e-conomy SEA

Unlocking the $200 billion digital opportunity in Southeast Asia

Google & Temasek's joint perspectives were developed using 4 independent data sources

DATA SOURCE	DESCRIPTION
1 **Proprietary Google data**	Query and click data to assess demand by country; internet usage data by country; smartphone penetration by country
2 **Temasek research**	VC and startup activity by country (including number of deals, exits, size of startups, number of startups by funding stage, etc.)
3 **Expert interviews**	59 expert interviews (21 startups, 12 VCs, 23 analysts at leading banks, and 3 industry experts across 6 countries) to validate research findings
4 **Secondary data sources**	Numerous sources such as Worldbank, UN, EIU, Euromonitor, McKinsey, WEF, and government websites were used to calculate economic development indicators such as population trends, GDP growth, etc.

Research scope

	INCLUDED	EXCLUDED
Sectors	**3 major sectors:** 1. **First-hand eCommerce** (i.e. online spend on electronics, apparel/clothing, household goods, food/grocery) 2. **Travel** (online spend on hotels, airlines and ride hailing) 3. **Media** (online spend on ads and gaming)	**Online spending in sectors which have not materially been disrupted by the internet** in SEA, such as: 1. Education 2. Entertainment/movies 3. Health (insurance, etc.) 4. Financial services **Second-hand eCommerce purchases**
Geographies	**6 major SEA countries** including Indonesia, Singapore, Malaysia, Philippines, Thailand and Vietnam	**Other SEA countries** such as Cambodia, Laos and Myanmar

Executive summary (1/2)

- SEA[1] is the world's fastest growing internet region (~14% 5-year CAGR) with an existing internet user base of 260m growing to ~480m users by 2020 (~3.8m / month)

- Consequently, the SEA[1] internet economy[2] is expected to grow to ~$200+ billion by 2025; driven mostly by the growth of first-hand eCommerce market (32% CAGR over next 10 years) followed by online media (18% CAGR), and online travel (15% CAGR)

- The total first-hand eCommerce market in SEA[1] is expected to reach ~$88 billion by 2025; significantly outpacing the growth of offline retail (32% vs. 7% 10-year CAGR) with potential to reach ~$120 billion

- 3 factors that are unique to SEA[1] will drive growth:
  - A burgeoning young population with ~70% under the age of 40
  - Lack of big-box retail (SEA retail stores per capita ~1/3rd of US); access particularly difficult in remote islands which are abundant in PH and ID
  - Rapidly growing middle-class (forecasted GDP growth of 5.3% over next 10 years)

- Number of transactions expected to be biggest growth driver (27% 10-year CAGR), as more people gain access to the internet and availability of products online increases

- All SEA countries are expected to have an eCommerce market >$5b

- Online travel (hotels, airlines, and rides) is expected to reach ~$90 billion by 2025 (15% CAGR);
  - Hotels + airlines will compose 85% of total online travel market (15% CAGR) or ~$77 billion; Low Cost Carriers will drive majority of growth due to their prominence in SEA (35% of gross booking vs 13% in rest of APAC) and higher online penetration (55% vs 35% for regional carriers)

1 includes PH, VN, TH, SG, MY, ID
2 includes first-hand eCommerce (apparel, electronics, household goods, food/grocery),
   travel (hotels, airlines, ride hailing), and online media (ads + gaming)

Executive summary (2/2)

• Online rides (e.g., Uber, Grab) should reach ~$13 billion (18% CAGR); Number of riders biggest driver of growth; 30-day active riders expected to reach ~29m (vs 7.3m in 2015)

● Online media (ads + gaming) will contribute ~$20 billion by 2025 (~10% of total GMV) but will be highly profitable sectors

● Making SEA a $200 billion internet economy[2] will require ~$40-50 billion of additional investments over the next 10 years (assumes VC investment as a percentage of GDP reaches similar levels to India and SEA [1] GDP grows at 5.3% CAGR)

● Additionally, 5 other challenges must be addressed through public and private-sector initiatives including:

1. **Talent / engineering:** Lack of senior developer and CXO-level talent causing startups to rely on expat talent from China and US; new tech-focused educational programs will need to be instated to create future pipeline

2. **Payment mechanisms:** Still no scalable e-payment alternative resulting in increase of 'Cash on Delivery' transactions, which, in turn increases risk and cost for merchants

