoul, followed by the Central area at 28.0%. Post-2019, while the South-east continued to see substantial supply growth, the West and South precincts emerged rapidly. These three areas collectively accounted for 94.0% of new completions. The West's development was bolstered by brownfield projects on industrial sites along Incheon's coast, benefiting from proximity to Incheon Ports. As construction permit acquisition in core South-east locations became more challenging due to local government backlash, expansion shifted to the southwest and further south. The upcoming supply will maintain this trend, with approximately 86.0% concentrated in these key sub-markets. In contrast, the Central area continues to face a shortage of new supply due to its high population density, resulting in scarcity of land for logistics development.

Requirements and trends (including impact from e-commerce growth)

South Korea's logistics market has thrived on the growth of e-commerce. Consequently, 3PLs and e-commerce platforms have emerged as key occupiers in the modern logistics market in Greater Seoul, accounting for 44.0% and 26.0% of the market, respectively. Although other industries also continue to expand coverage in the logistics space, e-commerce and 3PL are expected to continue to be key tenants going forward.

Figure 99: Tenant Profile



Source: JLL estimates, 4Q24

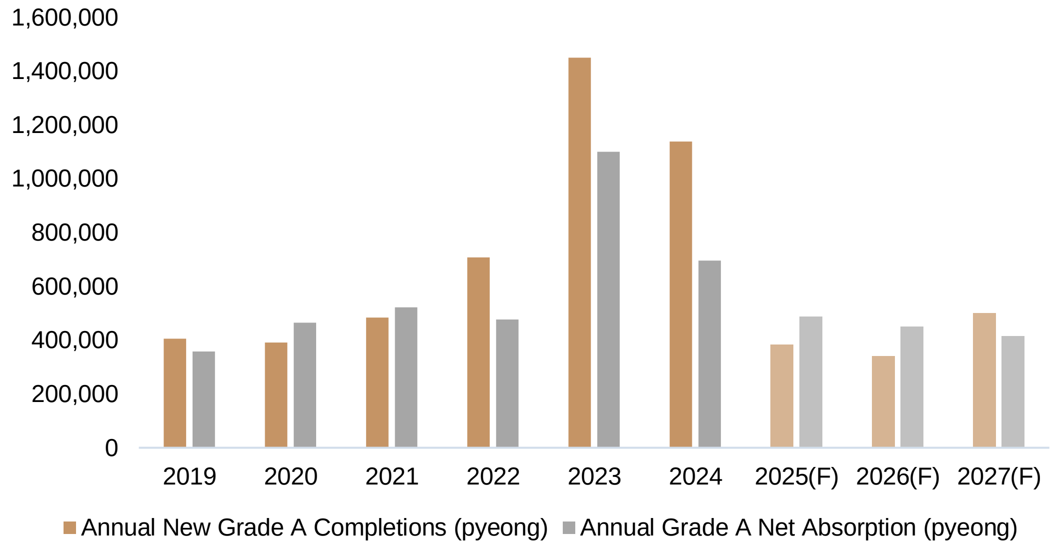
Traditional occupiers established supply chain infrastructure in the South-east area for easy access to expressways connecting to Busan port and to benefit from lower rents. While consistent demand persists in southern Greater Seoul, 3PL and e-commerce players have also expanded to last-mile locations such as Gimpo Gochon, Bucheon, Namyangju, and Goyang. This expansion allows for 3-4 deliveries per day and easier labour sourcing. Additionally, some have extended market coverage to Incheon to handle increased freight traffic from China to Incheon Port, amid the emergence of Chinese e-commerce platforms.

Regarding physical specifications of logistics properties, tenants prioritise facilities with larger floor plates enabling efficient worker movement without frequent floor changes, spacious loading docks and ramps, and consistent temperature and humidity control.

Performance and outlook

Annual Completion

Figure 100: Annual New Grade A Completions and Net Absorption in Greater Seoul (pyeong)



Source: JLL, 4Q24

Note: Excluding owner-occupied stock.

Logistics centres in the Greater Seoul have experienced rapid growth since 2019. Supply volumes peaked in 2023 and 2024, recording 1.45 million pyeong in 2023 and 1.14 million pyeong in 2024.

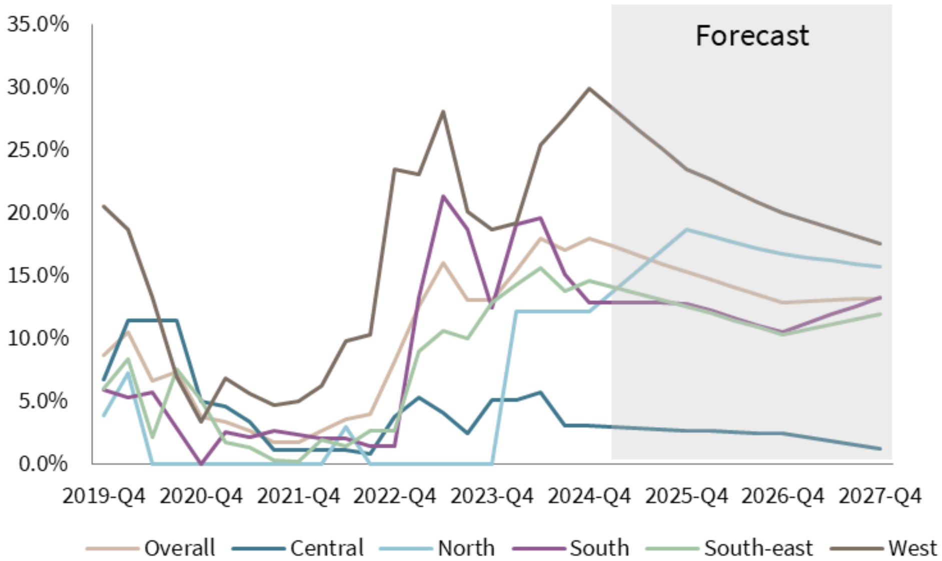
However, due to increased leasing risks and cost pressures, supply is expected to decrease sharply from 2025. Long-term difficulties related to project financing have significantly impacted supply, resulting in numerous projects failing to break ground. While there are numerous construction permits awaiting financing approval, most are unlikely to proceed to groundbreaking.

Among the logistics centres that have started groundbreaking, supply delays for logistics centres that have already broken ground have become frequent. These delays stem from various causes, including construction halts due to surging construction costs, foreclosure sales due to loss of benefit of time in project financing, developer bankruptcies, and disputes among developers, construction companies and lenders.

2025 supply is expected to be 383,000 pyeong, which is just one-third of 2024 levels of 1,140,000 pyeong. New supply will concentrate in the South sub-market, expected to account for 49.0% of new completions. The South-east and North sub-markets follow, representing 24.0% and 14.0% of new completions, respectively. The West sub-market is anticipated to see only one new centre, while the Central area may have one centre undergoing conversion from cold to dry storage. Notably, no new mega-scale centres with a GFA of 50,000 pyeong or larger are likely to be completed. The largest project currently underway, slated for completion in 2025, will offer a GFA of approximately 39,000 pyeong.

Demand vs Supply

Figure 101: Greater Seoul Grade A Vacancy Rates



Source: JLL, 4Q24

Since 2022, the overall vacancy rate has continued to surge despite positive net absorption, amid incessant considerable new supply. Going into 2025, the overall vacancy rate may decrease slightly as a mix of new, consolidation, expansion and upgrade demand persists while new construction volume plunges significantly.

Demand is likely to be particularly concentrated in newly built centres. New centres completed in 2024 accounted for roughly 67.0% of the 2024 annual net absorption. In addition, the vacancy rate for centres completed before 2024 was merely 9.3% in 4Q24.

The overall Greater Seoul vacancy rate in 4Q24 recorded 18.0%, reaching a record high. However, it is expected to decline to the mid-10% range in late 2025, with a gradual decrease to the low-10.0% range anticipated from the second half of 2026 onwards. Gradual vacancy rate declines are anticipated in most sub-markets, including the Central and West, each of which expects only one new supply in 2025. Notably, Incheon city, which has recorded the highest volume of new completions since 2021, has no additional supply planned for 2025.

Major logistics facility providers and players

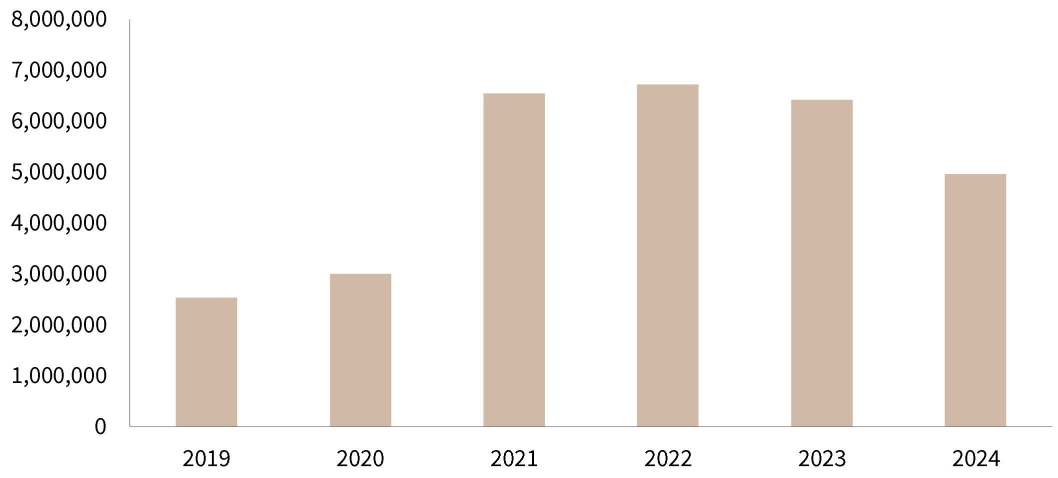
An analysis of the major providers of Greater Seoul logistics centres reveals that, as of 4Q24, around 70.0% of completed centres (by GFA) are held by financial investors, while the remaining 30.0% are held by non-investors. Non-Investors include developers, general contractors and corporates.

The major players include but not limited to institutional investors such as National Pension Service ("NPS"), Government of Singapore Investment Corporation ("GIC"), and private equity firms namely, Blackstone, KKR, and global real estate developers such as Mapletree and Hines.

In 2024, there was a notable increase in foreign capital inflows, including investments from GIC, Abu Dhabi Investment Council (ADIC), Partners Group and Heitman, which played a significant role in completing transactions. The distressed asset prices due to supply glut and high vacancy rates stimulated foreign investors' appetite for these investments.

