e-Conomy SEA 2022

Through the waves, towards a sea of opportunity
Reference

e-Conomy SEA is a multi-year research programme launched by Google and Temasek in 2016. Bain & Company joined the programme as lead research partner in 2019. The research leverages Temasek insights, Bain analysis, Google Trends, primary research, expert interviews, and industry sources to shed light on the digital economy in Southeast Asia. The information included in this report is sourced as ‘Google, Temasek and Bain, e-Conomy SEA 2022’, unless otherwise specified.

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Towards a sustainable digital economy

Unlocking the $200B opportunity in SEA

Unprecedented growth for SEA’s $50B internet economy

SEA’s internet economy hits an inflection point

Swipe up and to the right: SEA’s $100B internet economy

At full velocity: Resilient and racing ahead

Roaring 20s: The SEA Digital Decade

Through the waves, towards a sea of opportunity

7th edition of e-Conomy SEA by Google, Temasek, Bain: Southeast Asia’s digital economy research programme
e-Conomy SEA research methodology

Notes: All dollar amounts are in USD. Bain conducted interviews and a quantitative survey of SEA-focused venture capital investors in Q3 2022, n=30. All quotes in the report attributed to ‘VC’ are from interviews conducted with SEA-focused venture capitalists in June–August 2022, and have been redacted for brevity and editorial clarity.

*Google commissioned Ipsos to run the e-Conomy SEA consumer survey. The research was conducted in Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam. Fieldwork in urban cities ran online from 18/07/2022 - 06/08/2022 via a 25-minute Computer Assisted Web Interview survey, with a total of 4,995 respondents interviewed. Fieldwork in suburban cities ran from 29/07/2022 - 24/08/2022 via offline-recruit-to-online surveys with connected consumers, along with offline recruitment via a randomised door-to-door approach, with quota controls on demographics on a total of 2,059 respondents across Indonesia, Malaysia, the Philippines, Thailand, and Vietnam. Analysis was conducted with data weighted based on age, gender, region, monthly household income, and internet usage frequency for a more accurate and fairer representation of the markets, and the region as a whole.
e-Conomy SEA covers 6 countries in Southeast Asia

- Philippines: 113M
- Singapore: 6M
- Indonesia: 280M
- Malaysia: 33M
- Thailand: 70M
- Vietnam: 98M

Total population across the countries: 600M

Source: World Bank
Market coverage: 5 leading and 4 nascent sectors in the digital economy

**Leading sectors**
- **E-commerce**
  - Marketplaces
  - Direct-to-consumer
  - Groceries
- **Transport & food**
  - Transport
  - Food delivery
- **Online travel**
  - Flights
  - Hotels
  - Vacation rentals

**Nascent sectors**
- Healthtech
- SaaS
- Web3
- Edtech

**Online media**
- Advertising
- Gaming
- Video-on-demand
- Music-on-demand

**Financial services**
- Payments
- Remittances
- Lending
- Insurance
- Investments

*Notes: E-commerce does not include informal commerce due to lack of reliable data. Financial services is excluded from market sizing estimates due to differences in units of measurement compared to other leading sectors.*
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Just as countries in SEA embarked on a return to pre-pandemic normality, global headwinds started to blow, threatening to derail a full economic recovery. Rising interest rates and high inflationary pressure have also been impacting consumer demand, particularly the discretionary sectors that sit at the core of the digital economy.

Despite these macroeconomic headwinds, SEA’s digital economy remains on course to reach ~$200B in gross merchandise value (GMV) in 2022. In fact, it is reaching this threshold three years earlier than we had expected in our e-Conomy SEA 2016 report. Digital adoption continues to rise even today, albeit at a slower pace than the steep acceleration seen at the height of the pandemic.

Across urban areas, affluent consumers and their young digital native counterparts continue to represent the largest portion of the digital economy. For these two segments, the opportunity for growth lies in deeper engagement, including more frequent and valuable orders, subscriptions, or cross-selling services such as consumer lending. Meanwhile, adoption and spend by urban consumers ‘on a budget’ and suburban consumers remain lower, leaving digital players to figure out more economically sustainable ways to serve them.

SEA’s digital economy sectors are following three distinct trendlines. E-commerce follows an S-shaped growth curve, in which it continues on its growth trajectory, but from a higher starting point after the steep acceleration during the pandemic. Others, such as food delivery and online media, are returning to their trendlines after a two-year spike. And lastly, travel and transport are moving along a U-shaped recovery, with pre-pandemic levels still some miles away.

The adoption and usage of digital financial services (DFS) have flourished across the board, propelled by a shift from offline to online and the positive financial market conditions of the last few years. With rising interest rates and a riskier lending environment, however, fintech players, platforms, and newly launched digibanks will see their business models stress-tested. Meanwhile, banks and insurance companies are rapidly digitalising their services and maintaining a stronghold on affluent consumers.
Executive summary

**Prudence clouds tech investments**

Tech investments in SEA remain robust this year. However, the funding landscape tells a tale of two ends: early-stage deals are continuing with strong momentum, while late-stage deals are seeing more pronounced dips and a pause in IPOs. Meanwhile, DFS has overtaken e-commerce in investment volume. Investors will be cautious in the short-term as most do not expect a return to 2021 deal activity and valuation peaks in the next couple of years. Nonetheless, most investors remain bullish in SEA’s medium- to long-term potential, and have $15B dry powder on hand. We note increasing interest in emerging markets, like the Philippines and Vietnam, and in nascent sectors, like SaaS and Web3.

**Towards a sustainable digital economy**

The SEA digital economy is expected to produce 20MT of emissions by 2030—significant, albeit an order of magnitude lower than other environmental impact-intensive sectors. Digital players have been rolling out reducing and recycling initiatives, but more can be done to further lower impact by up to 30-40% over time. In the meantime, platforms can play a positive role in raising awareness among SEA consumers, and move towards closing the prevailing ‘say-do’ gap.

**Economic contribution meets social concerns**

On the social front, the digital economy has created 160K high-skilled jobs and indirectly supports nearly 30M jobs, while platforms have enabled over 20M merchants and 6M restaurants to grow their businesses online. Concerns exist, nonetheless, around the welfare of worker-partners, necessitating dialogue between institutions and platforms.

**Charting the course for the digital decade**

SEA’s ‘digital decade’ has just begun. The course to exceed $300B by 2025 depends on the shape of recovery amid today’s uncertainties, while the path to a $600B-1T digital economy in 2030 remains geared on SEA’s economic fundamentals. A growing emphasis on sustainable growth means profits may become as relevant as GMV when it comes to measuring progress.

Existing enablers like payments and logistics have come into place, but the talent challenge is now shifting from quantity to quality. New enablers, like digital inclusion of consumers ‘on a budget’ and suburbanites, are key to unlocking SEA’s full potential. Progress has been limited, however, with institutional support potentially the missing link to bridging the divide.

All in all, SEA’s digital economy is grounded on strong social and economic fundamentals, and offline to online trends, which provides much to be optimistic about especially as the region settles into its ‘digital decade’.
Navigating macroeconomic headwinds
Just as SEA economies reopened from pandemic lockdowns, macroeconomic headwinds started to blow.

SEA consumers and the digital economy are increasingly feeling the impact.
SEA COVID-19 vaccination rates have exceeded global standards

COVID-19 vaccination rates, by country

Singapore: 88%
Malaysia: 85%
Vietnam: 83%
Thailand: 76%
Philippines: 66%
Indonesia: 62%
USA: 68%
China: 89%
World: 63%

Notes: Based on the proportion of the eligible population that has received at least two vaccine doses. Data is up-to-date as of August 2022. Source: World Health Organization
With COVID restrictions lifted, people are now heading out more than before the pandemic.

**Google Retail Mobility Data, by country and indexed to pre-pandemic baselines**

**Indonesia**

**Malaysia**

**Philippines**

**Singapore**

**Thailand**

**Vietnam**

Notes: Retail Mobility Trends tracks data related to places such as shopping centres, restaurants, cafes, theme parks, museums, libraries, and movie theatres. The pre-pandemic baselines are the median value for the respective corresponding day of the week, during the 5-week period of January 3 - February 6, 2020. Source: Google Retail Mobility Data.
However, global headwinds threaten to derail the path to recovery

Supply chain disruptions
Logistics providers’ capacity issues, climate change, and freight costs are restricting global trade routes.

Mobility restrictions
Zero-COVID mandates and continued lockdowns have resulted in disrupted exports and imports with China, as well as outbound travel and tourism by Chinese nationals.

Geopolitical tensions
Various conflicts around the world are putting critical infrastructure, manufacturing capacity, and trade agreements at risk.
Macro headwinds have cascading implications on SEA consumers

**Reduced disposable income**
With the economic slowdown and a softer labour market, consumers’ discretionary spending will diminish.

**Increasing prices**
Inflation in fuel and food prices, and the depreciation of SEA currencies are driving price hikes in travel, transport, and food delivery.

**Less product availability**
Ongoing pandemic policies in China and production backlogs are hindering logistical flows, reducing consumer access to goods.
Interest rates have been raised to combat inflationary pressure.

1-month interbank rates

**Indonesia**
- 2016: 6.0%
- 2017: 4.7%
- 2018: 5.5%
- 2019: 3.9%
- 2020: 2.8%
- 2021: 4.8%
- 2022 (Sept): 2.8%

**Malaysia**
- 2016: 3.1%
- 2017: 3.2%
- 2018: 3.1%
- 2019: 2.1%
- 2020: 1.7%
- 2021: 2.7%
- 2022 (Sept): 3.1%

**Philippines**
- 2016: 2.5%
- 2017: 2.6%
- 2018: 2.5%
- 2019: 1.7%
- 2020: 1.7%
- 2021: 2.5%
- 2022 (Sept): 3.7%

**Singapore**
- 2016: 0.3%
- 2017: 0.7%
- 2018: 1.8%
- 2019: 0.4%
- 2020: 0.2%
- 2021: 2.7%
- 2022 (Sept): 0.2%

**Thailand**
- 2016: 1.5%
- 2017: 1.5%
- 2018: 1.6%
- 2019: 0.6%
- 2020: 0.9%
- 2021: 0.5%
- 2022 (Sept): 2.7%

**Vietnam**
- 2016: 4.5%
- 2017: 4.3%
- 2018: 4.2%
- 2019: 3.1%
- 2020: 2.5%
- 2021: 5.9%
- 2022 (Sept): 5.9%

Sources: Trading Economics; Bain analysis

(Sept)
SEA is relatively less impacted than other regions

Real GDP growth maintains its pace...

<table>
<thead>
<tr>
<th>Region</th>
<th>2020-2021</th>
<th>2021-2022</th>
<th>2022-2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEA</td>
<td>5.3</td>
<td>4.6</td>
<td>5.8</td>
</tr>
<tr>
<td>China</td>
<td>3.5</td>
<td>3.8</td>
<td>4.9</td>
</tr>
<tr>
<td>India</td>
<td>8.7</td>
<td>6.9</td>
<td>5.3</td>
</tr>
<tr>
<td>EU</td>
<td>5.7</td>
<td>5.3</td>
<td>0.9</td>
</tr>
<tr>
<td>USA</td>
<td>1.5</td>
<td>2.4</td>
<td>1.0</td>
</tr>
</tbody>
</table>

... while inflation remains relatively moderate

<table>
<thead>
<tr>
<th>Region</th>
<th>2020-2021</th>
<th>2021-2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEA</td>
<td>2.1</td>
<td>8.4</td>
</tr>
<tr>
<td>China</td>
<td>0.9</td>
<td>4.7</td>
</tr>
<tr>
<td>India</td>
<td>2.4</td>
<td>5.1</td>
</tr>
<tr>
<td>EU</td>
<td>2.8</td>
<td>6.8</td>
</tr>
<tr>
<td>USA</td>
<td>4.7</td>
<td>8.2</td>
</tr>
</tbody>
</table>

Note: Data is up-to-date as of August 2022.
Sources: S&P Global Market Intelligence, World Bank, Bain analysis
Approaching $200B in rough seas
100M additional internet users have come online in the last three years

Total internet users in SEA

- 360M (2019)
- 400M (2020, +40M (+11%))
- 440M (2021, +40M (+10%))
- 460M (2022, +20M (+4%))

Sources: Google, Temasek and Bain, e-Conomy SEA, 2019, 2020, and 2021; Statista for 2022
After years of acceleration, digital adoption growth is normalising

**Digital adoption among urban SEA users (%)**

- Incremental adoption in H1 2022
- Adoption as of 2021

- E-commerce is nearing full adoption among digital users in urban SEA.
- New adoption of groceries, video-on-demand, and music-on-demand is minimal as consumers revert to their pre-pandemic habits.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Incremental adoption in H1 2022</th>
<th>Adoption as of 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>19%</td>
<td>75%</td>
</tr>
<tr>
<td>Food delivery</td>
<td>10%</td>
<td>71%</td>
</tr>
<tr>
<td>Transport</td>
<td>7%</td>
<td>64%</td>
</tr>
<tr>
<td>Online groceries</td>
<td>3%</td>
<td>64%</td>
</tr>
<tr>
<td>Travel</td>
<td>4%</td>
<td>58%</td>
</tr>
<tr>
<td>Video-on-demand</td>
<td>3%</td>
<td>58%</td>
</tr>
<tr>
<td>Music-on-demand</td>
<td>0%</td>
<td>52%</td>
</tr>
</tbody>
</table>

Note: 'Digital adoption' accounts for both active users (last used in the past 3 months) and lapsed users (last used more than 3 months ago).

Question: S8. Which of these activities have you done before?

Weighted base: Digital users in urban SEA internet population, n=4,498 per vertical

Source: Google-commissioned Ipsos e-Conomy SEA Research 2022
With digital adoption maturing, understanding usage behaviour across consumer segments is necessary to unlock incremental headroom for growth.

