



Global Private Capital Association

2023 EMERGING TECH TRENDS IN ASIA

A look into the shifting landscape for tech investment in China, India and Southeast Asia

About GPCA

The Global Private Capital Association, which was founded as the Emerging Markets Private Equity Association (EMPEA) in 2004, is a non-profit, independent membership organization representing private capital investors who manage more than USD2t in assets across Asia, Latin America, Africa, Central & Eastern Europe and the Middle East.

From GPCA's Singapore headquarters, the Asia research team covers China, Southeast Asia, India and neighboring South Asian markets.

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OVERVIEW

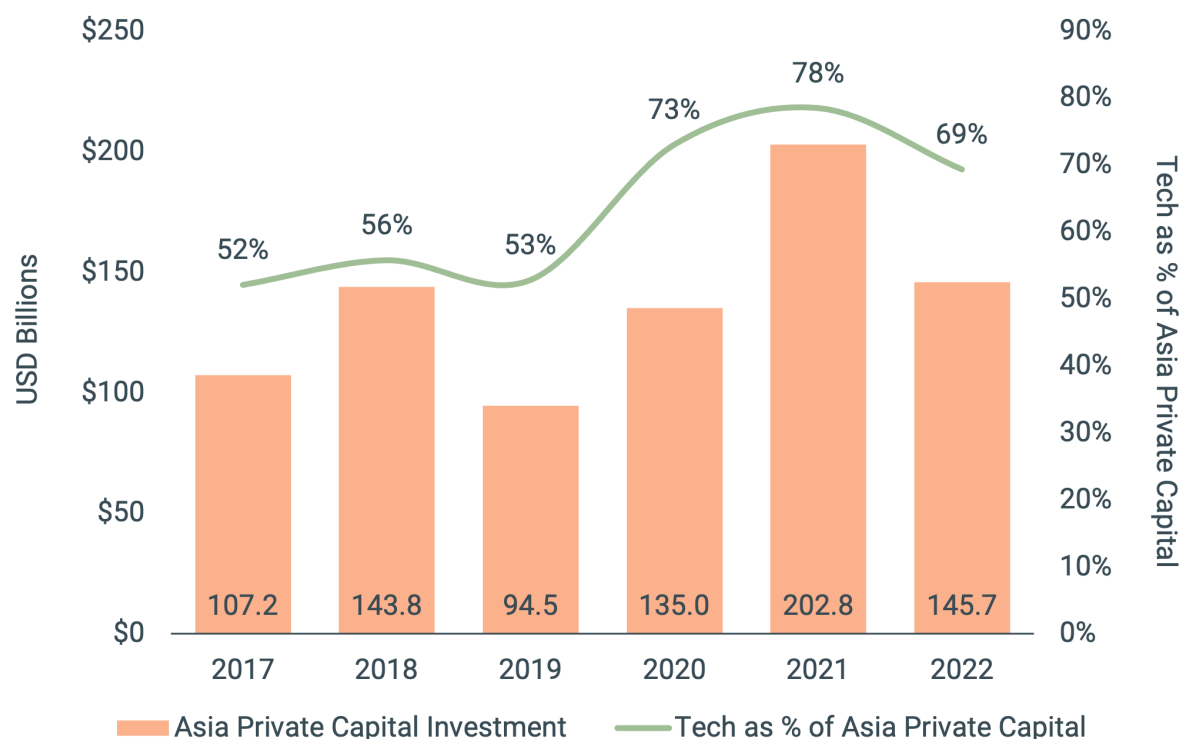
As digitization spreads across industries and with the continued growth of venture capital, tech investment has grown to represent the majority of private capital activity in Asia, even amidst the global correction in 2022. This report examines some of the contours of the changing tech investment landscape in China, India and Southeast Asia, with a focus on emerging trends and cross-border insights.

KEY INSIGHTS:

- In China, investment activity has shifted decisively towards deep tech, which accounted for 71% of tech deal value in 2022. Biotech, semiconductors and electric vehicles (EV) are benefitting from regulatory shifts and growing investment from local and international investors alike.
- Both Chinese and Western investors have increased their activity in Southeast Asia.
- In India, investment in consumer tech and fintech has declined from 2021 highs, but EVs have emerged as a key area of investment, with strong support from the government.
- Consumer tech and fintech continued to dominate the tech investment landscape in Southeast Asia in 2022. In India and Southeast Asia, agtech has grown despite representing a nascent sector of investment.
- Web3 investment in Southeast Asia grew significantly from a base of zero over the past two years but faces headwinds as investors and regulators reassess the sector after multiple high-profile collapses.

EVEN AMIDST A CORRECTION, TECH REMAINS THE DOMINANT THEME FOR PRIVATE CAPITAL IN ASIA

Asia Private Capital Investment and Tech Share, 2017-2022



While Asia was not immune to global tech and venture corrections in 2022, tech remained a dominant theme for private capital investors in the region.