3. **Internet infrastructure:** Low internet speeds and penetration rate due to regulatory and geographical constraints (e.g., Philippines has 2nd slowest internet in Asia due to duopoly structure); innovative PPP initiatives (e.g., Project Loon) required to make high-speed internet a commodity in SEA

4. **Logistics infrastructure:** Government investment and focus will be required to improve road and rail networks which are critical to ensure a fast and efficient delivery system

5. **Lack of consumer trust:** Consumers wary of making transactions online due to various security issues such as fraud (e.g., orders from Indonesia are 12x as likely to be fraudulent as global average);

1 includes PH, VN, TH, SG, MY, ID
2 includes first-hand eCommerce (apparel, electronics, household goods, food/grocery),
   travel (hotels, airlines, ride hailing), and online media (ads + gaming)

Agenda

Overview of SEA Internet economy
The SEA internet opportunity
SEA VC and startup landscape
Challenges to overcome

SEA's internet economy is ready to take off, with ~124k users coming online every day for the next 5 years

260M
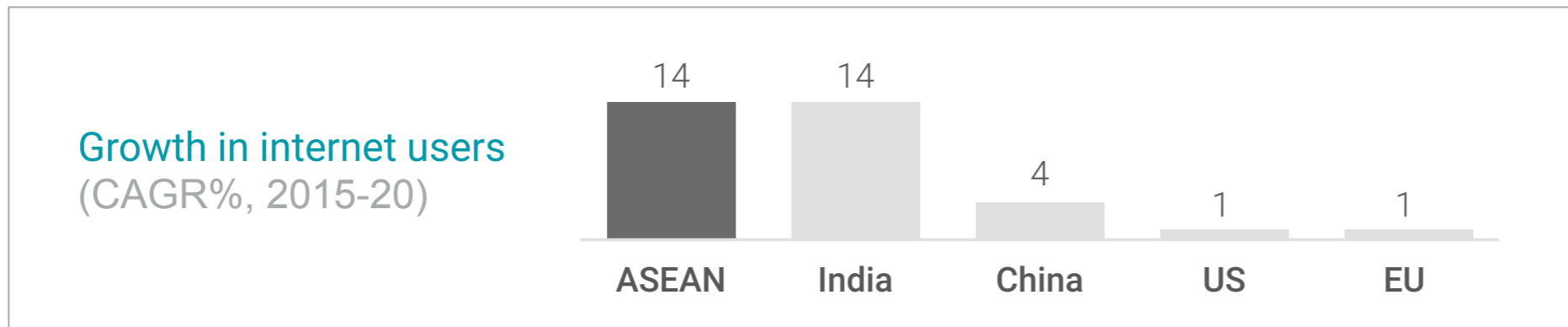Users already online; 4th largest internet market in the world

3.8M
Users coming online every month; fastest growing internet market in the world

700M
Mobile connections; 130% of population

SEA to be the fastest growing internet market in the world (~480m users by 2020); Indonesia fastest growing nation in the world

Growth in internet users
(CAGR%, 2015-20)

ASEAN	India	China	US	EU
14	14	4	1	1

Indonesia is the fastest growing internet market in the world
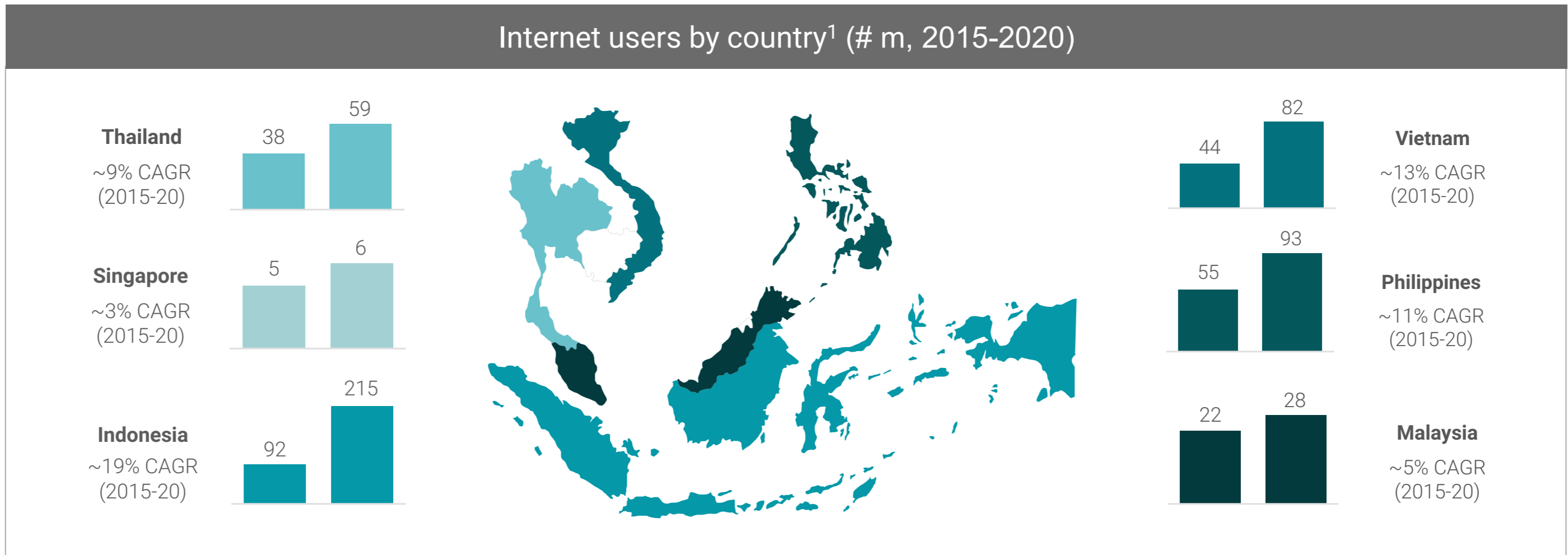
Internet users by country[1] (# m, 2015-2020)

