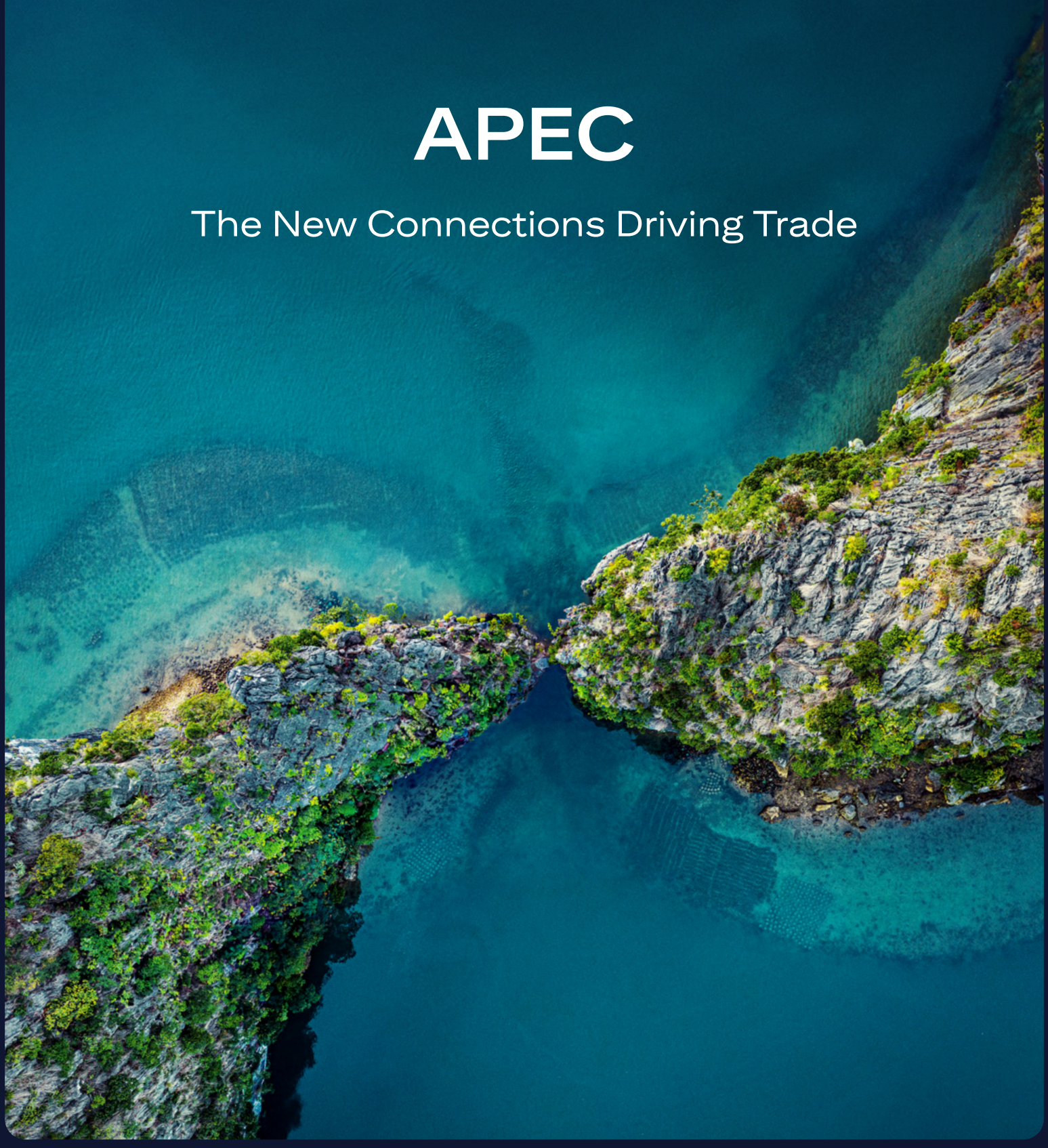
October 2025

APEC

The New Connections Driving Trade



Citi Institute

Global Perspectives & Solutions

Authors

Johanna Chua
Head of Emerging Market Economics and Chief Asia Economist, Citi Research
johanna.chua@citi.com

Emmanuel Levy
Data Analyst, Citi Global Data Insights
emmanuel.levy@citi.com

Helen Krause
Head of Citi Global Data Insights
helen.krause@citi.com

Anuj Gangahar
Global Editor-in-Chief, Citi Institute
anuj.gangahar@citi.com

Matthew Moffat
Data Analyst, Citi Global Data Insights
matthew.moffat@citi.com

Contributors

Scott Coulson
Head of Innovation Hub, Banking, Citi

Aparna Deepak Himan
Director and Business Execution Lead for CCB Asia, Citi

Sahra English
Managing Director of International Government Affairs, Citi

Amol Gupte
Asia South Cluster & Banking Head, Citi

Blake Herzinger
Director of Policy Strategy and Advocacy, Asia North & Australia, and Asia South Government Affairs, Citi

Mridula Iyer
Head of Services Asia South, Citi

Gunjan Kalra
Head of Commercial Bank, Japan, Asia North & Australia, Asia South, Citi

Steven Lo
Head of Citi Private Bank, JANA and Asia South, Citi

Marc Luet
Japan, Asia North & Australia Cluster & Banking Head, Citi

Jan Metzger
Head of Asia-Pacific Banking, Capital Markets and Advisory, Citi

Kaleem Rizvi
Head of Corporate Bank, Asia North and Australia, Citi

Catherine Simmons
Head of Government Affairs, Japan, Asia North and Australia and Asia South, Citi

Kanika Thakur
Head of Services for Japan, Australia, and Asia North, Citi

> The APEC economies are a powerhouse, accounting for 61% of global GDP, and we see them remaining resilient in terms of trade growth. Particularly, we see supply chain shifts have benefited intermediary hubs such as Southeast Asia, with trade growing upwards of over 60% in the last five years.
>
> While multinational corporations are reassessing diversifying production, many APEC markets are pursuing broader trade diversification unlocking new growth opportunities which creates a dynamic momentum in the region.
>
> *Amol Gupte, Asia South Cluster & Banking Head*

Introduction

This Citi Institute GPS report provides a snapshot of the rapidly shifting economic and trade landscape in the Asia-Pacific Economic Cooperation (APEC) region.

APEC's position as a vital trade and investment grouping looks assured. Since its inception in 1989, ties across the region have deepened and economic growth has increased significantly.

Catherine Simmons, Head of Government Affairs, Japan, Asia North and Australia and Asia South at Citi, says: "APEC brings together 21 economies to facilitate greater trade and investment across a region which accounts for over 60% of global GDP. As global trade and investment is being re-shaped, APEC remains a key regional grouping for countries and business seeking to find pathways forward."

To coincide with the APEC Leaders' Summit in Gyeongju, South Korea, this report features a data-rich overview of the grouping's economic performance and trade dynamics, highlighting its significant and growing share of global GDP and the evolving patterns of foreign direct investment. We have drawn in part on Citi data as one of the largest facilitators of global trade and investment.

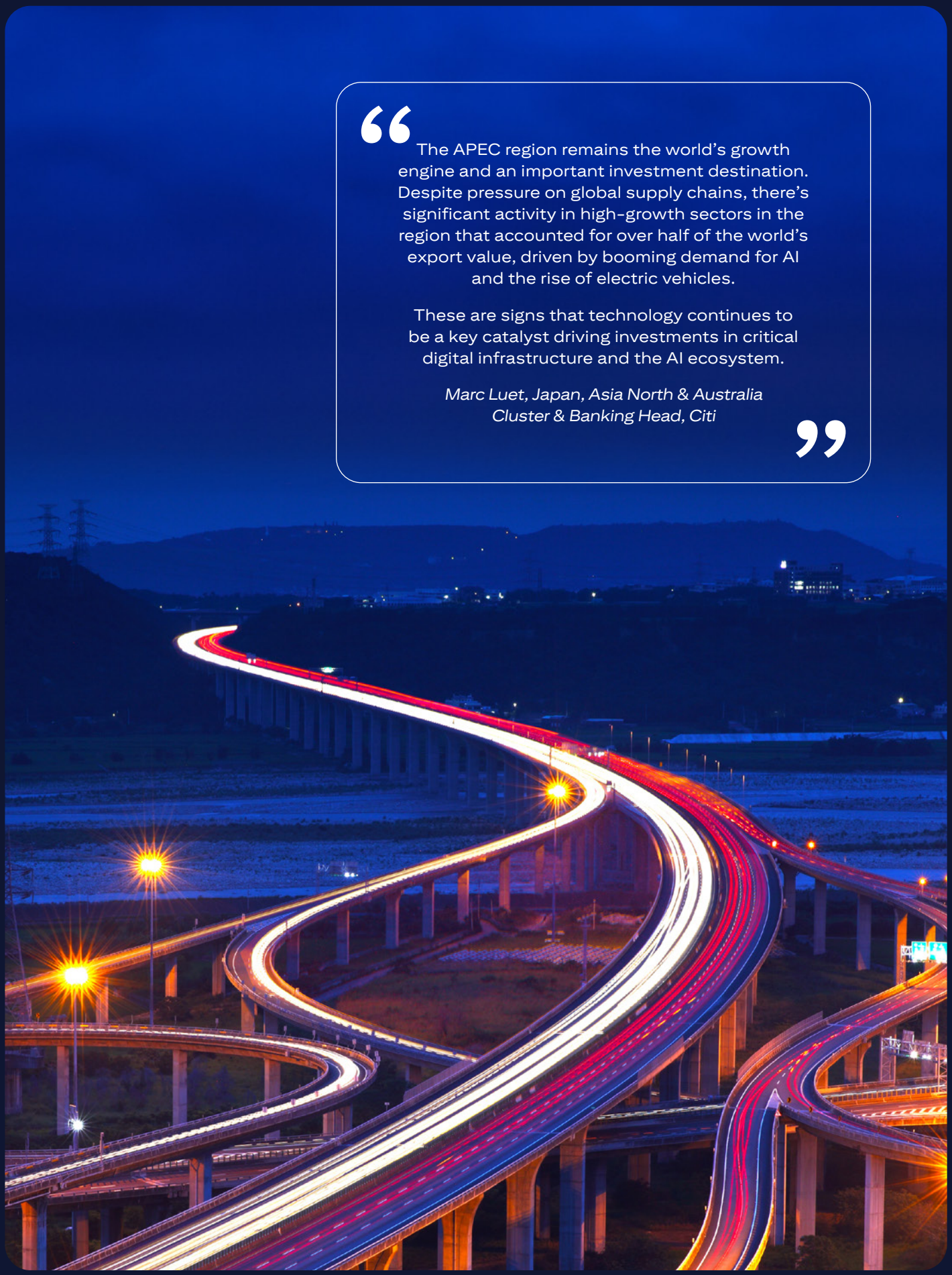
The report looks at several important shifts in trade relations, including the "China +1" strategy and how APEC economies are navigating supply chain disruptions. It identifies some of the major drivers of export growth, such as integrated circuits, electric vehicles, gold, and energy to name just a few.

We also examine the role of maritime shipping in the APEC supply chain, particularly the impact of tariffs and the region's resilience in adapting to new trade norms. And we explore emerging themes like private capital investment in cutting-edge technologies, including generative AI, large language models, and non-fungible tokens (NFTs).

The backdrop to this is the large-scale geopolitical reordering and realignment within APEC and between it and the rest of the world. We'll look at how these shifting dynamics influence trade in goods and services. And the report charts the rise of so called "connector countries" and the key role they are playing due to the broader geoeconomic fragmentation of trade flows.

And no report on the APEC region is complete without a focus on the rapid development of technology and how it is reshaping economic relations and influencing the tradability of services. We also look at the transformative impact of AI and the differing approach of major countries within the grouping including China and the U.S.

We hope you find this report a useful and thought-provoking encapsulation of the state of play in APEC in 2025.



> The APEC region remains the world's growth engine and an important investment destination. Despite pressure on global supply chains, there's significant activity in high-growth sectors in the region that accounted for over half of the world's export value, driven by booming demand for AI and the rise of electric vehicles.
>
> These are signs that technology continues to be a key catalyst driving investments in critical digital infrastructure and the AI ecosystem.
>
> *Marc Luet, Japan, Asia North & Australia Cluster & Banking Head, Citi*

Contents

APEC

The New Connections Driving Trade

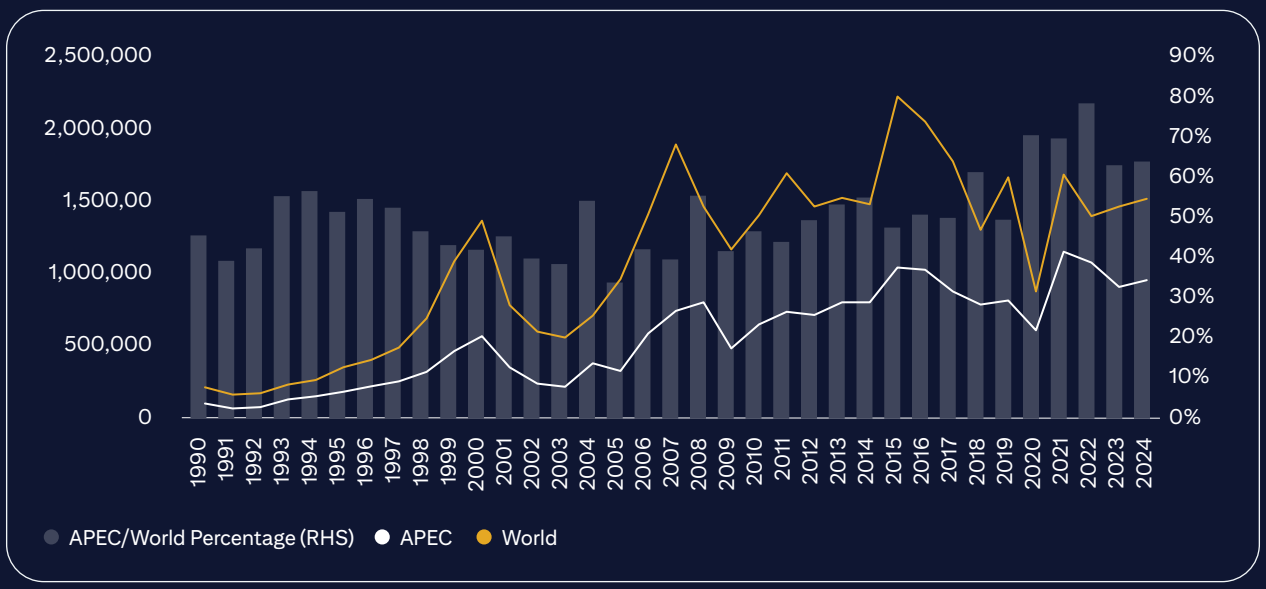
This report aims to provide a snapshot of the rapidly evolving economic and trade landscape within the Asia-Pacific Economic Cooperation (APEC) region. APEC has cemented its position as a vital economic grouping, growing to 21 economies since 1989 and accounting for a significant portion of global GDP.

Key shifts include changing trade relations, such as the "China +1" strategy and ongoing supply chain disruptions. The report identifies major drivers of export growth, including integrated circuits, electric vehicles, gold, and energy. Geopolitical reordering and realignment, alongside the rise of "connector countries," are profoundly influencing trade in goods and services.

Technology is a central theme of course, with substantial private capital investments in cutting-edge areas like generative AI, large language models, and non-fungible tokens (NFTs).

These innovations are reshaping economic relations and improving the tradability of services. The document also highlights the competitive dynamics between the U.S. and China in digital infrastructure and AI ecosystems. Overall, the report encapsulates the state of play in APEC as it navigates complex economic and technological transformations.

APEC Share of Global FDI has Grown Significantly



Source: UNCTAD, Citi Global Data Insights

Key Takeaways

1. **APEC's Robust Economic Standing:** APEC continues to solidify its position as a vital economic and trade grouping, with its share of global GDP steadily increasing and attracting significant foreign direct investment, reflecting its growing influence in the world economy.

2. **Geopolitical Reordering of Trade:** Trade relations within APEC are undergoing a significant realignment driven by geopolitical factors. This includes strategies like "China +1" and a visible diversification of supply chains, signaling a shift away from singular dependencies.

3. **Emergence of "Connector Economies":** Certain "connector economies" like Vietnam, Thailand, and Mexico are becoming crucial intermediaries in U.S.-China trade, enhancing supply chain resilience despite increasing geopolitical complexities.

4. **Technology-Driven Export Growth**: Integrated circuits (fueled by AI demand), electric vehicles, gold, and energy are identified as the primary drivers of export growth across APEC, with the region holding a dominant position in the global electric vehicle value chain.

5. **Accelerated Digitalization of Services Trade:** In contrast to the stagnation in goods trade, services trade, especially digitally delivered services, is experiencing rapid growth, largely propelled by technological advancements and the facilitative role of Artificial Intelligence.

6. **Substantial AI Investment:** Significant private capital is being invested in advanced technologies across APEC, with generative AI, large language models, and NFTs attracting the largest shares. The U.S. currently leads substantially in private AI investment.

7. **Impact of U.S. Trade Policy Uncertainty:** Anticipation and implementation of U.S. tariff policies are causing notable shifts in trade flows and supply chain configurations, impacting the value and volume of goods shipped between APEC members and the U.S.

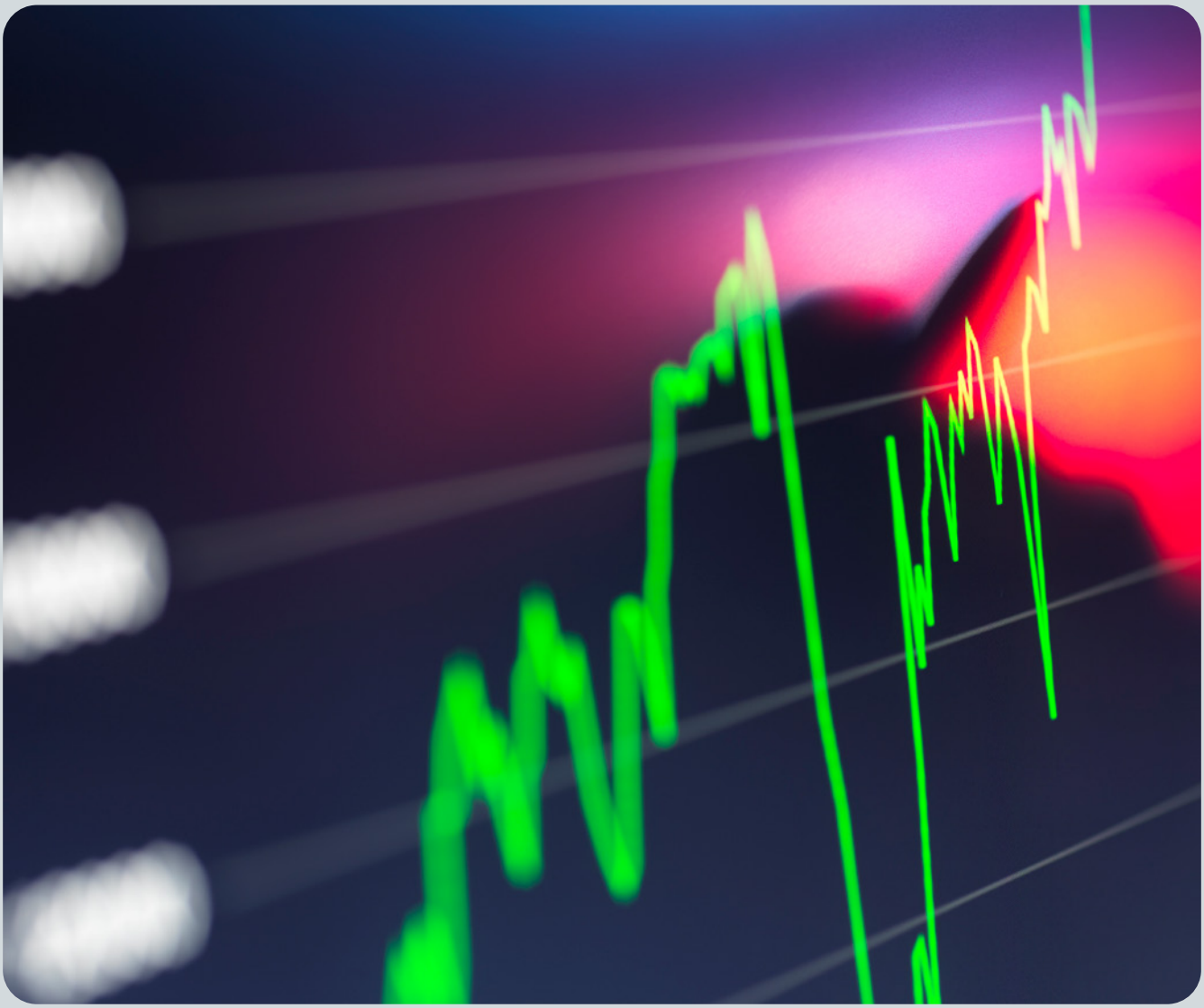
8. **China's Leadership in Clean Technology:** China's considerable investments in clean technologies such as solar, batteries, and electric vehicles are accelerating global adoption, influencing trade and investment patterns, and posing challenges to traditional manufacturing sectors in other APEC economies.

78%[1]
APEC's peak share of global GDP achieved in 2022

10%+
GDP growth forecast for all 21 APEC economies within the next 5 years according to IMF

$230bn[2]
Export growth for integrated circuits from APEC in the last 5 years

[1] IMF, Citi Global Data Insights.
[2] UN ComTrade, Citi Global Data Insights.