The majority of digital players are shifting priorities from new customer acquisition to deeper engagement with existing customers.
There are five consumer demographics, each at different stages of adoption and usage

<table>
<thead>
<tr>
<th>Location</th>
<th>Income</th>
<th>Age</th>
<th>Consumer demographic</th>
<th>% of digital population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>High</td>
<td>All ages</td>
<td>Affluent users</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>Middle</td>
<td>18-29</td>
<td>Young digital natives</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>30+</td>
<td>Metro mainstream</td>
<td>18%</td>
</tr>
<tr>
<td>Suburban (new)</td>
<td>All income levels</td>
<td>All ages</td>
<td>‘On a budget’ users</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Suburban users</td>
<td>41%</td>
</tr>
</tbody>
</table>

What’s new this year?
In previous reports, we covered Tier 1 (metro) and Tier 2 (non-metro) cities in SEA. This year, we combined Tier 1 and Tier 2 cities into ‘urban’ cities, and dove one layer deeper by conducting surveys in Tier 3 cities or ‘suburban’ cities.

Who are suburban users?
Consumers in suburban cities who participate in the digital economy by having made a purchase in at least one digital vertical. All suburban cities in the survey have populations between 50,000 and 200,000 residents. All respondents are digital consumers who access the internet at least once every two weeks.

Note: ‘% of digital population’ is based on weighted survey results (age, gender, household income, location). There will be marginal differences between suburban users when segmented by income and age.

Weighted base: SEA internet population, n=7,054 per vertical.

Source: Google-commissioned Ipsos e-Conomy SEA Research 2022
Affluent users consider the services an integral part of their modern lifestyle while young digital natives are naturally inclined to embrace the convenience and easy access.

E-commerce adoption has spread to suburban consumers while remaining sectors continue to be mainly urban practices.

E-commerce adoption is high across urban and suburban consumers.

Note: "Digital adoption" accounts for both active users (last used in the past 3 months) and lapsed users (last used more than 3 months).

Question: S8. Which of these activities have you done in the past? (last 3 months + more than 3 months)

Weighted base: SEA internet population weighted base includes survey respondents of (n=7,647 across 6 SEA markets) along with top-up samples (n=497) used for deeper consumer vertical representation. SEA internet population in the vertical for e-commerce n=5,563, groceries n=4,388, transport n=4,570, food delivery n=4,452, gaming n=2,263, video streaming n=2,759, music streaming n=2,231, travel n=3,768.

Source: Google-commissioned Ipsos e-Conomy SEA Research 2022
Southeast Asia’s digital economy approaches $200B GMV in 2022—three years earlier than expected.

Our inaugural e-Conomy SEA 2016 report, ‘Unlocking the $200B opportunity in SEA’, projected this to happen in 2025.
SEA’s digital economy is closing in on $200B, growing 20% YoY
As SEA’s digital sectors leave the pandemic behind, they are following one of three growth trajectories.

**Expected growth trajectory**

**S-shaped**
Sustained growth momentum towards 2025 despite routines reverting to normal—driven by continued demand for services like online shopping.

**Return to trendline**
Growth towards 2025 returns to pre-pandemic levels due to resumption of in-person activities such as dining out and entertainment.

**U-shaped**
Growth towards 2025 will be U-shaped given recovery from pandemic lows as local mobility habits and tourism trends gradually return to normal.
E-commerce: Persistent growth despite resumption of offline shopping and greater focus on profitability

Tapering but still growing from pandemic peaks
Online retail channels are still gaining ground even as spend moves partially back offline with a return to in-store shopping.

Optimising operations to improve profitability
E-commerce players are reducing promotions and discounts while improving margins by monetising value-add services.

Shifting from acquisition to engagement
Now with high user adoption, e-commerce players are instead focusing on boosting frequency, value, and loyalty of existing users, especially as average orders remain small ($10-15 each).

Online groceries needs better consumer value
To acquire new customers, grocery players must overcome freshness, delivery time, and pricing concerns, particularly among ‘on a budget’ and suburban users.

Environmentally-friendly practices on the rise
More online retailers are starting to take steps in the right direction, including optimising emissions, swapping to recycled packaging, and raising awareness for their sustainable offerings.

Note: Non-grocery includes marketplaces and direct-to-consumer platforms.
Source: Bain analysis
E-commerce: Despite widespread adoption, there remains an urban/suburban usage gap, especially in online groceries

Monthly active users (%)

- Affluent users
- Young digital natives
- Metro mainstream
- ‘On a budget’ users
- Suburban users

While all segments have adopted e-commerce, usage frequency is much higher among affluent users than ‘on a budget’ and suburban users.

Young digital natives are spending the most on groceries—75% more than the median—indicating significant headroom for growth even as the sector matures.

Less than 5% of suburban users buy groceries online as barriers like limited product variety and delivery options still need to be addressed.

Note: ‘Monthly active usage’ is derived from % adoption x % monthly usage frequency (among paying users, over the past 3 months).

Question: A2. In the last 3 months, how often did you purchase [physical items/online groceries]?

Weighted base: Active users by verticals in Southeast Asia, e-commerce n=3,801, groceries n=996.

Source: Google-commissioned Ipsos e-Conomy SEA Research 2022
Food delivery: Demand returns to trendline growth after tripling during the pandemic

Consumers gradually resuming pre-pandemic habits
Demand growth is normalising as people return to offices and eating out. Food delivery continues to be popular among urban consumers, but recent prices are driving them to order less.

Companies prioritising profitability over growth
There is greater urgency around improving unit economics, meaning fewer discounts, higher delivery fees, and increased take rates from restaurants are likely to reduce order growth.

Underpenetrated SEA market offers sizable headroom
Food delivery in SEA accounts for 2-4% of total spend on ready-to-eat meals, trailing behind markets such as the US and China which are at 6-8%. Unlocking this opportunity will require pushing beyond urban areas.

Balancing interests to drive sustainable growth
Food delivery services kept the F&B industry afloat during the pandemic, but platforms’ take rates remain a concern for restaurant owners as they resume normal operations.

Source: Bain analysis
Transport: Strong recovery expected as opportunities unlock but hurdles aplenty

Transport rising as mobility exceeds pre-pandemic levels
The gradual return to office, increase in brick-and-mortar shopping, and resurgence of tourism are driving a U-shaped recovery from lockdown lows.

Profitability measures affecting the value proposition
The introduction of new surcharges (e.g. cancellation fees and waiting fees) is translating into higher effective fares. They bump up GMV but are deterring ‘on a budget’ users, half of whom view price and promotions as barriers to usage.

Supply shortages putting the brakes on near-term growth
Platforms looking to rebuild their fleets are faced with inflated fuel costs and a labour shortage as F&B, hospitality, and taxi operators ramp up hiring. Transport players are offering financial incentives and social welfare to attract and retain drivers.

Low penetration and rising urbanisation are long-term tailwinds
Online transport has a 1-3% share of SEA’s total transport market, which is lower than the 3-7% seen in the US and China. Growing urbanisation will help boost online transport, but profitable expansion in suburban cities remains tough.

Source: Bain analysis
Food delivery & transport: Digital services provide convenience, but they are not for everyone

- Affluent users are the largest segment among transport and food delivery users, and spend nearly 2X more than the median.
- Food delivery usage correlates with income levels, with young digital natives and metro mainstream consumers equally dependent on the ease and convenience it provides.
- Metro mainstream consumers are less likely to use transport services as they are more likely to own a family car.

Note: 'Monthly active usage' is derived from % adoption x % monthly usage frequency (among paying users, in the past 3 months).

Question: A2. In the last 3 months, how often did you order a car or motorbike ride/food online?

Weighted base: Active users by verticals in Southeast Asia, transport n=1,126, food delivery n=1,447.

Source: Google-commissioned Ipsos e-Conomy SEA Research 2022
Online travel: ‘Revenge travel’ is here, but recovery to pre-pandemic levels will take years

Travel is back but recovery will be gradual
In 2022, the easing of travel restrictions and quarantine requirements spurred a surge in travel demand, but full recovery to 2019 levels is only expected in 2023/2024.

Domestic travel seeing a quicker revival
Hotels in SEA are back to ~80% of pre-COVID GMV. Domestic air travel has rebounded with passenger traffic at 60% and 70% of 2019 levels in Malaysia and Indonesia, respectively.

International travel taking longer to rebound
Flight capacity is still at 30-50% of 2019 levels* as airlines struggle to cope with demand after years of downsizing. Skyrocketing prices are also deterring travellers.

High-value corridors partially choked
The inflow of tourists from mainland China remains limited, and popular destinations for SEA travellers, such as Japan and Korea, were off-limits for much of 2022.

*vs Singapore at ~80% of pre-COVID capacity
Source: Bain analysis
Online travel: Travel-related search interest reaches or exceeds pre-pandemic levels, indicating impending demand

Travel-related search trends, by country

- Indonesia
- Malaysia
- Philippines
- Singapore
- Thailand
- Vietnam

Notes: Includes air- and accommodation-related queries; indexed searches are on a four-week rolling average; pre-pandemic average is for the period of January 2020.
Source: Destination Insights with Google
Online travel: Intent to travel internationally is back, with Singaporeans and Malaysians most likely to take flight

People intending to travel internationally (%)

<table>
<thead>
<tr>
<th>Country</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>39%</td>
<td>52%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>17%</td>
<td>40%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>19%</td>
<td>38%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>17%</td>
<td>31%</td>
</tr>
<tr>
<td>Philippines</td>
<td>21%</td>
<td>30%</td>
</tr>
<tr>
<td>Thailand</td>
<td>16%</td>
<td>22%</td>
</tr>
</tbody>
</table>

- People in Malaysia and Vietnam show the biggest leap in intent to travel internationally next year, doubling from 2022.
- On the flip side, enthusiasm for domestic travel is dipping across all consumer segments—with the exception of suburban consumers, of whom 50% more plan to travel within the country in 2023.
- Filipinos and Thais are especially spoilt for choice when it comes to domestic destinations. Incentive schemes from local governments are also helping boost domestic travel as international tourism to these countries will take time to recover.

Note: Chart refers to % of urban consumers intending to travel internationally for leisure purposes.
Question: H17. Which of these types of trips have you taken/are you intending to take in the following year?
Base: Digital users in Southeast Asia in the travel vertical, n=3,768.
Source: Google-commissioned Ipsos e-Conomy SEA Research 2022
Online media: Growth slows to single-digit following pandemic acceleration

Video down from peaks and back to trendline
There is much headroom for growth as video-on-demand penetration remains low. Expanding paid usage beyond affluent urban consumers will require more affordable subscription plans and local language content.

Music returning to normality
Music-on-demand is seeing strong recovery as people revert to pre-pandemic, on-the-go music-listening routines. Reactivated content platforms (e.g. live concerts, artist collaborations) are also boosting listening.

Gaming faces post-pandemic pullback
With the return to normal life, gaming has seen dips in downloads, time spent, and in-app purchases.

Digital ads maintain momentum
The uptick is driven by increased engagement on new social media platforms, and ads monetisation on marketplaces and platforms, though macro headwinds cloud the industry’s near-term outlook.

Source: Bain analysis
**Online entertainment**: Affluent users and young digital natives are the most willing to pay for music, video, and gaming services.

Despite the widespread popularity of free online entertainment apps, **paid usage in SEA is concentrated in a few urban consumer segments.**

Music-on-demand has a notable skew towards young digital natives, where **30% of them are using the service on a daily basis**—higher than any other consumer segment.

Content variety is the top trigger for **video-on-demand** users to switch between platforms, while **price is the top trigger for music-on-demand**.

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**Weekly active usage by paying users (%)**

<table>
<thead>
<tr>
<th>Service</th>
<th>Affluent users</th>
<th>Young digital natives</th>
<th>Metro mainstream</th>
<th>‘On a budget’ users</th>
<th>Suburban users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video-on-demand</td>
<td>59%</td>
<td>51%</td>
<td>43%</td>
<td>35%</td>
<td>14%</td>
</tr>
<tr>
<td>Music-on-demand</td>
<td>49%</td>
<td>34%</td>
<td>32%</td>
<td>7%</td>
<td>12%</td>
</tr>
<tr>
<td>Gaming</td>
<td>46%</td>
<td>34%</td>
<td>36%</td>
<td>48%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Note: ‘Weekly active usage’ derived from % adoption X % weekly usage frequency (among paying users, in the past 3 months).

Question: A2. In the last 3 months, how often did you use [music streaming/video streaming/gaming]?

Weighted base: Active users by vertical in Southeast Asia; gaming, n=953, video streaming, n=1,409, music streaming, n=845

Source: Google-commissioned Ipsos e-Conomy SEA Research 2022
Gaming: Seeing clear pullback from pandemic peaks

Q. Compared to 2020-2021, how much time did you spend playing digital games? (%)

- More time than 2020/2021
- Same time than 2020/2021
- Less time than 2020/2021

7 in 10 gamers are spending the same or less time playing now than during the pandemic.

Nearly 50% cited "I want to spend more time on other hobbies/interests" as the key reason for the drop in frequency.

The decline in time spent is more pronounced among lower income gamers, especially suburban users, who embraced gaming during the pandemic.

Question: E21. Compared to 2020-2021 (during the peak of the pandemic), did you spend more or less time playing digital games?
Base: Active and lapsed users across gaming vertical in Southeast Asia, n=1,851.
Source: Google-commissioned Ipsos e-Conomy SEA Research 2022
Digital financial services (DFS) have made significant inroads over the years, buoyed by a highly conducive growth environment.