Investors and investment trends, and major selected transactions. if any

Figure 102: Annual Logistics Transaction Volume in South Korea (KRW million)



Source: JLL, 4Q24

Logistics centre transaction volumes recorded over KRW 6.0 trillion each year between 2021 and 2023. However, annual transaction volume in 2024 fell to roughly KRW 5.0 trillion. Despite healthy investor appetite, transactions were postponed or failed due to significant bid-ask price gaps. Other factors contributing to the decrease in transaction volume included domestic capital liquidity shortages, unresolved market challenges such as oversupply, cold storage concerns and a backlog of pending transactions.

Figure 103: Major Logistics Transactions in 2024

SUBJECT PROPERTY	GFA (pyeong)	TOTAL PRICE (KRW)	VENDOR	PURCHASER	REMARKS
Seoknam Innovation Logistics Center	90,540	585,000,000,000	Pacific AMC (KKR)	IGIS Asset Management	Forward purchase
Jisan Logistics Center B	60,752	318,000,000,000	Jisan Co.	LaSalle Investment Management (ADIC)	Forward purchase
Jisan Logistics Center A	56,686	300,000,000,000	Jisan Co.	LaSalle Investment Management (ADIC)	Forward purchase
Bucheon Miraein Logistics Center	24,840	300,000,000,000	Miraein Logis Bucheon PFV	Gravity AMC (GIC)	Forward purchase
North Cheonan Logistics Center	43,137	246,507,901,500	DI&E	Gravity AMC (GIC)	Forward purchase
Bundang Yatap Logistics Center	21,340	222,653,000,000	Heritage Capital Management	IGIS Asset Management	NPL-type of Sale
Seokpo-ri Logistics Center	32,370	212,000,000,000	Pivot Plus	IGIS Asset Management	
Woonsu-ri Logistics Center	15,776	149,100,000,000	Geumo Distribution	Starlord AMC	Forward purchase
Hanexpress South-icheon Logistics Center	23,466	141,100,000,000	Han Express	ADF AMC	
Bupil-ri Logistics Center	22,902	132,000,000,000	CU Logis	Petraville Asset Management	NPL-type of Sale
Pyeongtaek R&R Logistics Center	43,295	126,000,000,000	R&R Logistics	Posco E&C	Ownership Transfer via Subrogation

HIVE Gunryang Logistics Center	16,425	125,920,566,679	SPC Gunryang Logistics	DL Construction	Ownership Transfer via Subrogation

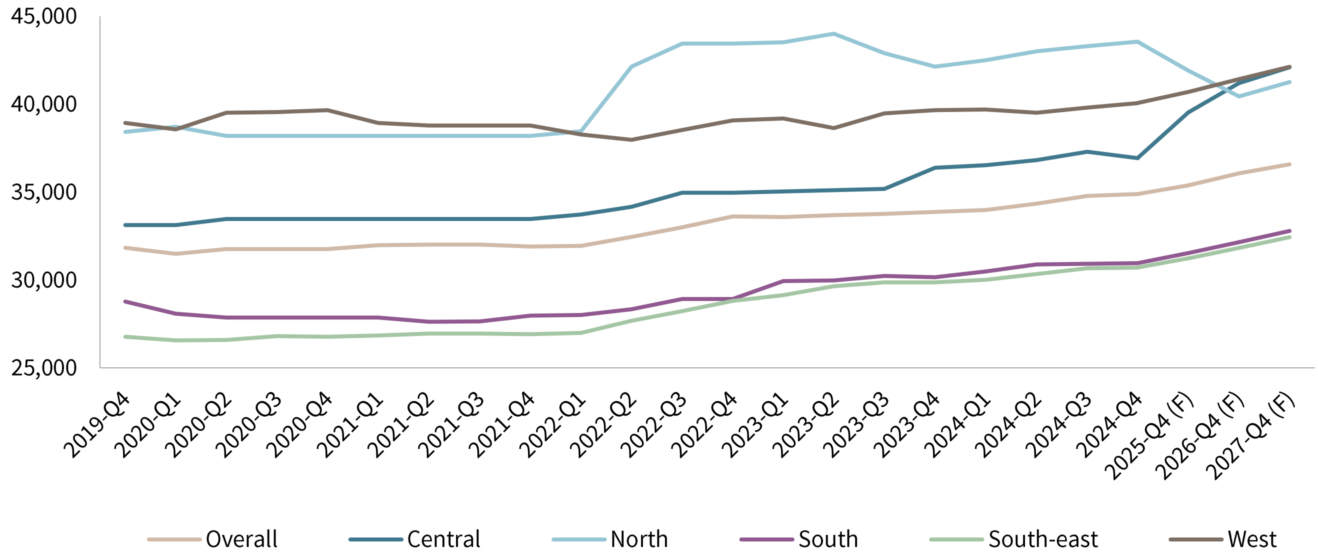
Source: JLL, 4Q24

2024 transactions comprised mainly forward purchases, NPL (non-performing loan) type of sales, and ownership transfers via subrogation. Contrary to expectation of widespread asset distress in 2024, competitive price levels were maintained, except for NPL-type properties.

The market is expected to gradually improve in 2025, due to more liquidity alongside additional interest rate cuts. While recent interest in the logistics market has mostly come from foreign investors instead of domestic ones, domestic institutional investors, including the National Pension Service (NPS), have announced plans to inject approximately KRW 750.0 billion into Korean real estate core platform funds, with capital injections expected to increase. Consequently, numerous transactions of core properties are anticipated in 2025. Recent price adjustments in logistics real estate have enhanced the investment attractiveness of this sector.

Historical and forecast data for key logistics market indicators

Figure 104: Greater Seoul Grade A Net Rent (GFA, pyeong)



Source: JLL, 4Q24

As of 4Q24, overall net rent for dry centres in the Greater Seoul reached KRW 34,900 per pyeong, up 3.0% y-o-y. From 2019 to 2024, the Greater Seoul logistics market experienced a CAGR of 1.8% in rents. Comparing the five-year CAGR across the sub-markets, the South-east recorded the highest growth rate at 2.8%. In contrast, the West showed the lowest CAGR at 0.6%. The North exhibited a CAGR of 2.5%, while the Central recorded 2.2%. The South's CAGR was at 1.5% over the same period.

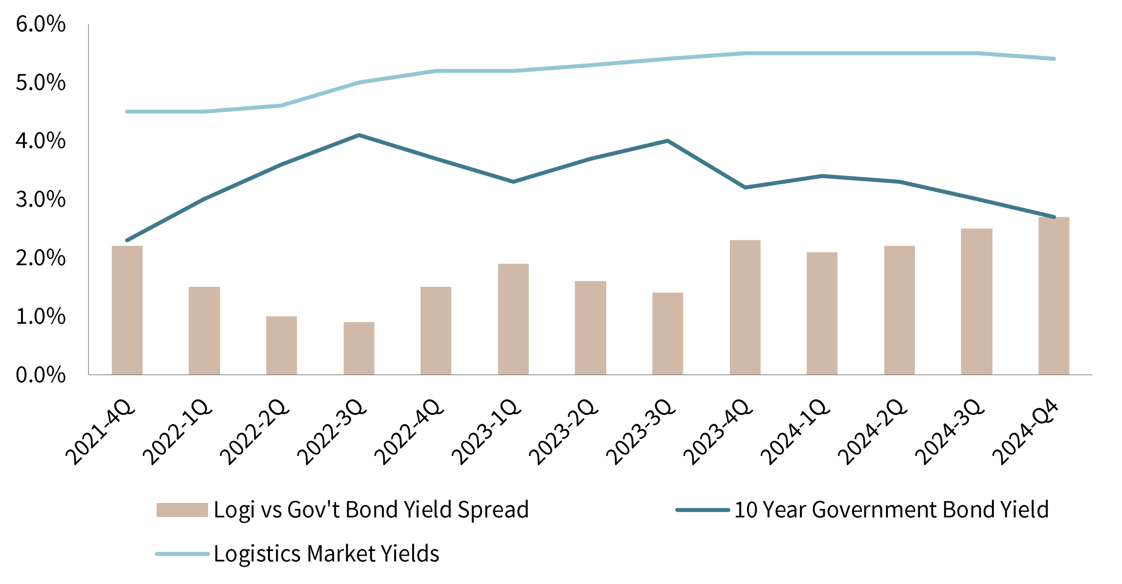
Over the past few years, developers have raised asking rents to recoup rising construction costs, although the extent of rent increases was limited by abundant supply. Looking ahead, as market conditions shift towards a sharp decrease in supply, landlords may have the opportunity to implement more substantial rent increases, particularly for dry centres, which have seen limited growth thus far. Centres renewing leases after extended periods due to contract expirations, especially those capable of three or four daily deliveries in last-mile locations, are likely to see higher rent hikes. Conversely, centres with long-term vacancies are expected to offer more incentives than the market average.

The importance of location cannot be overstated, as some tenants are willing to pay a rent premium to offset transportation costs and more easily access labour. In 4Q24, certain centres raised rents by over 10.0% compared to the previous quarter, while others had to lower rents to deal with persistent vacancies.

For example, major centres near key intersections or those offering last-mile delivery services tend to demonstrate stronger rental growth. This trend underscores increasing polarisation in the logistics real estate market. The willingness of tenants to pay higher rents for well-located facilities reflects the growing emphasis on rapid delivery times, particularly in the context of e-commerce growth and evolving consumer expectations.

Market Yield

Figure 105: Greater Seoul Grade A Cap Rate



Source: JLL, 4Q24

The cap rate for logistics centres recorded 5.4% in 4Q24. The Bank of Korea's consecutive interest rate reductions since October have raised expectations for enhanced liquidity and eased pressure on borrowing costs. The combination of a slowdown in new supply and anticipated improvements in the financial market is likely to contribute to increased transaction volume. Market resilience is expected to spur more activity in core-type assets, contrasting with 2024 when distressed sales opportunities were prevalent. However, persistent challenges, such as significant unresolved vacancies and subdued cold-storage demand, continue to pose major headwinds. These factors are likely to widen the disparity in investment sentiment between various asset grades.