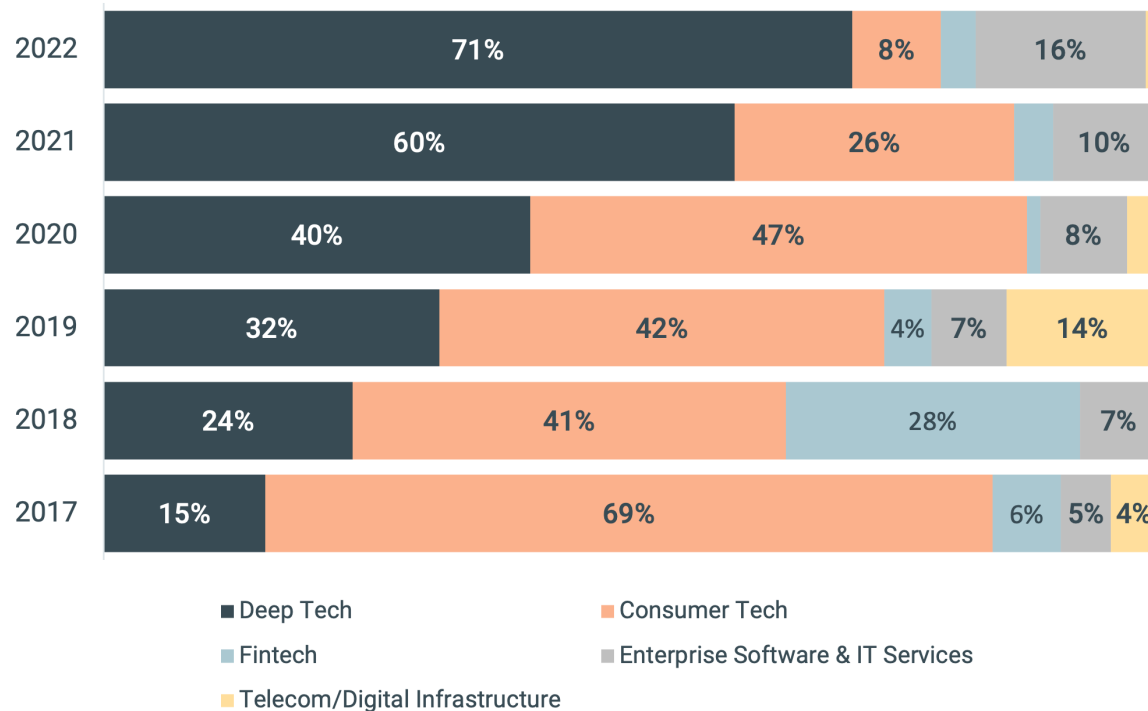
Despite a pullback from 2021 highs, tech investment was on par with pre-pandemic levels at USD146b in 2022. Tech as a share of all private capital activity in the region has steadily expanded since 2017.

	2017	2018	2019	2020	2021	2022
Asia Private Capital Investment (USDb)	107.2	143.8	94.5	135.0	202.8	145.7
Tech Investment (USDb)	55.8	80.2	49.9	98.6	159.2	101.1
Tech as % of Asia Private Capital	52%	56%	53%	73%	78%	69%

Source: GPCA. Data as of 31 December 2022.

IN CHINA, INVESTMENT ACTIVITY HAS SHIFTED DECISIVELY TOWARDS DEEP TECH

China Tech Investment Composition, 2017-2022 (% of Capital Invested)



Source: GPCA. Data as of 31 December 2022.

“Deep tech is underdeveloped, like consumer tech was fifteen years ago. There are not many fund managers who have established a proven track record in deep tech.

With plenty of room for development, finding professionals who have experience and specialized expertise involving science and technology is more essential than ever.”

– Rebecca Xu, Asia Alternatives

Breaking down the tech landscape

For the purposes of this report, GPCA has grouped tech investment activity in Asia into five key categories:

Consumer tech: Digital media, gaming, social networks, e-commerce, edtech, fitness/wellness, food delivery, healthtech, proptech, super apps, transportation/mobility and travel

Deep tech: Advanced materials, aerospace, agtech, AI & machine learning, AR/VR/metaverse, biotech and life sciences, cleantech, computer hardware, semiconductors, EV/AV, foodtech, internet of things (IoT), robotics and others