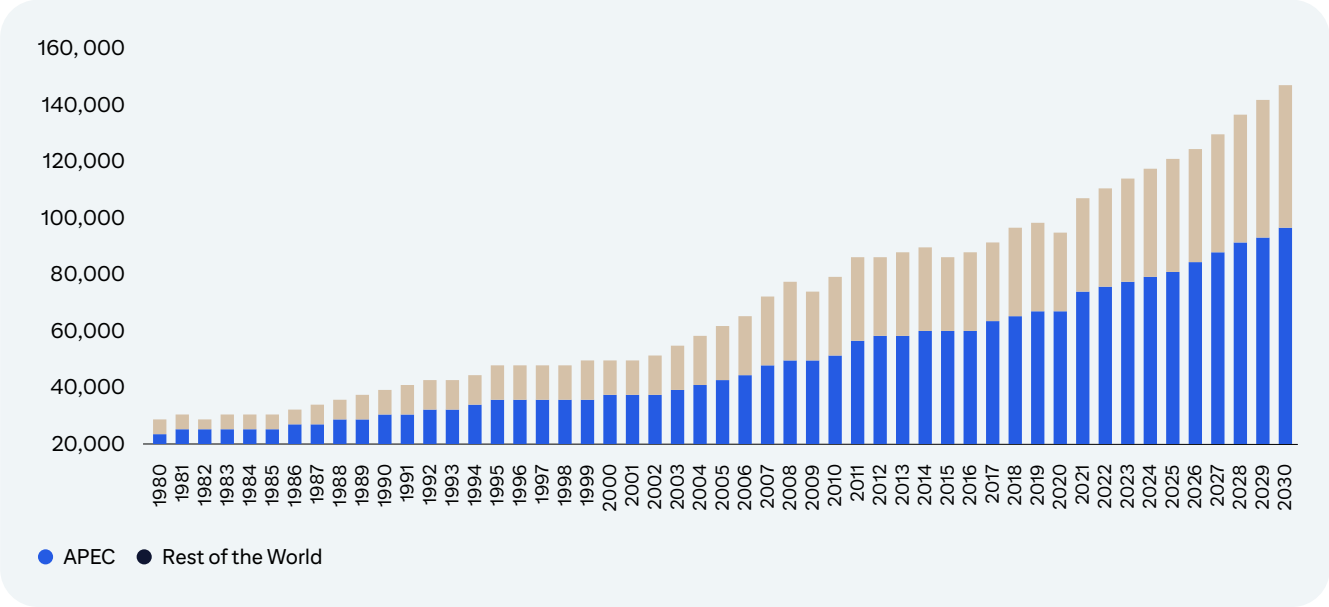


APEC in Numbers

The APEC grouping has been steadily growing its share of the world's GDP from 55% in 2004 to 61% in 2024. Within that time frame, the U.S. share has been stable hovering around 27%, while China's share has nearly quadrupled from 4.5% to 17%. According to the IMF's forecast[3], all of the 21 economies within APEC are expected to achieve more than 10% GDP growth over the next five years, with the Philippines and Indonesia leading the way at 52% and 44% respectively.

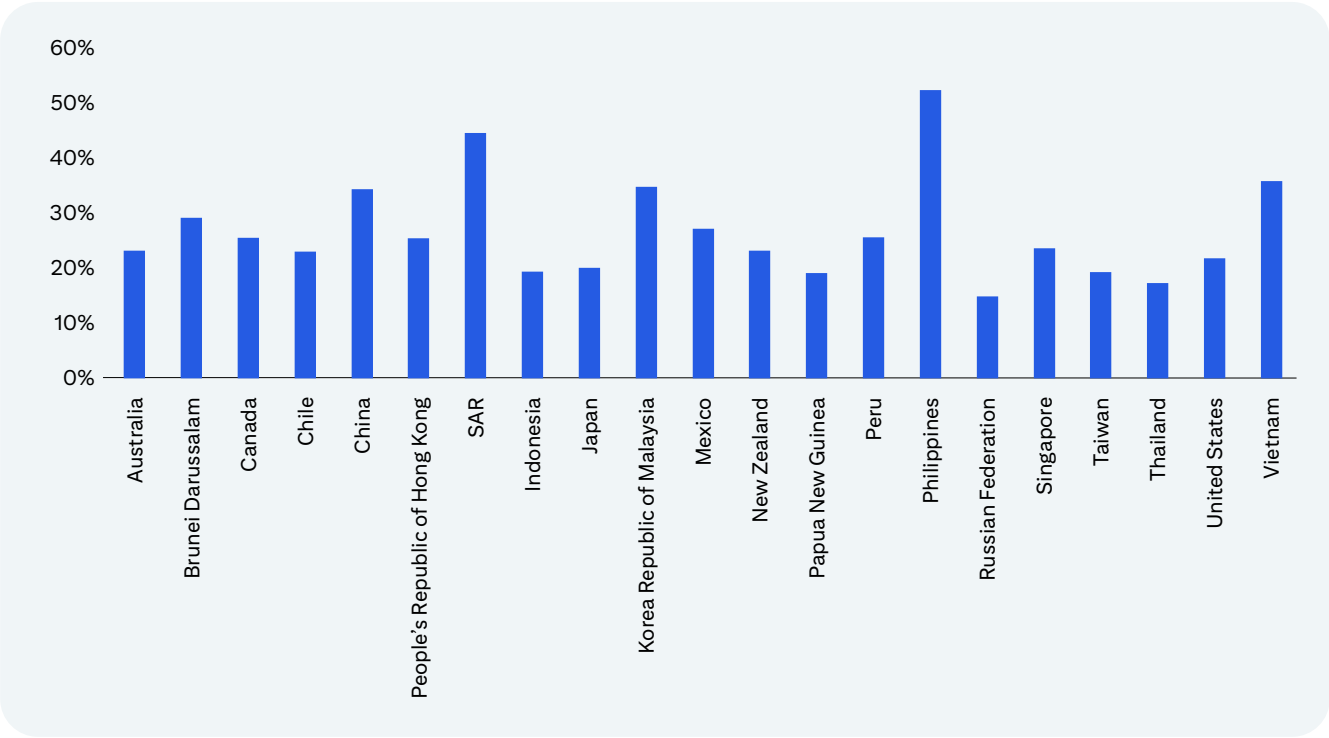
[3] https://www.imf.org/external/datamapper/PPPGDP@WEO/OEMDC/ADVEC/WEOWORLD.

Figure 1. Global GDP in US$ Billions



Source: IMF, Citi Global Data Insights

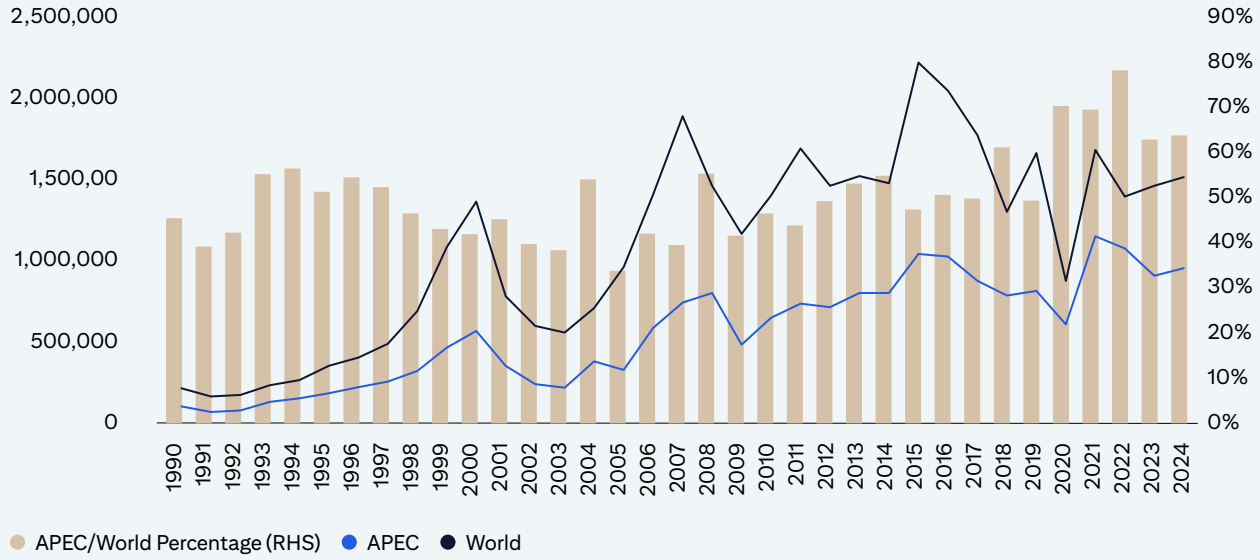
Figure 2. Forecast GDP Growth Over the Next 5 Years (2025 – 2030)



Source: IMF, Citi Global Data Insights

APEC's economy has also been attracting foreign direct investment (FDI), growing its share of the global FDI from around 40% two decades ago to over 60% in each of the last five years, peaking at 78% in 2022. Thailand has enjoyed an outsized growth of 180% since 2019. APEC in aggregate had +17% increase while the world experienced a decrease of 9% in terms of FDI inflows.

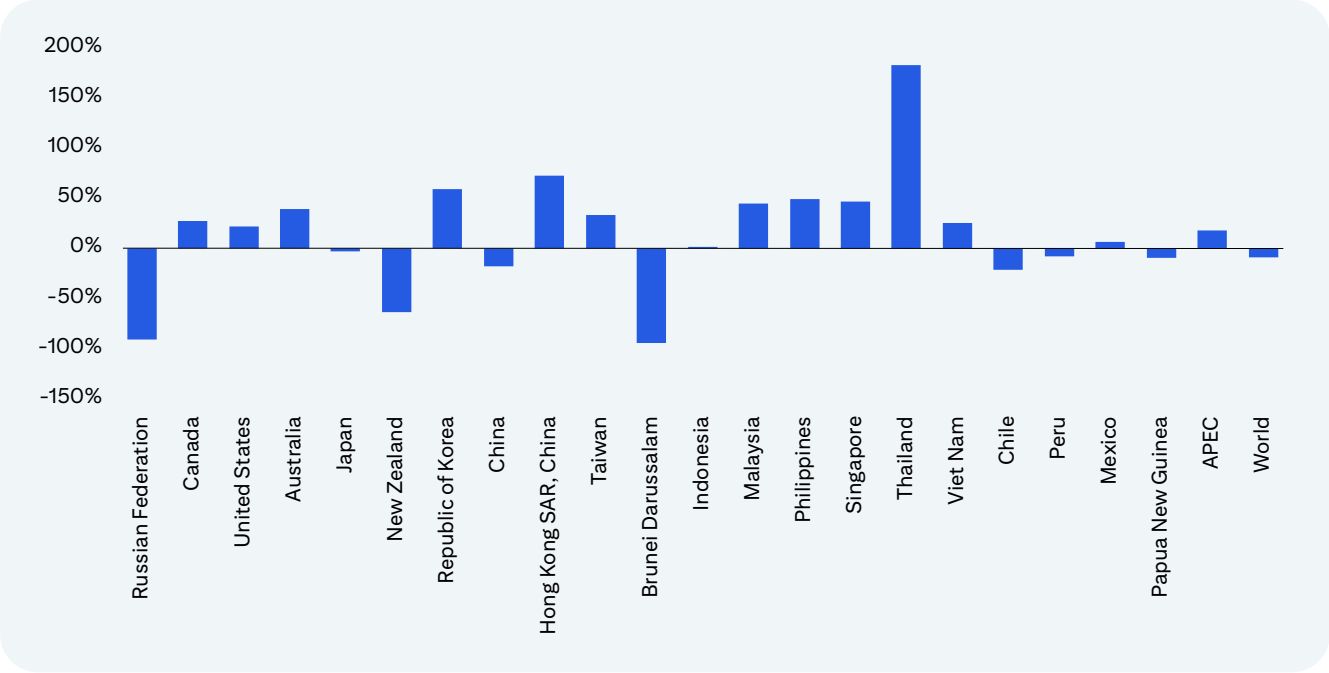
Figure 3. FDI Inflows into APEC vs World (US$ Millions)



Source: UNCTAD, Citi Global Data Insights

> There is a vast opportunity in this region. You are seeing that in EVs and fintech companies, for example, to name just two areas of rapid development. The young, dynamic and entrepreneurial population is of course a key driver of that opportunity, and of optimism for the road ahead.
>
> *Jan Metzger, Head of Asia-Pacific Banking. Capital Markets and Advisory, Citi*

Figure 4. Foreign Direct Investment Inflows % Change 2024 vs 2019



Source: UNCTAD, Citi Global Data Insights

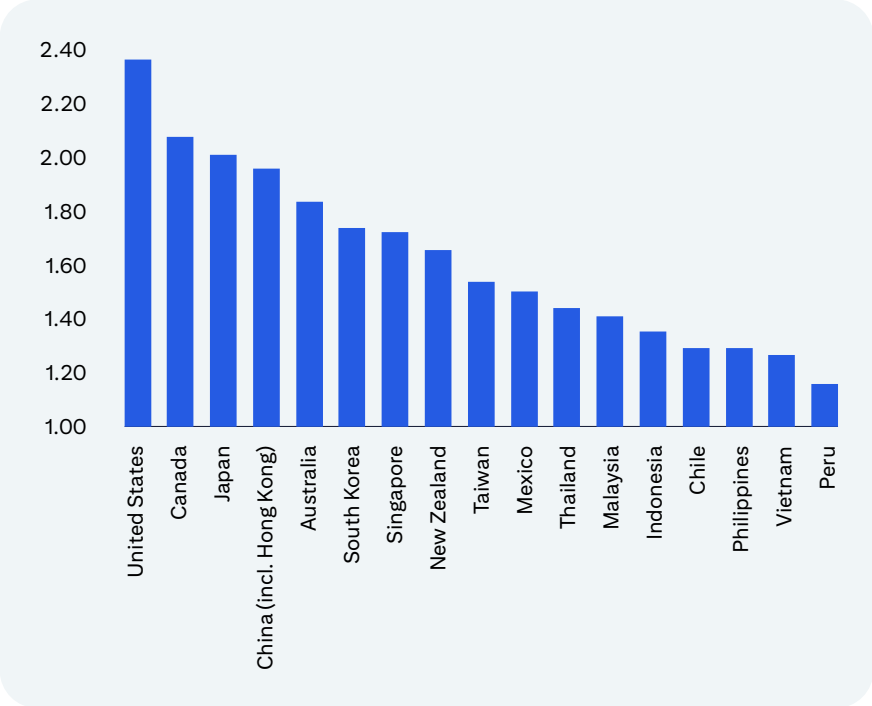
Another way to measure global FDI performance is Kearney's FDI Confidence Index[4] which contains the rankings of countries in terms of their perceived attractiveness as FDI destinations, based on a survey conducted by Kearney's Global Business Policy Council.

> "As we engage with clients across Asia, one theme consistently comes up – how corporates are adapting to the reality of tariffs and shifting trade dynamics. There is an acceptance now that tariffs and trade barriers are not a short term issue. In fact they are driving a new normal in global trade that forces companies to be agile, diversified and digitally enabled."
>
> *Gunjan Kalra, Head of Commercial Bank, Japan, Asia North & Australia, Asia South, Citi*

[4] https://www.kearney.com/service/global-business-policy-council/foreign-direct-investment-confidence-index. The Kearney FDI Confidence Index® is an annual survey of global business executives that ranks markets that are likely to attract the most investment in the next three years.

The 2025 Kearney FDI Confidence Index® and reflects responses from 500+ senior executives of the world's leading corporations headquartered in 30 countries across multiple sectors[5].

Figure 5. Kearney FDI Confidence Index 2025



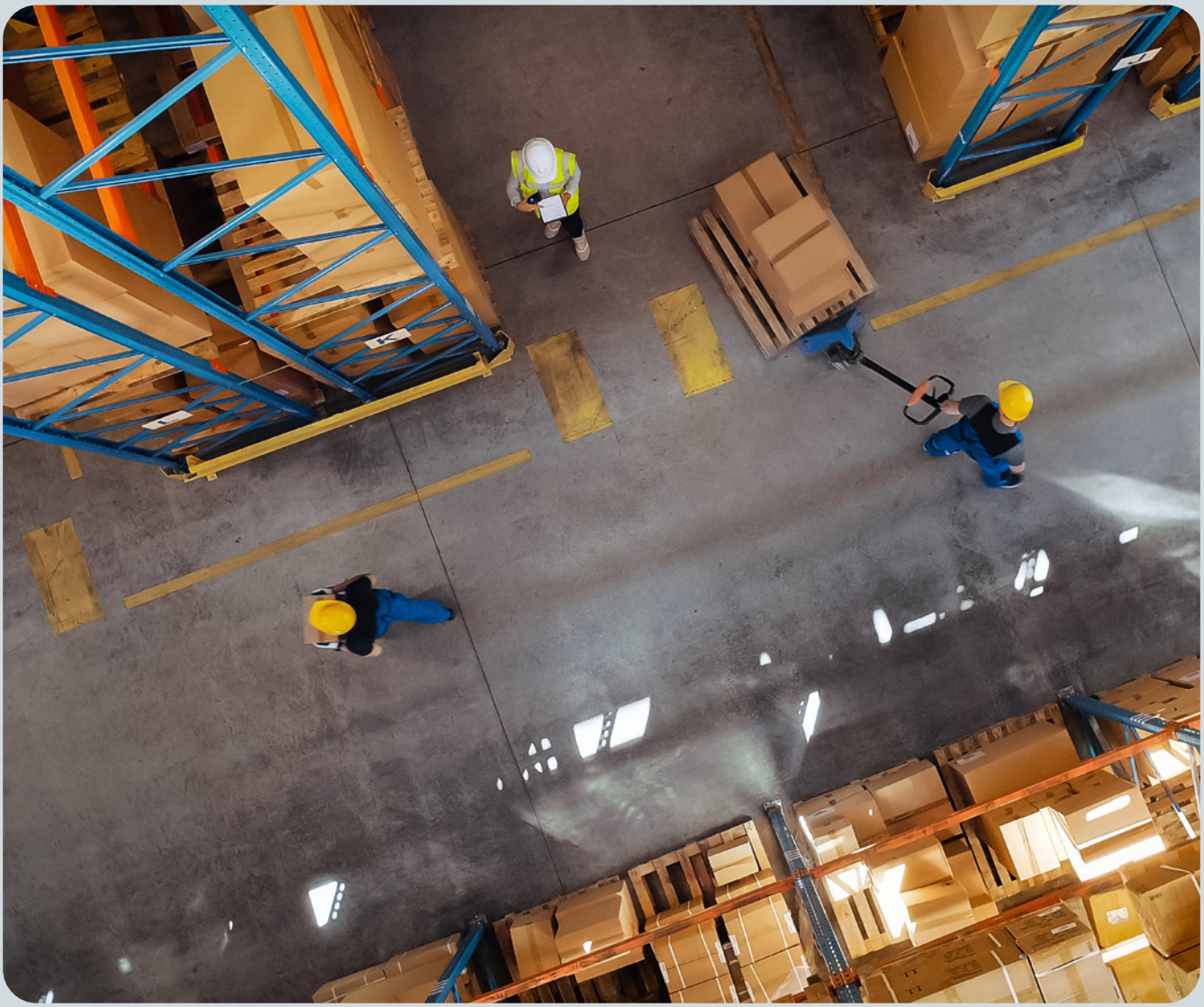
Source: Kearney, Citi Global Data Insights

Based on this ranking methodology, the U.S., Canada, China including Hong Kong, Japan, Australia, South Korea, and Singapore top the list among the APEC economies, although it is worth noting that the survey was conducted in January 2025 before the U.S. tariffs announcement in April.

For the 13th year in a row, the U.S. ranks 1st on the Index, with technological innovation and economic performance cited as the main reason for investments. Canada is ranked 2nd, with infrastructure quality named as its most attractive quality for investors.

Japan has overtaken China for its continued technology innovation and improved economic performance. China slipped in the ranking as investors are concerned with its economic slowdown and the ongoing uncertainty around trade relations between the U.S. and China, particularly around trade.

[5] This survey is conducted annually by Kearney's Global Business Policy Council. The results are subsequently aggregated and published in the "Kearney FDI Confidence Index."



APEC in Trade

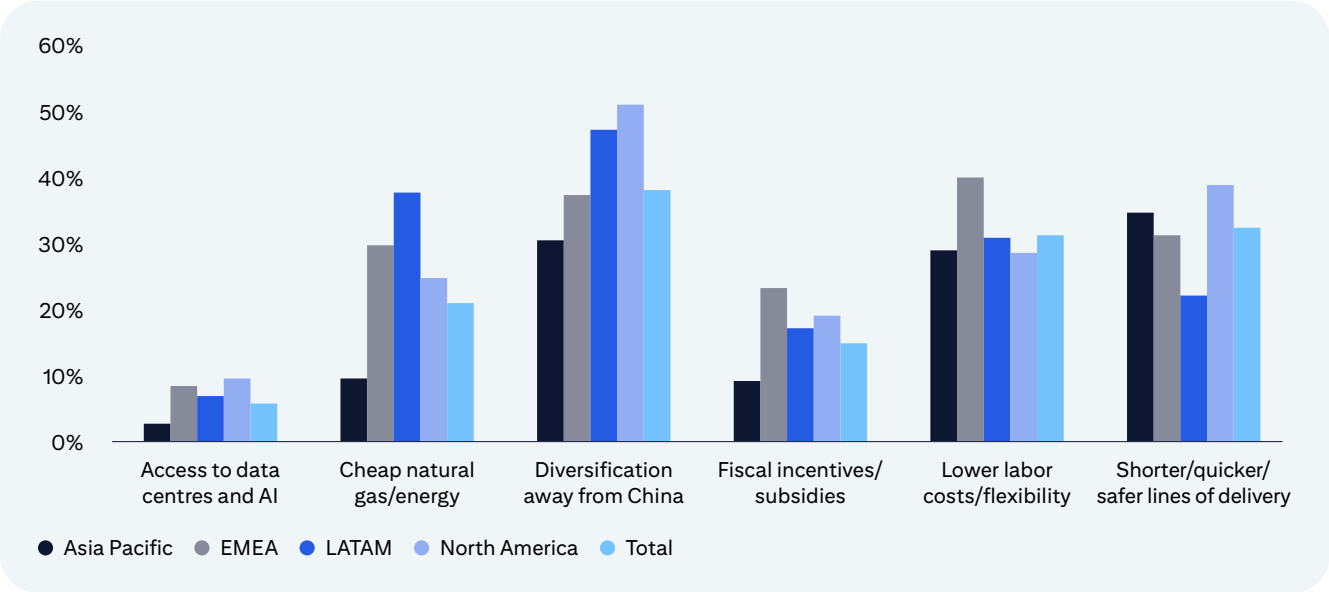
Accounting for over half of the world's export value[6], APEC has achieved broad trade growth over the past five years, demonstrating resilience amid pressure on global supply chains.