9. Overview of Vietnam's Logistics Market

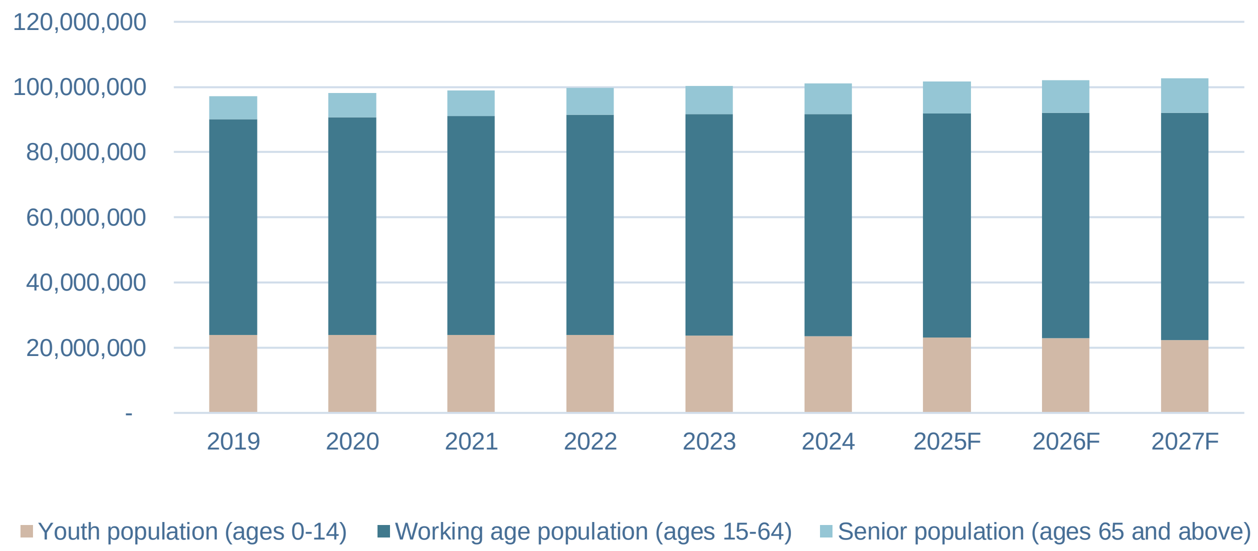
Macroeconomic overview

Country overview

Vietnam's population totalling around 101 million persons in 2024, with average annual growth rate of 1.0%. Vietnam currently enjoys favourable demographics with roughly two working-age individuals for every dependent. However, the country will soon face rapid population aging, which will impact socio-economic development. People aged 65 and over represent 9.3% of total population in 2024, but this figure is projected to rise to around 20.0% by 2035.

Vietnam has witnessed a surge in its middle-class population over the last decade. The number of middle-income households nearly doubled, expanding from 8.9 million in 2014 to 17.4 million in 2024[24]. This upward trajectory is expected to continue with roughly 23.2 million households projected by 2030. This substantial growth in the middle-class population should drive higher consumption levels in the coming years.

Figure 106: Vietnam's Demographic Profile



Source: General Statistics Office of Vietnam, Oxford Economics, February 2025

Economic overview

Vietnam's economy exhibited resilience in recent years. 2024 real GDP increased by 7.1% from the previous year, only lower than the growth rates of 2018, 2019 and 2022, and surpassed the government's growth target. This performance can be partly attributed to government policies such as extending the 2 percent VAT reduction to end-2024, as well as accommodative monetary policy to support economic growth. Vietnam is projected to maintain a healthy economic outlook. According to the latest forecasts by OE, the country is expected to sustain a robust average annual growth rate of 6.2% for the next three years through 2027.

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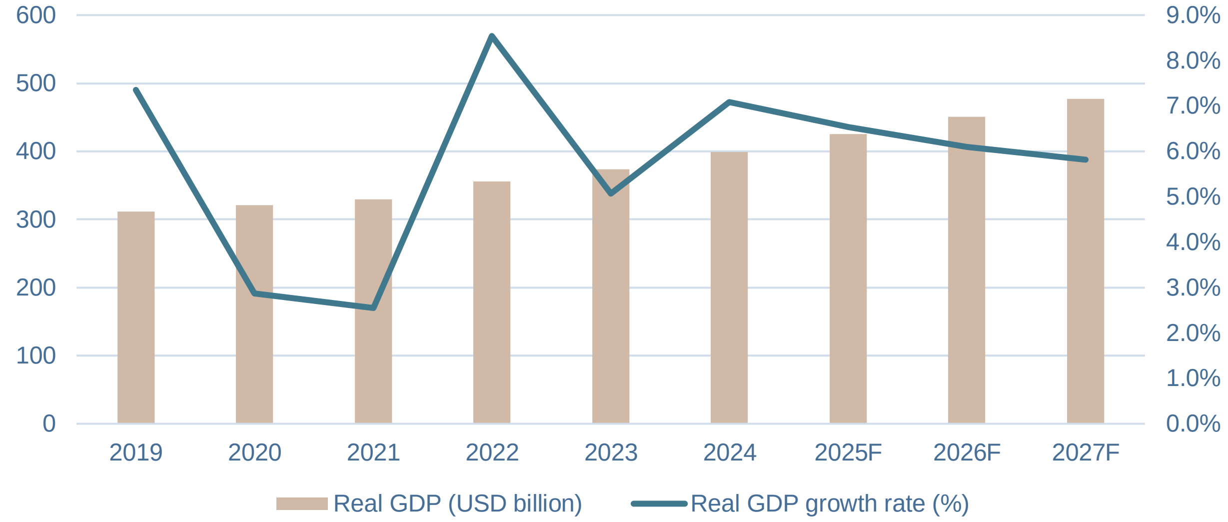
24 Middle-class households are defined by JL as those households with an annual income of USD 20,000 or above in 2015 PPP terms.

Figure 107: Vietnam Real GDP Growth



Source: General Statistics Office of Vietnam, Oxford Economics, February 2025

Vietnam's import and export turnover continued to grow over the past five years, despite global economic uncertainties. In 2024, total export and import turnover of goods reached a record high of USD 786.3 billion, marking a 1.5-fold increase from 2019. Vietnam has benefitted from the global chip upturn as computers and components are supporting the electronics exports. While robust investment inflows are expected to boost exports in the near term, early 2025 might see a temporary slowdown due to uncertainties surrounding potential US tariffs on Vietnamese exports.

The Vietnamese labour market has grown, with the workforce aged 15 and above reaching 53.0 million in 2024, up by 575,400 from 2023. Employment has increased to 51.9 million, a 1.1% rise from the previous year. Despite Vietnam's favourable demographics, the labour market faces challenges including high informal employment and low workforce skills. These include a high proportion of informal workers in unstable jobs, comprising about three-fifths of the employed workforce, and inadequate formal training.

Infrastructure developments and ***government planning***

By region, the North possesses a well-integrated transportation system, with multiple expressways connecting adjacent areas to the nation's capital in Hanoi, facilitating easy access to Hai Phong seaport as well as Noi Bai and Cat Bi airports. Coupled with its proximity to Southwest China, this region is considered more conducive to Ready-Built Warehouse (RBW) development. Going forward, this area will accelerate the completion of the remaining section of Ring Road 3, along with the implementation of the Ring Road 4 project, which is targeted for completion in 2027.

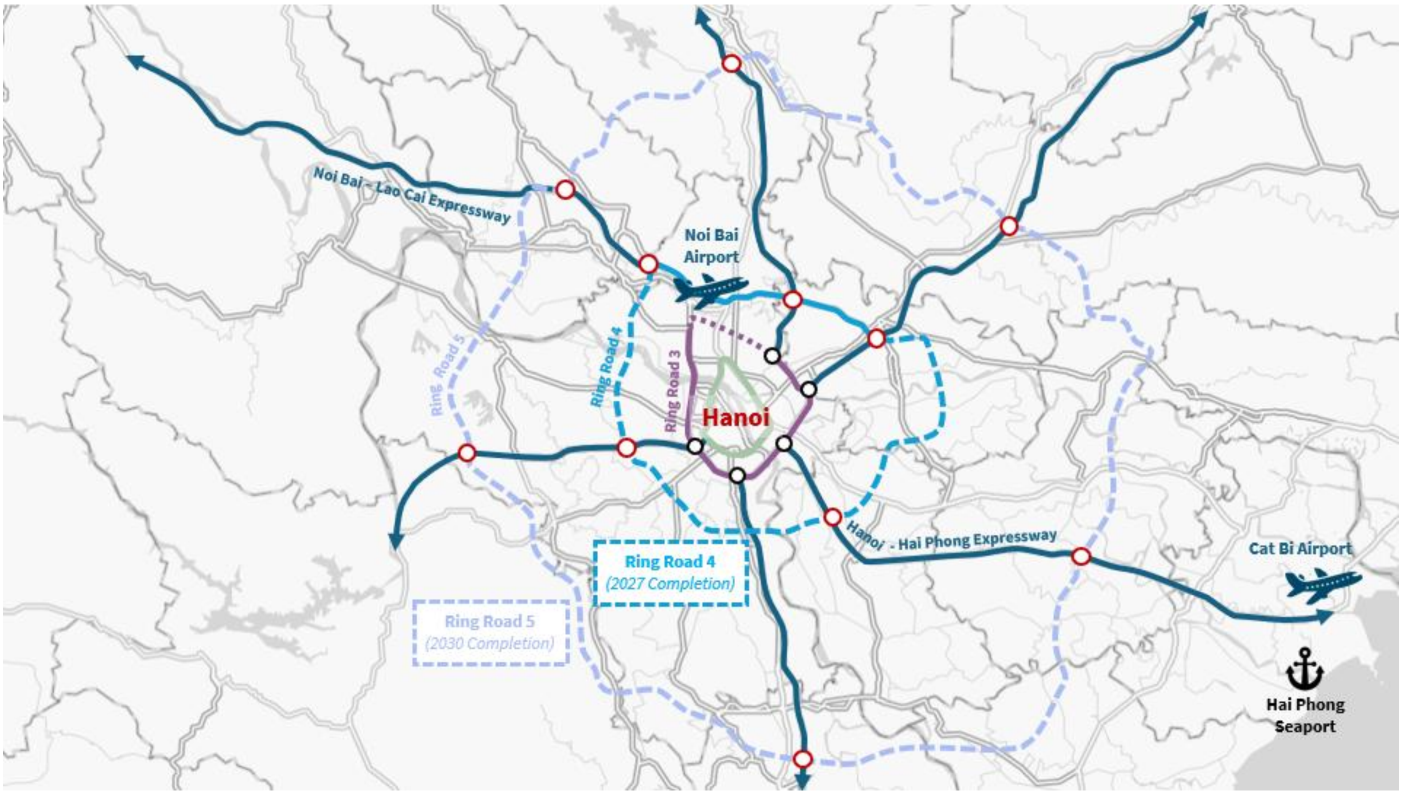
Meanwhile, the Southern region has been the premier destination for FDI in Vietnam's manufacturing sector. However, its infrastructure has struggled to keep pace with rapid development and transportation demands. Currently, the surrounding areas can only directly connect to Ho Chi Minh City's central area through two expressways: Ho Chi Minh-Long Thanh-Dau Giay and Ho Chi Minh-Trung Luong. While the ring road projects have not yet fully materialized, they have demonstrated considerable progress in recent times. Notably, in the coming period, key projects that will help improve the infrastructure system in the Southern region include Long Thanh International Airport (expected to commence operations for phase 1 in 2025) and Ring Road 3 (to be operational in 2026).