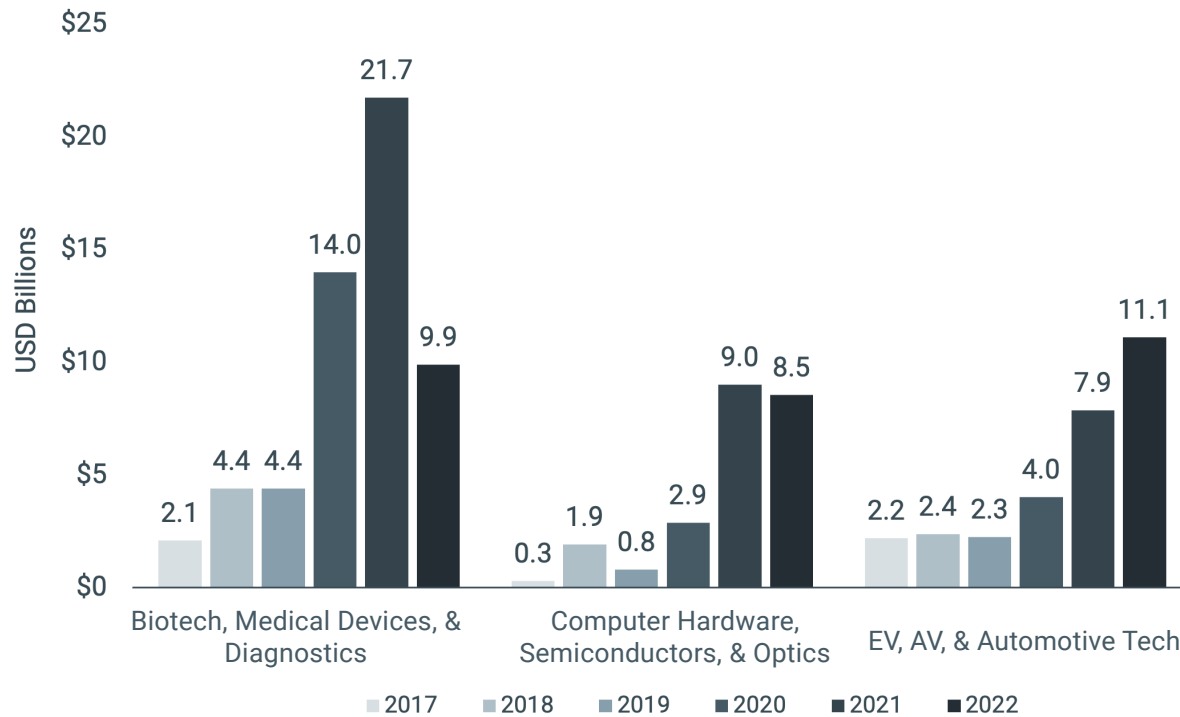
Enterprise software & IT services: Adtech & marketing, CRM, digital security, ERP, HRtech, legaltech and all other enterprise-focused applications and services

Fintech: Consumer- and enterprise-focused digital banking, lending, payment, insurance and investment solutions

Telecom/digital Infrastructure: Data centers, fiber-optic networks and wireless telecom infrastructure

BIOTECH, SEMICONDUCTORS AND EV/AV STAND TO BENEFIT FROM RECENT POLICY SHIFTS

Private Capital Investment in Top Deep Tech Verticals in China, 2017-2022



Source: GPCA. Data as of 31 December 2022.

In 2021, China issued its 14th Five-Year Plan, which seeks to expand domestic capabilities in tech innovation including **AI, quantum computing, integrated circuits, biotech, medicine, and deep sea and space exploration**. Private capital has followed into many of these segments.

In contrast, a series of antitrust probes and policy rollouts following **Ant Financial's** canceled New York listing in late 2020 has led to declines in consumer tech investments, particularly around edtech, gaming and crypto.

Anti-monopoly law & microlending rules

NOV 2020 >

Payment firms banned from using crypto for settlement

MAY 2021 >

Data security law

JUN 2021 >

After school tutoring (AST) banned

JULY 2021 >

Online gaming law

AUG 2021 >

LOCAL AND INTERNATIONAL INVESTORS ALIKE ARE LEADING THE SHIFT AWAY FROM CONSUMER INTERNET IN CHINA

Notable China Deep Tech Investments, 2022

INVESTORS	COMPANY	TECH VERTICAL	ASSET CLASS	TRANSACTION TYPE	TRANSACTION DATE	TRANSACTION VALUE (USDMM)
China Southern Power Grid, China Structural Reform Fund, Goldstone Investment, People's Insurance Company of China (PICC), Shenzhen Capital Group, Yingke Private Equity	GAC Aion	EV, AV, & Automotive Tech	PE	Growth	10/25/22	2,503.0
Broad Vision Funds, GAC Group, SAIC Motor, Shenzhen Capital Group, Shenzhen Costone Venture Capital, Source Code Capital	Sunwoda Electric Vehicle Battery	EV, AV, & Automotive Tech	VC	Early-Stage	8/17/22	1,179.9
Dongfeng Motor Corporation, FAW Group, GAC Capital, National Green Development Fund (NGDF), National Manufacturing Fund, NIO Capital, SAIC Motor, SDIC Unity Capital, Shang Qi Capital, Xiaomi Ventures, Zhongsu Capital	RT Advanced Materials	EV, AV, & Automotive Tech	VC	Late-Stage	7/19/22	741.7
CMB International Capital Management, GAC Capital, GF Securities, Guangdong Finance Fund Management, Guangzhou Bay Area Semiconductor Industry Group, Walden International, Yingke Private Equity, Yuexiu Industrial Investment Fund	CanSemi	Computer Hardware, Semiconductors, & Optics	PE	Growth	6/30/22	671.4
China Capital Investment Group, CMS Zhiyuan Capital, CNBM New Materials Industry Investment Fund, Empowtech Capital, Morgan Stanley, Sinochem High-Tech Industry Fund, SK China, Zhuhai Gree Financial Investment Management	Vital Thin Film Materials	Advanced Materials	VC	Early-Stage	9/29/22	631.6
China Southern Power Grid, China-Russia Energy Fund, Cloudview Capital, Hangzhou Industrial Investment Group (HIIG), National Green Development Fund (NGDF)	Chint Anneng Power System Engineering	Cleantech	VC	Early-Stage	12/30/22	579.8
China Life Private Equity Investment Company, China National Building Material (CNBM) New Materials Fund, Hudson Capital, SDIC Unity Capital, Shang Qi Capital, Source Code Capital	Eswin	Computer Hardware, Semiconductors, & Optics	VC	Late-Stage	12/9/22	574.9
Gaorong Capital, Green Pine Capital Partners, ZhenFund	WeView	Cleantech	VC	Early-Stage	9/21/22	567.6
CDB Capital Fund of Funds, CITIC Securities, Industrial and Commercial Bank of China, Poly Capital, Shang Qi Capital, Yuexiu Industrial Investment Fund	Fei Hong Technology	Robotics	VC	Early-Stage	12/19/22	544.9
Gongqingcheng Tiange Investment, Haibang Ventures, Hangzhou Smart Healthcare Industry Fund, Junhe Capital, Lanshan Venture Capital, Morning Spring Venture, Shouzheng Zefu	Zhejiang Decans Medical Equipment	Biotech, Medical Devices, & Diagnostics	VC	Early-Stage	2/21/22	500.0
Addor Capital, China Merchants Capital, China-Belgium Direct Equity Investment Fund, Haitong Securities, Peng Capital, Ti-Capital	Innoscence	Computer Hardware, Semiconductors, & Optics	VC	Late-Stage	2/17/22	473.4
Hillhouse Capital Group	Asymchem Laboratories	Biotech, Medical Devices, & Diagnostics	PE	PIPE	3/25/22	398.3