[6] https://share.america.gov/what-is-apec-and-why-does-itmatter-to-you.

This period of growth, however, is also marked by a realignment in trade relationships. Widening geopolitical differences among member economies are accelerating a trend toward regional nearshoring and friendshoring. This has given rise to the "China +1" effect, a strategy that reroutes the trade of key goods through "connector countries" between major economic partners like China and the U.S.

As the Citi GPS report Supply Chain Financing demonstrates, many companies sought to enhance resilience by adding redundancy to their supplier base, diversifying away from China, looking for shorter/safer lines of delivery and focusing on working capital management.

Figure 6. Primary Drivers When Considering Reshoring Operations

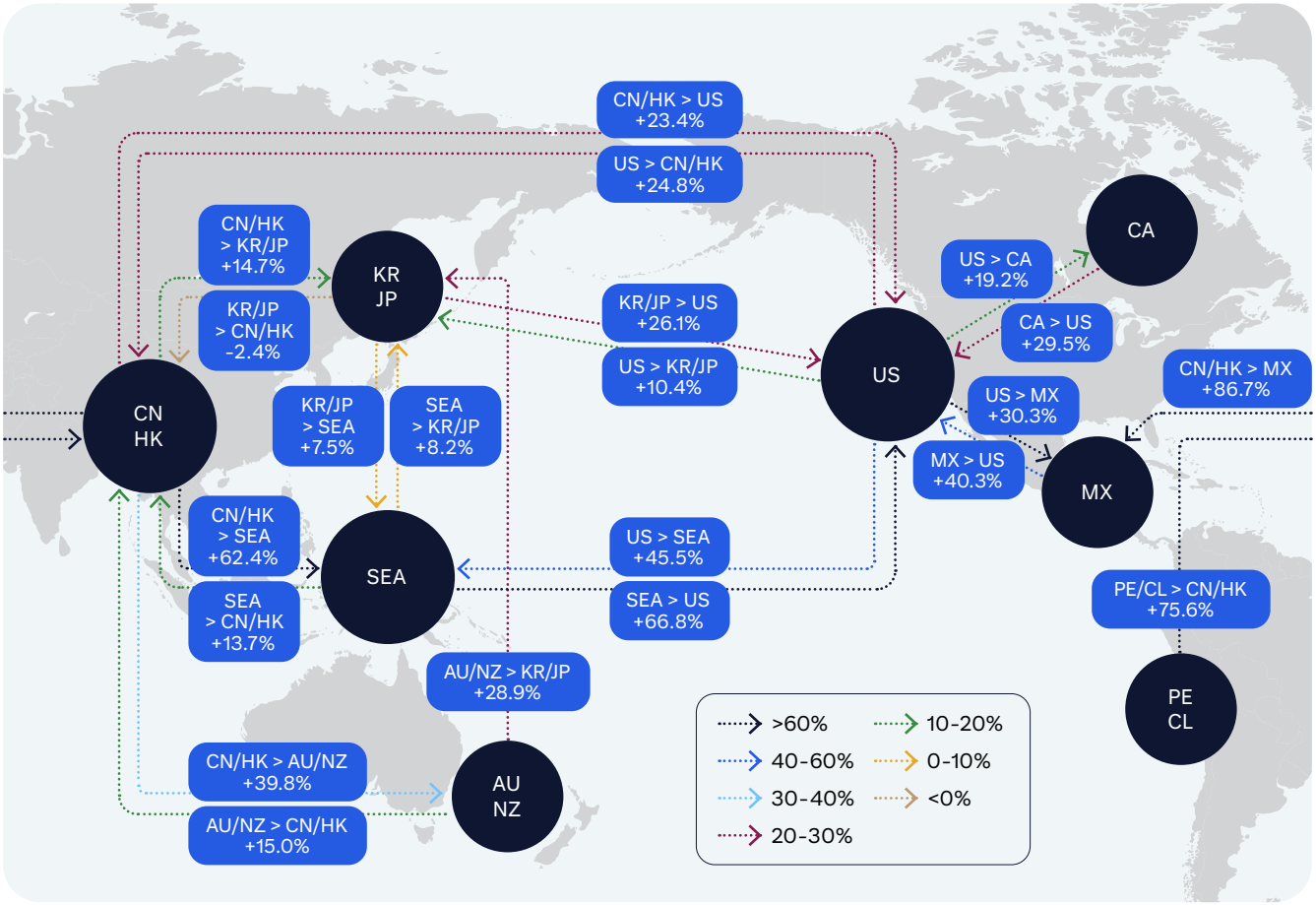


Note: Responses sum to over 100% due to multiple responses being enabled.
Source: East & Partners Large Corporate Survey 2024, Citi Treasury and Trade Solutions. For full report, see Supply Chain Financing – Resilience, Opportunity and the Shifting Winds of Trade, Citi GPS, Feb 2025

Among APEC members, our analysis of the largest[7] export flows clearly illustrates this phenomenon. The most significant growth is occurring in trade corridors that connect China and the U.S. via intermediary hubs in Southeast Asia and Mexico. At the same time, some other trade patterns are also evolving. Peru and Chile have emerged as crucial partners for China in the trade of key minerals, while South Korea and Japan have shifted more of their exports toward the U.S.

[7] Flows shown are > $50bn in one year.

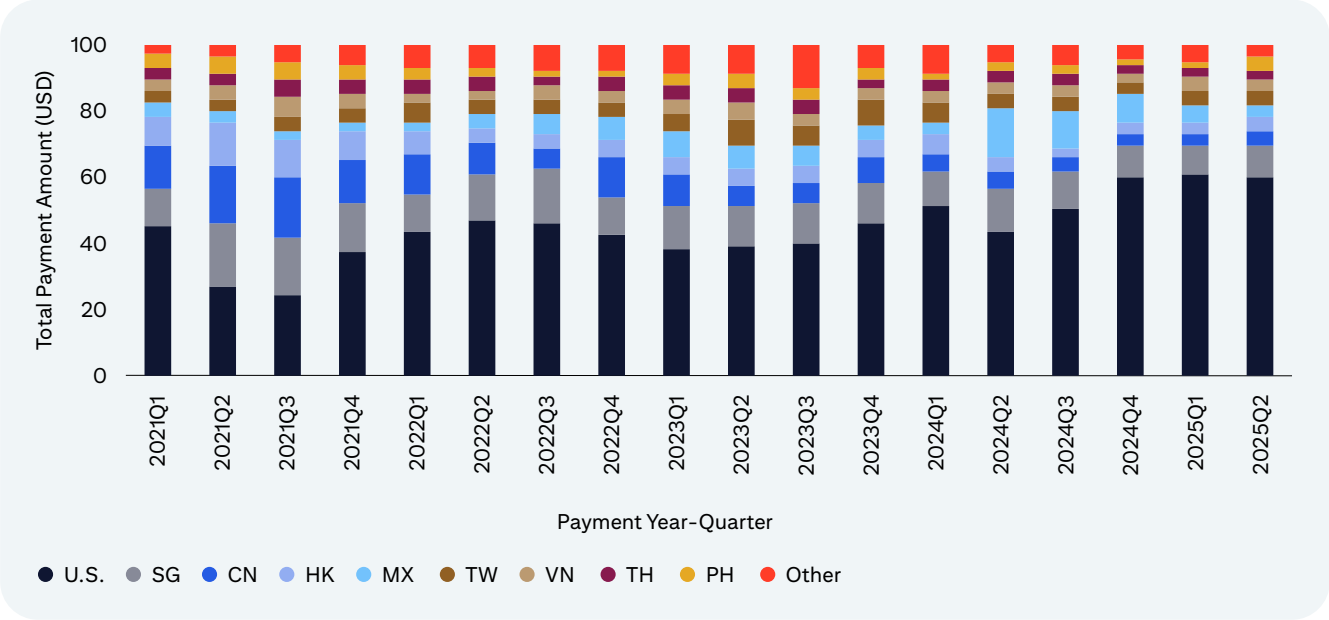
Figure 7. APEC Trade Changes 2019–2024



Source: UN ComTrade, Citi Global Data Insights

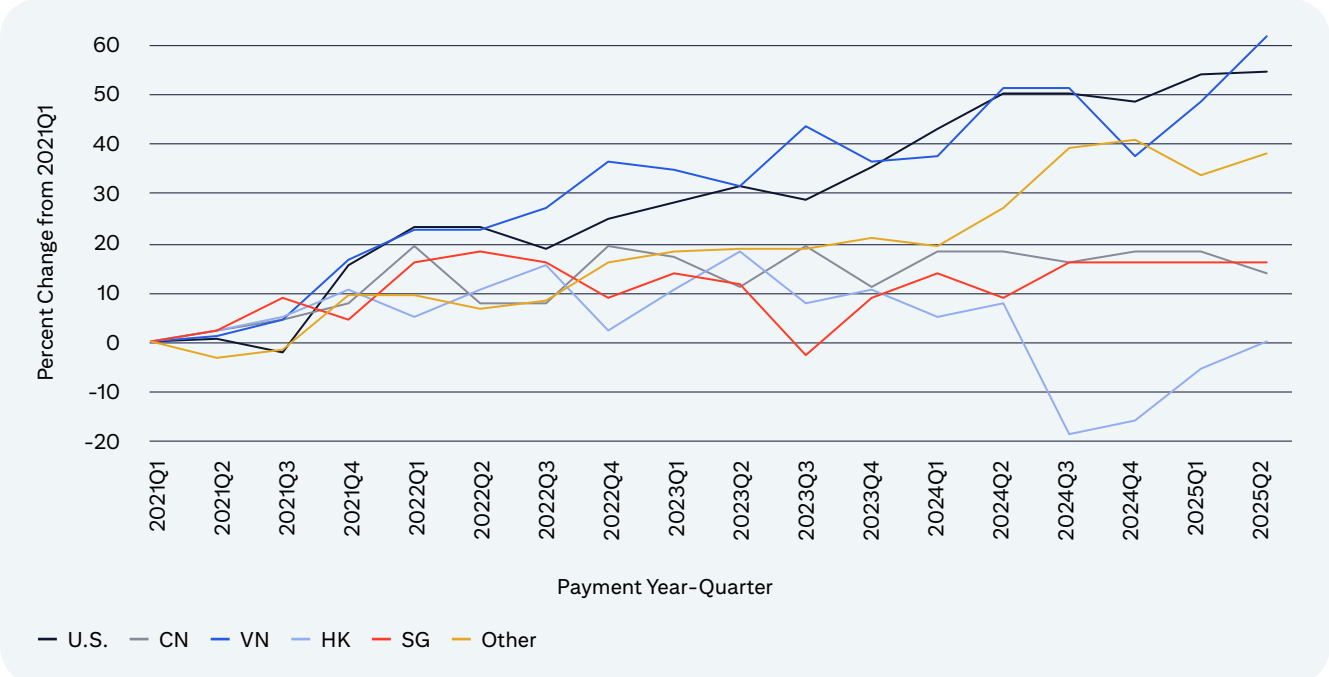
We also examine global (non-intra company) payment flows into APEC-based subsidiaries of parent companies in a member of APEC economies. The charts below show that most significant APEC subsidiaries of Korean and Japanese companies are in the U.S. This is a growing trend – particularly towards end of 2024. At the same time, South Korean and Japanese companies have been shrinking the presence of their subsidiaries in China.

Figure 8. Global Payment Flows to APEC Subsidiaries with South Korean Parents, by Subsidiary Location



Source: Citi Treasury and Trade Solutions, Citi Global Data Insights

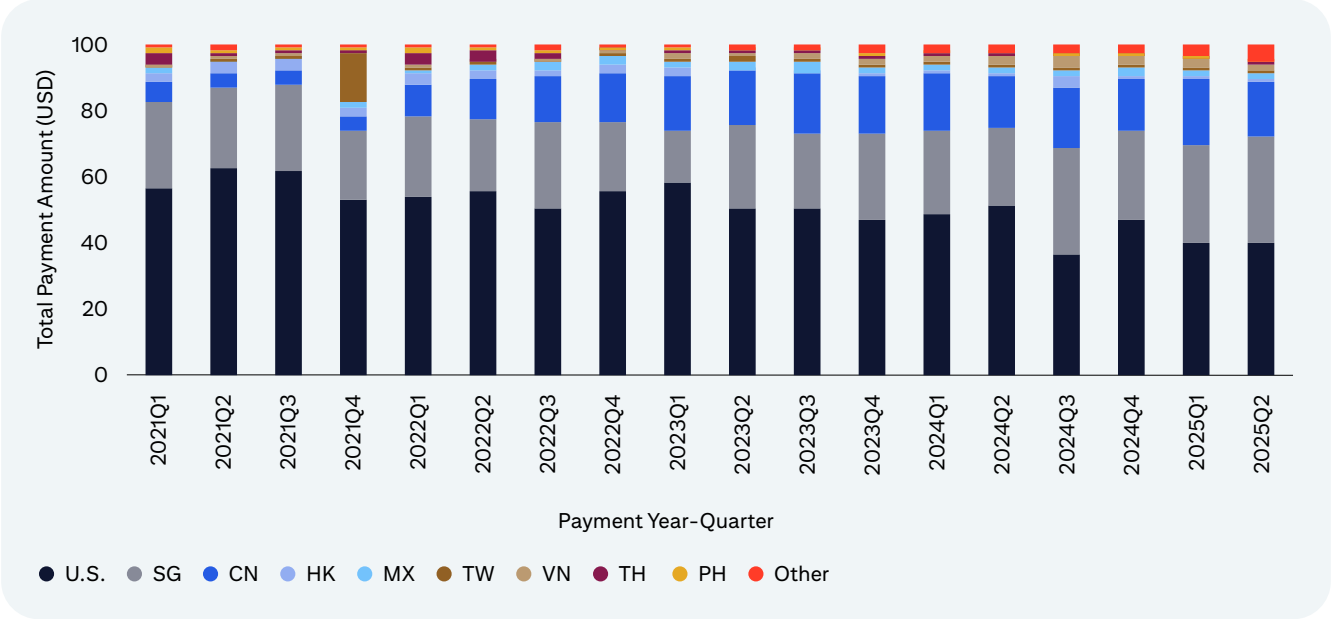
Figure 9. Change in Number of APEC Subsidiaries with South Korean Parents, by Subsidiary Location (rebased to Q1 2021)



Source: Citi Treasury and Trade Solutions, Citi Global Data Insights

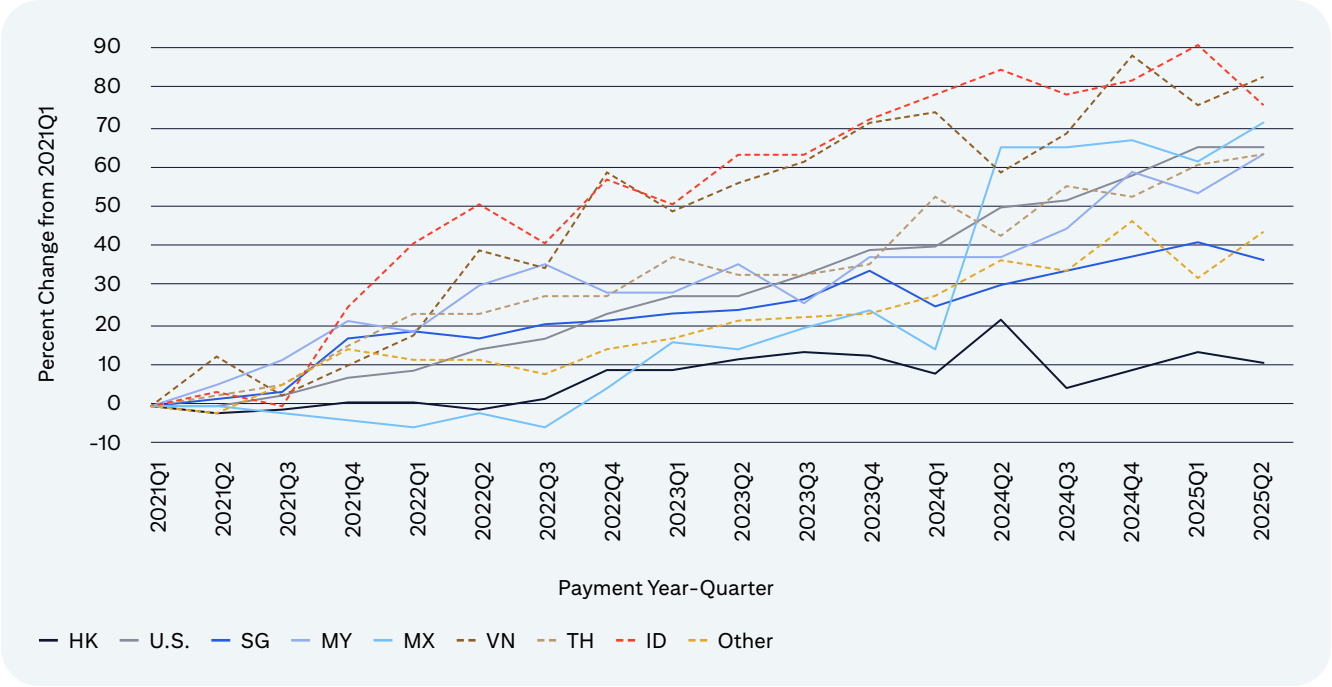
On the other hand, China has been increasing its number of subsidiaries in the U.S. and Singapore. Payments into subsidiaries of American companies in Mexico bulged towards the end of 2024.

Figure 10. Global Payment Flows to APEC Subsidiaries with Chinese Parents, by Subsidiary Location



Source: Citi Treasury and Trade Solutions, Citi Global Data Insights

Figure 11. Change in Number of APEC Subsidiaries with Chinese Parents, by Subsidiary Location (rebased to Q1 2021)



Source: Citi Treasury and Trade Solutions, Citi Global Data Insights

The Engines of Export Growth

A closer look reveals that a few key commodity groups are responsible for much of the APEC region's recent export growth.

Figure 12. Countries, Commodities and Export Growth

LARGEST EXPORT INCREASES 2019–2024

AUSTRALIA	$15.43bn Iron ores (2601)	$12.14bn Coal (2701)	$11.09bn Gaseous hydrocarbons (2711)
CANADA	$35.78bn Crude oil (2709)	$11.57bn Unwrought gold (7108	$2.72bn Goods vehicles (8704)
CHILE	$13.66bn Copper ores (2603)	$3.60bn Refined copper, unwrought (7403)	$1.86bn Carbonates (2836)
CHINA	$81.59bn Passenger vehicles (8703)	$57.64bn Electr÷uits (8542)	$49.74bn Batteries (8507)
CHINA, HONG KONG SAR	$81.59bn Passenger vehicles (8703)	$57.64bn Electronic integrated circuits (8542)	$49.74bn Batteries (8507)
JAPAN	$11.43bn Unwrought gold (7108)	$8.72bn Passenger vehicles (8703)	$7.07bn Electronics manufacturing machines (8486)
MALAYSIA	$31.81bn Electronic integrated circuits (8542)	$10.78bn Non-crude oil (2710)	$4.95bn Palm Oil (1511)
MEXICO	$14.87bn Goods vehicles (8704)	$10.80bn Passenger vehicles (8703)	$10.24bn Vehicle parts (8708)
NEW ZEALAND	$0.60bn Fruit (0810)	$0.51bn Butter (0405)	$0.33bn Milk and cream (0401)
PERU	$8.30bn Copper ores (2603)	$6.01bn Unwrought gold (7108)	$1.55bn Precious-metal ores (2616)
PHILIPPINES	$1.31bn Palm and coconut oils (1513)	$0.73bn Electronic integrated circuits (8542)	$0.73bn Copper ores (2603)
SOUTH KOREA	$41.11bn Electronic integrated circuits (8542)	$27.87bn Passenger vehicles (8703)	$10.24bn Non-crude oil (2710)
THAILAND	$7.52bn Phones (8517)	$3.18bn Computers (8471)	$3.05bn Electrical transformers, converters, and inductors (8504)
USA	$53.18bn Crude oil (2709)	$31.65bn Gaseous hydrocarbons (2711)	$30.03bn Non-crude oil (2710)
OVERALL	$233.64bn Electronic integrated circuits (8542)	$123.91bn Passenger vehicles (8703)	$94.63bn Unwrought gold (7108)

● Electronics ● Vehicles ● Mining ● Agriculture ● Energy

Source: UN ComTrade, Citi Global Data Insights

Integrated Circuits: The dramatic growth of AI and the broader demand for compute power have fueled over $230 billion in export growth for integrated circuits from APEC in the last five years.

