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The next test for Malaysia's data centre surge

The Malaysian Reserve, Malaysia



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Malaysia is set to record the largest relative GDP gains in South and South-East Asia from the data centre boom

by AUFA MARDHIAH

MALAYSIA is emerging as the biggest economic beneficiary of the data centre boom in South and South-East Asia (South & SE Asia), with the rapid build-out expected to deliver the region's largest relative gains in GDP and employment through 2030, Moody's Ratings said.

However, the rating agency cautioned that the benefits from the current construction boom could prove short-lived unless Malaysia develops a broader digital ecosystem around its growing data centre capacity.

Based on projected data centre capacity through 2030, Malaysia's capital spending is among the highest in South & SE Asia and is expected to generate the region's strongest construction and operating contribution.

The impact is concentrated in Johor, making Malaysia the clearest case where the data centre build-out can have a meaningful effect on the wider economy.

"Malaysia stands out as the only emerging market in South & SE Asia where data centres are significant to the economy at an aggregate level," Moody's said in its report titled Digital Transformation — South & SE Asia: Data centres bring economy-wide benefits, but lasting credit gains must be secured.

Moody's said Malaysia and Singapore are positioned to capture the most material economy-wide benefits from the build-out, although the nature of those gains will differ.

Malaysia's benefits are driven largely by new construction and capital spending, while Singapore is expected to derive a larger share of its gains from operations and associated services, given its more mature data centre base.

Construction Boom Provides Front-loaded Boost

The immediate economic benefit for Malaysia will come largely from the substantial capital spending required to construct data centres and the infrastructure needed to support them.

Moody's said the GDP impact would be front-loaded in the years up to 2030, particularly in developing economies where additional investment tends to have a larger marginal effect on growth.

But the boost will not necessarily persist at the same pace once construction activity slows.

The rating agency expects data centre construction to continue beyond 2030, although at a slower pace.

Once facilities are completed, the direct contribution from construction will fade and the economic benefits will increasingly depend on operating activity and the development of businesses and suppliers around the data centre industry.

Another constraint is the high import content of data centre projects.

A significant share of spending goes towards semiconductors, servers, cooling systems and other specialised equipment, much of which is not produced locally.

This means part of the investment leaks out of the domestic economy through imports.

Malaysia and Singapore are rela-

Source: Media Mula

TNB introduces its Green Lane Pathway specifically for data centre operators

tively better positioned because both have established semiconductor and electronics manufacturing bases, which can partially offset the import leakage.

"However, continued dependence on imported IT equipment would cap positive spillovers," Moody's said.

Employment gains are also expected to be relatively limited because data centres are highly capital intensive.

Job creation is concentrated in construction, while permanent operating positions are fewer and require specialised skills.

Local Ecosystem Holds Key To Lasting Gains

For Malaysia, the bigger opportunity lies in using the data centre boom to develop a wider digital and industrial ecosystem.

Moody's said the strongest potential source of durable credit improvement comes from the ecosystem effects generated by data centre investment.

The development of data centres creates demand for construction materials, power, fibre and water infrastructure, while potentially encouraging the localisation of equipment, manufacturers and specialist service providers.

At the same time, operational data centres can support the clustering of data-intensive businesses, accelerate cloud and artificial intelligence (AI) adoption and improve access to scalable digital infrastructure.

These downstream effects could translate into faster digital services exports and productivity gains for domestic companies, including small and medium enterprises (SMEs).

Malaysia's existing semiconductor and electronics manufacturing base provides a foundation for developing these linkages.

Greater local content in servers and IT hardware would further increase the domestic multiplier effect and narrow the drag on external balances, Moody's said.

"Evidence that capacity growth is accompanied by supplier localisation, stronger digital services exports and broader cloud adoption would make the credit benefits more durable," Moody's said.

Without these spillovers, the benefits would remain concentrated among data centre operators, telecommunications companies and infrastructure providers.

Johor Rides Singapore Spillover

Johor's position at the centre of Malaysia's data centre boom is closely tied to Singapore, where land and power constraints have increasingly limited the scope for new capacity.

Singapore's earlier restrictions on data centre development helped push demand across the Causeway, while Johor offers larger sites, lower costs and proximity to Singapore's established digital and business ecosystem.

Recent capacity constraints in Singapore are expected to continue steering some unmet demand towards Johor, reinforcing the Singapore-Johor corridor as a major regional data centre cluster.

This makes Johor more than simply a Malaysian data centre location. Its proximity to Singapore allows operators to tap the city state's connectivity, financial infrastructure and technology ecosystem while using Malaysia's greater availability of land and infrastructure for large-scale facilities.

The spillover has also attracted major international technology groups, including US and Chinese players.

Recent reporting has highlighted investments involving Amazon.com Inc, Microsoft Corp, Tencent Holdings Ltd and Alibaba Group Holding Ltd in Johor.

For Malaysian property, construction, utilities and infrastructure companies, the continued expansion of the Johor-Singapore corridor could therefore generate benefits beyond those accruing to data centre operators.

But Moody's cautioned that the ability to convert the investment boom into durable economic gains depends on the successful execution of supporting infrastructure, including power, water and financing capacity.

Power Demand Puts TNB in the Spotlight

Power availability will be one of the biggest constraints on Malaysia's ability to sustain the data centre build-out.

Moody's said data centre demand could account for more than 30% of Malaysia's total power demand by 2035, making timely expansion of both generation and transmission infrastructure critical to the country's development as an emerging regional hub.

That puts the spotlight on Tenaga Nasional Bhd (TNB), whose grid investment and ability to connect new large-scale users will be increasingly important as data centre demand grows.

TNB introduced its Green Lane Pathway specifically for data centre operators, with the initiative designed to streamline approvals and accelerate high-voltage electricity connections.

The utility said the pathway can reduce the normal 36-to-48-month connection timeline to about 12 months.

The scale of the challenge, however, extends beyond connecting individual facilities.

Moody's said grid expansion, equipment bottlenecks and the

Data centre-related imports have accelerated across South & SE Asia since 2020

■ India ■ Indonesia ■ Malaysia ■ Thailand ■ Singapore ■ Philippines ■ Vietnam
US\$ millions

Year	India	Indonesia	Malaysia	Thailand	Singapore	Philippines	Vietnam
2020	15	10	5	2	1	1	1
2021	20	15	10	5	2	2	2
2022	25	20	15	10	5	3	3
2023	30	25	20	15	10	5	5
2024	35	30	25	20	15	10	10

Note: Data centre-related imports include items under HS4 codes for power infrastructure, cooling and thermal management, racks and enclosures, and data power cabling, reflecting core data centre equipment.

Source: ITC Trade Map and Moody's Ratings