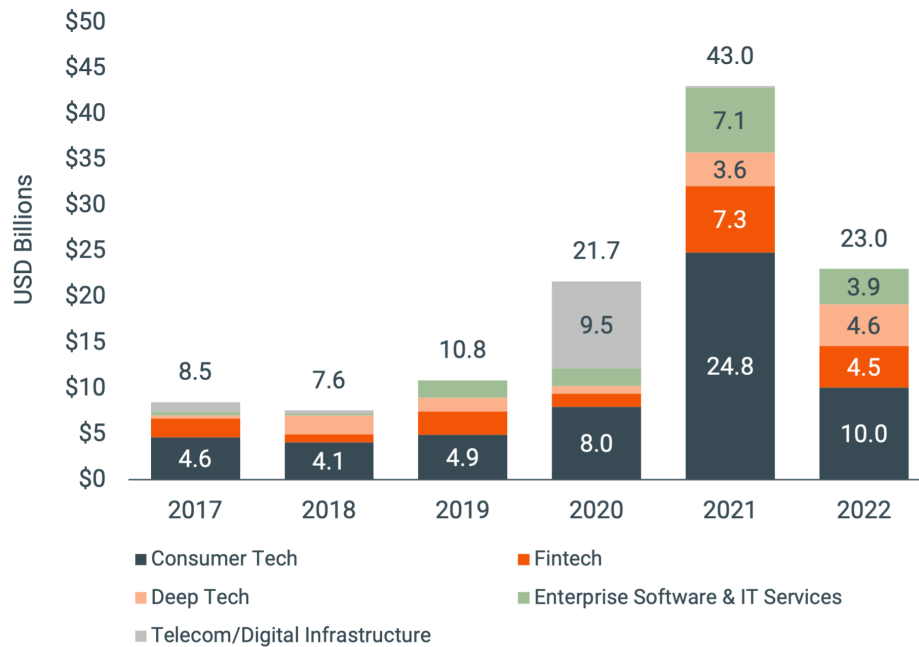
Source: GPCA. Data as of 31 December 2022.

INDIA CONSUMER TECH AND FINTECH INVESTMENT HAVE SLOWED FROM 2021

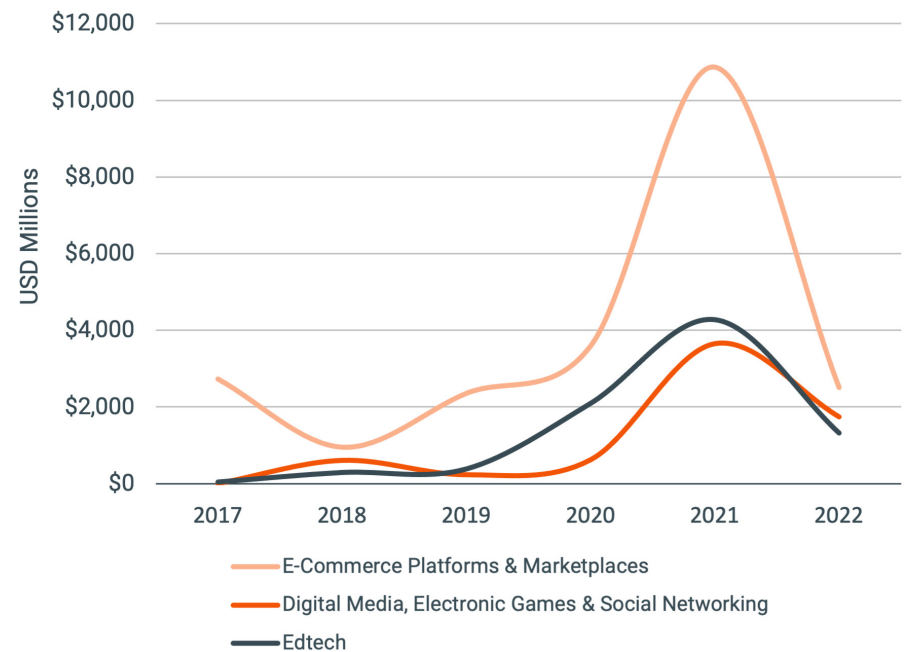
“Consumer tech is maturing with the establishment of leaders in e-commerce and food delivery, among others. We are witnessing signs of growing consolidation. Fintech infrastructure, despite undergoing rapid growth over the last few years, is still in the early stages of development. It has huge potential to unlock value for consumers.”