Looking ahead, the country is focusing on expanding and upgrading its expressway network, with plans to complete 12 component projects of the North-South Expressway by 2025. In the railway sector, Vietnam aims to approve the investment policy for the North-South high-speed railway project by 2025, with completion targeted before 2045.

The country is also expanding and modernizing its seaport network. In 2024, the government announced the master plan for Vietnam's seaport system development for 2021-2030, with a vision to 2050 [25]. This plan emphasises the development of the Can Gio international transshipment port complex and considers upgrading Ho Chi Minh City port to a special seaport status.

In the aviation sector, three major international airports serve as gateways for both international and domestic trade, including Tan Son Nhat in HCMC, Noi Bai in Hanoi, and Da Nang. To meet increasing demand for air freight, especially in the South, Vietnam is developing the Long Thanh International Airport in Dong Nai, in order compete with regional airports like Singapore's Changi and Thailand's Suvarnabhumi.

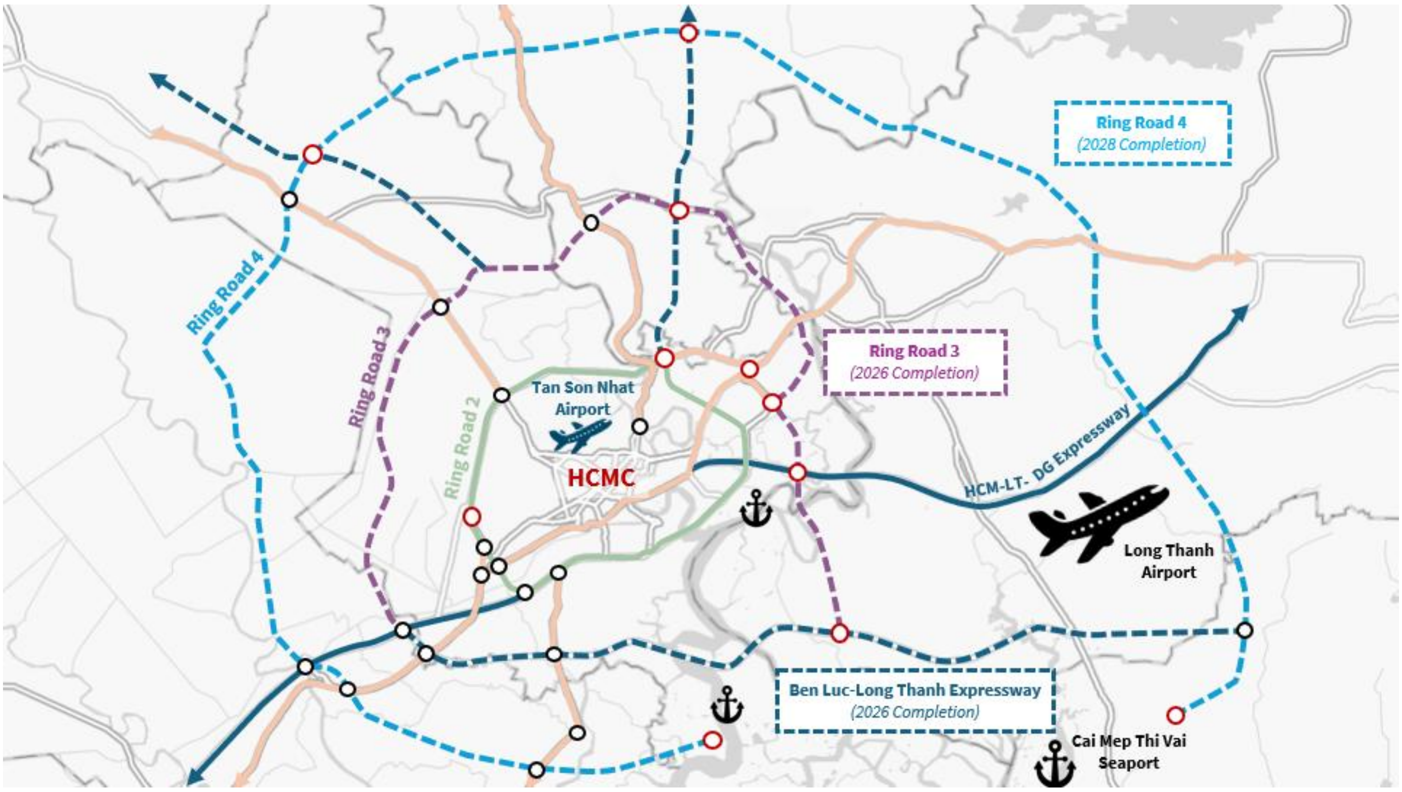
Figure 108: Northern Vietnam Major Ring Roads & Expressways



Source: JLL, 4Q24

25 Vietnam government issued Decision No. 442/QĐ-TTg on May 22nd, 2024.

Figure 109: Southern Vietnam Major Ring Roads & Expressways

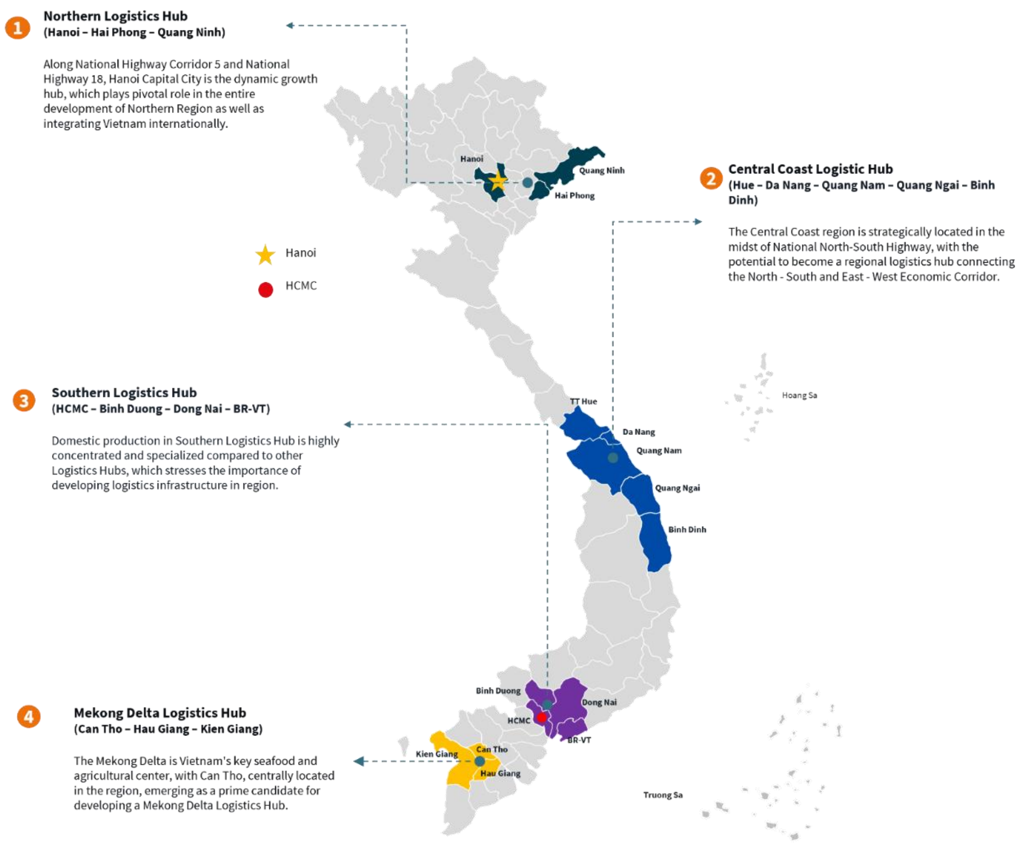


Source: JLL, 4Q24

Logistics market overview (Grade A only)

Key logistics hubs

Figure 110: Vietnam Key Logistics Hubs



Source: JLL

Logistics real estate market landscape

Vietnam's logistics market landscape is divided into three key regions: Northern, Central, and Southern. Each area exhibits different characteristics in terms of development pace and industry drivers. While the Northern and Southern regions have experienced substantial growth, the Central region's economic advancement, urbanisation, and FDI inflows remain comparatively modest. Consequently, the logistics sector in this Central region has not yet captured the attention of major occupiers and developers. So far, investors in logistics real estate continue to prioritize investment opportunities within the country's two primary economic hubs: the North and South.

Northern Key Economic Zone is positioned as a strategic 'China plus one' manufacturing hub. As such, the region is dominated by industries that have a large presence producing goods in China such as electronics, automotive and electrical equipment.

Hanoi and its submarkets, including Bac Ninh, Hung Yen, Hai Duong, and Hai Phong (hereinafter "North Vietnam"), are key provinces in this area.

Current prime supply (NLA sqm)	*Future prime supply (NLA sqm)* [1]
1,239,567	1,525,892
Asking rent (sqm/month)	*Occupancy Rate*
USD 3.2 – 6.0	~88.5%

Southern Key Economic Zone stands out as the most dynamic economic zone across Vietnam. As the country's first industrial development hub, the South has gained significant edges, positioning itself ahead in both growth and overall development.

Key provinces in the south are Ho Chi Minh City (HCMC) and its submarkets, including Binh Duong, Dong Nai, Long An, and Ba Ria – Vung Tau (BR-VT) (hereinafter "South Vietnam").

Current prime supply (NLA sqm)	*Future prime supply (NLA sqm)* [1]
2,021,224	954,323
Asking rent (sqm/month)	*Occupancy Rate*
USD 2.9 – 7.1	~70.2%

Source: JLL, MapIT, 4Q24

Note: [1] Future supply includes under-construction and proposed projects with clear development timelines within the 2025-2027 period, which are publicly available as of the reporting time. This is subject to change upon the latest development plans.