However, clear shifts in battlegrounds have made the landscape more competitive.
DFS: All sub-sectors are growing as a result of enduring offline-to-online behaviour shifts post-pandemic

Digital financial services ($B)

Payments (GTV)
- CAGR +9% in 2019
- CAGR +14% in 2021
- CAGR +13% in 2022
- CAGR +13% in 2025
- CAGR +13% in 2030

Remittance flow (GTV)
- CAGR +22% in 2019
- CAGR +19% in 2021
- CAGR +17% in 2022
- CAGR +17% in 2025
- CAGR +13% in 2030

Investment (AUM)
- CAGR +23%+ in 2019
- CAGR +23%+ in 2021
- CAGR +23%+ in 2022
- CAGR +23%+ in 2025
- CAGR +23%+ in 2030

Lending loan book
- CAGR +29% in 2019
- CAGR +33% in 2021
- CAGR +33% in 2022
- CAGR +33% in 2025
- CAGR +33% in 2030

Notes: GTV = Gross Transaction Values; AUM = Assets Under Management; APE = Annual Premium Equivalent; GWP = Gross Written Premiums.
Source: Bain analysis
DFS: We introduced the diverse competitive landscape in 2019...

Source: Bain analysis
... fast forward three years and winning business models are emerging

### Progress of different DFS business models

<table>
<thead>
<tr>
<th>Pure-play fintechs:</th>
<th>Consumer tech platforms:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Largely focused on expansion to improve profitability and drive customer stickiness</td>
<td>Leading e-commerce or transport platforms expanding into DFS with initial focus on existing customers</td>
</tr>
<tr>
<td>💪 Pace of innovation, a fast-growing suite of financial products, and a dedicated platform</td>
<td>🔄 Synergistic value-add to the existing consumer journey</td>
</tr>
<tr>
<td>🔄 Operating at subscale levels so profitability is challenging, limited products</td>
<td>🔄 Basic financial products available today, less sophisticated than pure-play fintechs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Established financial services players:</th>
<th>Established consumer players:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid digitalisation to unlock seamless omnichannel customer journeys and to compete with insurgents</td>
<td>Solo attempts at expansion mostly unsuccessful and now pivoting from individual ventures to partnerships</td>
</tr>
<tr>
<td>💪 Sophisticated financial products across a range of asset classes, extensive customer support</td>
<td>🔄 Synergistic value-add to the existing consumer journey</td>
</tr>
<tr>
<td>🔄 Slower platform and product innovation than pure-play fintechs</td>
<td>🔄 Less effective platforms and services than the expertise and infrastructure of fintech/tech platforms</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Digital banks:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New entrants leveraging existing merchant and consumer networks to reach unbanked and underbanked populations</td>
<td></td>
</tr>
<tr>
<td>💪 Penetration of young digital natives and unbanked/underbanked populations, catalysing financial inclusion</td>
<td>🔄 Unclear value proposition against incumbents in mature financial markets, challenging unit economics in emerging economies</td>
</tr>
</tbody>
</table>

Source: Bain analysis
### DFS: Digibanks compete for mass and unbanked consumers while established banks fast-track digitalisation

<table>
<thead>
<tr>
<th>Segment</th>
<th>% of total deposits</th>
<th>Likelihood of switching</th>
<th>Digibanks are starting to gain traction in SEA...</th>
</tr>
</thead>
<tbody>
<tr>
<td>High net worth</td>
<td>40-50%</td>
<td>↓</td>
<td>New entrants are gradually gaining consumer trust, especially among young digital natives. SEA’s digibanks aim to emulate peers in developed markets (e.g. the UK or South Korea) that enjoy a 60-70% cost base vs incumbent banks. Efficient, non-legacy platforms, together with streamlined operations and distribution, allow digibanks to pass on savings to their customers (e.g. higher CASA rates) as well as reinvest in new products such as their lending and investment portfolios.</td>
</tr>
<tr>
<td>Affluent</td>
<td>20-30%</td>
<td>→</td>
<td></td>
</tr>
<tr>
<td>Mass affluent</td>
<td>15-25%</td>
<td>→</td>
<td></td>
</tr>
<tr>
<td>Mass</td>
<td>10-15%</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Unbanked</td>
<td>N/A</td>
<td>↑</td>
<td></td>
</tr>
</tbody>
</table>

... while incumbents are building on inherent strengths to digitalise quickly

High net worth and affluent customers drive 60-80% of deposit balances, and are more likely to hold multiple products (e.g. investments, insurance, wealth, etc.). They are thus more likely to stick with established financial services.

To stay competitive, leading established banks are investing heavily in ramping up their digital capabilities so as to offer a better user experience and more value-added services, such as digital payments and investments.

"Digibanks’ opportunity lies in credit. They have access to proprietary consumer data and are in a position to capture share of underbanked via alternative credit decisioning.” – VC

"We continue to develop world-class digital solutions to match the value propositions offered by leading fintech and digibanks.”

- CEO, leading regional bank

Note: CASA = Current accounts and savings accounts.

Source: Bain analysis
**DFS: Uptake of digibanks will depend on unbanked share of population and digital maturity of incumbent banks**

<table>
<thead>
<tr>
<th>Country</th>
<th>% of population aged 15-35</th>
<th>% unbanked/underbanked</th>
<th>Digibanks’ ‘right to win’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>31%</td>
<td>81%</td>
<td>High</td>
</tr>
<tr>
<td>Philippines</td>
<td>34%</td>
<td>75%</td>
<td>High</td>
</tr>
<tr>
<td>Vietnam</td>
<td>30%</td>
<td>54%</td>
<td>High</td>
</tr>
<tr>
<td>Thailand</td>
<td>26%</td>
<td>46%</td>
<td>Low</td>
</tr>
<tr>
<td>Malaysia</td>
<td>34%</td>
<td>28%</td>
<td>Low</td>
</tr>
<tr>
<td>Singapore</td>
<td>24%</td>
<td>12%</td>
<td>Low</td>
</tr>
</tbody>
</table>

Digibanks have a higher ‘right to win’ in Indonesia, the Philippines, and Vietnam, where digitalisation of incumbent banks is slower, and low digital inclusion of the unbanked and underbanked offers sizable headroom for growth. Achieving profitable economics, however, will be a challenge.

“Consumers in Indonesia and Vietnam demonstrate significantly higher affinity towards digibanks than in other regional markets.” – VC

In Thailand and Malaysia, digibanks have a medium ‘right to win’, given the lower proportion of unbanked and underbanked people. Incumbent banks enjoy ecosystem support such as protective regulations and integrated partnerships, making it harder for newer players to gain ground.

In a mature market like Singapore, digibanks have a low ‘right to win’, given how few unbanked and underbanked customers there are. The banking system is concentrated around well-established financial institutions undergoing rapid digitalisation, which have a stronghold on the most profitable segments—the high net worth and affluent customers.

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**Note:** ‘Right to win’ is defined as the ability to gain sizable market share and profitable economics over a sustained period of time.

Sources: World Bank, Bain analysis
Prudence clouds tech investments
Investments maintained strong momentum in H1 2022, but investors are getting increasingly cautious

Note: Funding value excludes public financing deals like PIPE, IPO, ICO.
Source: Bain analysis

SEA’s deal landscape continues last year’s upward momentum
While total deal activity remained relatively constant at about 1.2K from H1 2021 to H1 2022, this year’s deal value has already surpassed last year’s by ~15%, mainly driven by larger average ticket sizes of +13% YoY.

Rising interest rates hindering investments in H2 2022
Historically, the US experiences peak venture capital (VC) investment activities while riding on prolonged periods of low interest rates, like in the past few years.

The recent increase in long-term US treasury rates has made investments in high-growth tech companies less attractive from a financial perspective, leading to a gradual slowdown in the latter half of 2022, akin to VC trends in the US.

---

<table>
<thead>
<tr>
<th>Year</th>
<th>Deal Count</th>
<th>Deal Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>1,546</td>
<td>12.0</td>
</tr>
<tr>
<td>2020</td>
<td>1,853</td>
<td>11.6</td>
</tr>
<tr>
<td>2021</td>
<td>2,697</td>
<td>26.7</td>
</tr>
<tr>
<td>H1 2021</td>
<td>1,216</td>
<td>11.5</td>
</tr>
<tr>
<td>H2 2021</td>
<td>1,481</td>
<td>15.2</td>
</tr>
<tr>
<td>H1 2022</td>
<td>1,233</td>
<td>13.2</td>
</tr>
</tbody>
</table>

Note: Funding value excludes public financing deals like PIPE, IPO, ICO.
Source: Bain analysis
Early-stagers are flourishing, while late-stage investments are impacted by dim IPO prospects

Private funding value ($B)

- **Early-stage investments growing**
  Even after a record high 2021, funding continued pouring in throughout H1 2022. With SEA relatively insulated from macro headwinds, ticket sizes have increased by 40-60%, giving investors reasons to stay optimistic about the region’s long-term prospects in the private market.

- **Growth-stage sees record highs**
  From H1 2021 to H1 2022, growth-stage investments hit an all-time high. Larger funds are active in the region and willing to follow up on previous investments, particularly in sectors and companies that accelerated during the pandemic.

- **Late-stage investments on a downtrend**
  Amid global headwinds and a recent series of inflated late-stage valuations, E+ megarounds have seen funding dry up as pre-IPO companies struggle to build a track record of profitable growth.

Note: Private funding value excludes public financing deals like PIPE, IPO, ICO.
Source: Bain analysis
In public markets, IPOs and post-IPO financing deals are drying up

Note: Funding value includes public financing deals like PIPE, IPO, ICO.
Source: Bain analysis

After a bull run in 2021...
Last year, leading digital players in SEA raised IPO and post-IPO financing rounds ranging between $1B and $6B, comprising over 80% of the digital economy’s total public funding.

... cool-off is happening in 2022
Now, rising interest rates, plummeting stock valuations, and global investor pivots to ‘safe havens’ are bringing IPO prospects to a near halt for the next 12 to 18 months.
Most VCs expect valuations to continue dwindling; only a small minority sees recovery in the near-term from 2021 peaks.

Following the pullback of leading late-stage funds, we are starting to see fewer and smaller-sized deals in later-stage rounds, as well as higher caution among other growth investors.” – VC

As we continue to face the impacts of global headwinds, we expect tighter squeezes on valuations in 2023— with more down rounds, especially with late-stage companies.” – VC

We are optimistic that deal activity and valuations will pick up again after the uncertainties in macro-conditions have cleared, over the next 2-3 years.” – VC

3 in 4 investors see valuations declining by at least 10-30%* in 2022

1 in 2 investors expect valuations to further decline from 2022 levels

<1 in 4 investors believe valuations will only return to 2021 peaks in 2023-2024

*from 2021 peaks
Source: Bain, SEA Venture Capital Investors Survey, Q3 2022
### Most tech companies are expediting their paths to financial sustainability

<table>
<thead>
<tr>
<th>Previous target / consensus</th>
<th>Revised target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grab</strong></td>
<td></td>
</tr>
<tr>
<td>H2 2023 EBITDA breakeven for overall delivery segment</td>
<td>H1 2023</td>
</tr>
<tr>
<td><strong>GoTo</strong></td>
<td></td>
</tr>
<tr>
<td>Q4 2024 Positive group contribution margin</td>
<td>Q1 2024</td>
</tr>
<tr>
<td><strong>Bukalapak</strong></td>
<td></td>
</tr>
<tr>
<td>H2 2024 EBITDA breakeven for overall business</td>
<td>H2 2023</td>
</tr>
<tr>
<td><strong>Shopee</strong></td>
<td></td>
</tr>
<tr>
<td>2023 Breakeven for Asia market post HQ costs</td>
<td>2023</td>
</tr>
</tbody>
</table>

Note: ‘Overall delivery’ includes food and logistics; EBITDA = Earnings before interest, taxes, depreciation, and amortisation.

Source: Bain analysis

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We have **accelerated our expected breakeven timelines** for our core food deliveries and overall deliveries segment by one and two quarters, respectively, to Q1 2023 and Q2 2023.”
- Grab’s Q2 2022 earnings press release

The Company currently expects group contribution margin to **turn positive starting in the first quarter of 2024**.”
- GoTo’s Q2 2022 earnings press release

**Bukalapak targets to be Indonesia’s fastest e-commerce player to break even**, with timeline of EBITDA positive by 2023F.”
- BNI Sekuritas analyst report, August 2022

**In terms of the breakeven target for the Asia market, post HQ costs, we previously shared that we expect that to happen by next year (2023). There’s no change to our expectation on that.”**
- Yanjun Wang, Group CCO, during Q2 earnings call
VCs remain vested in the region with $15B dry powder to sustain deals

SEA funds’ dry powder at year-end ($B)

- **Committed to investing in SEA...**
  The existing VC funds lifecycle instils confidence that investments in SEA will continue throughout the downturn, despite an expected slowdown in new funds raised.

- **... with a more cautious approach**
  VCs are likely to re-invest in their own portfolio companies and weather through the funding winter rather than venture into unproven startups.

  However, some VCs are ‘buying the dip’ at lower valuations, with the aim of seeking higher ROI opportunities from the 2022/2023 vintages.

Source: Preqin
Despite the headwinds, investors remain confident in SEA’s long-term prospects and the opportunities they bring.

Increasingly, they are spreading their bets in up-and-coming countries and sectors.
Singapore and Indonesia are 2022’s leading investment destinations yet again

Note: ‘Others’ include Brunei, Bangladesh, Cambodia, Myanmar, and Sri Lanka.
Source: Bain analysis
Vietnam, Indonesia, and the Philippines are most likely to attract more investors over the longer-term

Q. How do you expect deal activity to change in the long-term (2025-2030) for the following countries?

- **Vietnam**: 83%
- **Indonesia**: 73%
- **Philippines**: 73%
- **Singapore**: 50%
- **Thailand**: 47%
- **Malaysia**: 30%
- **Rest of ASEAN**: 17%

Source: Bain, SEA Venture Capital Investors Survey, Q3 2022

- *Indonesia, Vietnam, and the Philippines are clear hot spots for growth and investments in the years ahead, driven by heightened digital savviness and affluence.* – VC
- *Singapore will continue to serve as a mature investment market, with a strong pipeline of attractive regional startups.* – VC
- *It’s still early days for investments in the rest of ASEAN, where enablers for growth are not yet in place.* – VC
DFS overtakes e-commerce as SEA’s top investment sector

Note: ‘Others’ include foodtech, B2B tech, transport, cleantech, agritech, etc.
Source: Bain analysis
DFS: Payments retain the lion’s share of deal activities

Payments remain centrestage
Critical ‘backstage’ enablers like payment gateways and monetisation solutions clocked two of the year’s biggest private deals, making them the sector’s superstars. Investors will be on the lookout for more infrastructure-based solutions as they seek to expand SEA’s digital consumer population through DFS.