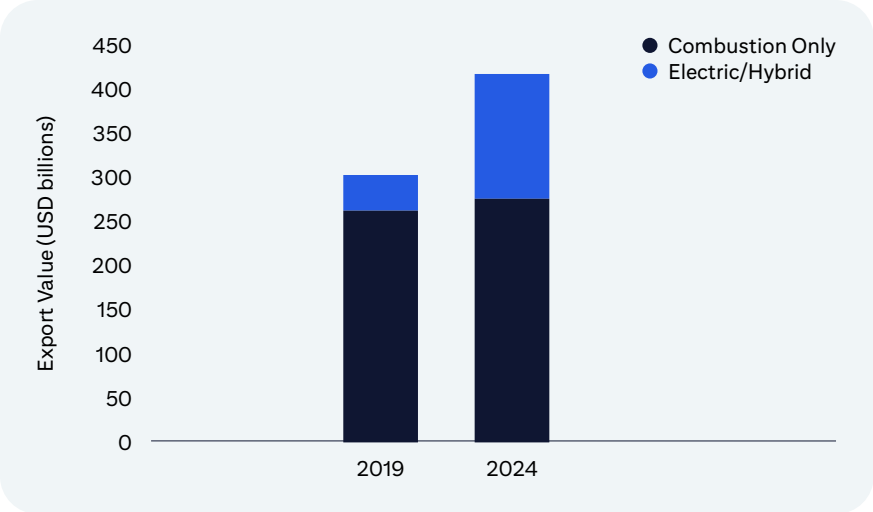
Electric Vehicles (EVs): A central theme in the region's growth is the rise of Electric Vehicles and their components, which aligns with APEC's goal of fostering a resilient EV supply chain. This is evidenced by over $120 billion in growth of passenger vehicle exports, with EVs accounting for more than $100 billion of that increase.

Gold: Amid global price rises and economic concerns, gold has also grown significantly as an export from APEC, driven by higher global demand for the safe-haven asset.

Energy: Energy remains a critical export. As many markets seek alternative suppliers of oil following the outbreak of the Russia-Ukraine war, APEC has seen high growth in its exports of oil, gas, and coal.

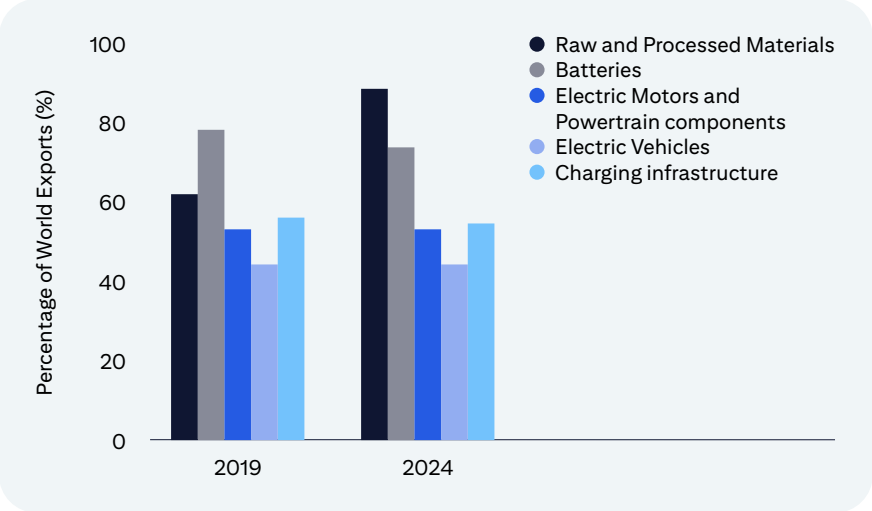
APEC's dominance extends across the entire EV value chain, holding significant portions of global exports from raw materials through to supporting infrastructure. The grouping's principal global market share is particularly pronounced in batteries and the raw or processed materials required for their manufacture.

Figure 13. Vehicle Export Value by APEC Economy (2019 vs 2024)



Source: UN ComTrade, Citi Global Data Insights

Figure 14. APEC Share of World EV Value Chain Exports by Category (2019 – 2024)



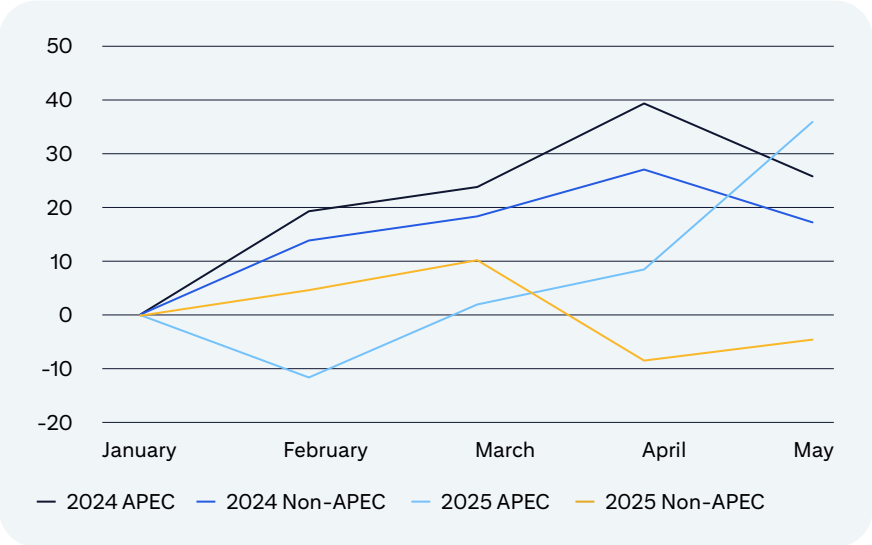
Source: UN ComTrade, Citi Global Data Insights

Tariffs and Trade Uncertainty

Insights from Citi's Treasury and Trade Solutions (TTS) payment flows data reveal the impact of high uncertainty in 2025 compared to the same period in 2024. After normalizing the data to remove trends related to Citi's own business activity, we find that overall growth in payment volumes has been distinctly muted this year, with significant drops in foreign payments from the U.S. to non-APEC partners.

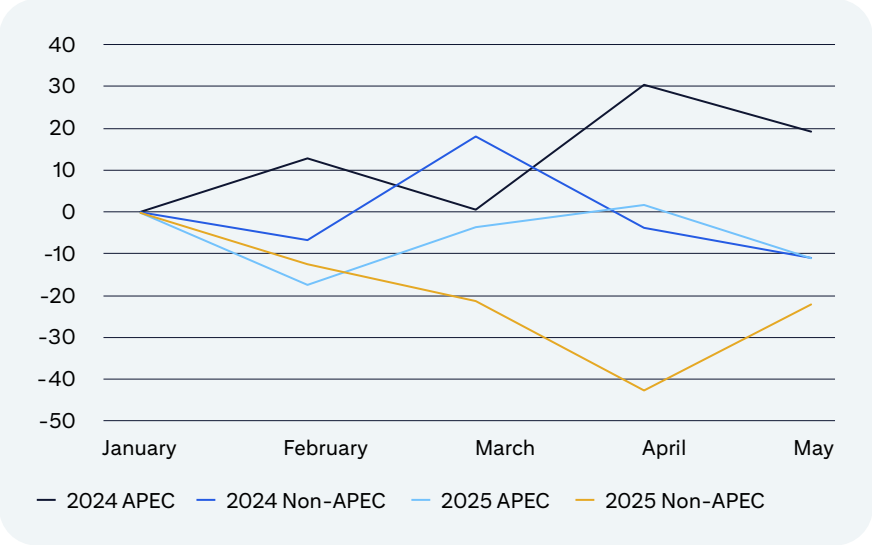
The encouraging message for APEC is that the impact on the grouping appears to be less significant than for the rest of the world. Nevertheless, the effects of increasingly protectionist trade policy are already noticeable.

Figure 15. U.S. Inflow Comparison (Rebased to January): 2024 vs 2025



Source: Citi Treasury and Trade Solutions, Citi Global Data Insights

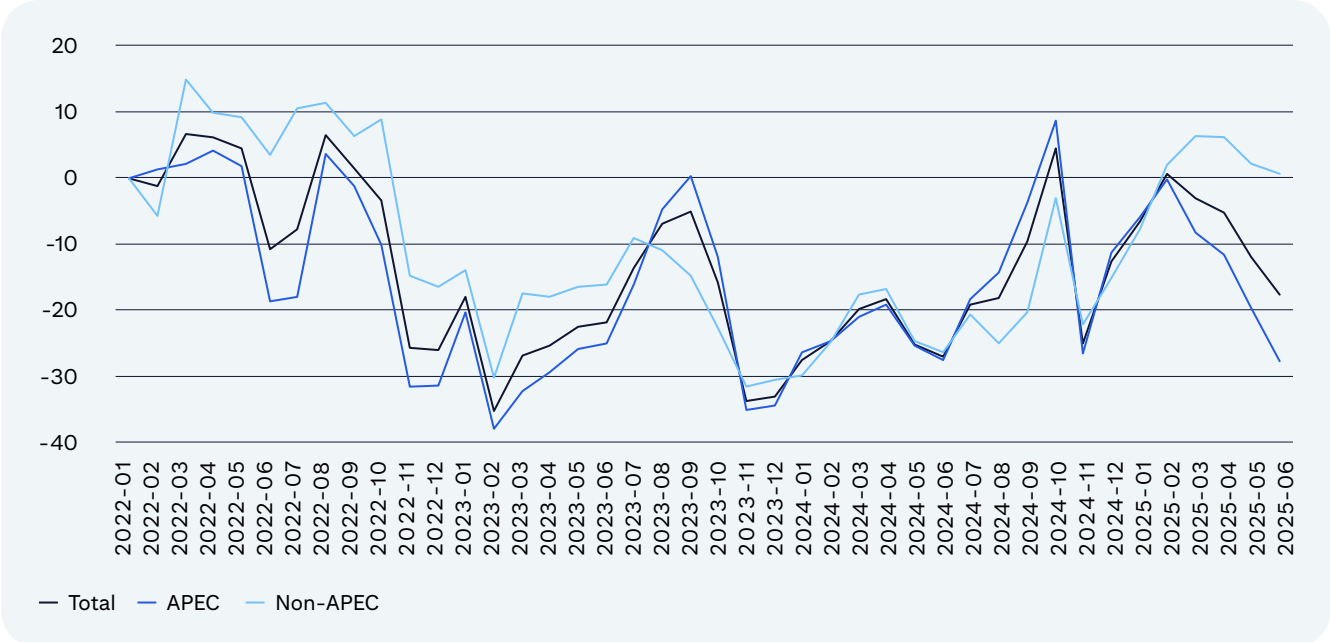
Figure 16. U.S. Outflow Comparison (Rebased to January): 2024 vs 2025



Source: Citi Treasury and Trade Solutions, Citi Global Data Insights

Tracking the volume of maritime shipped goods reveals a complementary angle to the impact of tariffs, with substantial drops in imports to the U.S. mostly attributable to a decrease in goods shipped from APEC.

Figure 17. U.S. Import Volume (TEU) by Month. Rebased to Jan 2022



Source: Dun & Bradstreet, Citi Global Data Insights

APEC Supply Chain – Shipping in Focus

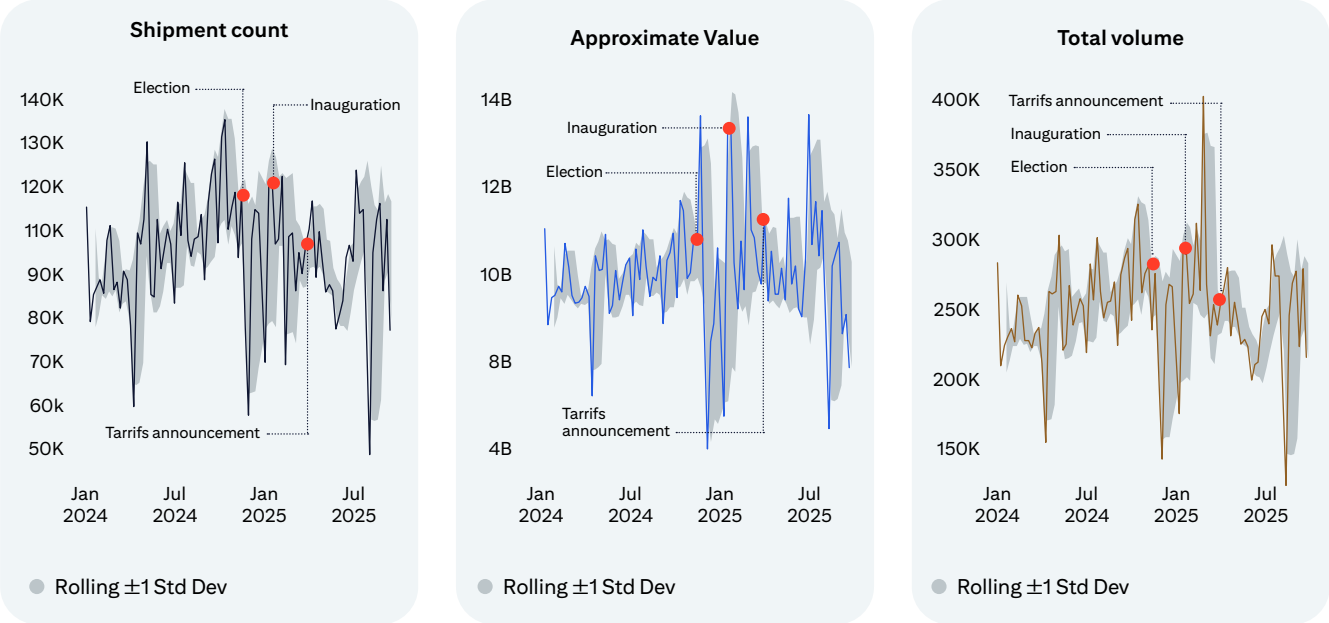
The APEC economies have been a cornerstone of the global supply chain, and their normal operations have recently been challenged by events such a global pandemic and tariffs imposed by APEC's biggest trading partner.

These changes reverberate throughout supply chains after the initial shocks but seem to have settled into their new normal.

This segment of our supply-chain analysis focuses on maritime shipping which is based on a near-real time, global dataset of shipping containers movements, and their approximate value. Using this data, we assess the impact of the tariff shock, and its effect on international trade.

The evidence we've found indicates that the anticipation, and preparation for the tariff shock had a more material impact than the tariffs themselves. We also observe initial signs of what the "new normal" could look like for APEC members.

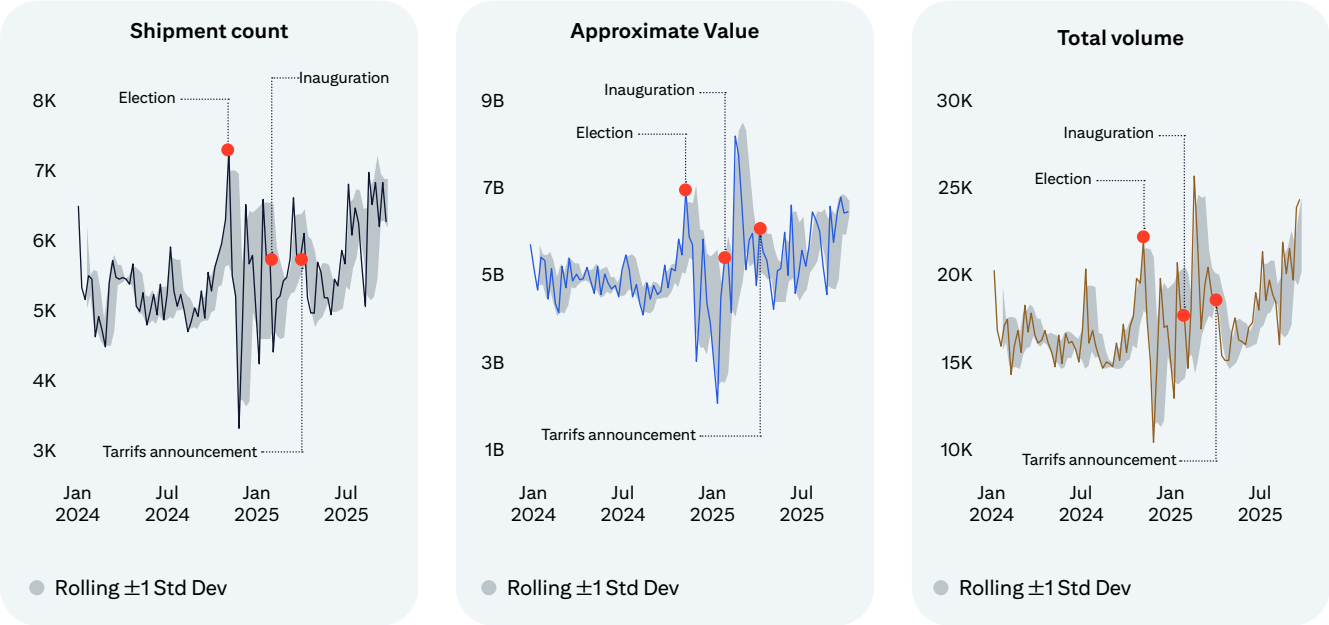
Figure 18. Total Flows from APEC with U.S. to the APEC ± 4w Rolling Std Dev



Source: Citi Global Data Insights, Dun & Bradstreet

The above charts illustrate the number of shipments, their approximate value, and the number of containers shipped per week between the APEC countries, including the U.S. The four-week rolling standard deviation around the line chart is used to highlight abnormal or unusual spikes. Although the profiles remain volatile, the recent trend does point towards a decline in trade volumes.

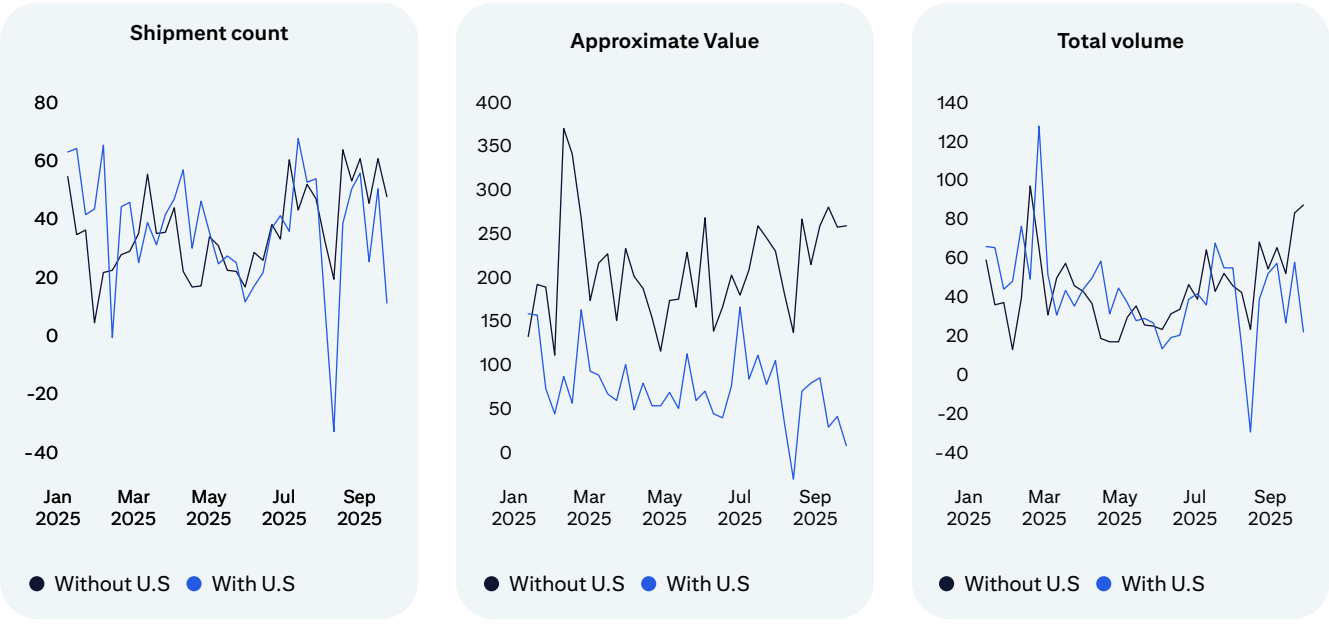
Figure 19. Total Flows from APEC without the U.S. to the APEC ± 4w Rolling Std Dev



Source: Citi Global Data Insights, Dun & Bradstreet

The charts indicate the volumes of trade between APEC countries excluding the U.S. have been steadily increasing, post a period of peaks and troughs at the height of tariff uncertainties. By comparing these metrics, we can gain additional insight into ongoing changes.

Figure 20. Comparison of Shipment-related metrics (Shipments, Approx. Value, and Container Count) with and without the U.S

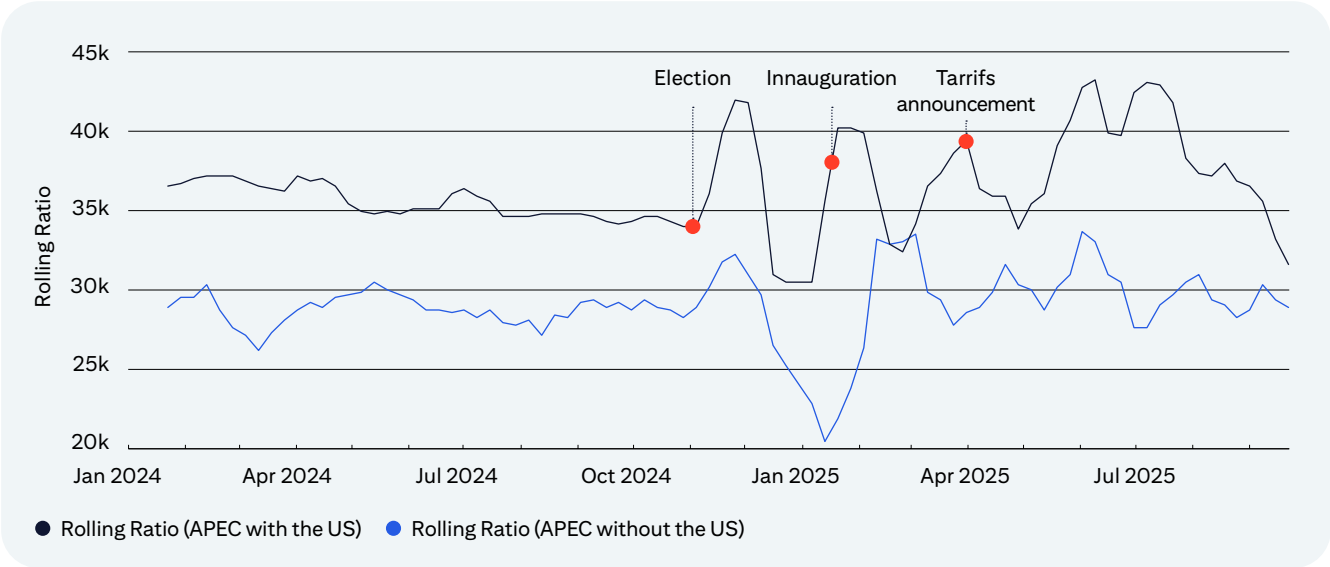


Source: Citi Global Data Insights, Dun & Bradstreet

While the number of shipments and containers being shipped has not changed dramatically between APEC economies (both including the U.S., and excluding the U.S.), the total approximate value of the goods shipped has decreased for shipments which involving the U.S. In other words, high value products are still being shipped among APEC economies excluding the U.S.