Demand drivers for logistics properties

All modes of transport experienced positive growth in recent years due to increased domestic production, consumption and import-export activities. According to General Statistics Office of Vietnam (“GSO”), maritime transportation reached 132.4 million tons in 2024, an increase of 15.0% y-o-y. As Vietnam integrates further into global supply chains, demand for containerized shipping has increased, particularly for electronics, apparel, and agricultural exports. Meanwhile, air freight reached 0.4 million tons in 2024, increased 35.3% y-o-y. This showed clearly the recovery trend of air cargo transport after the COVID period and was mainly driven by the sharp growth in demand for exporting electronic components, valuable goods, etc. from Vietnam.

Manufacturing: Industrial production has grown at an average rate of 4.5% during the 2020-23 period. Despite various challenges, industrial production grew 8.4% y-o-y in 2024 and was also the highest growth rate since 2020. Registered FDI in 2024 reached USD 38.2 billion, while disbursements grew 9.4% to USD 25.3 billion. 66.9% of total register FDI focused in the processing and manufacturing sector. Robust investment activities lead to more manufacturing activities, thus raising demand for warehouses from manufacturers.

Retail sales and e-commerce: Vietnam is experiencing steady growth in private consumption. In 2024, total retail sales of consumer goods reached nearly $251.5 billion, marking a 9.0% year-over-year growth. Simultaneously, traditional retailers continue to lease warehouse space for storage and distribution. Meanwhile, Vietnam's e-commerce sector is set for robust growth, which is fuelling demand for warehouses and logistics services to support the growing e-commerce sectors. Shopee retains its leading position in the competitive online market, capturing 60.0-70.0% of the gross merchandise value among major e-commerce platforms. At the same time, traditional brick-and-mortar retailers have successfully transitioned to the digital marketplace by launching their own online stores. Notably, many e-commerce platforms increasingly rely on in-house logistics operations, which allows businesses to better control costs, enhance customer experience, and reduce dependence on third parties. Consequently, demand for logistics properties from e-commerce companies is expected to increase.

3PLs: The continued rise in manufacturing FDI inflows is fueling demand for logistics services and warehousing facilities. This growth not only boosts the proportion of manufacturing tenants in logistics properties but also provides growth momentum for 3PL providers. Modern manufacturers often choose to outsource their logistics operations to 3PLs, allowing them to focus on core competencies.

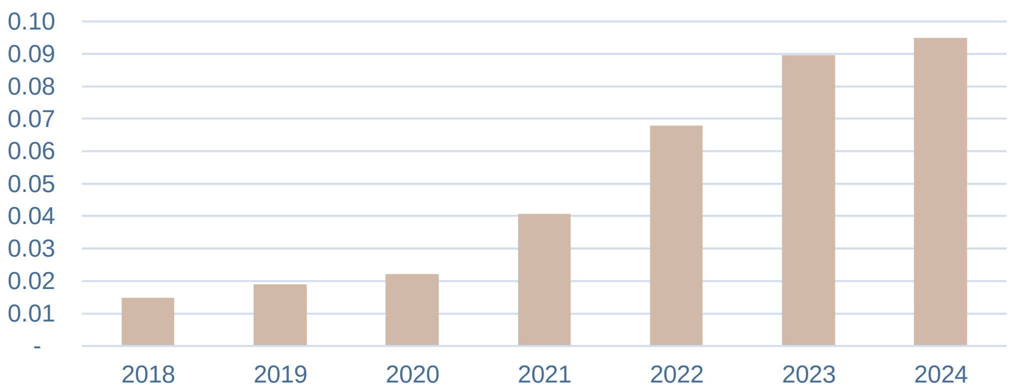
Despite the trend towards in-house logistics in some sectors, 3PL services are likely to maintain their significant market share. Their resilience stems from the ability to provide comprehensive, flexible, and cost-effective solutions catering to both domestic consumption and manufacturing sectors. The expertise and economies of scale offered by 3PL providers remain valuable, especially for businesses preferring to focus on core competencies while leveraging specialised logistics support.

Logistics property overview (Grade A only)

Estimated logistics real estate per capita

The logistics market's development has been demonstrated through the significant rise in prime RBW space per capita. While Vietnam had around 0.01 sqm of prime logistics space per person in 2018, this figure has increased six-fold to over 0.09 sqm per capita by the end of 2024.

Figure 111: Estimated Prime Warehouse Space per Capita (Sqm per person)



Source: JLL, GSO, 4Q24

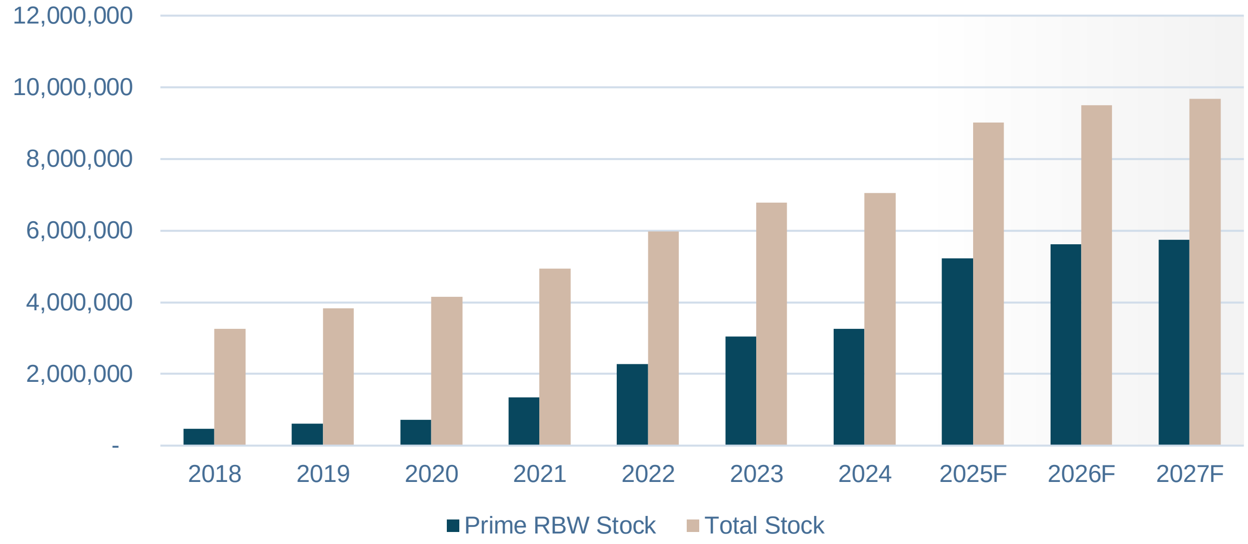
That said, Vietnam's RBW sector remains in its nascent stage in comparison with more developed markets such as Singapore and Malaysia. This indicates great potential for further development, supported by growing domestic demand and cross-border trade activities.

Market Size

The Vietnam logistics property market has experienced strong growth in 2022 and 2023, as a result of increased involvement of institutional developers and growing occupier demand. By the end of 2024, the aggregate warehouse space expanded to 7.0 million sqm, reflecting a 3.9% y-o-y increase.

Notably, growing market maturity is also indicated by the penetration rate of prime RBW stock, which rose from 14.3% in 2018 to 46.3% as of end-2024. Institutional players have been instrumental in this transformation, introducing higher-quality developments that have elevated the overall market landscape.

Figure 112: Vietnam RBW Market Size by Year (NLA, sqm)



Source: JLL, 4Q24

Notes:

Total market stock includes both Traditional and Modern RBW projects within key provinces in North Vietnam & South Vietnam.

Future supply till 2027F includes under-construction and proposed projects with clear development timelines, which are publicly available as of the reporting time. This figure is subject to change upon the latest development plans.

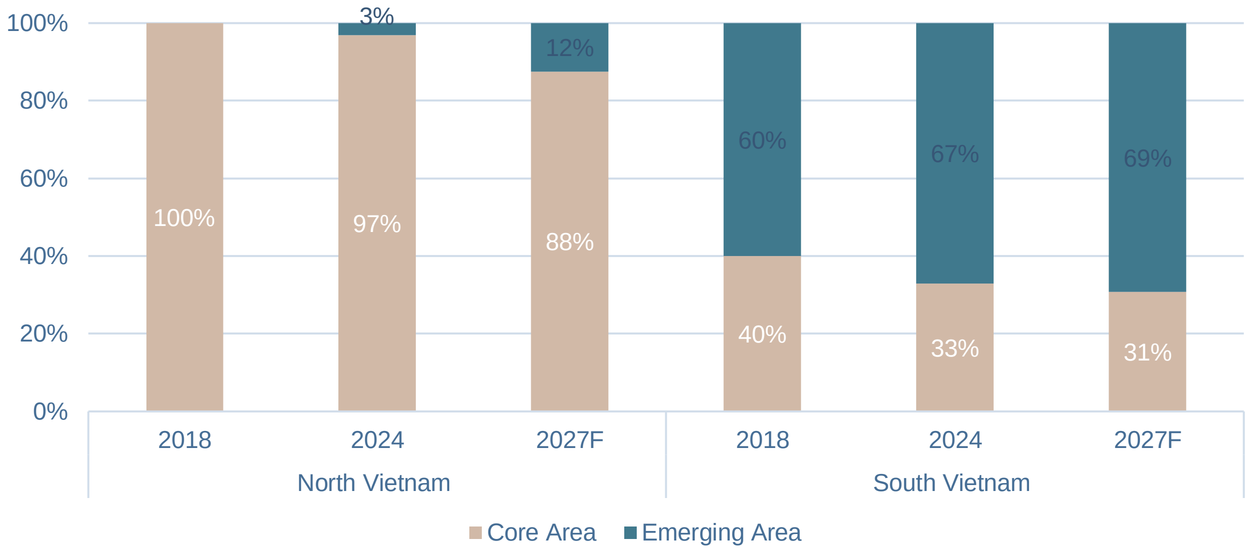
New supply between 2025 and 2027 will total roughly 2.6 million sqm. By the end of 2027, total national supply is poised to reach nearly 9.7 million sqm, marking a 1.4-fold increase from current levels. The prime warehouse segment is projected to account for 59.3% of the overall market stock.

Supply and characteristics of warehouses

South Vietnam spearheaded the initial wave of RBW developments catering to both manufacturing and domestic consumption activities. This leading position has prompted ready-built developers to strategically choose this region for their first market entry. As a result, the prime RBW market scale in the South has grown to nearly double the size of its Northern counterpart.

In recent years, however, North Vietnam has caught the interest of institutional developers, with many projects in the pipeline. The region's well-synchronized infrastructure system has created favourable conditions for investors to explore opportunities even in more remote areas. In contrast, the still-developing transportation network in the South may result in limited expansion options for both developers and occupiers.