Lending and new players step into the limelight
With the rise of buy-now-pay-later (BNPL) platforms, investor interest in lending has multiplied, with deal value doubling from H1 2021 to H1 2022. Between BNPL players, super apps, traditional banks, and more, competition is intensifying and consolidation is likely in the next couple of years.

Digibanks and Web3 fintechs have been turning heads too, with investments doubling year-on-year. While nascent, players are eagerly experimenting, learning, and capturing new opportunities.

Note: ‘Others’ include digital banks, Web3-related fintechs, etc.
Source: Bain analysis
E-commerce: Logistics deals diminishing after years of growth

E-commerce private funding value ($B)

- Marketplace
- Logistics
- Others

Note: ‘Others’ include social commerce, live commerce, companies offering tech-related e-commerce, and e-commerce aggregators, etc.

Source: Bain analysis

Further details:

- Fewer deals in a maturing sector
  E-commerce is a consolidated market with much of its market share and funding activity centred around regional, at-scale marketplace players. As a result, there have been ~23% fewer deals in 2022 than in 2021.

- Logistics investments cool off
  Coming off a strong funding year in 2021, investments in logistics companies have dwindled, with key regional players already sufficiently funded to continue capacity expansion and tide through the ‘funding winter’.
Nascent sectors like healthtech, SaaS, and Web3 hold the promise of addressing some of SEA’s key challenges.

But as they gather adoption momentum, they’re facing persistent challenges in terms of monetisation.
>80% of VCs expect to increase focus on healthtech, SaaS, and Web3, while enthusiasm for edtech cools

**Q. How do you expect deal activity to change in the long-term (2025-2030) for the following sectors?**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Expected increase in deal activity in 2025-2030 vs today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthtech</td>
<td>87%</td>
</tr>
<tr>
<td>SaaS / Enterprise / IT software</td>
<td>87%</td>
</tr>
<tr>
<td>Web3</td>
<td>80%</td>
</tr>
<tr>
<td>Edtech</td>
<td>47%</td>
</tr>
</tbody>
</table>

> The pandemic accelerated the development of digital medical services in order to provide affordable and accessible healthcare to all. We expect to see much higher adoption in the coming years, especially among the rural population.” – VC

> SMEs in SEA contribute a sizable amount to our overall GDP (especially in Indonesia), and will continue to grow over the next five years. Affordable SaaS solutions are key to empowering these companies.” – VC

> Many Web3 technologies will eventually be embedded into Web 2.0 platforms, enhancing functionality and engagement in the future. The trend of mixing Web3 tokenisation with Web 2.0 games is a clear example of that.” – VC

> With the return to in-person training and learning, demand for online-based learning has cooled off significantly compared to peak levels in the past 2 years. Going forward, it will be vital to consider hybrid learning forms to sustain growth.” – VC

Source: Bain, SEA Venture Capital Investors Survey, Q3 2022; Bain analysis
## Poor access and rising healthcare costs are key reasons for healthtech adoption

### Healthtech can help tackle SEA’s chronic healthcare pain points

<table>
<thead>
<tr>
<th>Poor access to hospital facilities</th>
<th>Low insurance coverage for digital health services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia (ID), Philippines (PH), Vietnam (VN) have between 1-3 hospital beds per 1,000 residents, compared to ~13 in Japan</td>
<td>Patients in Indonesia and Philippines pay out-of-pocket for ~40% of digital health services (e.g. online pharmacy, tele-meds, self-diagnostics, wellness) compared to ~20% in Australia</td>
</tr>
</tbody>
</table>

Healthcare accessibility is particularly challenging for suburban cities in emerging economies—"digital solutions can help bridge this gap." – VC

Affordability is another problem, given the scarcity of medical resources. "Tech-based health services can lower these costs." – VC

<table>
<thead>
<tr>
<th>Lack of consolidated health records</th>
<th>Rising healthcare costs</th>
<th>Rapidly ageing population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals in Thailand and Malaysia still operate in siloed databases, hindering patient and clinical data-sharing and efficiencies</td>
<td>In 2022, healthcare costs in Singapore and Malaysia surged by ~9% and ~16% respectively, well above South Korea’s ~3% rise</td>
<td>The number of people over 65 in these countries is expected to double by 2030</td>
</tr>
</tbody>
</table>

More mature markets are seeing growth in the aged population, which creates more pressure on the medical system. "Telemedicine can help alleviate some of that pressure." – VC

While Singapore is progressively consolidating medical records across providers and platforms, there is significant room for improvement in Thailand and Malaysia.” – VC

### Source: Bain analysis

**Emerging healthcare systems**
- Indonesia (ID)
- Philippines (PH)
- Vietnam (VN)

**Mature healthcare systems**
- Singapore (SG)
- Thailand (TH)
- Malaysia (MY)
Affordable SaaS with embedded finance solutions are key to digitalising and professionalising SMEs in SEA

SMEs are the bedrock of SEA...

- Large, growing SME population
  - SEA’s >70M SMEs, including Indonesia’s warungs and the Philippines’ sari-sari stores, are key to the region’s social and economic development

- SMEs deliver a substantial contribution to the economy
  - ~40% of SEA’s GDP is driven by SME activities

- Significant job creation
  - SMEs employ ~67% of SEA’s working population

... and SaaS with embedded finance can help address their pain points

- Costly backend services
  - Costly cash transactions and manual bookkeeping practices cause high operating costs

- Inaccessible financing
  - Many SMEs are unbankable due to unreliable business and financial data

- Limited reach and scalability
  - Majority of SMEs are offline with limited customer reach, making it a challenge to scale

Source: Bain analysis

"SMEs are the backbone of our economy—they drive a sizable amount of Indonesia’s GDP, along with an array of job opportunities, especially in suburban cities.” – VC

"The opportunity for SaaS in SEA is less on enterprise solutions but more on free/affordable SME SaaS solutions with embedded financial services (for monetisation).” – VC

"SMEs and MSMEs will continue to play a vital role in our economy, given the heavily fragmented nature of our geography—especially in Indonesia.” – VC
Though nascent, venture capital interest in Web3 themes is growing

Q. Within Web3, which areas are you most interested in investing in?

<table>
<thead>
<tr>
<th>% of VC respondents who have started investing in Web3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privacy &amp; digital infrastructure</td>
</tr>
<tr>
<td>DeFi</td>
</tr>
<tr>
<td>Blockchain games</td>
</tr>
<tr>
<td>DAOs</td>
</tr>
<tr>
<td>Metaverse</td>
</tr>
<tr>
<td>Crypto</td>
</tr>
<tr>
<td>NFTs</td>
</tr>
<tr>
<td>Others</td>
</tr>
</tbody>
</table>

Although Web3/crypto is a small portion of our investment portfolio today, we have established a separate fund dedicated to these investments, and are looking to expand our work in that space.” – VC

We expect select themes like infrastructure and gaming to gain significant traction in the years ahead. In fact, we are already seeing >50% of pitches coming from Web3 gaming startups.” – VC

All the investment hype in Web3 is on the infrastructure layer right now. As for the metaverse, we are taking a ‘wait and see approach’. It is not a priority yet.” – VC

Notes: DAO = Decentralised Autonomous Organisation; ‘Others’ include companies levered to crypto, creator economy and Web3 infrastructure.
Source: Bain, SEA Venture Capital Investors Survey, Q3 2022
Investments in edtech dip as economies reopen and e-learning gives way to in-person learning

Edtech private funding value ($B)

- **Edtech cools after pandemic peaks**
  The reopening of economies has led to higher churn rates, lower uptake of new courses, and reduced average spend, causing investors to approach edtech cautiously and pivot towards sectors such as SaaS and Web3.

- **Challenges in scaling into a sustainable business model**
  The widespread adoption of technology in learning continues to pose challenges. In order to scale, edtech needs top quality teaching materials and a learning experience that seamlessly integrates into traditional learning forms, all while ensuring security and privacy.

Source: Bain analysis
Towards a sustainable digital economy
Awareness of environmental, social, and governance issues remains nascent, but is on the rise.

Digital economy players can play a positive role in leading SEA consumers towards more sustainable habits.
Sustainability spans across environment, social, and governance, and is a key enabler for SEA’s digital decade

<table>
<thead>
<tr>
<th>Environment</th>
<th>Sustainability spans across environment, social, and governance, and is a key enabler for SEA’s digital decade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Environment</strong></td>
</tr>
<tr>
<td></td>
<td>Living within our planetary boundaries</td>
</tr>
<tr>
<td></td>
<td><strong>Water stewardship</strong></td>
</tr>
<tr>
<td></td>
<td>Sensible water use, water quality, and watershed management</td>
</tr>
<tr>
<td></td>
<td><strong>Material use, waste and circularity</strong></td>
</tr>
<tr>
<td></td>
<td>Responsible sourcing and use of resources, incl. product, packaging, and food lifecycles (reduce,</td>
</tr>
<tr>
<td></td>
<td>reuse, recycle)</td>
</tr>
<tr>
<td></td>
<td><strong>Hazardous substances</strong></td>
</tr>
<tr>
<td></td>
<td>Sensitively using and treating toxic products and waste, incl. chemical and technology pollutants</td>
</tr>
<tr>
<td></td>
<td><strong>Air quality</strong></td>
</tr>
<tr>
<td></td>
<td>Lowering pollutants impacting air quality and atmospheric integrity</td>
</tr>
<tr>
<td></td>
<td><strong>Land and ocean use</strong></td>
</tr>
<tr>
<td></td>
<td>Ensuring long-term sustainable land and ocean use, incl. land / ocean change (e.g. deforestation),</td>
</tr>
<tr>
<td></td>
<td>sound utilisation practices</td>
</tr>
<tr>
<td></td>
<td><strong>Biodiversity and ecological welfare</strong></td>
</tr>
<tr>
<td></td>
<td>Protecting and enhancing natural ecosystems and living organisms; upholding animal welfare</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social</th>
<th>Committing to equitable outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Human rights</strong></td>
</tr>
<tr>
<td></td>
<td>Upholding the corporate responsibility to respect universal rights (e.g. life, liberty, freedom of</td>
</tr>
<tr>
<td></td>
<td>expression, no forced / child labour)</td>
</tr>
<tr>
<td></td>
<td><strong>Labour practices</strong></td>
</tr>
<tr>
<td></td>
<td>Decent and safe work, incl. equitable pay / benefits, upskilling / development, and hiring practices</td>
</tr>
<tr>
<td></td>
<td><strong>Diversity, equity and inclusion</strong></td>
</tr>
<tr>
<td></td>
<td>Practices and culture promoting diversity, equity, accessibility, and inclusion, inside company and beyond</td>
</tr>
<tr>
<td></td>
<td><strong>Health and wellness</strong></td>
</tr>
<tr>
<td></td>
<td>Products, services, and technologies that enhance customer well-being</td>
</tr>
<tr>
<td></td>
<td><strong>Customer safety and access</strong></td>
</tr>
<tr>
<td></td>
<td>Safe and accessible offerings incl. safe formulations, clear labelling and non-abusive practices in</td>
</tr>
<tr>
<td></td>
<td>marketing, access, and pricing</td>
</tr>
<tr>
<td></td>
<td><strong>Cyber security and digital privacy</strong></td>
</tr>
<tr>
<td></td>
<td>Secure technology systems, infrastructure, and data practices; duty of care to customer privacy,</td>
</tr>
<tr>
<td></td>
<td>responsiveness to law enforcement</td>
</tr>
<tr>
<td></td>
<td><strong>Community partnership</strong></td>
</tr>
<tr>
<td></td>
<td>Aware and/or engaged members of the communities and broader society</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Governance</th>
<th>Demonstrating responsible conduct</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Governance foundation</strong></td>
</tr>
<tr>
<td></td>
<td>Norms and practices related to good</td>
</tr>
<tr>
<td></td>
<td>governance, e.g. ownership and control,</td>
</tr>
<tr>
<td></td>
<td>board diversity, pay, accountability</td>
</tr>
<tr>
<td></td>
<td><strong>Business ethics</strong></td>
</tr>
<tr>
<td></td>
<td>Sound decision-making, ethical conduct; no anti-competitive practices, bribery, or corruption</td>
</tr>
<tr>
<td></td>
<td><strong>Transparency and risk management</strong></td>
</tr>
<tr>
<td></td>
<td>Accurate accounting; appropriate risk disclosure and management; ESG transparency</td>
</tr>
<tr>
<td></td>
<td><strong>Third-party relationships</strong></td>
</tr>
<tr>
<td></td>
<td>Clear practices embedded in sourcing activities and investment and partnership decisions</td>
</tr>
<tr>
<td></td>
<td><strong>Tax practices</strong></td>
</tr>
<tr>
<td></td>
<td>Fair tax payment and practice</td>
</tr>
<tr>
<td></td>
<td><strong>Indirect economic impacts</strong></td>
</tr>
<tr>
<td></td>
<td>Sensitivity to indirect impacts on external populations of firm’s economic activity</td>
</tr>
<tr>
<td></td>
<td><strong>National and int'l. policy</strong></td>
</tr>
<tr>
<td></td>
<td>Appropriately navigating complex domestic and international issues, incl. policy and lobbying</td>
</tr>
</tbody>
</table>

Source: Bain analysis
Environmental and social sustainability are the greatest concerns among SEA’s core digital economy sectors.