– Sanjay Nath, Blume Ventures

India Tech Investment, 2017-2022



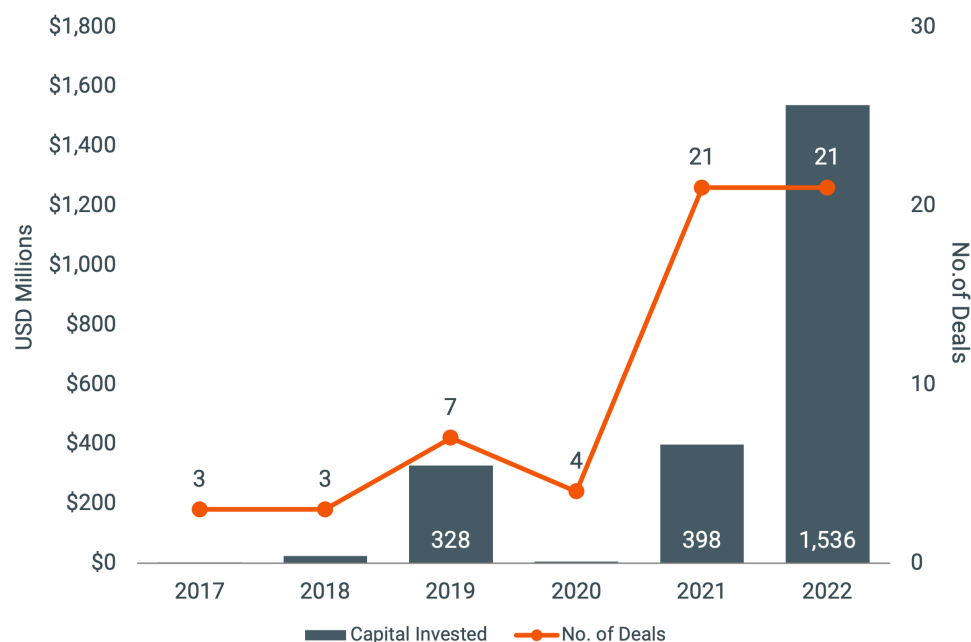
Movements in Key Indian Consumer Tech Verticals, 2017-2022



Source: GPCA. Data as of 31 December 2022.

BEYOND CHINA: INDIA IS EMERGING AS A KEY HUB FOR EV DEAL ACTIVITY

India EV/AV Investment, 2017-2022



In early 2023, India overtook Japan as the third-largest automotive market globally. With an EV adoption rate of about 2%, India is looking to accelerate its EV industry via tax cuts and subsidies to reach 30% penetration by 2030.

But the real growth is expected with two-wheel vehicles, with an 80% penetration target by 2030. Local battery development remains a challenge; venture-backed scooter maker Ola Electric, Mukesh Ambani’s Reliance Industries, and bullion refiner Rajesh Exports are slated to receive incentives as part of a USD2.3b government program to support local battery development.

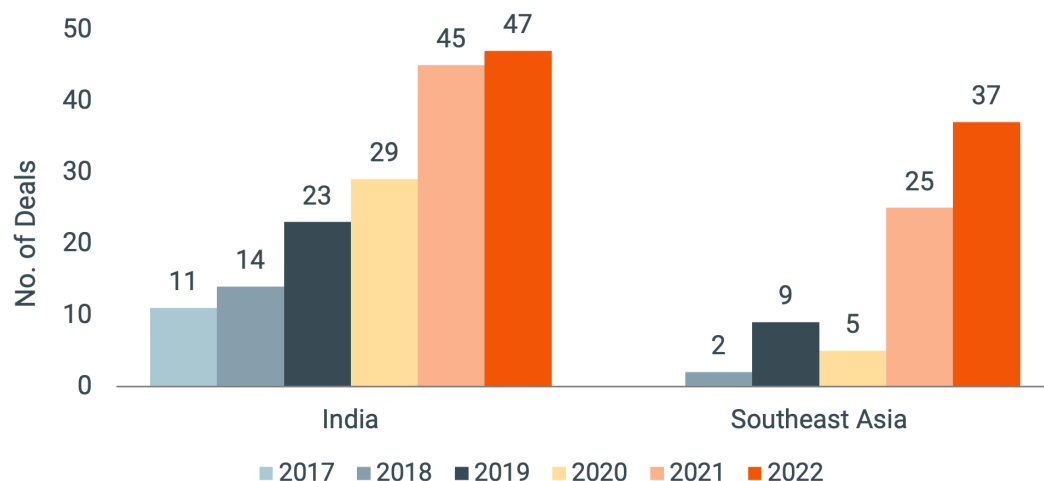
Notable India EV, AV and Automotive Tech Investments, 2021-2022

INVESTORS	COMPANY	TRANSACTION TYPE	TRANSACTION VALUE (USDM)	TRANSACTION DATE
ADQ, TPG	Tata Passenger Electric Mobility	Growth PE	988.0	3/30/2022
Alpha Wave Global, SoftBank Group	Ola Electric Mobility	Late-Stage	210.0	9/30/2021
Alpine Capital, Edelweiss Capital, Tekne	Ola Electric Mobility	Late-Stage	200.0	1/24/2022
Hero MotoCorp, NIIF	Ather Energy	Late-Stage	128.0	5/12/2022
Alteria Capital, ADB, Athera Venture Partners, Blume Ventures, GIC, Mogli Labs, QRG	Euler Motors	Late-Stage	60.0	10/4/2022
Edelweiss Capital, IIFL, Temasek Holdings, VSS Investco, et al	Ola Electric Mobility	Late-Stage	53.0	12/8/2021

Source: GPCA. Data as of 31 December 2022.