Figure 113: Proportion of Prime RBW Stock by Key Regions (NLA, sqm)



Source: JLL, 4Q24

Note: Future supply till 2027F includes under-construction and proposed projects with clear development timelines, which are publicly available as of the reporting time. This figure is subject to change upon the latest development plans.

Figure 114: Map of North Vietnam Prime RBW Supply

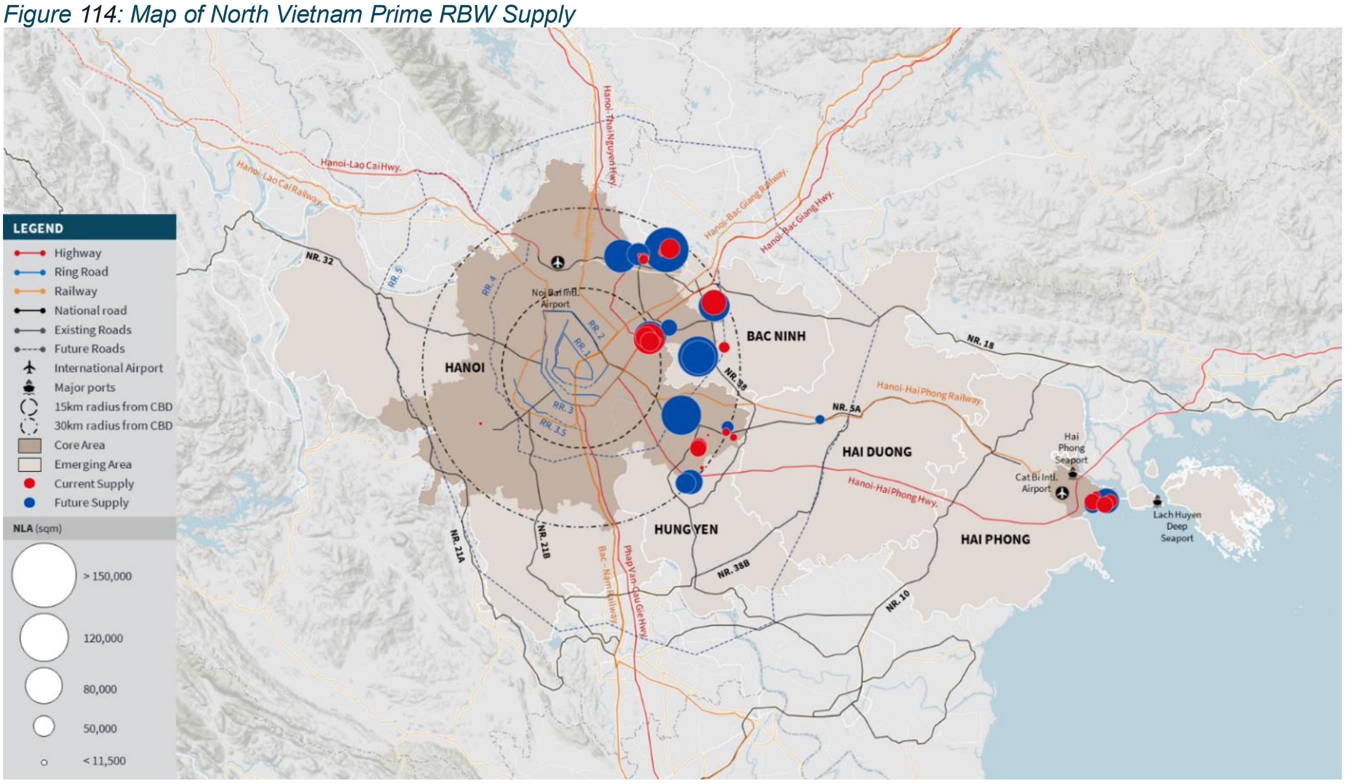
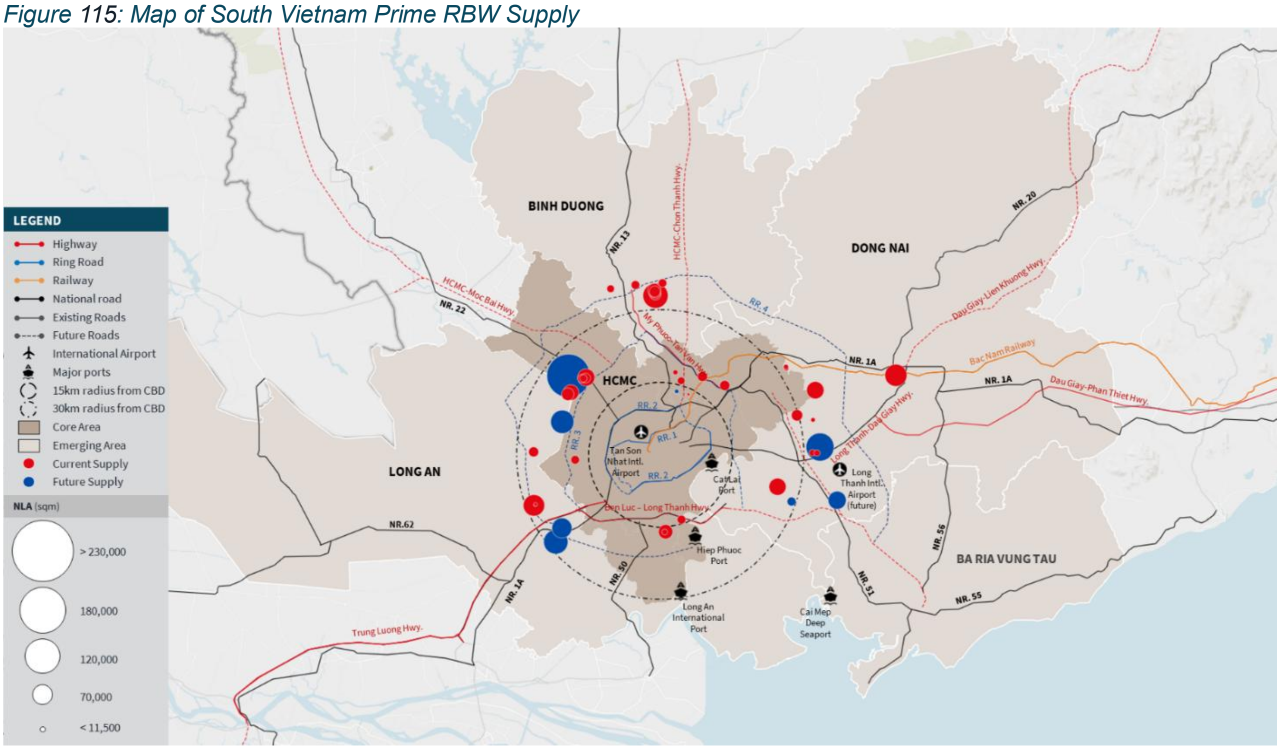


Figure 115: Map of South Vietnam Prime RBW Supply



Source: JLL, Map IT, 4Q24

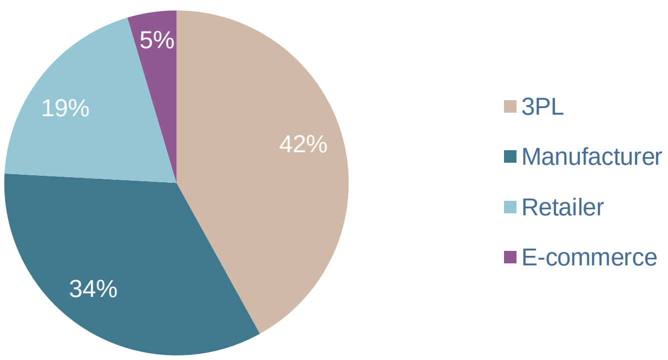
Note: Future supply includes under-construction and proposed projects with clear development timelines within the 2025-2027 period, which are publicly available as of the reporting time. This figure is subject to change upon the latest development plans.

As an established market, South Vietnam has seen diminishing land availability in core areas, which is pushing newly completed and upcoming projects to emerging locations. The Northern core area, with its available land bank and locational advantage, remains a priority for new developments. However, escalating land prices in prime locations are prompting developers to build new logistics hubs.

Requirements and trends

3PLs currently form the largest occupier group and the manufacturing sector is also a primary driver of warehouse demand. E-commerce and retailers are set to grow strongly despite their moderate shares.

Figure 116: Vietnam Prime RBW Tenant Profiles Figure



Source: JLL, 4Q24

Note: Occupier profiles are best estimates based on a non-exhaustive list of major RBW tenant types within key provinces in North Vietnam & South Vietnam on the best available information basis. Proportions are estimated based on the number of occupiers.

Modern Warehouse

The introduction of high-quality facilities, spearheaded by institutional developers, has significantly elevated the standard for market demands. While warehouse specifications have been upgraded to meet higher occupier requirements, there is still room for further enhancement.

Figure 117: Specifications Comparison of RBW Grades

No.	Specs [1]	Traditional Warehouse	Modern Warehouse
1	**Structure**	Masonry-concrete structure and reinforced concrete structure are often used Mezzanine office within warehouse portion	Steel portal frame with metal cladding Integrated 2 storeys office
2	**Clear height**	Approximately 5 – 6m	At least 9 – 12m or higher for single-storey buildings
3	**Loading dock**	Floor level loading/ roller shutter doors If any, one dock for each 3,000 – 3,500 sqm	Various designs: (1) 10m open bay/ door + Dock levellers & ramp access (2) Dedicated dock door and levellers + ramp access. At least 1 dock leveller for each 1,200 – 1,500 sqm
4	**Platform height**	Floor level loading	1.3m
5	**Floor loading**	Typically, 1.5 - 2 ton/sqm Landlords do not calculate floor-loading data. This can result in floor depression.	At least 3 ton/sqm
6	**Fire & security**	Basic fire protection: fire alarm, fire hose, fire extinguisher (without sprinkler)	Sprinkler system required. In some instances, a fire hydrant will suffice. Fire compartment is available to enclose an area of a building with fire-resistant barriers
7	**Roof lighting**	No light available from the roof	Natural roof lights with 5.0-10.0% coverage rate
8	**Ventilation system**	No modern ventilation system is available except for windows	Available inside the building to control air quality
9	**Other facilities**	Limited	Security guard post. Storm water collection (normal downpipes or potentially symphonic drainage). Solar ready roof
10	**Truck/ container width**	15 - 25m	Single block usage: 27.5 - 30m Shared usage: 52 - 54m
11	**Value-added services**	Simple services such as hire of material handling equipment, labour and trucking services	Majority are offering dry lease option only in line with tenant demand

Source: JLL

Note: [1] Criteria would be classified as per JLL in-house classification. Analysis by grade (i.e., Modern and Traditional) would be applicable for general warehouse only. In Vietnam, the existing warehouse supply still has not been able to meet the full set of Modern criteria; therefore, the warehouses which can meet the majority of such the set, namely no. 1, 2, 3, 4, 5, 6, 11 will be classified as Modern type.