<table>
<thead>
<tr>
<th>Levels of concern, by sector</th>
<th>Low concern</th>
<th>High concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>🌱</td>
<td>🌱</td>
</tr>
<tr>
<td>Social</td>
<td>🏛️</td>
<td>🏛️</td>
</tr>
<tr>
<td>Governance</td>
<td>🗿️</td>
<td>🗿️</td>
</tr>
</tbody>
</table>

- **E-commerce**
  - Environment: Low concern
  - Social: High concern
  - Governance: Low concern

- **Transport**
  - Environment: High concern
  - Social: Low concern
  - Governance: High concern

- **Food delivery**
  - Environment: High concern
  - Social: High concern
  - Governance: High concern

- **Online travel**
  - Environment: High concern
  - Social: High concern
  - Governance: High concern

- **Gaming**
  - Environment: Low concern
  - Social: Low concern
  - Governance: Low concern

- **Online media**
  - Environment: Low concern
  - Social: Low concern
  - Governance: Low concern

- **Fintech**
  - Environment: Low concern
  - Social: Low concern
  - Governance: Low concern

- **Healthtech**
  - Environment: Low concern
  - Social: Low concern
  - Governance: Low concern

- **Edtech**
  - Environment: Low concern
  - Social: Low concern
  - Governance: Low concern

*Note: VC’s perception of the level of concern (‘somewhat concerning’ + ‘significant concern’) for each ESG dimension across different sectors.
Source: Bain, SEA Venture Capital Investors Survey, Q3 2022*
Emissions and resources are the hottest environmental issues while labour practices and DEI are top of mind social topics

<table>
<thead>
<tr>
<th>Environment</th>
<th>Social</th>
<th>Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E</strong></td>
<td><strong>S</strong></td>
<td><strong>G</strong></td>
</tr>
<tr>
<td><strong>Emissions and resources</strong></td>
<td><strong>Committing to equitable outcomes</strong></td>
<td><strong>Demonstrating responsible conduct</strong></td>
</tr>
<tr>
<td>Reducing and offsetting emissions contributing to climate change</td>
<td>Decent and safe work, incl. equitable pay / benefits, upskilling / development, and hiring practices</td>
<td>Norms and practices related to good governance, e.g. ownership and control, board diversity, pay, accountability</td>
</tr>
<tr>
<td>Sensible water use, water quality, and watershed management</td>
<td>Practices and culture promoting diversity, equity, accessibility, and inclusion, inside company and beyond</td>
<td>Sound decision-making, ethical conduct; no anti-competitive practices, bribery, or corruption</td>
</tr>
<tr>
<td>Responsible sourcing and use of resources, incl. product, packaging, and food lifecycles (reduce, reuse, recycle)</td>
<td>Products, services, and technologies that enhance customer well-being</td>
<td>Accurate accounting; appropriate risk disclosure and management; ESG transparency</td>
</tr>
<tr>
<td>Sensitively using and treating toxic products and waste, incl. chemical and technology pollutants</td>
<td>Safe and accessible offerings incl. safe formulations, clear labelling and non-abusive practices in marketing, access, and pricing</td>
<td>Clear practices embedded in sourcing activities and investment and partnership decisions</td>
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<tr>
<td>Lowering pollutants impacting air quality and atmospheric integrity</td>
<td>Secure technology systems, infrastructure, and data practices; duty of care to customer privacy; responsiveness to law enforcement</td>
<td>Fair tax payment and practice</td>
</tr>
<tr>
<td>Ensuring long-term sustainable land and ocean use, incl. land / ocean change (e.g. deforestation), sound utilisation practices</td>
<td>Protecting and enhancing natural ecosystems and living organisms; upholding animal welfare</td>
<td>Sensitivity to indirect impacts on external populations of firm’s economic activity</td>
</tr>
<tr>
<td><strong>Biodiversity and ecological welfare</strong></td>
<td><strong>Human rights</strong></td>
<td><strong>Indirect economic impacts</strong></td>
</tr>
</tbody>
</table>

Source: Bain analysis
Environment: SEA is one of the most heavily exposed regions to the risks and consequences of climate change.
Environment: As the digital economy scales, emissions are projected to reach ~20 MT CO2e by 2030

Carbon footprint (CO2e)

CO2e projections are calculated based on the Greenhouse Gas Protocol Scope 3. The methodologies used to calculate the digital economy’s three key sectors are:

**Transport**
- Estimated average trip, including driver repositioning distance per ride, based on urban area sizes
- Applied blended emissions per km per trip based on electric vehicle (EV) and hybrid electric vehicle (HEV) penetration

**Food delivery**
- Packaging emissions based on the average amount and type of materials used
- Rider emissions based on average distance to pick-up point, then to customer destination

**E-commerce**
- Scaled up regional players’ published carbon footprint reports, by market share
- Growth in carbon footprint is assumed to follow sector’s GMV growth

Online travel has been excluded despite the environmental footprint of air travel, since online platforms facilitate bookings and do not emit material CO2e themselves.

Notes: The Greenhouse Gas Protocol includes Scope 1, 2 and 3 emissions. Scope 3 defined as: ‘Emissions coming from activities from assets not owned by the company, but indirectly impacts in its value chain’. Nascent sectors (e.g. Web3) not included given uncertainties around the technology and business models.

Source: Bain analysis
**Environment:** If optimised, the carbon output from digital channels can be much lower than traditional.

**Carbon footprint scenarios (indexed emission levels)**

- **E-commerce**
  - Per item scenario comparison
  - Traditional commerce: Optimised e-commerce = -30-40%

- **Transport**
  - Per trip scenario comparison
  - Traditional transport: Optimised online transport = -20-30%

**Notes:** Differences between scenarios are largely driven by Scope 3 emissions. Purchasing behaviour has significant impact on carbon emissions—if consumers consolidate multiple purchases in the same trip or order, they can reduce emissions on a per item basis. Transport comparison does not consider end-to-end carbon emissions linked to vehicle manufacturing and ownership. Online transport can help reduce the need for vehicle manufacturing and ownership.

**Source:** Bain analysis

**To reduce e-commerce’s footprint by 30-40%,** logistics providers can deploy electric vehicles (EV) to handle last-mile deliveries, consolidate operations into satellite distribution centres, and further reduce and recycle packaging materials.

**The online transport sector can lower its footprint by 20-30%** by helping drivers reduce wait times, optimising driving routes using mapping technologies, and converting more of its fleets to EV, HEV, and plug-in electric vehicles (PEV) through partnerships with EV manufacturers around the region.
Environment: Achieving optimised carbon goals will first require a concerted effort to address some key questions

Companies

Carbon-friendly practices

- How can we highlight sustainable products and services to raise awareness and provide options to consumers who want to reduce or offset their carbon emissions?
- How can we use environmentally friendly practices, like waiving flexible-time delivery fees, recycling packaging materials, and opt-ins for cutlery, to meet the path to profitability goals?

Consumers

Sustainable sales

- How can we source and sell sustainable products that use less packaging materials, last longer, and can be reused and recycled by consumers in a circular economy?
- How can we grow the business and leverage consumers’ emerging willingness to pay for sustainable products and services, while standing out in a crowded marketplace?

Merchants

Purchasing behaviour

- How can we adopt environmentally friendly purchasing behaviour, like choosing sustainable products, services, and merchants, consolidating purchases into larger orders, or accepting longer delivery times to help optimise operations?
- How can we switch from owning vehicles with internal combustion engines (ICE) to using shared electric vehicles (EV) services and reducing our collective carbon footprint?
**Social:** SEA’s digital economy has delivered business opportunities, jobs, and economic contribution

<table>
<thead>
<tr>
<th>Business opportunities</th>
<th>Job creation</th>
<th>Economic contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>20-25M</strong> unique merchants transacting on e-commerce platforms to date</td>
<td><strong>~160K</strong> direct¹ jobs created to date across the digital economy</td>
<td><strong>~5-10%</strong> penetration of SEA’s GDP³ in 2022 (i.e. digital economy’s GMV/GDP)</td>
</tr>
<tr>
<td><strong>6-7M</strong> small- to medium-sized restaurants on food delivery platforms to date</td>
<td><strong>~30M</strong> indirect² jobs created to date across the digital economy</td>
<td><strong>~2X</strong> expected growth of SEA’s digital economy GMV (vs GDP) between 2022 to 2025</td>
</tr>
</tbody>
</table>

Notes: (1) Core sectors include e-commerce, transport, food delivery, online travel, online media, and financial services. (2) Indirect jobs refer to jobs created as a result of the digital platform business, including transport driver-partners, food delivery riders, content creators and personnel of third party logistics companies that support e-commerce, etc. (3) With 5% being the lowest and 10% being the highest GMV/GDP penetration among SEA countries in 2022. Source: Bain analysis
Social: Companies and institutions must address some key concerns before the digital economy can become truly sustainable

Worker-partner concerns

- **Welfare**
  - How do we better support gig economy workers in their medical, accident, income protection, and retirement needs?
  - How do we help them build skills relevant to the ‘digital decade’ and beyond?
  - How do we balance worker-partners’ rights with service affordability and financial sustainability of the platform?

- **Well-being**
  - How do we guarantee a high standard of workplace safety in e-commerce warehouses and last-mile delivery centres?
  - How do we ensure safety standards for transport drivers and delivery partners that prioritise well-being over jobs maximisation?

Consumer concerns

- **Digital inclusion**
  - How do we drive higher adoption of digital economy services in suburban cities, especially in underserved areas?
  - How do we make digital economy services more affordable to ‘on a budget’ consumers?
  - How can institutions play a more active role in closing the digital economy divide?

- **Financial inclusion**
  - How do we increase financial literacy, particularly among suburban and lower income consumers?
  - How do we offer financial services to the unbanked and underbanked in an economically sustainable way?
  - What can institutions do to promote adoption of digital financial services while regulating against abuse and fraud?
Despite growing interest in sustainability, adoption remains nascent.

There is much to do, with the onus on consumers, companies, investors, and governments to jointly strive towards a more sustainable digital economy.
**Consumers:** Interest in sustainability is rising across the region

**Sustainability-related search trends, by country**

- **Indonesia:** 1.2X
- **Malaysia:** 2.6X
- **Philippines:** 2.2X
- **Singapore:** 2.8X
- **Thailand:** 2.1X
- **Vietnam:** 1.4X

**Indexed searches**

Note: Terms include 'sustainability' and 'sustainable', and their variants.
Source: Google Trends, 2022 vs 2020 average search volumes
Consumers: A ‘say-do’ gap exists between declared intentions and actual purchasing behaviour

~40% of SEA consumers say they care about sustainability…

… but only ~3-15% are acting on their intentions by purchasing sustainable foods

Question: What are the most important things you consider while purchasing the following products?
Base: Indonesia, Philippines, Vietnam, Thailand, Malaysia, and Singapore, n=9,749
Sources: ‘Say’ - Bain APAC ESG Survey Jan 2022, ‘Do’ - Euromonitor; data is based on the ‘packaged foods’ category

<table>
<thead>
<tr>
<th>Country</th>
<th>Say (%)</th>
<th>Do (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>40</td>
<td>36</td>
</tr>
<tr>
<td>Philippines</td>
<td>41</td>
<td>36</td>
</tr>
<tr>
<td>Thailand</td>
<td>41</td>
<td>32</td>
</tr>
<tr>
<td>Vietnam</td>
<td>41</td>
<td>38</td>
</tr>
<tr>
<td>Malaysia</td>
<td>31</td>
<td>26</td>
</tr>
<tr>
<td>Singapore</td>
<td>23</td>
<td>9</td>
</tr>
</tbody>
</table>

~40% of SEA consumers say they care about sustainability, but only ~3-15% are acting on their intentions by purchasing sustainable foods.
Consumers: Awareness, and trustworthy sustainability claims are more pivotal to closing the ‘say-do’ gap than price

Top barriers for sustainability adoption in SEA (%)

- Consumers generally have insufficient information about the available sustainable options. When they do, they don’t necessarily trust the sustainability claims companies make.
- As environmental and social concerns rise across the region, brands need to provide transparency and trustworthy information so that consumers can make purchases that best align with their values.
- New brands stand to gain market share by launching more sustainable products, while existing players, like e-commerce and transport platforms, can highlight their product/service’s sustainability features via product descriptions, in their delivery options, or in their merchant ratings/reviews with the goal of encouraging the adoption of sustainability practices.
Investors: Still in the early stages of wrapping ESG considerations into VC investment processes

Q. How do you rate the importance of ESG dimensions in your investment process?

- Somewhat important
- Very important

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Somewhat Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental</td>
<td>33%</td>
<td>23%</td>
</tr>
<tr>
<td>Social</td>
<td>30%</td>
<td>20%</td>
</tr>
<tr>
<td>Governance</td>
<td>33%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Source: Bain, SEA Venture Capital Investors Survey, Q3 2022

Some SEA-focused funds recognise the importance of incorporating ESG elements into the deal evaluation process:

“We’re actively building our capacity and knowledge depth in the sustainability space...” – VC

For many funds, it is an ongoing learning process as most have yet to formulate a structured approach to doing so:

“It [ESG] is inherently a part of our diligence process, but more can be done to formalise this...” – VC

Most funds today do not actively assess ESG within the investment due diligence:

“While ESG is increasingly important, it is still an early concept for most companies in SEA today and they should not be over-penalised at this stage...” – VC
Companies: Digital platforms have started to take concrete steps towards sustainability, though efforts are still nascent

Environment example

A regional transport player partners with automakers to deploy electric vehicles (EV) in Indonesia

- Through this partnership, over 8,000 electric vehicles were rolled out.
- The same company also worked with leading partners to develop and deploy battery-swapping stations in order to power the fleet.