Thailand
~9% CAGR
(2015-20)
38 → 59

Singapore
~3% CAGR
(2015-20)
5 → 6

Indonesia
~19% CAGR
(2015-20)
92 → 215

Vietnam
~13% CAGR
(2015-20)
44 → 82

Philippines
~11% CAGR
(2015-20)
55 → 93

Malaysia
~5% CAGR
(2015-20)
22 → 28

The internet economy in SEA is expected to reach ~ $200 billion by 2025 (6.5x increase over 10 years)

eCommerce and Travel to make up >90% of total online retail spend in 2025

Market size by segment ($, billion)

10-year CAGR (%)

6.5x

197

20

90

88

18

15

32

31

4

22

6

2015

2025

3 Online media (ads + gaming)

2 Travel (hotels and flights, ride hailing)

1 eCommerce (apparel, electronics, household goods, food / grocery)
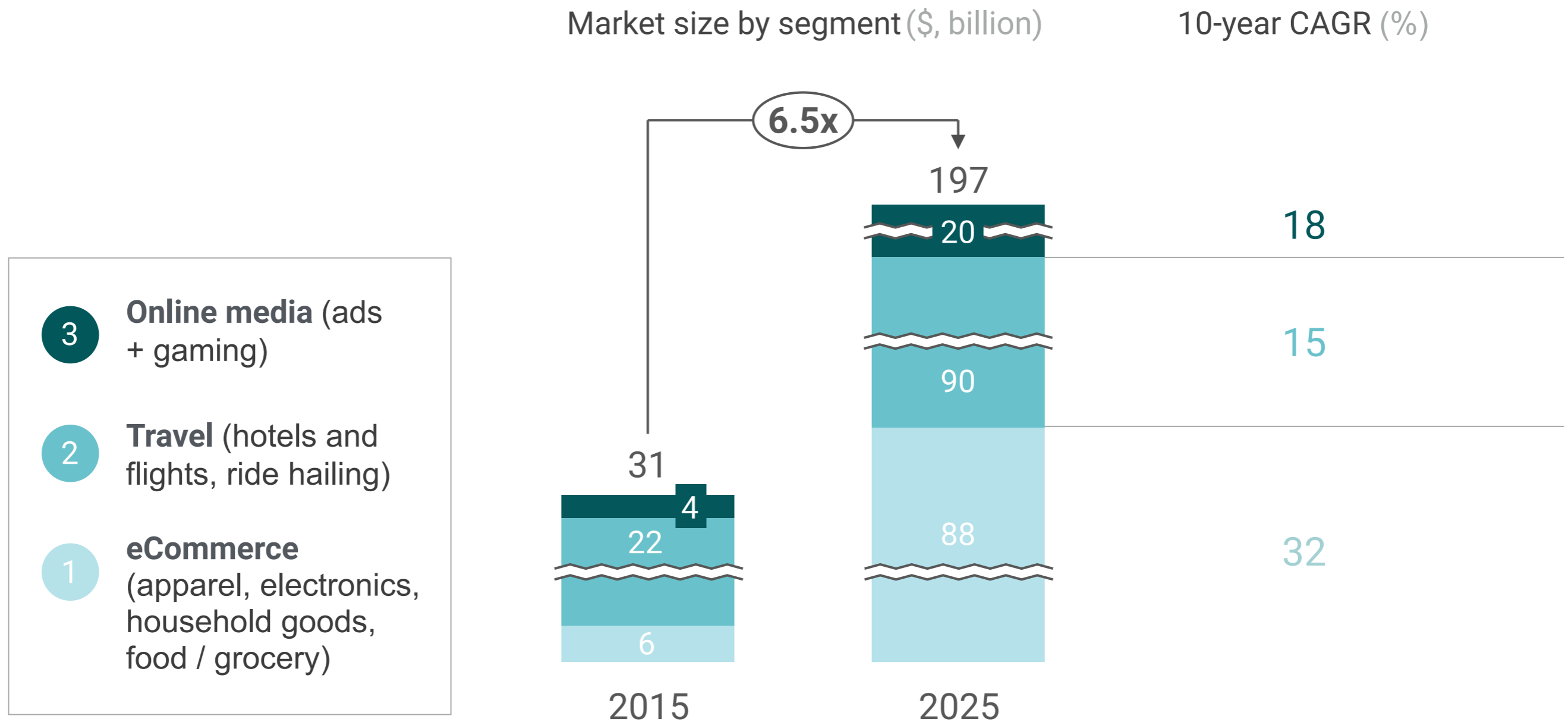
1 The eCommerce market is split into two key segments, each with a different operating and monetization model