AGTECH INVESTMENT IN INDIA AND SOUTHEAST ASIA HAS BECOME A BRIGHT SPOT FOR GROWTH

India and SE Asia Agtech Investment, 2017-2022



Agtech in India and Southeast Asia represents a growing opportunity for investment to feed growing populations efficiently – while also having a direct impact on climate change mitigation and adaptation. Innovations developed in India and Southeast may represent solutions for other global markets facing similar structural challenges.

Notable India and SE Asia Agtech Investments, 2021-2022

INVESTORS	COMPANY	COUNTRY	TRANSACTION TYPE	TRANSACTION VALUE (USDM)	TRANSACTION DATE
KKR	Advanta Enterprises	India	Buyout	300.0	10/21/22
FMO, Lightrock, Omnivore, Prosus Ventures, RTP Global, Sequoia Capital, Sofina, Temasek Holdings	DeHaat	India	Late-Stage	115.0	10/27/21
Aqua-Spark, Go-Ventures, Sequoia Capital, SoftBank Group, Temasek Holdings, The Northstar Group, Wavemaker Partners	eFishery	Indonesia	Late-Stage	90.0	1/18/22
Aavishkaar Capital, Accel Partners, Bertelsmann Investments, BII, Chiratae Ventures, Evolve Capital, Hero Enterprise, Rabo Frontier Ventures, Schroders	AgroStar	India	Late-Stage	70.0	12/7/21
AddVentures, BRI Ventures, Flourish Ventures, Intudo Ventures, MDI Ventures, Openspace Ventures, Telkomsel Mitra Inovasi, Tenaya Capital, UOB Venture Management, Vertex Ventures	TaniHub Group	Indonesia	Early-Stage	65.5	5/21/21
Asia Impact, Lightrock, Quona Capital, U.S. International Development Finance Corporation	Arya Collateral Warehousing Services	India	Late-Stage	60.0	1/18/22

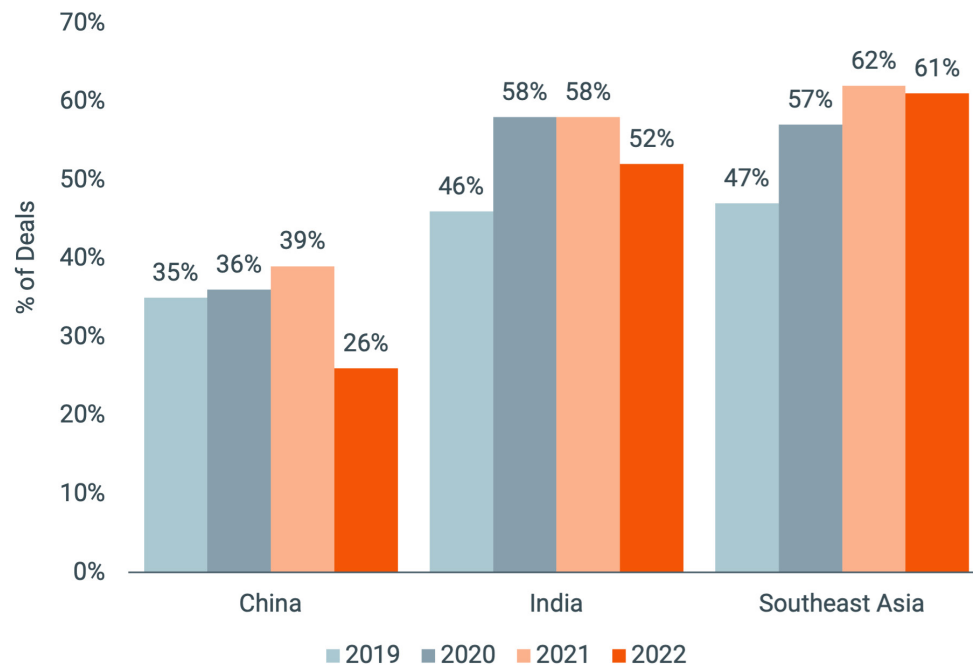
Source: GPCA. Data as of 31 December 2022.

WESTERN & CHINESE MANAGERS ARE SHIFTING FOCUS TO SOUTHEAST ASIA; WESTERN INTEREST IN CHINA HAS FALLEN

Qiming Venture Partners, Shunwei Capital, Source Code Capital, Vision Plus Capital, Sky9 Capital, Lyfe Capital, Hillhouse Capital, MSA Capital and Loyal Valley Capital are reportedly among the Chinese tech funds that have opened offices in Singapore or expanded their presence in Southeast Asia.