Social example

A leading e-commerce platform in Vietnam empowers suburban farmers via digital

- The e-commerce platform created an online app that enabled suburban farmers in 23 provinces to sell their produce directly to end-consumers and identify ways to prevent food waste, ensuring sustainable income for the farmers.

Governance example

A regional e-commerce platform commits to responsible governance practices

- The company is a signatory of the World Economic Forum’s ‘Stakeholder Capitalism Principles’, which shape sustainability goals globally, and holds itself accountable against international ESG standards.
- It also established the Sustainability Advisory Council, which includes experts from the World Bank, United Nations, and ASEAN Centre for Energy to ensure that its sustainability commitments meet global standards.
Sustainability is the responsibility of not one, but all stakeholders

**Investors**
- Increase focus on ESG during the due diligence process, since ESG resembles 'licenses to operate' and could cripple businesses that fall short
- Advocate sustainability practices as value creation levers rather than compliance requirements
- Demonstrate commitment to uphold ESG principles by investing in digital companies that exemplify strong sustainability standards

**Consumers**
- Close the 'say-do' gap by spending more on brands that are ESG-conscious, and cutting back on brands that aren't
- Support digital platforms that adopt socially responsible practices for their worker-partners
- Adopt more sustainable ordering habits, such as larger basket sizes, lower order frequencies, or accepting extended delivery times

**Companies**
- Help consumers bridge the 'say-do' gap by being transparent about products' and merchants' sustainability, facilitating greener purchases
- Reduce and recycle packaging materials, offer viable alternatives to single-use plastics, and enforce opt-ins for plastic packaging
- Optimise last-mile logistics, charge carbon taxes for off-route services, and offer discounts on EV rides and carbon credits to offset emissions
- Offer social welfare solutions for both employees as well as worker-partners

**Governments**
- Proactively review international ESG best practices in view of developing consistent, SEA-nuanced policies
- Conduct regular dialogues with the industry when introducing new regulations to encourage growth while balancing ESG needs
- Implement incentives and regulations that encourage companies to move towards less carbon-intensive solutions
Charting the course for the digital decade
We remain optimistic about the sustainable development of SEA’s digital economy.

Rooted in strong social and economic fundamentals, SEA’s ‘digital decade’ has just started to deliver on its promises.
The SEA digital economy could reach up to $1T GMV by 2030, provided it can pursue this potential in a sustainable way.

### Digital economy GMV ($)

- **2022** $200B
- **2025** $330B
- **2030** $600B - $1T including nascent sectors

#### Achieving profitable growth (2023-2025)

The path to profitability has risen to prominence as an immediate priority for digital economy companies around the world, and in SEA.

In the next two to three years, they will need to maintain growth against macroeconomic headwinds, in a balancing act between price increases, cost optimisation measures, and raising cost of capital.

#### Unlocking full potential, sustainably (2025-2030)

Digital inclusion of suburban and lower income users in urban areas will be required to unlock the full economic potential and social impact of SEA’s digital economy by the end of the ‘digital decade’.

Sustainable growth hinges on addressing environmental, social, and governance responsibilities—which, following trends seen in developed markets like the US and China, will become ‘licences to operate’.

Over time, sustainability will become more important than top line growth, opening a wide range of GMV scenarios for 2030—from $600B to $1T.

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Notes: 2025 projection excludes DFS and nascent sectors; 2030 projection includes ballpark estimates for nascent sectors.
Source: Bain analysis
Sustained growth expected across the board, with Vietnam and the Philippines as frontrunners going forward

**Digital economy GMV ($B)**

### Indonesia
- E-commerce: $77B in 2022, $130B in 2025, $220-360B in 2030
- Travel: $19%B in 2022, $130B in 2025, $220-360B in 2030
- Food & transport: $20B in 2022, $35B in 2025, $100-150B in 2030
- Online media: $10B in 2022, $30B in 2025, $100-150B in 2030

### Malaysia
- E-commerce: $21B in 2022, $34B in 2025, $40-70B in 2030
- Travel: $17%B in 2022, $34B in 2025, $40-70B in 2030
- Food & transport: $20B in 2022, $35B in 2025, $100-150B in 2030
- Online media: $20B in 2022, $35B in 2025, $100-150B in 2030

### Philippines
- E-commerce: $20B in 2022, $35B in 2025, $100-150B in 2030
- Travel: $20%B in 2022, $35B in 2025, $100-150B in 2030
- Food & transport: $20B in 2022, $35B in 2025, $100-150B in 2030
- Online media: $20B in 2022, $35B in 2025, $100-150B in 2030

### Singapore
- E-commerce: $18B in 2022, $28B in 2025, $40-65B in 2030
- Travel: $17%B in 2022, $28B in 2025, $40-65B in 2030
- Food & transport: $18B in 2022, $28B in 2025, $40-65B in 2030
- Online media: $18B in 2022, $28B in 2025, $40-65B in 2030

### Thailand
- E-commerce: $35B in 2022, $53B in 2025, $100-165B in 2030
- Travel: $15%B in 2022, $53B in 2025, $100-165B in 2030
- Food & transport: $35B in 2022, $53B in 2025, $100-165B in 2030
- Online media: $35B in 2022, $53B in 2025, $100-165B in 2030

### Vietnam
- E-commerce: $23B in 2022, $49B in 2025, $120-200B in 2030
- Travel: $31%B in 2022, $49B in 2025, $120-200B in 2030
- Food & transport: $23B in 2022, $49B in 2025, $120-200B in 2030
- Online media: $23B in 2022, $49B in 2025, $120-200B in 2030

Notes: Excludes DFS and nascent sectors in 2025; includes ballpark estimates for nascent sectors in 2030.
Source: Bain analysis
The digital economy is expected to grow ~2X as fast as GDP through 2030

Digital economy GMV growth vs GDP growth (%)

<table>
<thead>
<tr>
<th>Country</th>
<th>2022-2025 Expected</th>
<th>2025-2030 Expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>19%</td>
<td>11%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>17%</td>
<td>7%</td>
</tr>
<tr>
<td>Philippines</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Singapore</td>
<td>17%</td>
<td>7%</td>
</tr>
<tr>
<td>Thailand</td>
<td>15%</td>
<td>13%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>31%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Note: Excludes DFS.
Sources: Bain analysis; GDP data from IHS, Central Bank, World Bank
A new set of enablers can help SEA’s digital decade reach new heights.

Unprecedented digital economy growth
- Payments
- Internet access
- Logistics
- Funding
- Consumer trust
- Talent

Towards a sustainable digital economy
- Path to profitability
- Digital inclusion
- Environment, social, governance
- Data infrastructure and regulation
Payments and funding push ahead, but talent challenge is shifting focus from headcount to depth of capabilities

Payments
Throughout the pandemic, the adoption and usage of digital payments have accelerated more than ever before, with payments GTV exceeding $800B in 2022 after surging over 35% since 2019.
The rise of e-commerce catapulted digital payments adoption—even in areas where offline merchant payments adoption is not yet ubiquitous.

Internet access
2022 will see 20M new internet users joining the online world, bringing the total number of users added since the pandemic began to 100M.
Over 95% of SEA’s internet users have access to LTE/WiMax connectivity, and the region enjoys some of the cheapest data in the world.

Logistics
Investments in logistics infrastructure cooled off to $0.2B in 2022, down from its peak of $2.5B in 2021.
Nonetheless, logistics providers have built up capacity to deliver over 15B orders per year, given the increasing frequency of shopping festivals across the year.

Funding
VC investments in SEA’s digital economy reached an all-time high of $27B in 2021, and momentum extended into H1 2022 with $13B.
Continued investments in early-stage startups and nascent sectors are needed if the ‘digital decade’ is to reach its $1T GMV ambition by 2030.

Consumer trust
Trust in e-commerce players is high, with less than 5% of users dissatisfied with the authenticity of products on marketplaces.
Meanwhile, trust in food delivery is table stakes, as the second least important factor when consumers choose which merchant to order from.

Talent
SEA’s digital economy directly employs over 160K people. As companies streamline their operations on the path to profitability, they are now optimising staffing after years of accelerated growth. Going forward, the focus will shift from headcount growth to depth of capabilities, especially in specialised disciplines like engineering, data science, cloud technology, and digital marketing.

Source: Bain analysis
Digital inclusion and ESG present both opportunities and challenges, and requires balancing with path to profitability

Path to profitability
Investors are asking companies to achieve financial independence and generate cash by focusing on profitable unit economics (i.e. cost per order). For example, they could optimise operations, or scale core services.

The risk in doing so is that while online companies are pulling back incentives and promotions, consumers may find their value proposition less attractive, especially as price and promotions remain the top reasons that a third of users would switch platforms or revert to offline alternatives.

Digital inclusion
A ‘digital divide’ between urban/suburban lines and income levels persists. Fewer consumers in suburban areas (20-30% excl. e-commerce) have adopted digital economy services compared to those in urban areas (>90%).

Even urban ‘on a budget’ users deem digital services too expensive, urging companies to make them more affordable, such as by offering basic plans and lowering price points.

Institutional interventions may be needed to invest in digital literacy, and help onboard consumers and areas that companies cannot serve in an economically feasible way.

Environment, social, governance
In SEA, search interest in sustainability has more than doubled over the past three years. Consumers have yet to turn that interest into everyday choices, however, with a prevailing ~30% ‘say-do’ gap.

Companies and investors must increasingly consider ESG practices as value creation levers rather than compliance items.

Data infrastructure and regulation
To enable equitable access, providers need to continually improve security and speed of connectivity in underserved areas.

Governments should ensure balanced policies and regulatory frameworks on privacy, data sharing, and taxes to encourage interoperability and reduce fragmentation of the internet, thereby enabling businesses to scale digitally.

Source: Bain analysis
Ports of call: Country data
Indonesia
Indonesia: Digital consumers in numbers

Usage intent 1
Intent to use the service in the next 12 months

- Less
- Same
- More

E-commerce: 18% Less, 50% Same, 32% More
Groceries: 16% Less, 65% Same, 19% More
Transport: 25% Less, 51% Same, 24% More
Food delivery: 18% Less, 69% Same, 13% More

% adoption across urban digital users

- E-commerce: 89%
- Groceries: 59%
- Transport: 80%
- Food delivery: 79%
- Travel: 52%
- Video-on-demand: 63%
- Music-on-demand: 57%
- Gaming: 48%

Media usage frequency 2

% using at least once a week

- SEA average
- Indonesia

- Video-on-demand: 33%, 37%
- Music-on-demand: 28%, 29%
- Gaming: 29%, 34%

Media usage time 3

% using >1 hour per day

- SEA average
- Indonesia

- Video-on-demand: 23%, 16%
- Music-on-demand: 12%, 13%
- Gaming: 13%, 18%

Declared willingness to pay more for a sustainable product or service 4

- 48%

Questions: 1 - X10. How would you describe your intent to use [e-commerce, online groceries, transport, food delivery] in the next 12 months?; 2, 3 - ‘Usage’ derived from adoption of Xusage frequency/time (among paying users in the past three months); 4 - On average, how much more would you be willing to pay for products/services that are more sustainable (e.g. reducing fuelcarbon emissions, etc)?

Base: Users by verticals in Indonesia, n=948.
Source: Google-commissioned Ipsos e-Conomy SEA Research 2022
At ~22% YoY GMV growth, Indonesia’s digital economy hits ~$77B in 2022 and is on course to reach ~$130B by 2025, driven primarily by e-commerce.
DFS will maintain momentum towards 2025, with digital payments CAGR growing in the teens, and investment platforms accelerating by ~75% CAGR.

Digital financial services ($B)

Payments (GTV)

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2021</th>
<th>2022</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAGR</td>
<td>+7%</td>
<td>+13%</td>
<td>+17%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2019</th>
<th>2021</th>
<th>2022</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>206</td>
<td>234</td>
<td>266</td>
<td>421</td>
</tr>
</tbody>
</table>

Remittance (GTV)

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2021</th>
<th>2022</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAGR</td>
<td>+61%</td>
<td>+34%</td>
<td>+26%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2019</th>
<th>2021</th>
<th>2022</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>1.2</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Investment (AUM)

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2021</th>
<th>2022</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAGR</td>
<td>+99%</td>
<td>+31%</td>
<td>+74%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2019</th>
<th>2021</th>
<th>2022</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>1</td>
<td>2</td>
<td>10</td>
</tr>
</tbody>
</table>

Lending loan book

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2021</th>
<th>2022</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAGR</td>
<td>+57%</td>
<td>+66%</td>
<td>+51%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2019</th>
<th>2021</th>
<th>2022</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>5</td>
<td>16</td>
</tr>
</tbody>
</table>

Insurance (APE / GWP)

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2021</th>
<th>2022</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAGR</td>
<td>+78%</td>
<td>+64%</td>
<td>+51%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2019</th>
<th>2021</th>
<th>2022</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1</td>
<td>0.2</td>
<td>0.4</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: BNPL loan book calculated using ~3 month average loan tenure for BNPL loans. GTV = Gross Transaction Values; AUM = Assets Under Management; APE = Annual Premium Equivalent; GWP = Gross Written Premiums.

Source: Bain analysis
Deal count constant but deal value dips by ~$2B YoY as investors prioritise profitability and contend with valuation concerns around late-stage companies

<table>
<thead>
<tr>
<th>Private funding value ($B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
</tr>
<tr>
<td>Deal count</td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td>$3</td>
</tr>
</tbody>
</table>

Source: Bain analysis
DFS claims lion’s share of investor funding, raising ~$1.5B in H1 2022 alone, with activity primarily focused on B2B payments and lending services.