Further evidence of this can be seen when measuring the ratio between shipped goods value and the number of containers shipped.

Figure 21. Rolling Ratio (weekly) of Approx. Value to Container Count (with the U.S. vs without the U.S.)



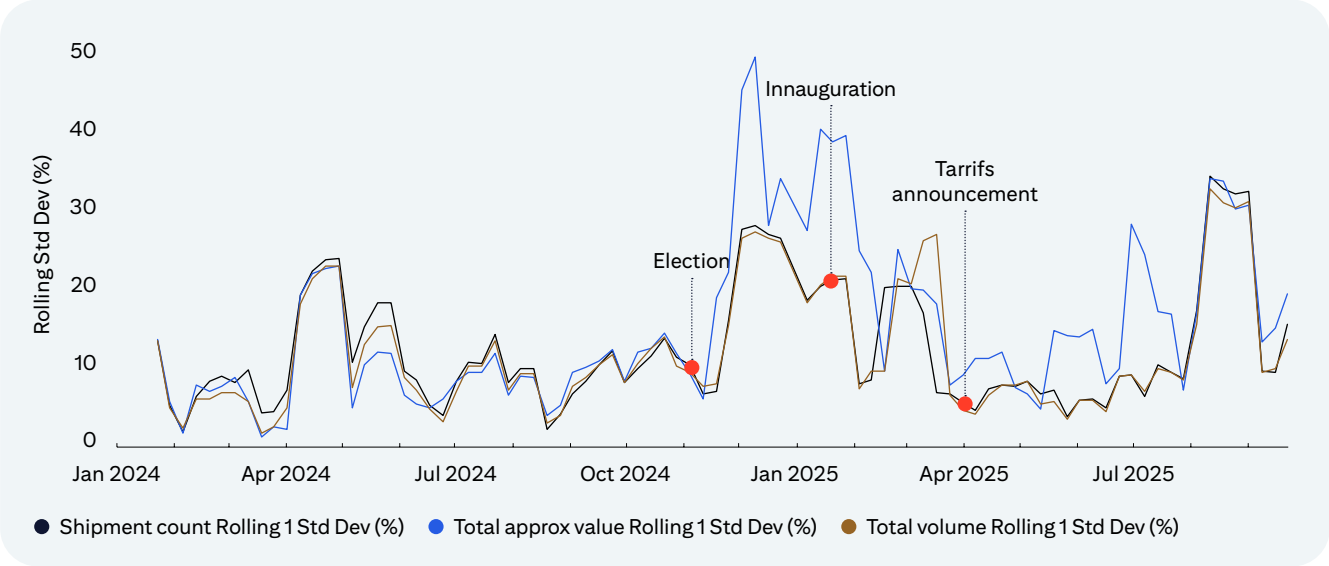
Source: Citi Global Data Insights, Dun & Bradstreet

The ratio between total value of goods and containers shipped indicates a decrease in the value of the "average good" shipped between APEC economies and the U.S., while the value has remained consistent for APEC excluding the U.S. This suggests either higher cost goods have moved to other means of shipping, or their supply chains are being reconfigured, with greater emphasis on local manufacturing or production in lower tariff countries. Lower cost goods seem to have continued shipping normally.

Focusing on volatility specifically, it increased dramatically across all the metrics tracked around the U.S. presidential election in 2024. Tariff anticipation led to significant increases in shipments, frontloading possibly to preempt the shock. After the tariff announcement, volatility subsided for the APEC members, excluding the U.S. For the U.S., it remains high although lower than the period between the elections and the tariff announcement.

The rolling standard deviation (measurement of volatility) of shipment volume metrics, with the U.S.

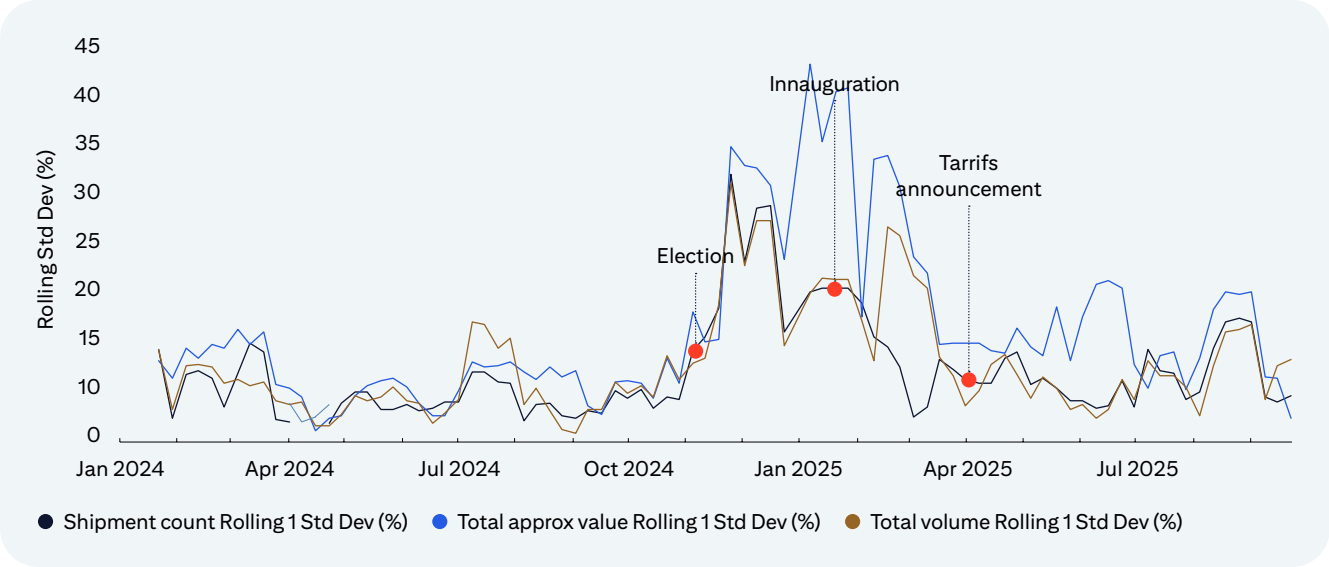
Figure 22. Volatility (4 week rolling) in Percentage Terms for Shipping-Related Metrics With the U.S.



Source: Citi Global Data Insights, Dun & Bradstreet

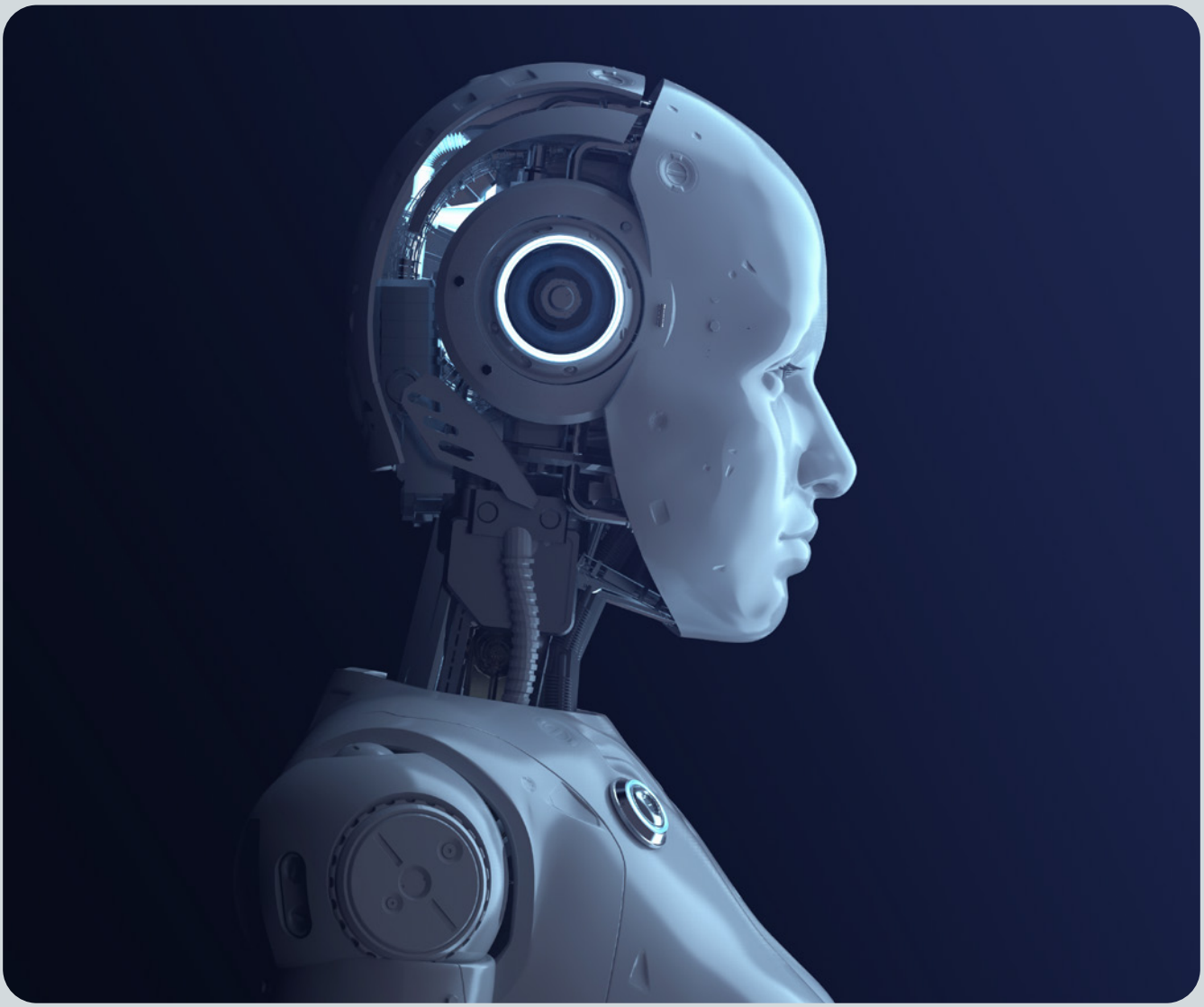
The rolling standard deviation (measurement of volatility) of shipment volume metrics, without the U.S.

Figure 23. Volatility (4 week rolling) in Percentage Terms for Shipping-Related Metrics Without the U.S.



In conclusion, when viewing container shipment data, the strongest impact of the tariff announcement was in anticipation of its announcement. This is evident from the "front-running" of shipments, the change in the average value of goods shipped post-tariff announcement, and in the general trends of container shipments.

Whether this is a temporary effect that will eventually normalize, or a more permanent shift involving higher-value goods being manufactured locally or having their supply chains reconfigured, remains to be seen.

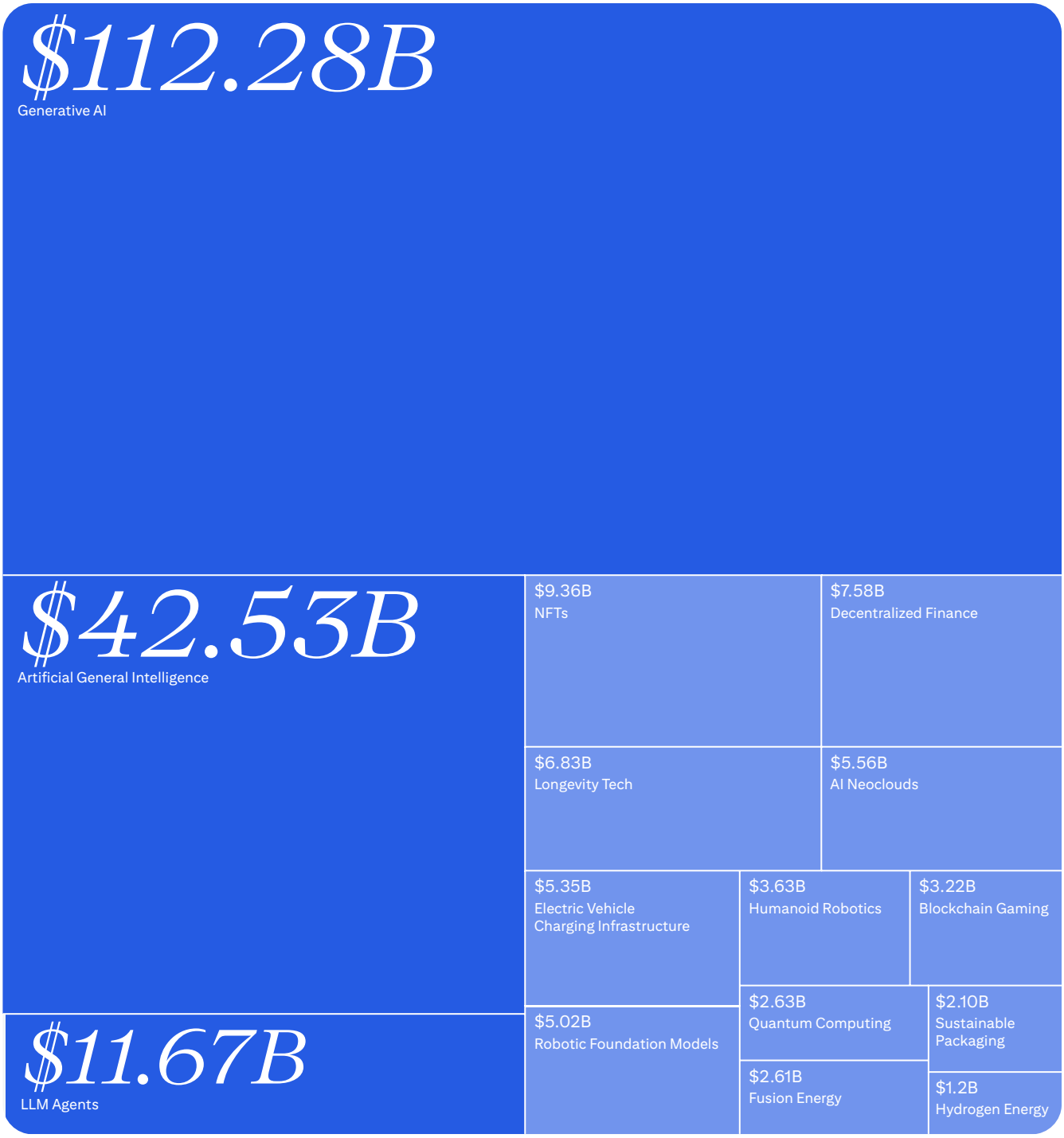


APEC in Themes

Across APEC it is interesting to note the themes underpinning investment in the region and driving private capital into particular areas of interest. The region's appetite for AI, for example, is clear.

From an emerging theme perspective in APEC, the chart below captures those that have enjoyed the largest investment inflows in terms of private funding over the last five years.

Figure 24. APEC Private Capital Invested in US$ Billions, 2020 – Sep 2025

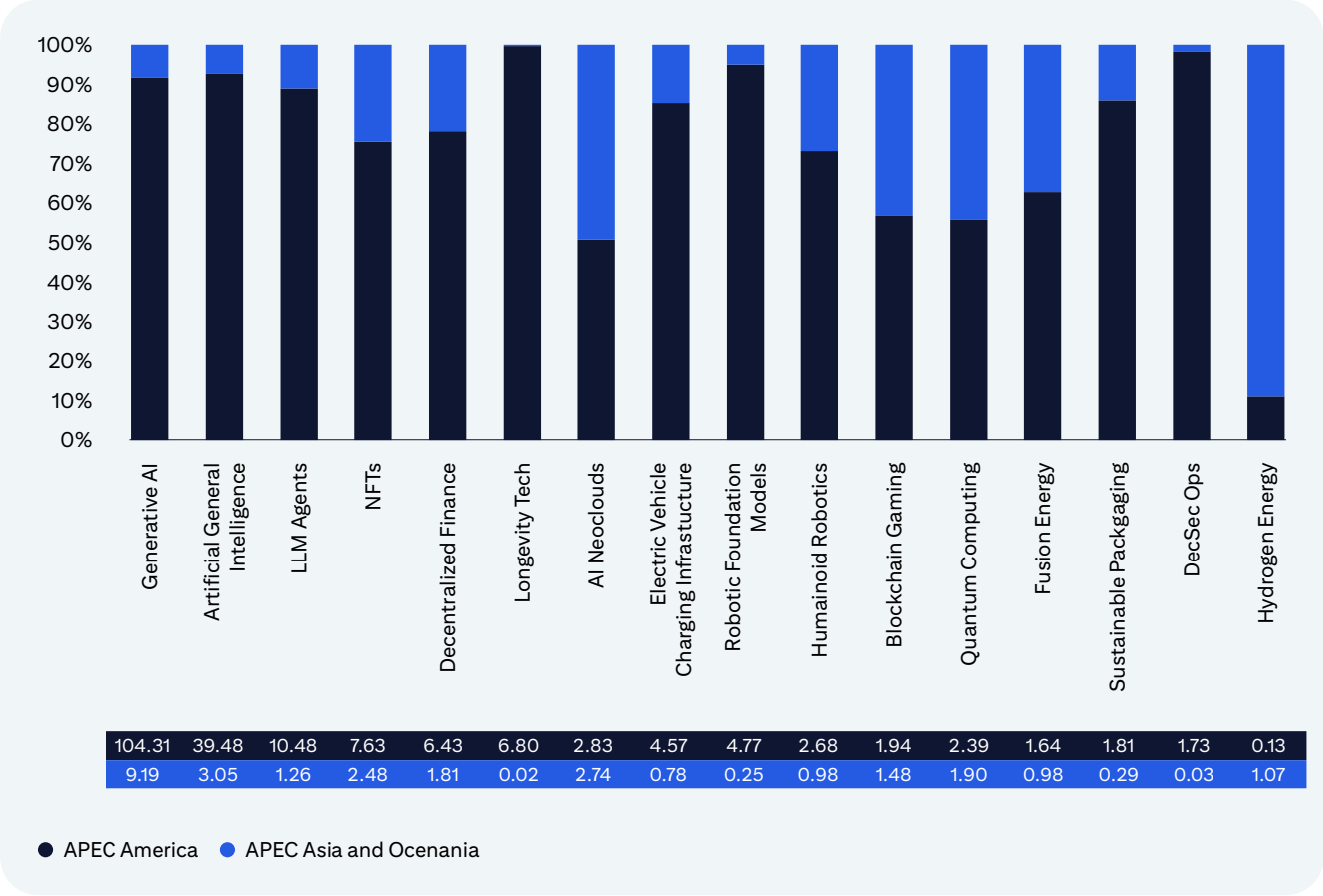


Source: Citi Global Data Insights, Pitchbook

Unsurprisingly, generative AI and LLM agents altogether attracted a large proportion of the funding flows. It is worth noting the advanced AI themes such as AGI (artificial general intelligence) research, AI neoclouds and humanoid robotics also enjoy substantial investments in private markets, which can be seen as the next waves to come.

When delving deeper to examine themes within members of APEC in Asia and Oceania vs Americas, while AI themes clearly dominate, NFTs and decentralized finance have a strong foothold particularly in Asia, together with alternative energy sources. Whether the flows translate into dominance in these areas remains to be seen but they do highlight the different approaches taken: higher concentration in AI on the Americas side, and a more diverse mix in Asia and Oceania.

Figure 25. Private Capital Invested (US$ Billions)



Source: Citi Global Data Insights, Pitchbook

APEC at a Crossroads – Reordering and Realignment

The dynamics of APEC are shifting. First formed in 1989 to facilitate growing economic cooperation amongst 12 members, it has grown to 21 members and covers over 60% of global GDP. The economies within APEC have grown significantly over the last 30 years and global trade and investment has changed significantly.

Foundations of APEC have Profoundly Shifted

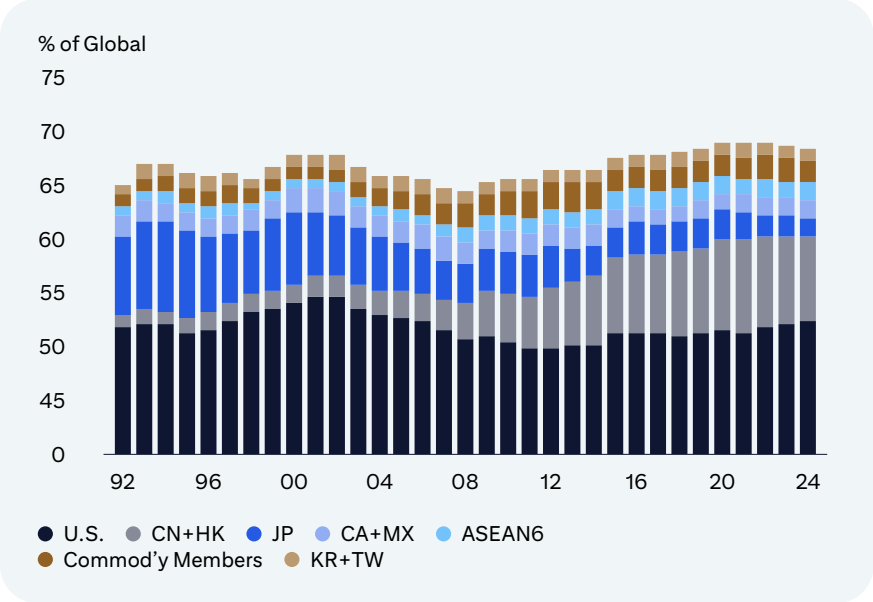
With all that change, the APEC grouping, especially given the resilience of the U.S. economy and the rise of China, continues to be even more economically meaningful now than 30 years ago.