Ready-built Hybrid (RBH)

RBH has recently emerged in the Vietnam logistics market as an innovative strategy in response to global economic challenges. These facilities provide dual-function spaces that can accommodate both manufacturing and warehousing operations. RBH enables landlords to offer flexible leasing options and diversify their tenant mix, thereby improving asset performance and maintaining resilience in a changing market landscape.

Multi-story Facilities

The shift towards multi-storey developments is gaining momentum as a result of rising investment costs, especially in land acquisition. These facilities are predominantly found in the South, while the North is expected to welcome its first high-rise warehouses by 2025. Most existing projects are two-storey, with ramp-designed premises preferred over those using cargo lifts due to better operational efficiency.

Built-to-suit Development (BTS)

The rapid growth of e-commerce and retail sectors in Vietnam has heightened logistics facility standards. BTS development emerges as an effective solution, offering customized spaces while minimizing CAPEX. Despite challenges of high costs and expertise requirements, BTS product types offer compelling benefits for landlords, including long-term leases, stronger tenant relationships, and enhanced market reputation.

Sustainability

Vietnam's commitment to achieve net-zero carbon emissions by 2050 is shaping the future of industrial real estate. Stricter requirements from foreign investors and multinational corporations are making green initiatives and sustainable development crucial. Consequently, investors are prompted to develop sustainable projects to capture high-end profile tenants.

Performance and outlook (3 years of forecast data)

Annual Completion

During the 2019-2024 period, a total of 2.9 million sqm of Prime RBW space was added to the market. In particular, the market saw a strong influx of new investors between 2021 and 2024, including SLP, Cainiao, ESR, JD Property, LOGOS Property, KCN Vietnam, KTG Industrial, etc. These investors introduced a diverse type of warehouses to the market, such as double-story warehouses, ready-built hybrid (multi-function property that can be leased to either warehouse or factory), and warehouses with high-quality LEED standards.

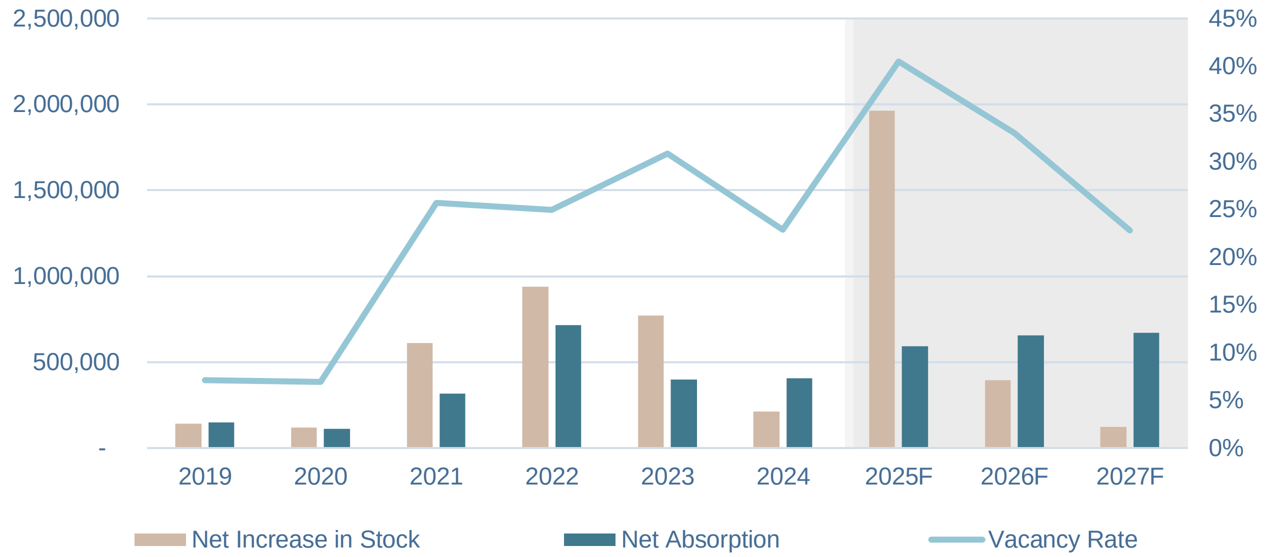
In 2024, the market expanded at a slower pace with 333,000 sqm of new developments. The Southern region accounted for 66.0% of the total new supply thanks to the completion of notable projects from SLP, Cainiao, KCN Vietnam, and BW Industrial. Meanwhile, new supply in the North was limited with two RBW projects (Horizon Park IDEC, SLP Park Bac Ninh) and the remaining new leasable spaces were RBH spaces.

The Vietnam Prime RBW market is forecasted to continue its growth in the coming years. The Northern market is projected to receive approximately 1.2 million sqm in 2025, coming from local and international developers. Two new players enter the market, namely Daiwa House-WHA Group partnership with DPL (Vietnam Minh Quang project) and Mitsubishi Estate Asia (MEA Logicross Hai Phong project). High-rise RBW project will be introduced for the first time, aimed at optimizing rental areas and reducing land rental costs. In 2026-207, new supply of RBW space should total 247,000 sqm, bringing the total stock to over 2.7 million sqm by end-2027.

In 2025, the Southern logistics market is set to record about 684,000 sqm of new warehouses under construction across key provinces. BW Industrial leads in contributing new developments, followed by existing players namely KCN Vietnam and ESR, as well as new market entrant – MEA. An estimated 270,000 sqm RBW is planned for completion between 2026 and 2027. Total prime RBW stock is anticipated to reach nearly 3.0 million sqm by the close of 2027, growing 1.5 times larger than its current scale.

Demand vs **Supply**

Figure 118: Vietnam Distribution Warehouse/Logistics Net Increase in Stock, Net Absorption and Vacancy Rate (NLA sqm, Annual)



Source: JLL, 4Q24

Note: Including both the Northern & Southern logistics markets.

Before 2019, Vietnam's logistics sector relied heavily on traditional facilities that had secured prime locations early on. The modern logistics segment was just beginning to emerge, with Mapletree being one of the first institutional investors to enter the market.

In the last five years, the RBW supply landscape has matured significantly. This development was driven by institutional players investing in high-quality projects to meet the increasingly sophisticated needs of new occupiers. Modern warehouses now boast advanced features, enabling them to function as regional distribution and sorting centres.

Overall, market sentiment remained cautious in 2024. Leasing activity has yet to show significant improvement, with net absorption experiencing a slight increase of 2.2% y-o-y. Vacancy rate decreased from 30.9% in 4Q23 to 22.9% in 4Q24. Domestic demand, particularly from manufacturers, retailers, e-commerce companies, and 3PLs, helped maintain market activity. Built-to-suit orders also played a crucial role, as evidenced by positive net absorption when these custom facilities were delivered to tenants. The recent announcement of Temu's entry into Vietnam suggests growing demand for supply chain-related services, potentially increasing demand for RBW space.

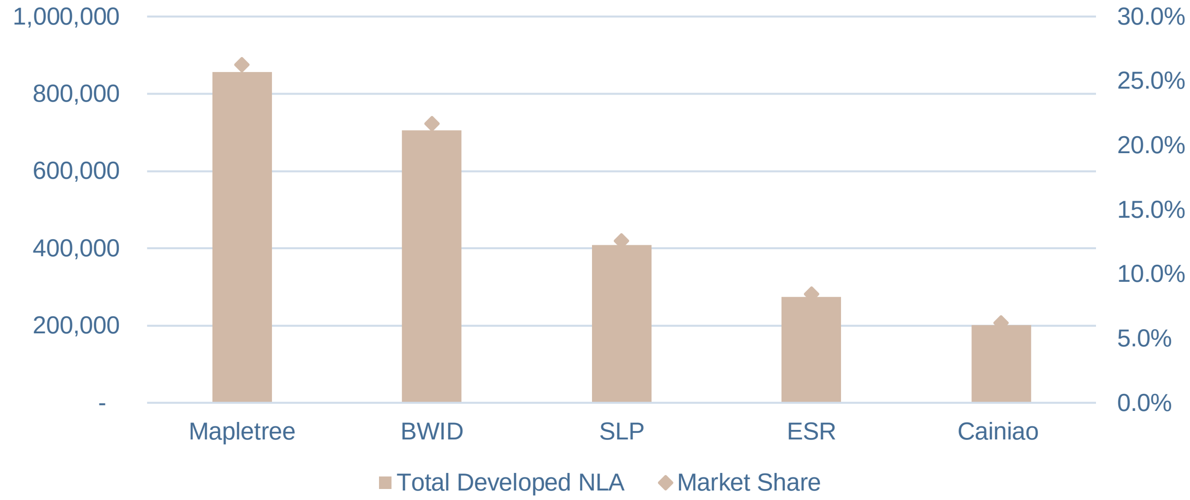
In response to fluctuating market demand, some developers consider more flexible strategies for their ready-built assets, such as converting warehouse spaces into factories or integrating mixed-use functions. These initiatives aimed to ease competitive pressures, attract diverse tenants, and accelerate occupancy rates. While the projects are primarily classified as RBF, they could also be leased as RBW. Nevertheless, it is important to note that this dual-use approach may face certain legal constraints related to business registration for RBW operations.

Major logistics facility providers and players

In recent years, Vietnam's RBW market has witnessed a more diverse set of players other than operators that focus more on core business. For example, developers that offer new asset types allow the market to efficiently scale up. Institutional players also play a significant role in expanding ready-built logistics supply.

Among them, Mapletree and BW Industrial stand out as pioneers in this sector, leveraging their early-mover advantage to secure the largest market shares of 26.3% and 21.7% respectively. These market leaders have shown ambition in continuously expanding their portfolios across the country, expecting to maintain their dominance over the next three years. SLP followed closely in third place, contributing approximately 410,000 sqm of leasable space by the end of 2024.

Figure 119: Key Developers' Market Share by Total Developed Area (Cumulative NLA, Sqm)



Source: JLL, 4Q24

Note: Total developed area of major market players includes only prime RBW projects within key provinces in North Vietnam & South Vietnam.