Private funding value ($B)

- DFS
- E-commerce
- Transport
- Digital media
- Travel
- Others

<table>
<thead>
<tr>
<th>Year</th>
<th>Deal count</th>
<th>E-commerce</th>
<th>Transport</th>
<th>Digital media</th>
<th>Travel</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>355</td>
<td>59%</td>
<td>9%</td>
<td>14%</td>
<td>14%</td>
<td>11%</td>
</tr>
<tr>
<td>2020</td>
<td>437</td>
<td>36%</td>
<td>31%</td>
<td>14%</td>
<td>14%</td>
<td>11%</td>
</tr>
<tr>
<td>2021</td>
<td>649</td>
<td>39%</td>
<td>14%</td>
<td>13%</td>
<td>14%</td>
<td>2%</td>
</tr>
<tr>
<td>H1 2021</td>
<td>300</td>
<td>39%</td>
<td>14%</td>
<td>13%</td>
<td>14%</td>
<td>2%</td>
</tr>
<tr>
<td>H2 2021</td>
<td>349</td>
<td>67%</td>
<td>9%</td>
<td>13%</td>
<td>15%</td>
<td>5%</td>
</tr>
<tr>
<td>H1 2022</td>
<td>302</td>
<td>26%</td>
<td>44%</td>
<td>23%</td>
<td>4%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Note: ‘Others’ include foodtech, B2B SaaS, Web3, cleantech, agritech, etc.
Source: Bain analysis
Malaysia
Malaysia: Digital consumers in numbers

Usage intent

- **E-commerce**
  - Less: 23%
  - Same: 53%
  - More: 24%
- **Groceries**
  - Less: 19%
  - Same: 57%
  - More: 24%
- **Transport**
  - Less: 21%
  - Same: 66%
  - More: 13%
- **Food delivery**
  - Less: 18%
  - Same: 69%
  - More: 13%

% adoption across urban digital users

- **E-commerce**: 95%
- **Groceries**: 63%
- **Transport**: 73%
- **Food delivery**: 86%
- **Travel**: 70%
- **Video-on-demand**: 59%
- **Music-on-demand**: 46%
- **Gaming**: 47%

Media usage frequency

- **SEA average**
  - Video-on-demand: 33%
  - Music-on-demand: 28%
  - Gaming: 29%
- **Malaysia**
  - Video-on-demand: 31%
  - Music-on-demand: 31%
  - Gaming: 31%

Media usage time

- **SEA average**
  - Video-on-demand: 23%
  - Music-on-demand: 28%
  - Gaming: 19%
- **Malaysia**
  - Video-on-demand: 12%
  - Music-on-demand: 21%
  - Gaming: 18%

Declared willingness to pay more for a sustainable product or service: 38%
The digital economy continues pushing towards ~$35B in 2025, largely fuelled by e-commerce’s S-shaped growth and online travel’s U-shaped recovery.

Overall digital economy

2019 2021 2022 2025 2030

GMV ($B)

E-commerce

2019 2021 2022 2025

CAGR 98% 6% 10%

Online travel

2019 2021 2022 2025

CAGR -57% 100% 56%

Transport and food

2019 2021 2022 2025

CAGR 30% 22% 18%

Online media

2019 2021 2022 2025

CAGR 21% 9% 13%

Source: Bain analysis
DFS to accelerate towards 2025, driven by digital investments hitting ~$25B AUM at 40% CAGR and lending reaching ~$16B at ~39% CAGR

Digital financial services ($B)

**Payments (GTV)**
- 2019: 83
- 2021: 123
- 2022: 146
- 2025: 199

**Remittance (GTV)**
- 2019: 1
- 2021: 1.7
- 2022: 2
- 2025: 3

**Insurance (APE / GWP)**
- 2019: 0.3
- 2021: 0.5
- 2022: 0.7
- 2025: 2

**Investment (AUM)**
- 2019: 1
- 2021: 5
- 2022: 7
- 2025: 25

**Lending loan book**
- 2019: 5
- 2021: 6
- 2022: 5.8
- 2025: 16

Note: BNPL loan book calculated using ~3 month average loan tenure for BNPL loans. GTV = Gross Transaction Values; AUM = Assets Under Management; APE = Annual Premium Equivalent; GWP = Gross Written Premiums.

Source: Bain analysis
Despite a ~30% drop in deal activity, deal value grew marginally YoY due to several high-profile investments in new categories.

Overview
Growth
Investments

Private funding value ($B)

<table>
<thead>
<tr>
<th>Year</th>
<th>Deal count</th>
<th>Private funding value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>147</td>
<td>0.4</td>
</tr>
<tr>
<td>2020</td>
<td>202</td>
<td>0.5</td>
</tr>
<tr>
<td>2021</td>
<td>236</td>
<td>0.9</td>
</tr>
<tr>
<td>H1 2021</td>
<td>101</td>
<td>0.4</td>
</tr>
<tr>
<td>H2 2021</td>
<td>135</td>
<td>0.6</td>
</tr>
<tr>
<td>H1 2022</td>
<td>77</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Source: Bain analysis
E-commerce attracts ~$340M in H1 2022, of which the bulk was allocated to Malaysia’s first unicorn, outpacing DFS to become the investor favourite.

Private funding value ($B)

- E-commerce
- DFS
- Transport
- Digital media
- Travel
- Others

Note: ‘Others’ include foodtech, B2B SaaS, Web3, cleantech, agritech, etc.
Source: Bain analysis
Philippines: Digital consumers in numbers

Usage intent

<table>
<thead>
<tr>
<th>Service</th>
<th>Less</th>
<th>Same</th>
<th>More</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>29%</td>
<td>51%</td>
<td>20%</td>
</tr>
<tr>
<td>Groceries</td>
<td>30%</td>
<td>56%</td>
<td>14%</td>
</tr>
<tr>
<td>Transport</td>
<td>32%</td>
<td>39%</td>
<td>29%</td>
</tr>
<tr>
<td>Food delivery</td>
<td>29%</td>
<td>60%</td>
<td>11%</td>
</tr>
</tbody>
</table>

% adoption across urban digital users

<table>
<thead>
<tr>
<th>Service</th>
<th>88%</th>
<th>57%</th>
<th>69%</th>
<th>48%</th>
<th>58%</th>
<th>48%</th>
<th>50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groceries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food delivery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Video-on-demand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music-on-demand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gaming</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Media usage frequency

<table>
<thead>
<tr>
<th>Media type</th>
<th>SEA average</th>
<th>Philippines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video-on-demand</td>
<td>33%</td>
<td>39%</td>
</tr>
<tr>
<td>Music-on-demand</td>
<td>28%</td>
<td>33%</td>
</tr>
<tr>
<td>Gaming</td>
<td>29%</td>
<td>37%</td>
</tr>
</tbody>
</table>

Media usage time

<table>
<thead>
<tr>
<th>Media type</th>
<th>SEA average</th>
<th>Philippines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video-on-demand</td>
<td>23%</td>
<td>29%</td>
</tr>
<tr>
<td>Music-on-demand</td>
<td>12%</td>
<td>19%</td>
</tr>
<tr>
<td>Gaming</td>
<td>18%</td>
<td>28%</td>
</tr>
</tbody>
</table>

Declared willingness to pay more for a sustainable product or service 42%
The digital decade continues its upward trend at 20% YoY to reach $20B this year, with e-commerce propelling it to $35B by 2025

**GMV ($B)**

**Overall digital economy**

- 2019: 8
- 2021: 16
- 2022: 20
- 2025: 35
- 2030: 100-150

**E-commerce**

- CAGR: 110% (2019), 17% (2022), 17% (2025)

**Transport and food**

- Transport: CAGR 30% (2019), 21% (2022), 29% (2025)
- Food delivery: CAGR 1.5% (2019), 1.9% (2022), 4% (2025)

**Online travel**

- CAGR: -58% (2019), 180% (2022), 44% (2025)

**Online media**

- CAGR: 29% (2019), 17% (2022), 18% (2025)

Source: Bain analysis
Sustained DFS growth with lending and remittance hitting ~$8B each (as part of a U-shaped recovery for the latter); digital investments still nascent

Digital financial services ($B)

Payments (GTV)

<table>
<thead>
<tr>
<th>Year</th>
<th>GTV (B)</th>
<th>CAGR %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>66</td>
<td>+2%</td>
</tr>
<tr>
<td>2021</td>
<td>69</td>
<td>+9%</td>
</tr>
<tr>
<td>2022</td>
<td>75</td>
<td>+9%</td>
</tr>
<tr>
<td>2025</td>
<td>123</td>
<td>+18%</td>
</tr>
</tbody>
</table>

Investment (AUM)

<table>
<thead>
<tr>
<th>Year</th>
<th>AUM (B)</th>
<th>CAGR %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>0.1</td>
<td>+189%</td>
</tr>
<tr>
<td>2021</td>
<td>0.2</td>
<td>+63%</td>
</tr>
<tr>
<td>2022</td>
<td>0.3</td>
<td>+50%</td>
</tr>
<tr>
<td>2025</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Lending loan book

<table>
<thead>
<tr>
<th>Year</th>
<th>Loan book (B)</th>
<th>CAGR %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>0.3</td>
<td>+189%</td>
</tr>
<tr>
<td>2021</td>
<td>0.8</td>
<td>+63%</td>
</tr>
<tr>
<td>2022</td>
<td>8</td>
<td>+50%</td>
</tr>
<tr>
<td>2025</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

Remittance (GTV)

<table>
<thead>
<tr>
<th>Year</th>
<th>GTV (B)</th>
<th>CAGR %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>7</td>
<td>-30%</td>
</tr>
<tr>
<td>2021</td>
<td>3</td>
<td>+32%</td>
</tr>
<tr>
<td>2022</td>
<td>4</td>
<td>+25%</td>
</tr>
<tr>
<td>2025</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

Insurance (APE / GWP)

<table>
<thead>
<tr>
<th>Year</th>
<th>APE/GWP (B)</th>
<th>CAGR %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>0.03</td>
<td>+53%</td>
</tr>
<tr>
<td>2021</td>
<td>0.08</td>
<td>+58%</td>
</tr>
<tr>
<td>2022</td>
<td>0.12</td>
<td>+51%</td>
</tr>
<tr>
<td>2025</td>
<td>0.4</td>
<td></td>
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</tbody>
</table>

Note: BNPL loan book calculated using ~3 month average loan tenure for BNPL loans. GTV = Gross Transaction Values; AUM = Assets Under Management; APE = Annual Premium Equivalent; GWP = Gross Written Premiums.

Source: Bain analysis
After a two-year digital economy boom, both deal value and deal activity have risen thanks to sizable investments in incumbent players.

Source: Bain analysis
DFS captures 56% of total investor funding and raises ~$450M in H1 2022 alone; Web3 is also pulling its weight with a ~12% share of the pie.

Private funding value ($B)

- DFS
- E-commerce
- Transport
- Digital media
- Travel
- Others

Deal count:
- 2019: 72
- 2020: 73
- 2021: 125
- H1 2021: 59
- H2 2021: 66
- H1 2022: 68

Note: 'Others' include foodtech, B2B SaaS, Web3, cleantech, agritech, etc.
Source: Bain analysis
# Singapore: Digital consumers in numbers

## Usage intent

<table>
<thead>
<tr>
<th>Service</th>
<th>Less</th>
<th>Same</th>
<th>More</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>17%</td>
<td>63%</td>
<td>20%</td>
</tr>
<tr>
<td>Groceries</td>
<td>15%</td>
<td>70%</td>
<td>15%</td>
</tr>
<tr>
<td>Transport</td>
<td>30%</td>
<td>59%</td>
<td>11%</td>
</tr>
<tr>
<td>Food delivery</td>
<td>29%</td>
<td>60%</td>
<td>11%</td>
</tr>
</tbody>
</table>

## % adoption across urban digital users

<table>
<thead>
<tr>
<th>Service</th>
<th>% Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>97%</td>
</tr>
<tr>
<td>Groceries</td>
<td>75%</td>
</tr>
<tr>
<td>Transport</td>
<td>82%</td>
</tr>
<tr>
<td>Food delivery</td>
<td>92%</td>
</tr>
<tr>
<td>Travel</td>
<td>80%</td>
</tr>
<tr>
<td>Video-on-demand</td>
<td>63%</td>
</tr>
<tr>
<td>Music-on-demand</td>
<td>51%</td>
</tr>
<tr>
<td>Gaming</td>
<td>46%</td>
</tr>
</tbody>
</table>

## Media usage frequency

<table>
<thead>
<tr>
<th>Service</th>
<th>SEA average</th>
<th>Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video-on-demand</td>
<td>33%</td>
<td>28%</td>
</tr>
<tr>
<td>Music-on-demand</td>
<td>45%</td>
<td>29%</td>
</tr>
<tr>
<td>Gaming</td>
<td>36%</td>
<td>36%</td>
</tr>
</tbody>
</table>

## Media usage time

<table>
<thead>
<tr>
<th>Service</th>
<th>SEA average</th>
<th>Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video-on-demand</td>
<td>23%</td>
<td>12%</td>
</tr>
<tr>
<td>Music-on-demand</td>
<td>36%</td>
<td>17%</td>
</tr>
<tr>
<td>Gaming</td>
<td>18%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Questions: 1 - X10. How would you describe your intent to use [e-commerce, online groceries, transport, food delivery] in the next 12 months? 2, 3 - 'Usage' derived from adoption of X usage frequency/time (among paying users in the past three months); 4 - On average, how much more would you be willing to pay for products/services that are more sustainable (e.g. reducing fuel/carbon emissions, etc)?

Base: Users by verticals in Singapore, n=756
Source: Google-commissioned Ipsos e-Conomy SEA Research 2022

Declared willingness to **pay more for a sustainable** product or service **32%**
The digital economy grew 22% YoY with expectations to hit ~$30B by 2025, mainly powered by ~$11B e-commerce and ~$9B travel recovery.