The reasons? First, globalization isn't dead, but is instead, being transformed by a combination of geopolitics, policy interventions and technology. Avenues for cross-border economic cooperation persist and, in some configurations that cooperation is accelerating.

Second, APEC also serves an important geopolitical function – it is one of just two surviving architectures (the other is the G20) where U.S. and Chinese leadership can meet face-to-face.

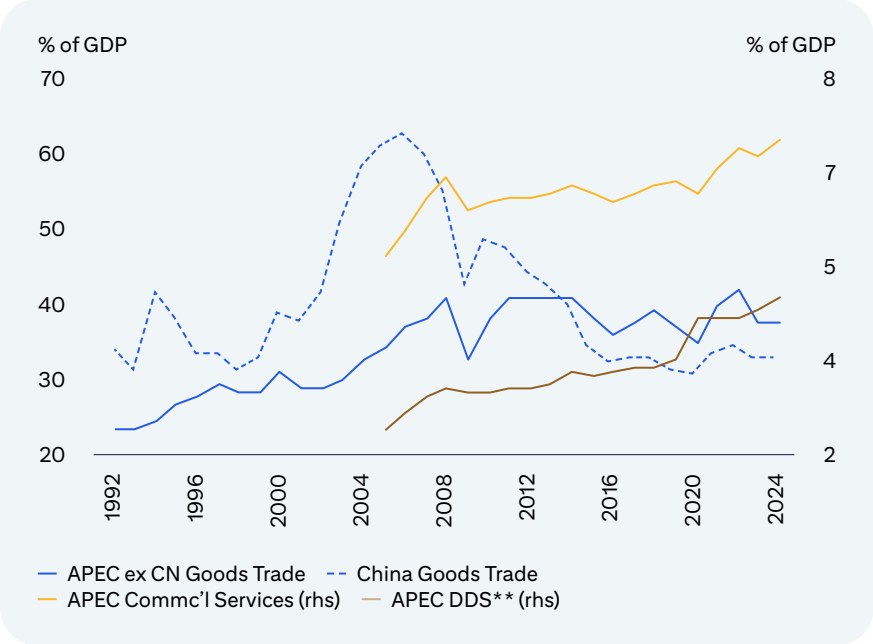
We saw this in a key Biden-Xi summit in APEC 2023 that de-escalated tensions with the reopening of military-to-military dialogue and initiation of cooperation on curbing illicit drug trafficking and AI governance risks. The latter two issues were advanced in their follow-up meeting at APEC 2024 summit in Peru. The APEC Summit Economic Leaders' Meeting in South Korea likely provides the best opportunity for a potential Trump-Xi meeting that might serve to de-escalate recent tensions.

Figure 26. APEC's overall share of global GDP has been remarkably resilient though relative weights within the grouping has shifted



Note: *We designate Australia, Brunei, Chile, New Zealand, Papua New Guinea, Peru and Russia as "commodity" APEC members.
Source: IMF, Haver, Citi Research

Figure 27. Global goods trade has stalled but services trade continues to rise, especially digitally delivered services



Note: *We exclude travel services given Covid distortions; **Digitally delivered services.
Source: WTO, IMF, Haver, CIti Research

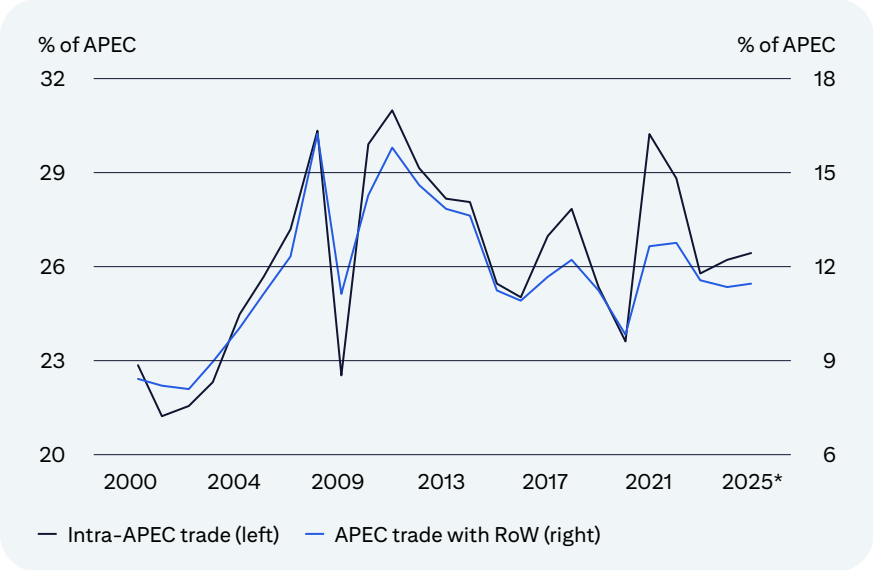
Shifting Patterns of Intra-APEC Economic Relations

Geoeconomic fragmentation of trade flows

The nature of globalization had been changing even prior to the escalation of U.S.-China tensions that started in 2018, with stalling global goods trade intensity being driven by China's rapidly growing size and productive capacity.

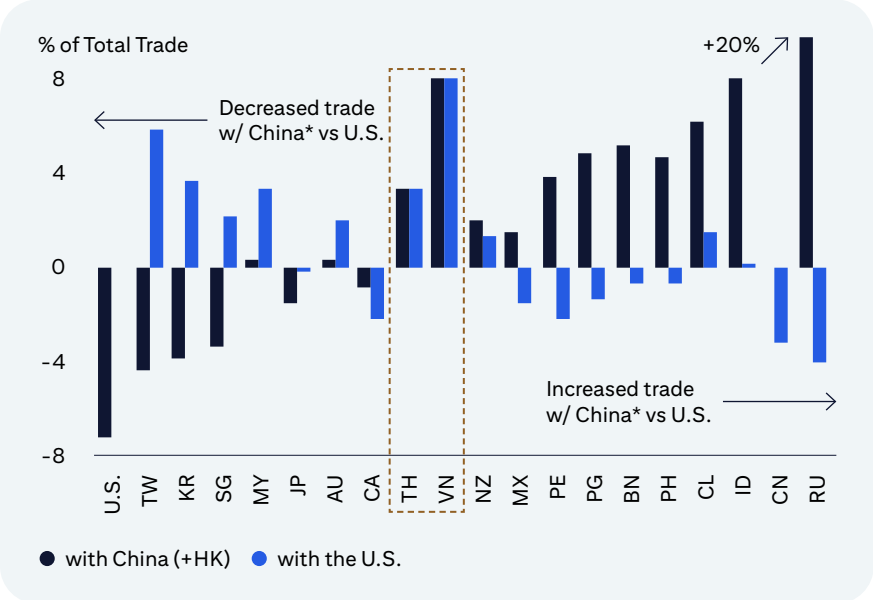
But intra-APEC goods trade has stayed remarkably resilient (though down from its 2011 peak) and has not shown any trend underperformance vis-a-vis APEC members' trade relationships outside the grouping (figure 15). Aggregate ratios conceal a more divergent picture within APEC, with a significant reduction in U.S. and China bilateral trade shares (U.S.-Russia saw an even larger decline given sanctions), and a mixed picture elsewhere across APEC.

Figure 28. Intra-APEC goods trade flows have been relatively stable



Note: *12-month sum up to June 2025.
Source: IMF, Haver, Citi Research

Figure 29. There are significant divergences in trade relations between U.S. and China



Note: * 12-month sum up to June 2025.
Source: IMF, Haver, Citi Research

While some of these trade flow divergences are a function of their economic structures and sectoral developments (e.g. U.S.'s AI capex surge driving high-end chips from Taiwan and South Korea), one could argue that these divergent patterns portray a strong geopolitical alignment, which in turn is influenced by various policy interventions, noteworthy of which were the semiconductor export controls imposed by the U.S. in October 2022.

Work by both Gopinath et al, (2025) and McKinsey (2025), both using UN General Assembly voting patterns to measure geopolitical distance, note that there has been an increase in trade along geopolitical lines (i.e. reduction in geopolitical distance), with Gopinath et al.'s work expanding on this to include evidence of fragmentation in FDI flows.[8]

Such geoeconomic fragmentation – or the diversion of trade and investment flows for non-economic reasons (e.g. national security) – entail economic costs that could be a drag on growth, but at the same time, could also provide opportunities for a redistribution of value added away from the heavy concentration that has accrued to China.

The rise of connector economies

One factor that has been able to safeguard global goods trade, including intra-APEC trade, despite a record rise in trade policy measures, is the role of non-aligned "connector" economies. These act as conduits to U.S.-China trade, providing companies an important lifeline to build arguably more geopolitically resilient supply chains (despite ironically making them longer).

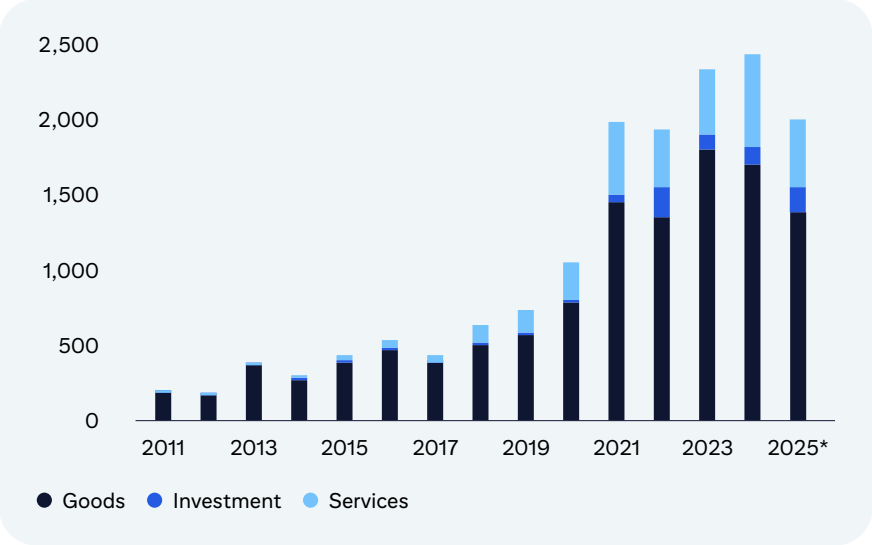
One would logically expect "connector economies" to see their trade shares with both U.S. and China rise since 2017, and indeed, the prime candidates in APEC would be Vietnam and Thailand (figure 16). But a more precise gauge of a "connector" role would be to be more specific about the directionality of trade flows– i.e. share of imports from China would likely rise just as it makes market share gains in U.S. imports in lieu of China's falling market share (which indeed, dropped 9ppts since 2017 – from 21.6% of U.S. imports to 12.6%). By this metric, APEC member economies such as Vietnam and Thailand will now be joined by Mexico and Cambodia (a non-APEC country) (figure 17) .

We think the significant market share gains in U.S. imports for Taiwan and South Korea in APEC, and Switzerland and Ireland outside of APEC, appear more sectoral in nature – the surge in AI capex driving Taiwan and South Korea's high-tech components; and the outsized role of pharmaceutical for the latter two.[9] Only India (a non-APEC economy) represents a meaningful supply chain alternative to China (having made material U.S. import gains, but appears to be less fueled by Chinese originating supply chains or transshipment as its import share from China significantly lags others.

[8] G. Gopinath, P. Gourinchas, A. Presbitero & P. Topalova. "Changing Global Linkages: A New Cold War?" Journal of International Economics (2025), and McKinsey Global Institute. Geopolitics and the geometry of global trade: 2025 update (January 2025).

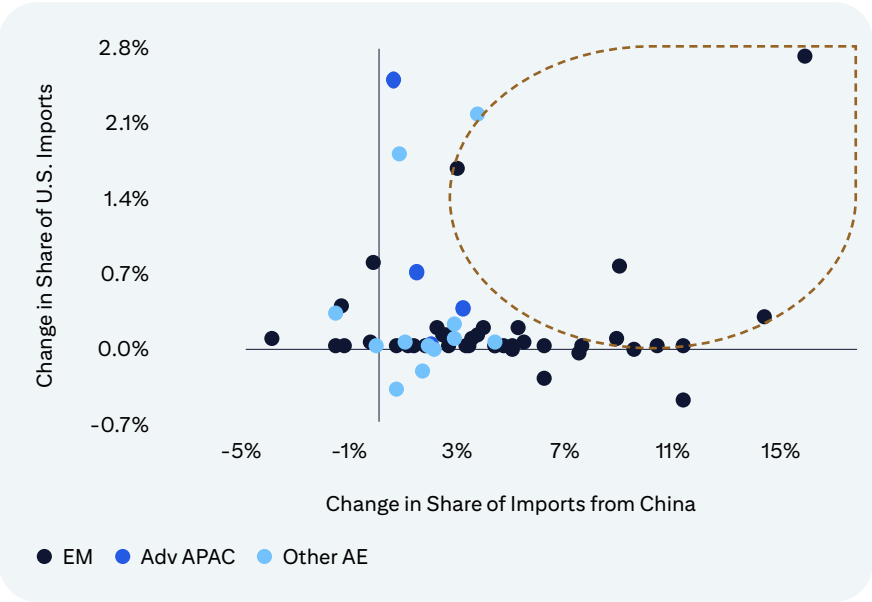
[9] See Brad Setser's testimony to the U.S. Senate Committee on Finance (May 2023) regarding tax arbitrage factors driving offshoring pharma production in Ireland and Switzerland; read here.

Figure 30. Trend Rise in Harmful Policy Interventions on Trade and Investments



Note: *Annualized from end-Aug 2025 data.
Source: Citi Global Trade Alert, Citi Research

Figure 31. Change in Share of Imports from China vs Change in Share of U.S. Imports



Note: * 12-month sum up to June 2025.
Source: IMF, Haver, Citi Research; Note: 12 month sum up to Apr 2025

FDI flows are the key channel within which we can assess if there are real shifts in production location and value addition in these emerging "connector economies", as opposed to just being a hub for simple transshipment and trade rerouting.

Moreover, FDI is an important conduit for technology transfers and productivity spillovers for the receiving economies. We thus look at the share of overseas direct investments of U.S. and Chinese entities and whether they have also increased to candidate "connectors", accompanying the shift in trade flows in the last several years.[10] We find that China-based FDI flows have skewed more to a notable share increase towards ASEAN in recent years, U.S.-based FDI flows have skewed towards India and Costa Rica, while Mexico seems to have received flows from both.

But FDI data may be too broad of a metric to capture production shifts as it includes transactions that may be fueled by tax and interest-rate arbitrage reasons (e.g. intercompany debt, reinvested earnings).

Looking at announcements of greenfield investments, Vietnam and Malaysia seem to be in the receiving end of announcements from both U.S. and China, while data for Mexico is skewed towards China. Having said this, the situation remains fluid, especially as recent U.S. trade policies to protect the North America supply chain will likely put a different complexion on China's investments into Mexico (e.g. China's BYD shelving its plans to build a major car plant in Mexico).[11]

> As the global trade landscape continues to evolve, multinational corporations are actively reassessing manufacturing and sourcing plans, increasingly diversifying production to Southeast Asian countries, and pursuing broader trade diversification to unlock new growth avenues.
>
> *Mridula Iyer, Head of Services for Asia South, Citi*

[10] U.S. data on its FDI abroad data by country can be narrowed down to the manufacturing sector, while China's similar data does not report such granularity, and is lagged by a year.

[11] L. Lara. "BYD Shelves Plans to Build Major Mexico Car Plant over Trump's Trade War" Bloomberg. (3 July 2025).

Figure 32. Top and bottom 20 in absolute mean change (2Q22 to 2Q24 vs 2Q13-1Q22) in FDI from China and U.S.

	CHINA	USA		CHINA	USA
India	-5.75	53.75	Turkey	1.00	not top 20 +/-
UAE	5.25	25.31	Bangladesh	0.64	not top 20 +/-
Spain	3.61	8.19	Singapore	1.56	-1.58
S. Arabia	2.78	8.31	Taiwan	-0.39	not top 20 +/-
Costa Rica	not top 20 +/-	8.06	New Zealand	-0.44	not top 20 +/-
Vietnam	6.31	1.31	Japan	-0.58	not top 20 +/-
Malaysia	2.81	3.75	Hungary	1.47	-2.42
Poland	not top 20 +/-	5.92	South Korea	not top 20 +/-	-1.58
Mexico	5.61	-1.28	United States	-2.36	n.a.
Thailand	3.28	not top 20 +/-	Australia	-0.89	-1.94
Philippines	0.69	2.44	Brazil	0.86	-4.92
Egypt	1.28	1.22	Netherlands	-0.69	-4.06
Indonesia	2.14	not top 20 +/-	Russia	-4.36	-6.22
Serbia	0.61	1.42	Germany	-2.28	-12.25
Cambodia	1.78	not top 20 +/-	United Kingdom	-2.47	-17.44
Chile	1.28	not top 20 +/-	China	n.a.	-30.28

Source: CH Cheng, O. Konovalov & A. Plekhanov, "Connector Economies in a Fragmenting World," EBRD Working Paper no. 303 (Feb 2025) citing fDI Markets data

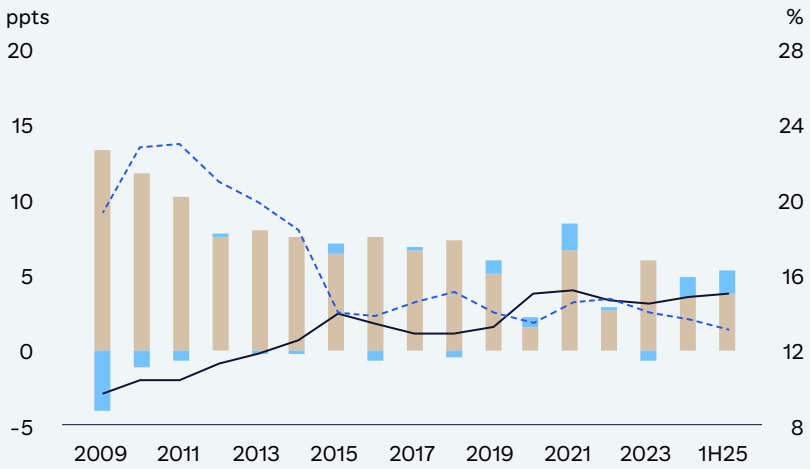
China's Cost Competitiveness and U.S. Trade Policy Breadth

Even before President Trump came into office, the world had already been grappling with an increasing imbalanced growth structure in China as domestic demand had weakened, while industrial capacity has grown on the back of the lagged impact of its existing scale economies and effects of various industrial policies, driven by a technology self-sufficiency drive in recent years.[12] Even as China endures protracted deflationary pressures and weakening industrial profits with the record high level of loss-making firms, manufacturing investments up until May (it has weakened since) have been surprisingly resilient since late 2022, which raises the risk that China's excess capacity pressures will persist for longer.

[12] For a background discussion, see Emerging Markets Economic Outlook & Strategy: China's Manufacturing Glut and its Global Ramifications.

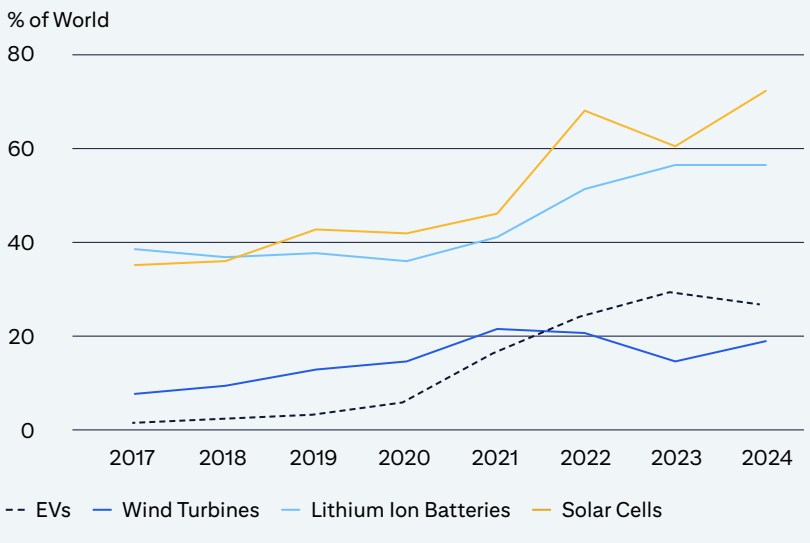
For now, China's dominance in Clean Tech is particularly striking, with significant market share gains in key sectors, especially in solar, batteries and EVs since 2021. In the auto sector, the rapid rise of EV penetration represents a structural transformation that will likely displace competing traditional internal combustion engines. This will have relatively larger impact in some APEC members highly exposed to the more traditional internal combustion engine supply chains, particularly Thailand, Mexico, South Korea, Japan and Canada, alongside being a very politically salient sector in the U.S. (though small relative to GDP).