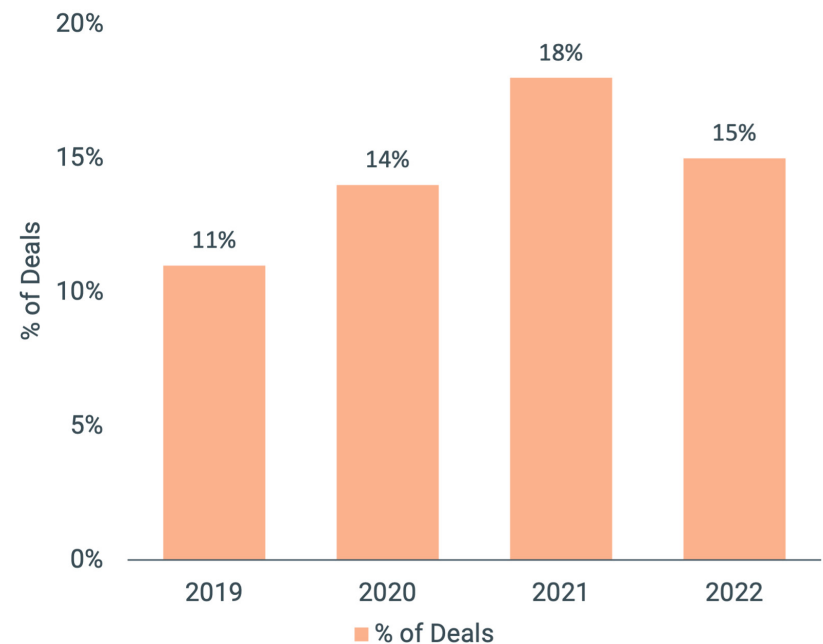
Chinese GPs are increasingly looking to not just Southeast Asia, but also other global markets for expansion opportunities.

Cross-Border Private Capital Tech Investment in Asia by Western Investors, 2019-2022



Note: "Western" denotes investors based in North America and Western Europe.

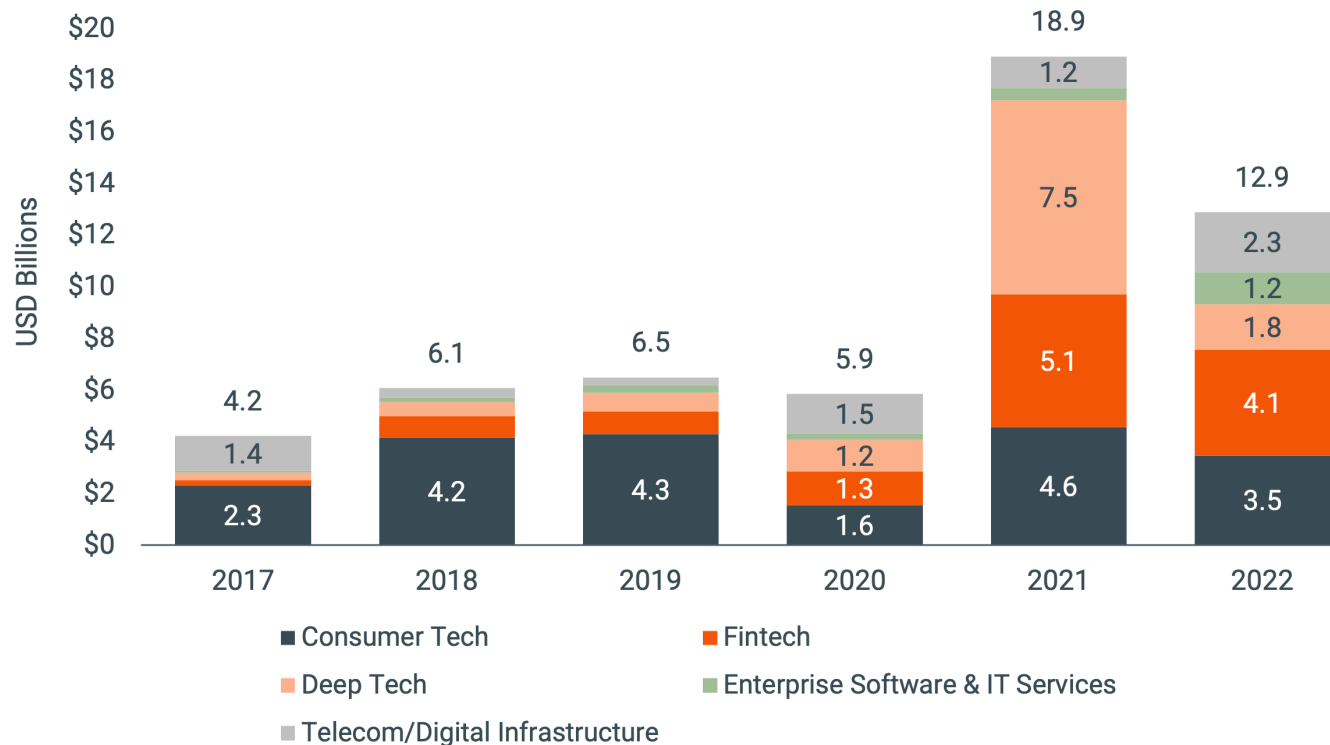
SE Asia Tech Deals with Participation from Chinese Investors, 2019-2022



Source: GPCA. Data as of 31 December 2022.