BW Industrial is perceived as one of the prominent players aggressively expanding its market share through merger and acquisition (“M&A”) strategy. In 3Q24, ESR agreed to acquire the remaining interest in LOGOS held by the LOGOS founders. This event has propelled ESR into the top market players, ranking fourth and accounting for 8.4% of total prime RBW stock. Cainiao, Alibaba's logistics arm, has swiftly ascended to the fifth position since its 2022 entry, contributing over 200,000 sqm of modern space in South Vietnam.

Investors and investment trends, and major selected transactions. if any

The RBW investment is currently experiencing a significant influx of foreign capital, marked by strong M&A activities and the entry of new players. In a pivotal development for Vietnam's industrial real estate sector, BW Industrial announced its intention to pursue an IPO within the next one to two years. This move not only underscores the company's positive market outlook but also attracts more attention from both domestic and international investors.

Mitsubishi Estate Asia (MEA) marked the first step in Vietnam with the start of construction of Logicross Nam Thuan (South) and Logicross Hai Phong in the North. The market has also seen the formation of notable joint ventures recently. Indochina Kajima, a joint venture between domestic enterprise Indochina Capital and Japan's Kajima Group, partnered with Hulic Group (Japan) to promote two ready-built projects: Core5 Hung Yen and Core5 Quang Ninh. WHA Group collaborated with Daiwa House to launch the DPL Vietnam Minh Quang logistics facility in Hung Yen. Furthermore, two Japanese companies, Hankyu Hanshin and CRE, joined hands with Singapore-based Sembcorp to invest in Sembcorp Infra Services (SIS), focusing on developing logistics warehouses in Northern and Central Vietnam. The trio announced plans to construct Sembcorp Logistics Park, a two-story logistics warehouse in VSIP Thuy Nguyen, Hai

Phong, slated for 2025. These developments underscore the growing attractiveness of Vietnam's RBW sector to foreign investors.

Figure 120: Major Logistics Transactions between 2020 – 2024

Year	Property	Location	Seller	Buyer	Transaction Price (USD)	Land Area (sqm)	Total Size (sqm)
2020	Mapletree Logistics Park Bac Ninh Phase 3	VSIP Bac Ninh, Tu Son, Bac Ninh province	Mapletree Investments	Mapletree Logistics Trust	USD 21.8 million	83.418	47,732
2022	Mapletree Logistics Park Bac Ninh Phase 4	VSIP Bac Ninh, Tu Son, Bac Ninh province	Mapletree Investments	Mapletree Logistics Trust	USD 31.5 million	113,083	56,754
2022	Mapletree Logistics Park Bac Ninh Phase 5	VSIP Bac Ninh, Tu Son, Bac Ninh province	Mapletree Investments	Mapletree Logistics Trust	USD 38.6 million	158,273	76,197
2022	Mapletree Logistics Park Binh Duong Phase 5	VSIP II, Thu Dau Mot, Binh Duong province	Mapletree Investments	Mapletree Logistics Trust	USD 25.8 million	113,036	61,754
2023	BW Industrial Nam Dinh Vu	Nam Dinh Vu IP, Hai An, Hai Phong	n/a	BW Industrial	USD 9.7 million	72,001	71,998
2023	BW Industrial Yen Phong	Yen Phong Expansion IP, Bac Ninh	n/a	BW Industrial	USD 18.3 million	n/a	99,998
2023	Land in Northern Vietnam	Yen Phong IP, Bac Ninh	Minh Quang Industrial Development JSC	Boustead Singapore & Khai Toan JSC	USD 21.7 million	136,455	136,447
2023	Stake divestment (49.0%)	An Phat 1 IP, Nam Sach, Hai Duong	ACTIS	An Phat Holdings	n/a	1,800,025	129,997
2024	Mapletree Logistics Park Hung Yen Phase 1	Yen My IP, Hung Yen province	Mapletree Investments	Mapletree Logistics Trust	USD 24.8 million	96,962	60,186
2024	Mapletree Logistics Park Binh Duong Phase 3	VSIP II, Thu Dau Mot, Binh Duong province	Mapletree Investments	Mapletree Logistics Trust	USD 24.6 million	113,029	61,712
2024	Interest Acquisition*	n/a	LOGOS Property	ESR Group	n/a	n/a	n/a

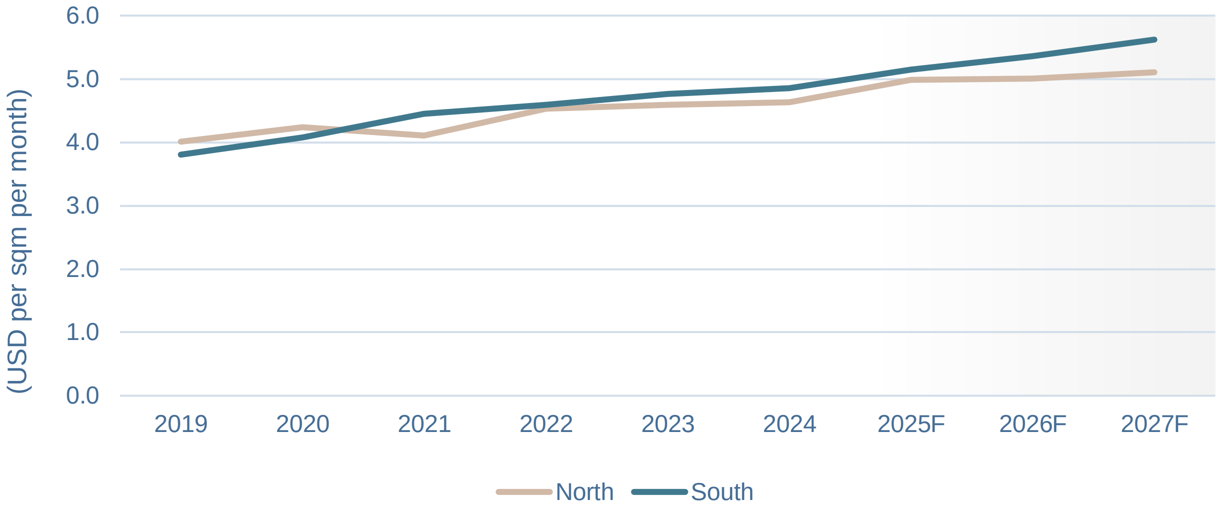
Source: JLL, RCA, 4Q24

Note: * ESR Group had signed agreements to acquire the remaining 13.6% interest in LOGOS held by the LOGOS founders. The information was officially announced on the ESR Group website on July 26, 2024.

Historical and forecast data for key logistics market indicators

Market Rent

Figure 121: Vietnam Distribution Warehouse/Logistics Gross Rent (NLA, Annual)



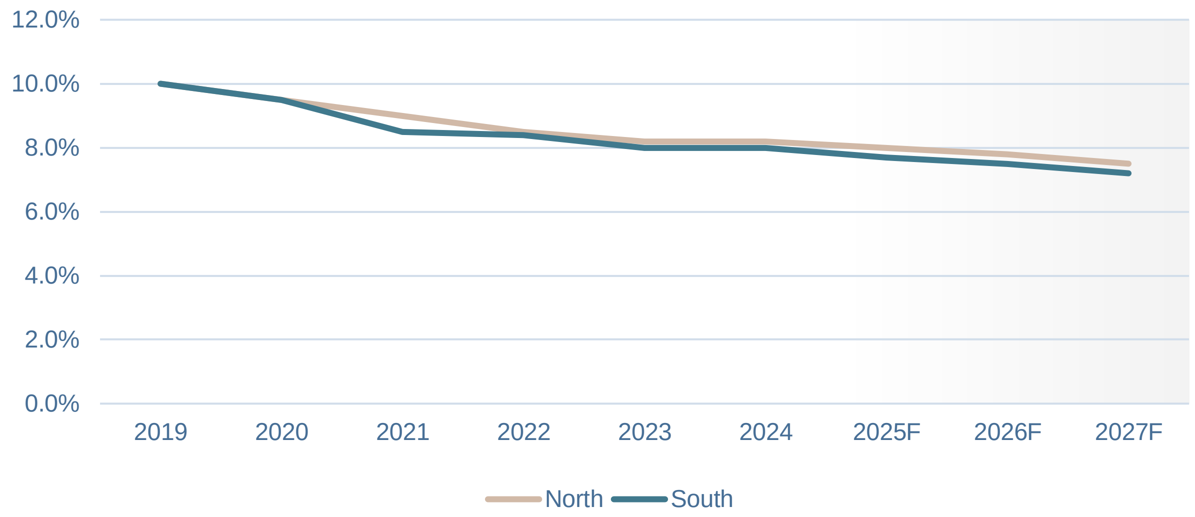
Source: JLL, 4Q24

In the North region, the asking rent increased from USD 4.0 per sqm per month in 4Q19 to USD 4.6 per sqm per month in 4Q24, representing a CAGR of 2.9%. Northern rents have generally trended upward since 2019, and recent increases are attributed to higher rents in new developments. Future market rent is expected to continue rising, driven by premium rates for new, high-quality modern warehouses. However, growth may slow due to abundant new supply challenging landlords' leasing activities.

The Southern RBW market's average rent grew steadily at a 5.0% CAGR from 2019 to 2024, reaching USD 4.9 per sqm per month in 4Q24. Overall growth was driven by new modern supply with premium rates and increased headline rents in well-performing facilities. Recent supply increases have strengthened tenants' bargaining power, leading landlords to offer significant incentives such as direct discounts and extended rent-free periods. Short-term leases have also been accepted as a temporary measure to improve asset performance. As available land in core areas decreases, new projects are moving to non-prime locations where competitive rates and high-quality products are crucial for attractiveness. Consequently, overall market rent growth is projected to slow, reaching USD 5.3 per sqm per month by the end of 2026.

Market Yield

Figure 122: Vietnam Distribution Warehouse/Logistics Market Yield (NLA, Annual)



Source: JLL, 4Q24

Capital values in key markets, based on gross asking rents, have consistently increased over time. This upward trend is driven by the introduction of high-quality new supply, particularly from institutional investors, which commands higher rental rates. As of 4Q24, the overall market yield has remained stable at around 8.0% - 8.2%.

The outlook for capital values remains positive, with continued growth expected. This optimism is based on several factors, including increased market establishment and maturity, as well as anticipated overall economic recovery. The asking rents are expected to rise further, supported by strong domestic consumption and the expansion of manufacturing facilities in response to global economic recovery.

Market yields are predicted to continue compressing, though at a slower rate. By the end of 2027, yields are forecast to reach 7.5% in the North and 7.2% in the South.

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