Figure 33. China's growth is increasingly driven by net exports as it has defended its export market share and become increasingly less import reliant



Source: Haver, CEIC, Citi Research

Figure 34. A driver of China's export market share gains is in Clean Tech sectors



Source: UN Comtrade, Citi Research

The tariff policies of the second Trump administration should be viewed as a structural break from the past: We see two key differences:

First, trade policy uncertainties are far greater than what we've encountered in U.S. modern history.[13] A big contributing factor to this uncertainty is the unprecedented use of the International Economic Emergency Powers Act (IEEPA) as the legal basis for many of the U.S. tariffs (e.g. reciprocal tariffs, fentanyl tariffs, ad valorem tariff on Brazil, penalty tariffs on Russian imports for India). This adds greater discretionary powers to the President to impose tariffs at will (without the usual review procedures of Section 232 and Section 301, for example) and to impose them broadly. While these specific tariffs are currently undergoing a legal challenge, we presume that the Trump administration is prepared for any outcome, with several other authorities – including Sections 232, 301, and 338 – that would enable further sector specific tariffs should the current broad-based policy be invalidated. Such uncertainty should pose a drag on trade-sensitive investment, which would include those relating to supply chain capacity adjustments. Domestic value-added exposure to U.S.-destined exports is particularly high in APEC, particularly East Asia, Mexico and Canada.

Second, the U.S.'s tariff policies now cover most of its trading partners, and is not as asymmetrically punitive against China as earlier anticipated. Recall that U.S. President Trump had campaigned last year on imposing a 60% tariff on China and 10% on everyone else, even though we think market expectations were banking on an additional 30-40% tariff on China. In the end, China willingness to retaliate and impose punitive countermeasures (e.g. rare earth magnets) to extract leverage has led the U.S. to de-escalate its additional tariffs this year to about 30% so far (excluding exemptions), while many ASEAN economies have seen reciprocal tariffs settle in the 20% range, and India for now has an even higher effective tariff rate than China (figure 23). Thus, the additional tariff differential of China vs major ASEAN peers has narrowed to ~16ppts vs market expectations in the 20-30% range.

[13] Based on news-based trade policy uncertainty (TPU) index, the average TPU in February to July 2025 is about 2.5 higher than the peak TPU month under Trump 1.0 (Aug 2018). In fact, the Liberation day tariff noise in April 2025 saw TPU increase by almost 13x standard deviation above 40-year mean.

Figure 35. U.S. Latest Effective Tariff Rates on Key U.S. Trading Partners/APEC Members vs. U.S. Bilateral Trade Balance

	RECIPROCAL TARRIF (%)	SECTOR TARRIF AND EXEMPTION ADJUSTED (%)	PLUS PREV. EFFECTIVELY APPLIED TARRIF	LATEST EFFECTIVE TARRIF (%)	U.S. BILATERAL TRADE BALANCE (IN US$ BN)
India	25 (50 incl tarrif for Russia oil purchase)	39.6	2.7	42.4	-45.8
China	10 (30 incl fentanyl	29.3	11.2	40.5	-295.5
Brazil	10 (50 incl additional Ad Valorem Tax)	33.4	1.3	34.7	6.8
Indonesia	19	18.3	4.1	22.4	-17.9
New Zealand	15	14.4	4.7	19.1	-1.1
Vietnam	20	13.7	4.6	18.3	-123.5
Japan	15	14.2	1.6	15.8	-69.4
South Korea	15	14.3	0	14.3	-66
Thailand	19	13.3	0.9	14.2	-45.5
Philippines	19	12.4	1.4	13.8	-4.9
EU	15	12.3	1.5	12.3	-235.9
Australia	10	11	0.5	11.5	17.9
Peru	10	10.8	0.1	10.9	1.8
Malaysia	19	9.9	0.7	10.6	-24.9
Mexico	- (25% incl. fentanyl)	-	0	9.2	-171.5
Taiwan	20	8.4	0.7	9.1	-73.7
Chile	10	6.9	0	6.9	1.8
Canada	- (25% incl. fentanyl)	6.0	0.1	5.0-6.0	-62
Singapore	10	5.5	0	5.5	1.9

Note: China effective rate includes 20% fentanyl tariff for all goods; 10% reciprocal tariff and sector tariff below; and plus effective tariff rate of pre-Trump 2.0 tariff at 11.2%; Canada (assumes 95% USMCA compliant) and Mexico (assumes 80% USMCA compliant) effective rate estimated by Citi analyst; 0% sector tariff: semiconductor, pharma, lumber, refined copper; 0% tariff for aircraft from EU; 50% tariff steel/ aluminum/ semi-finished copper; 15% tariff auto/part for EU/JP/KR; 25% tariff auto/part for others.
Source: White House, World Bank, Citi Research

How Technology is Reshaping Economic Relations

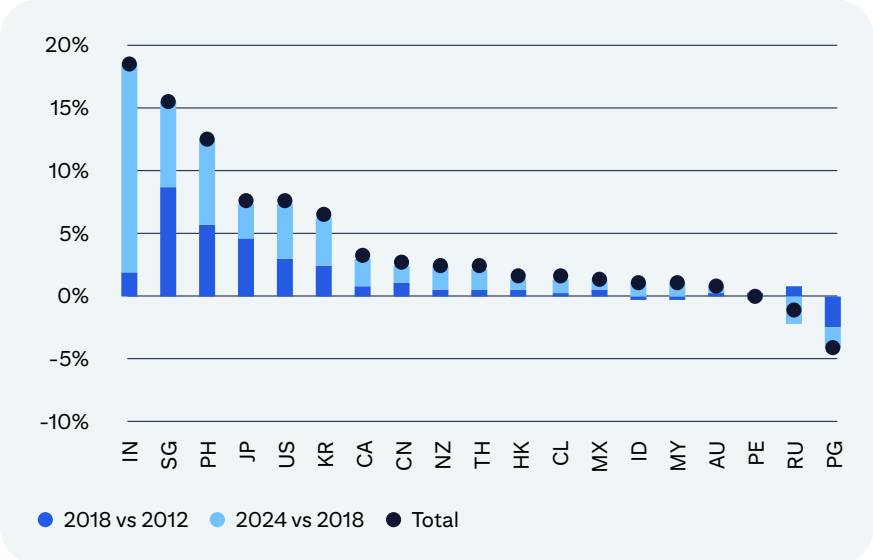
Improving Tradability of Services

We had earlier argued that while global goods trade has stalled, services trade has continued to rise, especially digitally delivered services, which we see is a function of significant technological advances that have facilitated their cross-border delivery. Unlike goods trade where evidence is pointing to marked geoeconomic fragmentation, preliminary work looking at a new bilateral service trade flows database (BiTS) has so far not shown signs of geoeconomic fragmentation to overall services as a whole, though there is some evidence that foreign policy disagreements appear to have some impact on sub-components of services trade relating to intellectual property and ICT services.[14]

We think technological factors facilitating services productivity growth and its tradability are overwhelming geopolitical considerations at this juncture, not to mention recent U.S.-led trade policy uncertainties have largely targeted the goods sector, while leaving services trade largely unscathed. There is still significant variation in a subset of regulatory development affecting digital services – and in general, they have become more restrictive (figure 25)

For now, we think technology is becoming transformative for services trade in at least two ways. First, ICT advances make "modern services" (IT, business process outsourcing, financial, insurance, pension services, educational and even recreational services) more directly tradeable, and this is likely to further accelerate amid digital and telecommunication hardware advancements, collaborative software, freelance platforms, machine translation and artificial intelligence. In fact, the share of modern services – the type of services that could be boosted by such technological advances – to gross exports have risen by about 3.4ppts in the last 12 years, outpacing "traditional" services (e.g. travel, transport) as goods share gross exports have declined.

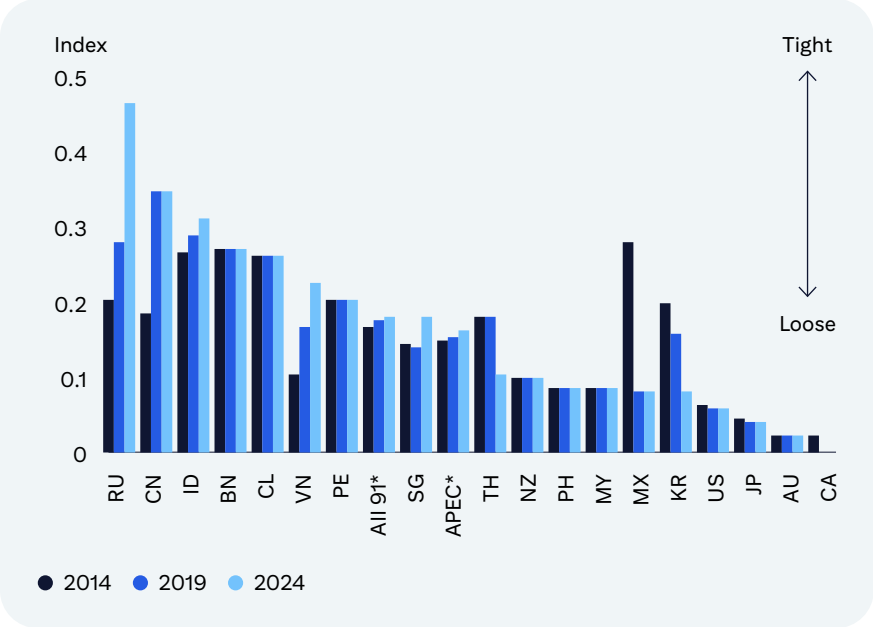
Figure 36. APEC (and India) – Change in the share of modern services to gross exports, 2024 vs 2012



Source: IMF, Haver, Citi Research

[14] N. Li & R. Zymek. "Geoeconomic fragmentation in services? Evidence from a new database", Chapter 3 of The State of Globalisation. Centre for Economic Policy Research (June 2025).

Figure 37. Digital Services Trade Restrictiveness Index–APEC economies with APEC and Global Average



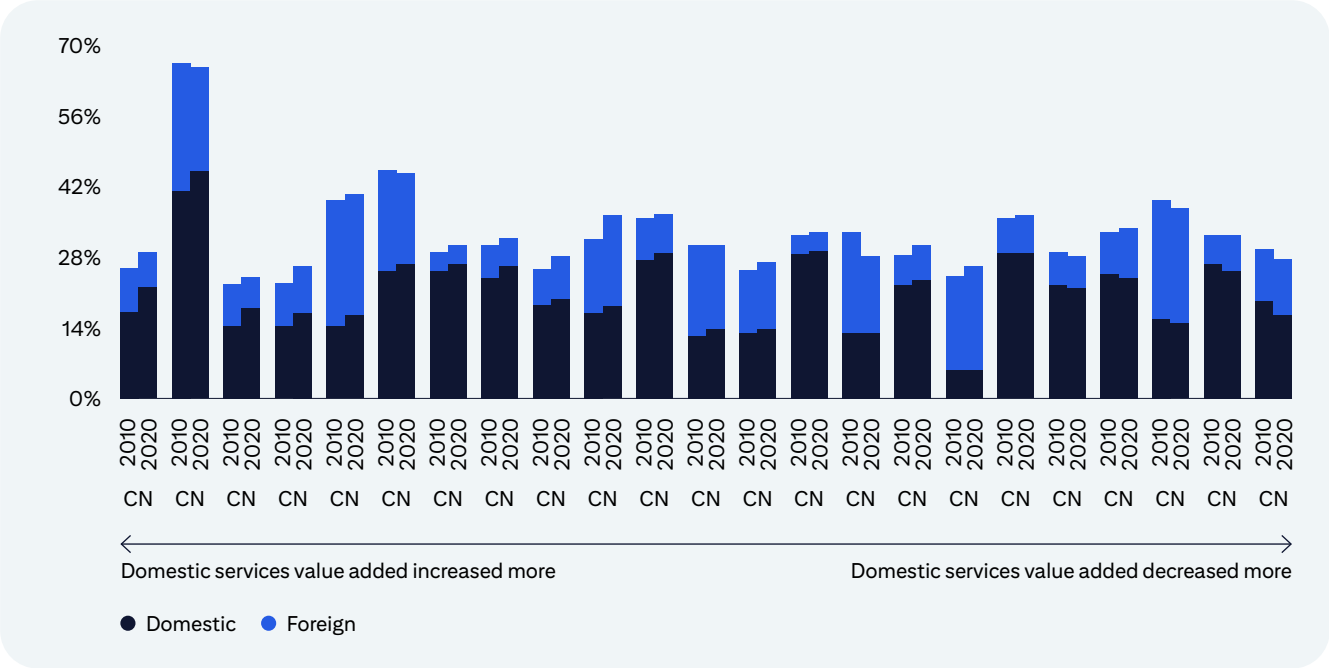
Note: *Average of 91 economies in the OECD DSTRI database; **APEC average does not include Hong Kong, Papua New Guinea and Taiwan where data is not available.
Source: OECD, Citi Research

Second, technology has also opened up more services value-added to cross borders within the production process of physical (manufactured) goods itself, with much of these tasks are traded in-house within a multi-national company – e.g. R&D, design, engineering services – and this can be viewed in the rising share in services value-added in trade of manufactured goods, though this is less directly observable in trade data. Using OECD TiVA calculation from input-output tables (latest data in 2020), we see a general rise in services value added content in manufactured goods, led by China and HK, with one non-APEC member, India, also making domestic inroads. U.S. is outperforming other developed OECD nations and EU (at least up until 2020) in raising both the services VA in their exports, alongside their domestic contribution. However, commodity APEC members, particularly Russia, underperform, as do less developed regions like Africa (figure 26).

Kanika Thakur, Head of Services for Japan, Australia, and Asia North, Citi, points out that while there is geo-economic fragmentation in the global trade of goods, technological advancements are bolstering cross-border services flows, particularly for those that are digitally delivered.

She adds: "The tradability of modern services – from IT to financial and education offerings – is being accelerated by innovations in ICT, collaborative software, and AI. Technology is also gradually transforming global production processes and making services an indispensable component of both direct exports and integrated supply chains. This digital transformation and the global integration of services will increasingly define economic growth and interconnectedness in APEC and beyond."

Figure 38. Services Value Added (VA) share in Manufactured Exports (in %) – Rising in most, with China leading in domestic service VA increase



Note: *Non-APEC economies included to serve as a comparison.
Source: OECD TiVA (2023), Citi Research

The impact of artificial intelligence, with extensive applications across sectors as a general-purpose technology, could act as a further accelerant to services trade. The overall productivity and income boost that AI applied on services sector could spur greater demand and trade flows. Digital tools, enhanced by AI, could either directly facilitate trade by being applied to enhance trade logistics/customs procedure, overcome language barriers, minimize search costs to match buyers and sellers, and improve both trade regulation compliance and supply chain transparency.[15] Beyond this, AI could be a very powerful tool to enhance the trade of digitally delivered services, fostering new applications and customization of services. Work by Sun and Trefler (2023) shows how AI increases the international trade of mobile app services by foreign users by 10-fold, though this is halved when foreign users have strong cross-border data flow restrictions.[16] South Korea introduced a first-ever APEC Digital and AI Ministerial Meeting in 2025 and proposed an APEC AI Initiative promoting a shared outlook, capacity building, and investment in sustainable AI infrastructure. This marks a significant step in APEC's orientation on this surging area of investment and development, and will likely feature high on the group's agenda in coming years. As developments in quantum continue to emerge, we expect these to take a prominent place in APEC's digital agenda as well.

[15] WTO. Trading with Intelligence – How AI shapes and is shaped by international trade (Oct 2024).
[16] R. Sun & D. Trefler. "The Impact of AI and Cross-Border Data Regulation on International Trade in Digital Services: A Large Language Model," NBER Working Paper No. 31925 (Nov 2023).

AI may not be an entirely benign force for all types of services trade. On the one hand, it can act as a compliment to labor, reducing the skills gap across workers – a boost to lower skilled back office workers in developing economies.[17] On the other hand, AI-enabled automation could also displace workers and reduce the necessity of significant back office operations that are particularly important in driver of jobs and services trade in the Philippines and India. For example, the CEO of India's largest IT services company, Tata Consultancy Services, had argued that AI could kill off most call centers, with BPO being ripe for disruption, displacing lower end outsourcing jobs even as it creates higher value roles (e.g. in data science, digital marketing),[18] which could shift the geographic footprint of services trade flows.

Clean Tech Adoption Spurring Trade and Investment Shifts

China's significant capital investments in Clean Tech over the last decade has resulted in staggering cost declines, helping accelerate their adoption globally, which in turn will drive energy transition-related investments. As China remains dominant in supply chain in these key clean tech technologies, particularly renewables and electrified transport[19], this may continue to skew certain trade and investment activity of major EM and APEC trading partners towards China, displacing others more developed economies like U.S., EU and Japan.

Over the short term, however, capacity growth in some of these key sectors, may outstrip demand and may be a drag to significant renewable factory/ supply chain investment across EM including China.[20] In fact, Citi Research, on July 03 2025, said capex growth in solar and battery sectors could be subject to China's next round of supply side reforms.

However, China's dominance in critical magnets proved to be a useful strategic leverage against U.S. trade policy under President Trump, and there are no signs China will relinquish this dominance in the short-term, with the ability to leverage its economies of scale to drive down cost efficiencies. In fact, there were earlier reports that Beijing was tightening its grip in the industry by restricting the movement of engineers and equipment to safeguard its technological knowhow.[21] Based on investments announcements tracked by the China Global Investment Tracker (CGIT), Chinese outbound investment in metal-related projects appears to have rebounded sharply from the pandemic lows, and at the current run rate in 1H25, is set to increase further this year even as total outbound investments fall, though much of Chinese investments appear to be flowing outside of APEC (i.e. Africa) (figure 27).

[17] For example, see E. Brynjolffson, D. LI & L. Raymond. "Generative AI at Work," Quarterly Journal of Economics. Vol 140, Issue 2 (May 2025): 889-942.

[18] B. Parkin & C. Kay. "AI could kill off most call centers, say Tata Consultancy Service Head" Financial Times (25 Apr 2024), and "BPO sector ripe for AI disruption,,," The Economic Times (14 July 2025).

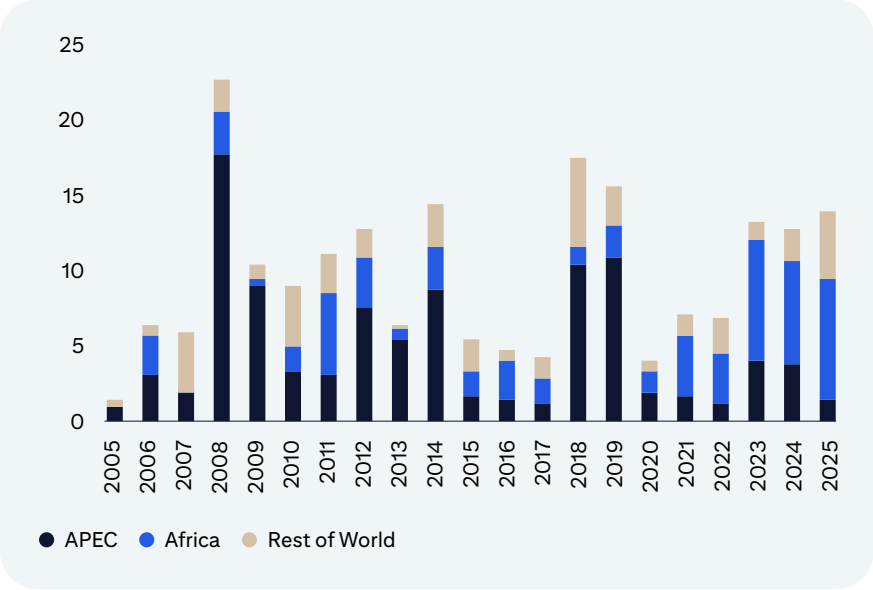
[19] See Figure 9a of Emerging Markets Economic Outlook & Strategy: Capex Growth Challenges Mount.

[20] Bloomberg NEF. Energy Transition Supply Chains 2025 (Apr 2025).

[21] "China tightens grip on tech, minerals and engineers as trade war spirals," FT (16 Feb 2025).