CONSUMER AND FINTECH CONTINUE TO LEAD THE WAY FOR TECH INVESTMENT IN SOUTHEAST ASIA

Southeast Asia Tech Investment, 2017-2022



Source: GPCA. Data as of 31 December 2022.

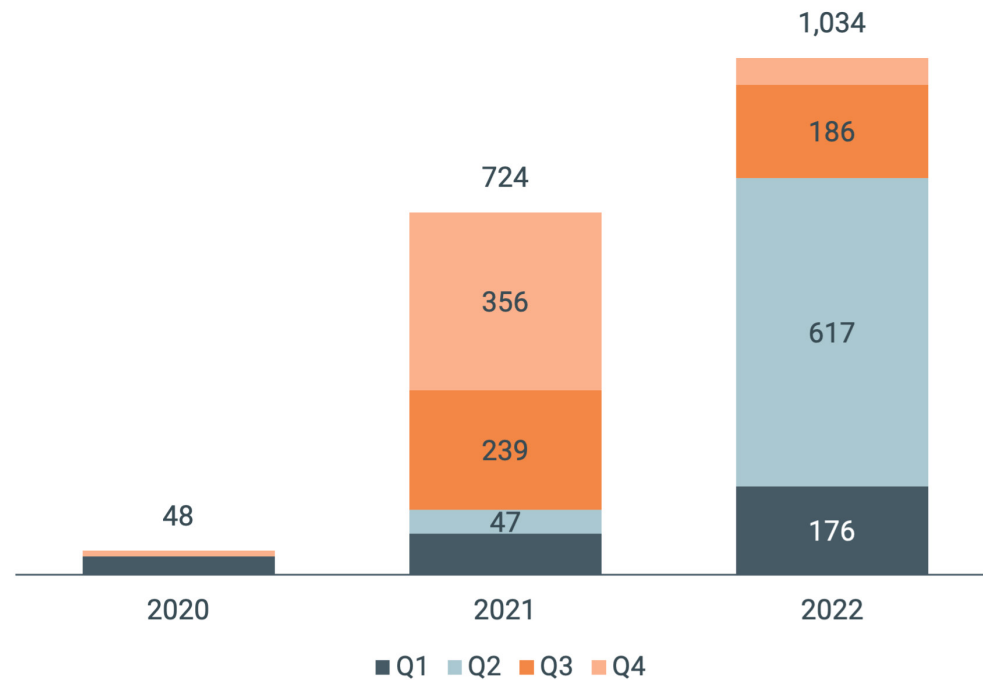
Southeast Asia tech investment remains diversified across sectors, with USD12.9b invested in 2022 compared to USD19b in 2021. Despite declines in some segments of the market, opportunities are growing in healthcare, agtech and e-commerce 2.0, including social commerce and live commerce models that have thrived in China.

Kuo-Yi Kim of Monk's Hill Ventures sees the cooling investment environment as a positive development:

“Valuations are normalizing to a rational level. Both founders and investors are more sensitive to the scarcity of capital, leading to more prudent deployment. This should always be the norm.”

WEB3 INVESTMENTS IN SOUTHEAST ASIA HAVE GROWN SIGNIFICANTLY BUT FACE HEADWINDS

Web3 Private Capital Investment in Southeast Asia, 2020-2022 (USDm)



Source: GPCA. Data as of 31 December 2022.

Over the course of 2022, Singapore tightened crypto trading rules and banned crypto advertising in a bid to protect retail investors but stopped short of more restrictive bans in India and China. The Monetary Authority of Singapore also announced plans to collaborate with the financial industry in a pilot project to explore the economic potential and usefulness of asset tokenization.

Investment in web3, blockchain and crypto technologies slowed in Q3 2022 on the heels of the Axie Infinity hack and Three Arrows Capital's implosion. Then, in November, FTX imploded, causing a tectonic shift in global crypto markets.

“Consumer applications adoption has slowed down, but infrastructure, tooling, web3 social and decentralized identity are key areas of interest. We believe infrastructure buildout will be essential to scale the next wave of applications.”

– Amy Zhao, Openspace Ventures

REPORT METHODOLOGY

“Technology” or “tech” deals, as defined in this report, include consumer digital platforms; enterprise software and IT services providers; biotech and life sciences businesses; digital infrastructure and telecom platforms; and frontier technology startups in areas like advanced materials and satellites. The “tech” breakdowns in this report include all private capital deals and are not limited to venture capital.

- **Consumer tech** includes digital media, gaming, social networks, e-commerce, edtech, fitness/wellness, food delivery, healthtech, proptech, super apps, transportation/mobility and travel.
- **Deep tech** includes advanced materials, aerospace, agtech, AI & machine learning, AR/VR/metaverse, biotech and life sciences, cleantech, computer hardware, semiconductors, EV/AV, foodtech, internet of things (IoT), robotics and others.
- **Enterprise software & IT services** includes adtech & marketing, CRM, digital security, ERP, HRtech, legaltech and all other enterprise-focused applications and services.
- **Fintech** includes consumer- and enterprise-focused digital banking, lending, payment, insurance and investment solutions.
- **Telecom/digital Infrastructure** includes data centers, fiberoptic networks and wireless telecom infrastructure.

Unless otherwise noted, GPCA’s Asia-Pacific investment data excludes Japan, Australia and New Zealand.

For more information on GPCA’s research methodology, visit globalprivatecapital.org or contact research@gpcapital.org.

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