GMV ($B)

Overall digital economy

E-commerce

Transport and food

Online travel

Online media

CAGR = Compound Annual Growth Rate

Source: Bain analysis
With digital payments nearly ubiquitous, DFS growth to 2025 will be driven by digitalisation of investments and lending via digibanks and fintechs.

Digital financial services ($B)

### Payments (GTV)
- **CAGR +9%**
  - 83 (2019)
  - 98 (2021)
  - 107 (2022)
  - 127 (2025)

### Remittance (GTV)
- **CAGR +101%**
  - 2 (2019)
  - 7 (2021)
  - 7.3 (2022)
  - 9 (2025)

### Investment (AUM)
- **CAGR +34%**
  - 12 (2019)
  - 21.6 (2021)
  - 22.2 (2022)
  - 33 (2025)

### Lending loan book
- **CAGR +21%**
  - 15 (2019)
  - 22 (2021)
  - 25 (2022)
  - 39 (2025)

### Insurance (APE / GWP)
- **CAGR +48%**
  - 0.4 (2019)
  - 1.1 (2021)
  - 1.3 (2022)
  - 2 (2025)

Note: BNPL loan book calculated using ~3 month average loan tenure for BNPL loans. GTV = Gross Transaction Values; AUM = Assets Under Management; APE = Annual Premium Equivalent; GWP = Gross Written Premiums.
Source: Bain analysis
Deal value grew from ~$4B in H1 2021 to ~$7B a year later, throning Singapore as the region’s most favoured investment country.

### Private funding value ($B)

<table>
<thead>
<tr>
<th>Year</th>
<th>Deal count</th>
<th>Private Funding Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>675</td>
<td>7</td>
</tr>
<tr>
<td>2020</td>
<td>852</td>
<td>5</td>
</tr>
<tr>
<td>2021</td>
<td>1,213</td>
<td>12</td>
</tr>
<tr>
<td>H1 2021</td>
<td>569</td>
<td>4</td>
</tr>
<tr>
<td>H2 2021</td>
<td>644</td>
<td>8</td>
</tr>
<tr>
<td>H1 2022</td>
<td>572</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: Bain analysis
The allure of DFS endures, raising ~$1.9B in H1 2022; healthtech is rapidly gaining ground with ~15% of investment pool at ~$1.1B
Thailand
# Thailand: Digital consumers in numbers

**Usage intent**

<table>
<thead>
<tr>
<th>Service</th>
<th>Less</th>
<th>Same</th>
<th>More</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>22%</td>
<td>55%</td>
<td>23%</td>
</tr>
<tr>
<td>Groceries</td>
<td>25%</td>
<td>57%</td>
<td>18%</td>
</tr>
<tr>
<td>Transport</td>
<td>36%</td>
<td>51%</td>
<td>13%</td>
</tr>
<tr>
<td>Food delivery</td>
<td>32%</td>
<td>52%</td>
<td>16%</td>
</tr>
</tbody>
</table>

**Media usage frequency**

<table>
<thead>
<tr>
<th>Service</th>
<th>SEA average</th>
<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video-on-demand</td>
<td>33%</td>
<td>28%</td>
</tr>
<tr>
<td>Music-on-demand</td>
<td>27%</td>
<td>32%</td>
</tr>
<tr>
<td>Gaming</td>
<td>29%</td>
<td>29%</td>
</tr>
</tbody>
</table>

**Media usage time**

<table>
<thead>
<tr>
<th>Service</th>
<th>SEA average</th>
<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video-on-demand</td>
<td>23%</td>
<td>12%</td>
</tr>
<tr>
<td>Music-on-demand</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Gaming</td>
<td>18%</td>
<td>22%</td>
</tr>
</tbody>
</table>

**% adoption across urban digital users**

<table>
<thead>
<tr>
<th>Service</th>
<th>Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>95%</td>
</tr>
<tr>
<td>Groceries</td>
<td>63%</td>
</tr>
<tr>
<td>Transport</td>
<td>53%</td>
</tr>
<tr>
<td>Food delivery</td>
<td>78%</td>
</tr>
<tr>
<td>Travel</td>
<td>55%</td>
</tr>
<tr>
<td>Video-on-demand</td>
<td>62%</td>
</tr>
<tr>
<td>Music-on-demand</td>
<td>54%</td>
</tr>
<tr>
<td>Gaming</td>
<td>56%</td>
</tr>
</tbody>
</table>

**Declared willingness to pay more for a sustainable product or service**

- **39%**

**Questions:**

1. How would you describe your intent to use (e-commerce, online groceries, transport, food delivery) in the next 12 months?
2. 'Usage' derived from adoption of X-use frequency/time (among paying users in the past three months).
3. On average, how much more would you be willing to pay for products/services that are more sustainable (e.g., reducing fuel/emissions, etc.)?

**Base:** Users by verticals in Thailand, n=1,340

**Source:** Google-commissioned Ipsos e-Conomy SEA Research 2022
Growing at ~17% YoY and expected to reach ~$53B by 2025, the digital economy is fuelled by e-commerce, but travel recovery will take time.

**Overview**

**GMV ($B)**

**E-commerce**

- **CAGR 99%**
- **CAGR 13%**
- **CAGR 22%**

**Transport and food**

- **CAGR 64%**
- **CAGR 12%**
- **CAGR 20%**

**Online travel**

- **CAGR -48%**
- **CAGR 139%**
- **CAGR 22%**

**Online media**

- **CAGR 28%**
- **CAGR 10%**
- **CAGR 12%**

Source: Bain analysis
DFS accelerated through the pandemic and is still growing; momentum to 2025 will be led by lending and investments at ~40% and ~45% CAGR, respectively.

**Payments (GTV)**
- CAGR +0% in 2019, +11% in 2021, +12% in 2022, 161 billion in 2025.

**Investment (AUM)**
- CAGR +81% in 2019, +33% in 2021, +44% in 2022, 23 billion in 2025.

**Lending loan book**
- CAGR +39% in 2019, +50% in 2021, +39% in 2022, 21 billion in 2025.

**Remittance (GTV)**
- CAGR +52% in 2019, +32% in 2021, +20% in 2022, 4 billion in 2025.

**Insurance (APE / GWP)**
- CAGR +41% in 2019, +29% in 2021, +26% in 2022, 3 billion in 2025.

Note: BNPL loan book calculated using ~3 month average loan tenure for BNPL loans. GTV = Gross Transaction Values; AUM = Assets Under Management; APE = Annual Premium Equivalent; GWP = Gross Written Premiums.

Source: Bain analysis
Deal value is on the rise, driven by several large Series-C investments in DFS and e-commerce.

Source: Bain analysis
DFS overtakes e-commerce, nabbing nearly half of all funding and raising ~$150M in H1 2022 alone

Private funding value ($B)

- **DFS**
- **E-commerce**
- **Transport**
- **Digital media**
- **Travel**
- **Others**

**Overview**

**Growth**

**Investments**

Note: ‘Others’ include foodtech, B2B SaaS, Web3, cleantech, agritech, etc.
Source: Bain analysis
Vietnam
Vietnam: Digital consumers in numbers

### Usage intent

<table>
<thead>
<tr>
<th>Service</th>
<th>Less</th>
<th>Same</th>
<th>More</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>10%</td>
<td>60%</td>
<td>30%</td>
</tr>
<tr>
<td>Groceries</td>
<td>17%</td>
<td>54%</td>
<td>29%</td>
</tr>
<tr>
<td>Transport</td>
<td>25%</td>
<td>52%</td>
<td>23%</td>
</tr>
<tr>
<td>Food delivery</td>
<td>18%</td>
<td>60%</td>
<td>22%</td>
</tr>
</tbody>
</table>

### Media usage frequency

<table>
<thead>
<tr>
<th>Media service</th>
<th>Vietnam</th>
<th>SEA average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video-on-demand</td>
<td>29%</td>
<td>23%</td>
</tr>
<tr>
<td>Music-on-demand</td>
<td>19%</td>
<td>16%</td>
</tr>
<tr>
<td>Gaming</td>
<td>28%</td>
<td>23%</td>
</tr>
</tbody>
</table>

### Media usage time

<table>
<thead>
<tr>
<th>Media service</th>
<th>Vietnam</th>
<th>SEA average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video-on-demand</td>
<td>12%</td>
<td>9%</td>
</tr>
<tr>
<td>Music-on-demand</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>Gaming</td>
<td>9%</td>
<td>18%</td>
</tr>
</tbody>
</table>

### % adoption across urban digital users

- **E-commerce**: 96%
- **Groceries**: 84%
- **Transport**: 85%
- **Food delivery**: 85%
- **Travel**: 66%
- **Video-on-demand**: 61%
- **Music-on-demand**: 54%
- **Gaming**: 60%

### Declared willingness to pay more for a sustainable product or service

- **55%**

**Questions:**
1. X10. How would you describe your intent to use [e-commerce, online groceries, transport, food delivery] in the next 12 months?
2, 3. ‘Usage’ derived from adoption of X usage frequency/time (among paying users in the past three months);
4. On average, how much more would you be willing to pay for products/services that are more sustainable (e.g. reducing fuel/carbon emissions, etc.)?

**Base:** Users by verticals in Vietnam, n=2,383

**Source:** Google-commissioned Ipsos e-Conomy SEA Research 2022
The digital economy hits $23B in 2022 and is on course for ~$50B by 2025; the region’s fastest growing market due to a booming e-commerce sector

**GMV ($B)**

**Overall digital economy**
- 2019: 13
- 2021: 18
- 2022: 23
- 2025: 49
- 2030: 120-200

**CAGR**
- 2019-2022: 28%
- 2022-2025: 23%

**E-commerce**
- 2019: 5
- 2021: 11
- 2022: 14
- 2025: 32

**CAGR**
- 2019-2022: 47%
- 2022-2025: 37%

**Online travel**
- 2019: 5
- 2021: 1
- 2022: 2
- 2025: 6

**CAGR**
- 2019-2022: 56%
- 2022-2025: 39%

**Online media**
- 2019: 3
- 2021: 4
- 2022: 4.3
- 2025: 6

**CAGR**
- 2019-2022: 22%
- 2022-2025: 12%

**Transport and food**
- **Transport**
  - 2019: 1
  - 2021: 2
  - 2022: 3
  - 2025: 5
- **Food delivery**
  - 2019: 1
  - 2021: 2
  - 2022: 3
  - 2025: 5

**CAGR**
- 2019-2022: 35%
- 2022-2025: 21%

Source: Bain analysis
DFS to flourish, with the biggest leaps happening in lending at ~56% CAGR; digital investments to take off only after 2025

**Digital financial services ($B)**

**Payments (GTV)**
- 2019: 55
- 2021: 82
- 2022: 99
- 2025: 143

CAGR: +22% (2019-2022), +13% (2022-2025)

**Remittance (GTV)**
- 2019: 1
- 2021: 1.8
- 2022: 2.4
- 2025: 5

CAGR: +55% (2019-2021), +31% (2021-2022), +23% (2022-2025)

**Investment (AUM)**
- 2019: 0.01
- 2021: 0.05
- 2022: 0.08
- 2025: 0.7

CAGR: +124% (2019-2021), +50% (2021-2022), +106% (2022-2025)

**Lending loan book**
- 2019: 0.3
- 2021: 2
- 2022: 5
- 2025: 18

CAGR: +166% (2019-2021), +114% (2021-2022), +56% (2022-2025)

**Insurance (APE / GWP)**
- 2019: 0.04
- 2021: 0.1
- 2022: 0.2
- 2025: 0.6

CAGR: +87% (2019-2021), +41% (2021-2022), +46% (2022-2025)

**Note:** BNPL loan book calculated using ~3 month average loan tenure for BNPL loans. GTV = Gross Transaction Values; AUM = Assets Under Management; APE = Annual Premium Equivalent; GWP = Gross Written Premiums.

Source: Bain analysis
Deal activity grows by ~60% but deal value drops by half, reflecting investor caution in deploying late-stage capital.

Private funding value ($B)

<table>
<thead>
<tr>
<th>Year</th>
<th>Deal Count</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>151</td>
<td>0.9</td>
</tr>
<tr>
<td>2020</td>
<td>140</td>
<td>0.7</td>
</tr>
<tr>
<td>2021</td>
<td>233</td>
<td>2.6</td>
</tr>
<tr>
<td>H1 2021</td>
<td>89</td>
<td>1.4</td>
</tr>
<tr>
<td>H2 2021</td>
<td>144</td>
<td>1.3</td>
</tr>
<tr>
<td>H1 2022</td>
<td>148</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Source: Bain analysis
E-commerce raises ~$230M in H1 2022 to become the investor favourite, followed by online media at ~$190M

Private funding value ($B)

- **E-commerce**
- **Digital media**
- **DFS**
- **Transport**
- **Travel**
- **Others**

<table>
<thead>
<tr>
<th>Year</th>
<th>Deal count</th>
<th>Digital media</th>
<th>DFS</th>
<th>Transport</th>
<th>Travel</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>151</td>
<td>0.9</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>2020</td>
<td>140</td>
<td>0.7</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>2021</td>
<td>233</td>
<td>2.6</td>
<td>0.5</td>
<td>0.1</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>H1 2021</td>
<td>89</td>
<td>1.4</td>
<td>0.4</td>
<td>0.2</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>H2 2021</td>
<td>144</td>
<td>1.3</td>
<td>0.4</td>
<td>0.3</td>
<td>0.3</td>
<td>0.1</td>
</tr>
<tr>
<td>H1 2022</td>
<td>148</td>
<td>0.7</td>
<td>0.2</td>
<td>0.1</td>
<td>0.2</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Note: 'Others' include foodtech, B2B SaaS, Web3, cleantech, agritech, etc.
Source: Bain analysis
Through the waves, towards a sea of opportunity