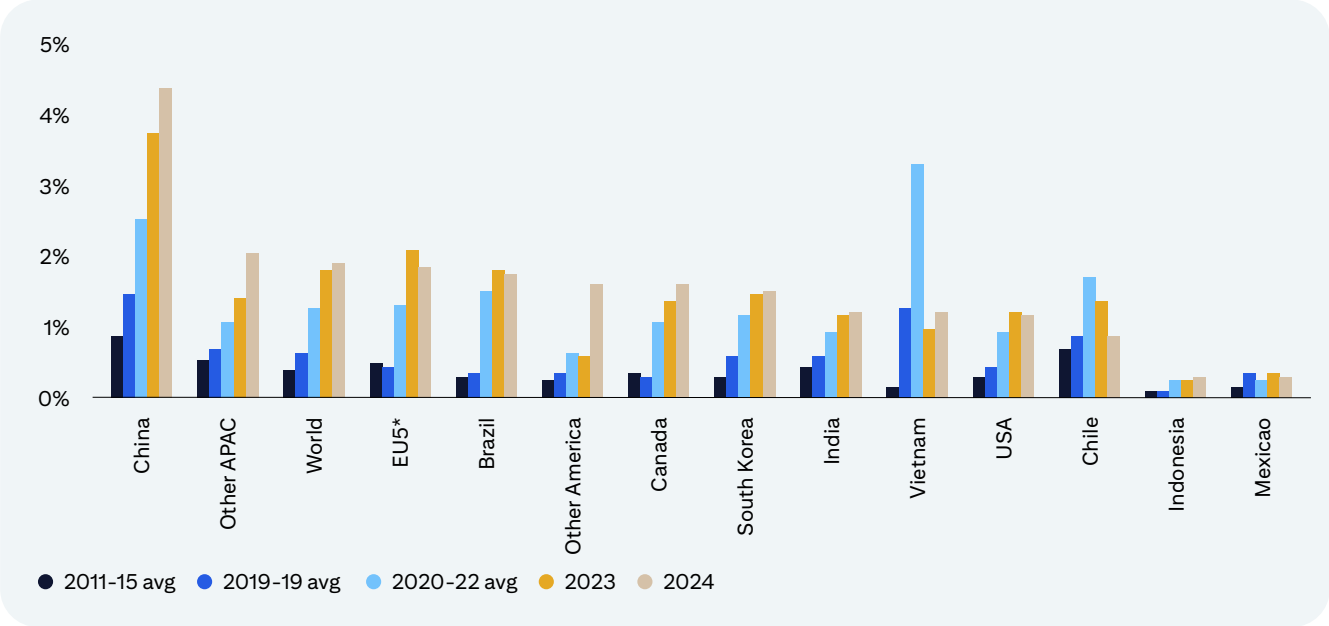
While China's critical mineral dominance has been long known by U.S. authorities, the second Trump administration seems more focused on reviving domestic production and working with select partners as opposed to continuing with Biden's Mineral Security Partnership with 14 other nations (including four APEC members – Canada, Australia, Japan and South Korea) and the EU. In October, the U.S. signed an agreement with Australia to fast-track development of rare earths from Australia. U.S. efforts to build an independent supply chain, including processing capacity, will take a long time and will necessitate continued fiscal support amid a wide production cost gap between China and the U.S. It remains to be seen if U.S.'s attempt to mobilize alternative critical mineral supply chains will eventually translate to increased U.S. engagement with several key APEC-mining-rich economies addition to Australia including Canada, Chile and Peru, alongside Indonesia, where its latest framework agreement with the U.S. (to secure a 19% tariff effective August 7th) incorporate Indonesia removing its export restrictions on nickel.

Figure 39. China's Announced Outbound Investments in the Metal Industry (USD Billions)



Note: CGIT data excludes transactions smaller than US$95mn, Note: *We annualized 1H 2025 data.
Source: American Enterprise Institute & Heritage Foundation, China Global Investment Tracker

Figure 40. Energy Transition Investments (i.e. capital spent on deployment of low-carbon technology*), % of GDP



Note: *Energy transition investments cover renewable energy, power grids, nuclear, energy storage, carbon capture storage, hydrogen, electrified transport, electric heating, clean industry and clean shipping. **EU5–UK, France, Germany, Italy and Spain.
Source: BloombergNEF, Haver, IMF, Citi Research

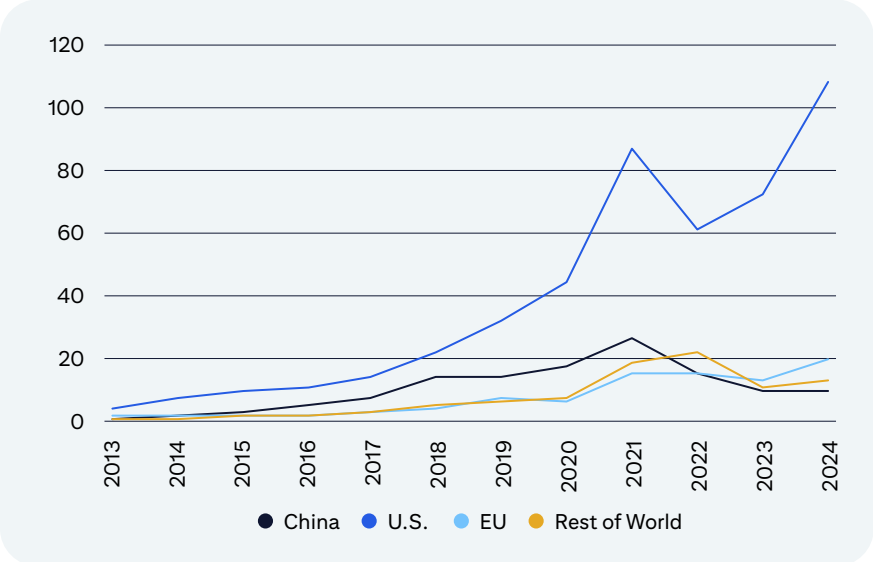
Citi Research said in a July 3rd 2025 note that prospects for clean-tech deployment-related investments on the downstream end ("energy transition investment") will likely continue to grow as cost efficiencies and technology improve. The largest investments were made in electrified transport, power grids and renewable energy, which together account for 90% of the total US$2trn in global ETI last year.[22] EM will likely see faster growth than AE, especially with the reversal in climate strategy under President Trump, as seen in the climate unfriendly provisions of the One Big Beautiful Bill Act. China remains the leader of energy transition investments, driving APAC's growth to be twice the global average, but other APEC members in ASEAN may continue to see strong growth, alongside EM economies like Brazil and India.

[22] Bloomberg NEF. Energy Transition Investment Trends 2025 (30 January 2025).

Digital Infrastructure and Artificial Intelligence – the Tug of War between U.S. and China

Despite the U.S. arguably losing competitiveness in Clean Tech, there is a striking and contrasting narrative in its perceived very wide lead in Artificial Intelligence, which is in turn fueling the strong U.S. equity market performance, according to a Citi Research report published on July 3rd. This is one subcomponent of private investments that have surged in the U.S. relative to others at $109bn in 2024, almost 12x larger than the next biggest spender, China, though this gap may have narrowed this year as "DeepSeek" catalyzes renewed AI investment interest in China, not only by private sector players but significant government support that is not captured in the reported private numbers, though analysis by MERICs argue government financial support is more heavily concentrated in the capital-intensive semiconductor sector.[23] For now, we have seen a material narrowing of the performance gap of China-based large language models (all open sourced) with that of the U.S.-led Western ones (mix of open and closed source models), though relative performance has recently slipped somewhat (figure 30), and hardware constraints may pose a challenge to Chinese models over the longer term.[24] While China spends far less than the U.S. and is lagging in cutting edge models and tools where U.S. leads, it seems more focused on embedding AI in applications (e.g. manufacturing, robotics, healthcare, etc.) and diffusing it in its economy, using cheaper/more efficient models with greater access to vast local data.

Figure 41. U.S. private sector far outstrips the rest of the world in AI Investments (USD Billions)



Source: Artificial Intelligence Index Report 2025, Haver, Citi Research

[23] W . Chang, R. Arcesati & A. Hmaidi. "China's Drive Toward Self-Reliance in Artificial Intelligence," MERICS Report (July 2025).

[24] E. Olcott & Z. Wu. "DeepSeek's next AI model delayed by attempt to use Chinese chips" Financial Times (14 Aug 2025).

Figure 42. Top Scoring Large Language Models according to Chatbot Arena–June 2024, Jan 2025 and Aug 2025

JUN-24		JAN-25		AUG-25	
GPT 4o- 2024-05-13 (OpenAI)	1,287	o1-2024-12-17 (OpenAI)	1,351	Gemini-2.5-Pro (Google)	1,468
Gemini-Advanced-0514 (Google)	1,267	o1-preview (OpenAI)	1,335	Grok-4-0709 (xAI)	1,433
Gemini-1.5-Pro-API-0514 (Google)	1,265	DeepSeek-V3 (DeepSeek)	1,320	GPT-5 (Open AI)	1,432
GPT4-Turbo-24-04-09 (OpenAI)	1,256	Step-2-16K-Exp (StepFun)	1,306	GLM-4.5 (Zhipu AI)	1,431
GPT-4-1106-preview (OpenAI)	1,251	o1-mini (OpenAI)	1,306	ChatGPT-4o-latest (25-03-26)	1,429
Claude 3 Opus (Anthropic)	1,249	Gemini-1.5-Pro-002 (Google)	1,303	DpSk-R1-0528 (DeepSeek)	1,425
GPT-4-0125-preview (OpenAI)	1,246	Grok-2-08-13 (xAI)	1,288	o3-2025-04-16 (Open AI)	1,424
Gemini-1.5-Flash-API-0514 (Google	1,231	Yi-Lightning (01.AI)	1,287	Grok-3-Preview-02-24 (xAI)	1,423
Llama-3-70b-Instruct (Meta)	1,207	GPT-4o-'24-05-13 (OpenAI)	1,285	Claude Opus 4.1 Thinking-16k (Anthropic)	1,421
Claude 3 Sonnet (Anthropic)	1,201	Claude 3.5 Sonnet (Anthropic)	1,283	Qwen3-235B-A22B-Instruct 2507 (Alibaba)	1,420
Command R+ (Cohere)	1,189	Qwen2.5-plus-1127 (Alibaba)	1,282	Claude Opus 4.1 (Anthropic)	1,419
Qwen2-72B-Instruct (Alibaba)	1,187	DeepSeek-v2.5-1210 (DeepSeek)	1,279	Deepseek V3.1 (DeepSeek)	1,419
GPT-4-0314 (OpenAI)	1,186	Athene-v2-Chat-72B (NexusFlow)	1,277	Qwen3-235B-A22B-Thinking-2507 (Alibaba)	1,418
Claude 3 Haiku (Anthropic)	1,178	GLM-4-Plus (Zhipu AI)	1,274	DpSk-V3.1-think (DeepSeek)	1,416
Qwen1.5-110B(Alibaba)	1,162	GPT-4o-mini-24-07-18 (OpenAI)	1,273	GPT-4.5-Preview (Open AI)	1,415
Yi-1.5-34B-Chat (01.AI)	1,162	Llama-3.1-Nemotron-70B (Meta)	1,269	GPT-5-Chat (Open AI)	1,411

Source: W. Chang, R. Arcesati & A. Hmaidi. "China's Drive Toward Self-Reliance in Artificial Intelligence," MERICS Report (July 2025), Chatbot Arena, Citi Research

To fully harness the benefits of digitalization driven by AI, big data and cloud computing, investing in critical infrastructure to boost digital connectivity will be key. According to ITU, the world has an estimated $1.6 trillion in investment shortfall to achieve universal digital connectivity, with most gaps in developing economies.[25] Based on fDi Markets data cited by UNCTAD, the share of greenfield investments in the digital economy sector has been rising, from 20% share in 2020 to 28% in 2024, and seven Asian economies – India, Malaysia, Indonesia, Singapore, Vietnam, China and Thailand –accounted for 64% of the greenfield investments in the digital economy going to emerging markets in 2020-24, while the major FDI sources is from U.S. , Taiwan and China (figure 31).

South Asia appears to be the frontline of a battle for influence over the digital infrastructure and AI ecosystem between U.S. and China. Chinese providers appear to have made significant inroads in the region at the onset (based on a 2023 census), benefiting from its more cost competitive offering (by one estimate, 40% cheaper than U.S. providers; figure 32).[26] However, the situation is still evolving. Several major U.S. companies have announced investments in Malaysia (and to a lesser extent, Indonesia and Vietnam) since last year as the country is benefiting from the biggest pipeline of data center projects in the region, with relatively solid infrastructure, relatively cheap energy and land, and is able to cater to the strong demand from neighboring Singapore, which had earlier imposed a moratorium on data centers given environmental and land constraints (2019-22). Chinese tech firms have also made aggressive announcements in the region. We suspect this ongoing scaling up of AI-infrastructure investment will continue to catalyze trade and investment flows within APEC, with U.S. and China being centers of gravity of the tech infrastructure.

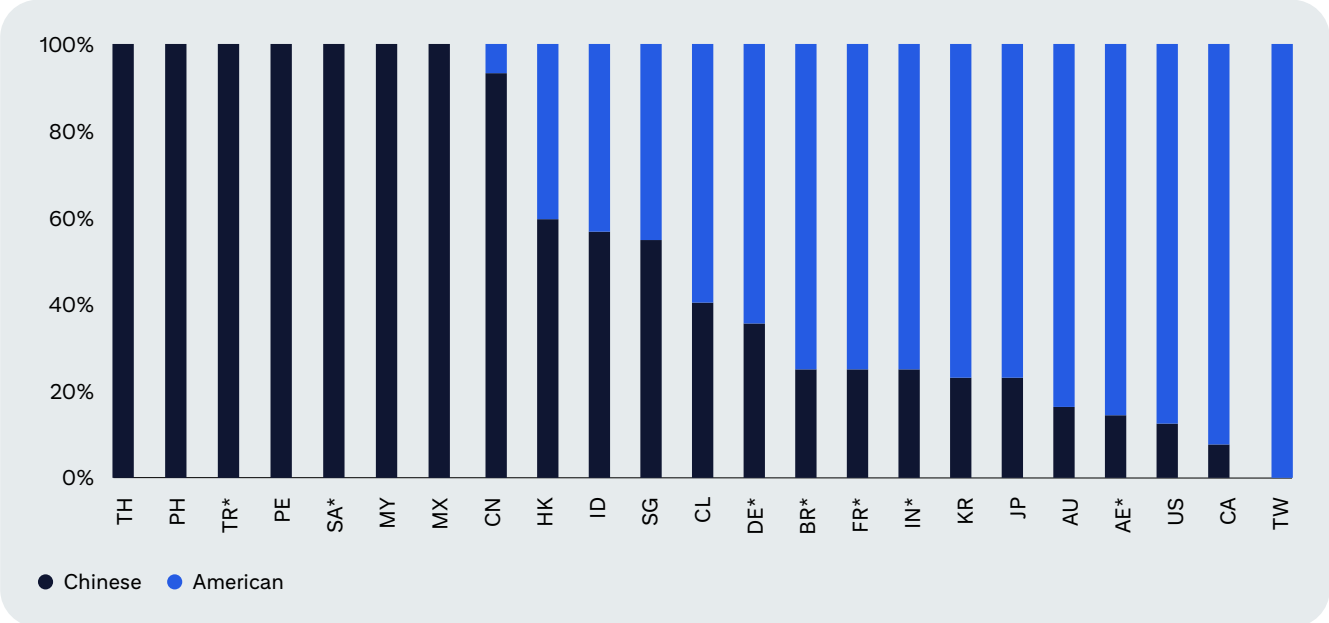
[25] International Telecommunication Union. Digital Infrastructure Investment: Closing the digital infrastructure investment gap by 2030. Whitepaper. (2025). Read here.
[26] The Economist. "The front line of the tech war is in Asia," (10 Oct 2024).

Figure 43. Top 10 EM economy destinations and top 10 home economies of investors for greenfield investment in digital economy sectors, 2020-2024

TOP 10 EM RECEIVING ECONOMIES	IN U.S. $BN	TOP 10 SOURCE ECONOMY OF EM GREENFIELD INVESTMENT	IN US$BN
India	114	U.S.	113
Malaysia	74	Taiwan	61
Indonesia	39	China	51
Singapore	39	Singapore	26
Vietnam	32	South Korea	25
Mexico	29	Germany	19
China	24	Japan	17
Brazil	23	Switzerland	15
Saudi Arabia	23	United Kingdom	12
Thailand	16	France	12

Source: Citi Research, UNCTAD citing fDi Markets data

Figure 44. APEC and select non APEC economies – Share of cloud-computing availability zones* controlled by the largest U.S. and Chinese cloud providers, Oct 2023



Note: *Census comprised of six hyperscale public cloud providers: AWS, Microsoft, Google, Alibaba, Huawei and Tencent.
Source: V. Lehdonvirta, B. Wu & Z. Hawkins. "Weaponized interdependence in a bipolar world: How economic forces and security interests shape the global reach of U.S. and Chinese cloud data centres." SocArXiv 6s7dn, Center for Open Science

APEC's Role in Delivering Frictionless Trade

While APEC economies still seek to increase their respective volumes of trade, they are simultaneously working to increase the value of existing trade – one way of achieving this has been manifested in the rapid expansion of digital, or paperless, trade.

Sectoral trade agreements, especially digital agreements, represent the opportunity to advance critical efforts in this space, including digital signature use, recognition, and promotion, as well as electronic bills of lading. Some APEC economies, most notably Singapore as the first to do so, have moved early to adopt United Nations Commission on International Trade Law (UNCITRAL) Model Law on Electronically Transferable Records (MLETR), a key enabler to advancing digital trade. The adoption of MLETR into statute law provides increased legal confidence and commercial predictability, and paves the way for a more seamless, easier, and faster way to transact digitally.

APEC's Role in Facilitating Data Flows Critical to the Future of Trade

As data becomes more central to the digital economy, governments are continuing to look for ways to create frameworks for its use, management and transfer. This includes privacy laws, non-personal data laws, cyber/data security laws and frameworks for the use of cloud and outsourcing. At the same time, efforts are ongoing among some economies to consider ways to encourage the flow of data across borders, including the use of Contractual Clauses and the expansion of the APEC Cross-Border Privacy Rules (CBPR) system.

- The digital economy is driven by massive cross-border information flows. Sharing data across borders enables business to access global markets, interact with customers, communicate with suppliers/affiliates around the globe thereby increasing efficiency and productivity.
- Cross-border data flows are essential for financial services in enabling digitization, undertaking effective fraud and anti-money laundering, complying with United Nations (UN) and country sanctions and increasing cyber security.
- They are also fundamental to managing risk across affiliates and borders and complying with financial regulatory requirements across jurisdictions.
- Firms utilize regional and global data centers to ensure the security of information and to benefit from efficiencies such as reduced duplication of data, ease of updating and maintaining data integrity.
- Cross-border flow of data is consistent with ensuring regulator access, as well as privacy and security. Securing data in the cloud is a more effective way to address security risks than storing data in a static data center in a local jurisdiction.
- Countries that erect data walls are inhibiting the potential of domestic small and medium-sized enterprises, corporates and consumers to benefit from the digital economy.

If you are visually impaired and would like to speak to a Citi representative regarding the details of the graphics in this document, please call USA 1-888-800-5008 (TTY: 711), from outside the US +1-210-677-3788

IMPORTANT DISCLOSURES

This communication has been prepared by Citigroup Global Markets and is distributed by or through its locally authorised affiliates (collectively, the "Firm"). This communication is not intended to constitute "research" as that term is defined by applicable regulations, though it may contain thematic content that has been or may be contained in research reports. Unless otherwise indicated, any reference to a research report or research recommendation is not intended to represent the whole report and is not in itself considered a recommendation or research report. The views expressed by each author herein are their personal views and do not necessarily reflect the views of their employer or any affiliated entity or the other authors, may differ from the views of other personnel at such entities, and may change without notice. You should assume the following: The Firm may be the issuer of, or may trade as principal in, the financial instruments referred to in this communication or other related financial instruments. The author of this communication may have discussed the information contained herein with others within the Firm and the author and such other Firm personnel may have already acted on the basis of this information (including by trading for the Firm's proprietary accounts or communicating the information contained herein to other customers of the Firm). The Firm performs or seeks to perform investment banking and other services for the issuer of any such financial instruments. The Firm, the Firm's personnel (including those with whom the author may have consulted in the preparation of this communication), and other customers of the Firm may be long or short the financial instruments referred to herein, may have acquired such positions at prices and market conditions that are no longer available, and may have interests different or adverse to your interests. This communication is provided for information and discussion purposes only. It does not constitute an offer or solicitation to purchase or sell any financial instruments. The information contained in this communication is based on generally available information and, although obtained from sources believed by the Firm to be reliable, its accuracy and completeness is not guaranteed. Certain personnel or business areas of the Firm may have access to or have acquired material non-public information that may have an impact (positive or negative) on the information contained herein, but that is not available to or known by the author of this communication. The Firm shall have no liability to the user or to third parties, for the quality, accuracy, timeliness, continued availability or completeness of the data nor for any special, direct, indirect, incidental or consequential loss or damage which may be sustained because of the use of the information in this communication or otherwise arising in connection with this communication, provided that this exclusion of liability shall not exclude or limit any liability under any law or regulation applicable to the Firm that may not be excluded or restricted. The provision of information is not based on your individual circumstances and should not be relied upon as an assessment of suitability for you of a particular product or transaction. Even if we possess information as to your objectives in relation to any transaction, series of transactions or trading strategy, this will not be deemed sufficient for any assessment of suitability for you of any transaction, series of transactions or trading strategy. The Firm is not acting as your advisor, fiduciary or agent and is not managing your account. The information herein does not constitute investment advice and the Firm makes no recommendation as to the suitability of any of the products or transactions mentioned. Any trading or investment decisions you take are in reliance on your own analysis and judgment and/or that of your advisors and not in reliance on us. Therefore, prior to entering into any transaction, you should determine, without reliance on the Firm, the economic risks or merits, as well as the legal, tax and accounting characteristics and consequences of the transaction and that you are able to assume these risks. Financial instruments denominated in a foreign currency are subject to exchange rate fluctuations, which may have an adverse effect on the price or value of an investment in such products. Investments in financial instruments carry significant risk, including the possible loss of the principal amount invested. Investors should obtain advice from their own tax, financial, legal and other advisors, and only make investment decisions on the basis of the investor's own objectives, experience and resources. This communication is not intended to forecast or predict future events. Past performance is not a guarantee or indication of future results. Any prices provided herein (other than those that are identified as being historical) are indicative only and do not represent firm quotes as to either price or size. You should contact your local representative directly if you are interested in buying or selling any financial instrument, or pursuing any trading strategy, mentioned herein. No liability is accepted by the Firm for any loss (whether direct, indirect or consequential) that may arise from any use of the information contained herein or derived herefrom. Although the Firm is affiliated with Citibank, N.A. (together with its subsidiaries and branches worldwide, "Citibank"), you should be aware that none of the other financial instruments mentioned in this communication (unless expressly stated otherwise) are (i) insured by the Federal Deposit Insurance Corporation or any other governmental authority, or (ii) deposits or other obligations of, or guaranteed by, Citibank or any other insured depository institution. This communication contains data compilations, writings and information that are proprietary to the Firm and protected under copyright and other intellectual property laws, and may not be redistributed or otherwise transmitted by you to any other person for any purpose.

25-8BF1602A 10/25