eCommerce

☐ Research focus

	First-hand goods	Second-hand goods
Model Description	• Sale of 'new goods' (contributing to GDP) either through a market place, online store or social media	• Re-sale of 'used goods' through a market place or social media (could be an exchange / barter)
Monetization Strategy	• **Margin-based** (Online retailer receives a % of sales revenue) • **Transaction fee-based** (Online retailer receives a fee for enabling transaction)	• **Margin-based** (Marketplace provider receives a % of sales revenue) • **Classifieds-based** (Marketplace provider monetizes traffic with ads)
2015 market size	• $5.5 billion	• Several billion[1]
Companies / channels	LAZADA GROUP ZALORA tokopedia	Instagram carousell WeChat

1 5 key systemic changes are expected to occur, leading to the exponential growth of eCommerce

Thriving young population	70% of SEA's population is under the age of 40 (vs. 57% in China)
Increase in internet speed and penetration	Internet speeds in SEA are expected to reach global average (23.3 mbps) with more than 80% of population having access (vs. 46% today)
GDP Growth	SEA as a region has a nominal GDP of ~2.5 trillion USD (larger than India) growing at 5.3% over the next 10 years
More conducive payment ecosystem	Payment ecosystem is expected to accelerate with increased access to financial system, going from 0.7 acct/capita to +1 acct/capit[1]
Lack of store access	# of organized retail store available per capita is significantly less than developed markets, (1/3rd of US)

① SEA eCommerce expected to 16x by 2025, reaching $88 billion (~32% CAGR), with the potential to exceed

2015 Calculation methodology

- **Determined 2015 retail market size and eCommerce penetration rate** through proprietary Google / Temasek data + secondary research (e.g., Euromonitor)

- **Forecasted 2025 retail market size** (assumed retail growth equals GDP growth[3], except in VN, ID, and PH where rising middle-class will drive consumption growth)

- **Identified benchmark country** for each SEA country by comparing ~9 indicators including internet penetration, logistics performance, population under 40

- **Forecasted 2025 eCommerce penetration rate for each SEA country** using eCommerce penetration growth curve of benchmark country (e.g., 2015-20 eCommerce penetration rate for VN is expected to grow at same rate as India's grew from 2009-14)

- **Calculated 2025 eCommerce market size** as 2025 retail market x eCommerce penetration

- **Validated model** through 59 expert interviews

Total eCommerce[1] spend in SEA[2] ($, billion)

Total retail market = $.7 trillion

Total retail market = $1.4 trillion

16x

88

5.5

	2015	2025
eComm % of total retail	0.8	6.4
10-year CAGR (%)		32

1 includes groceries, apparel/clothing, electronics, household goods, and food / grocery
2 defined as PH, TH, VN, ID, MY, and SG
3 based on constant GDP (2005 USD)

1 27% CAGR in # of online transactions will be driven by growth in internet penetration, consumer sentiment and product availability
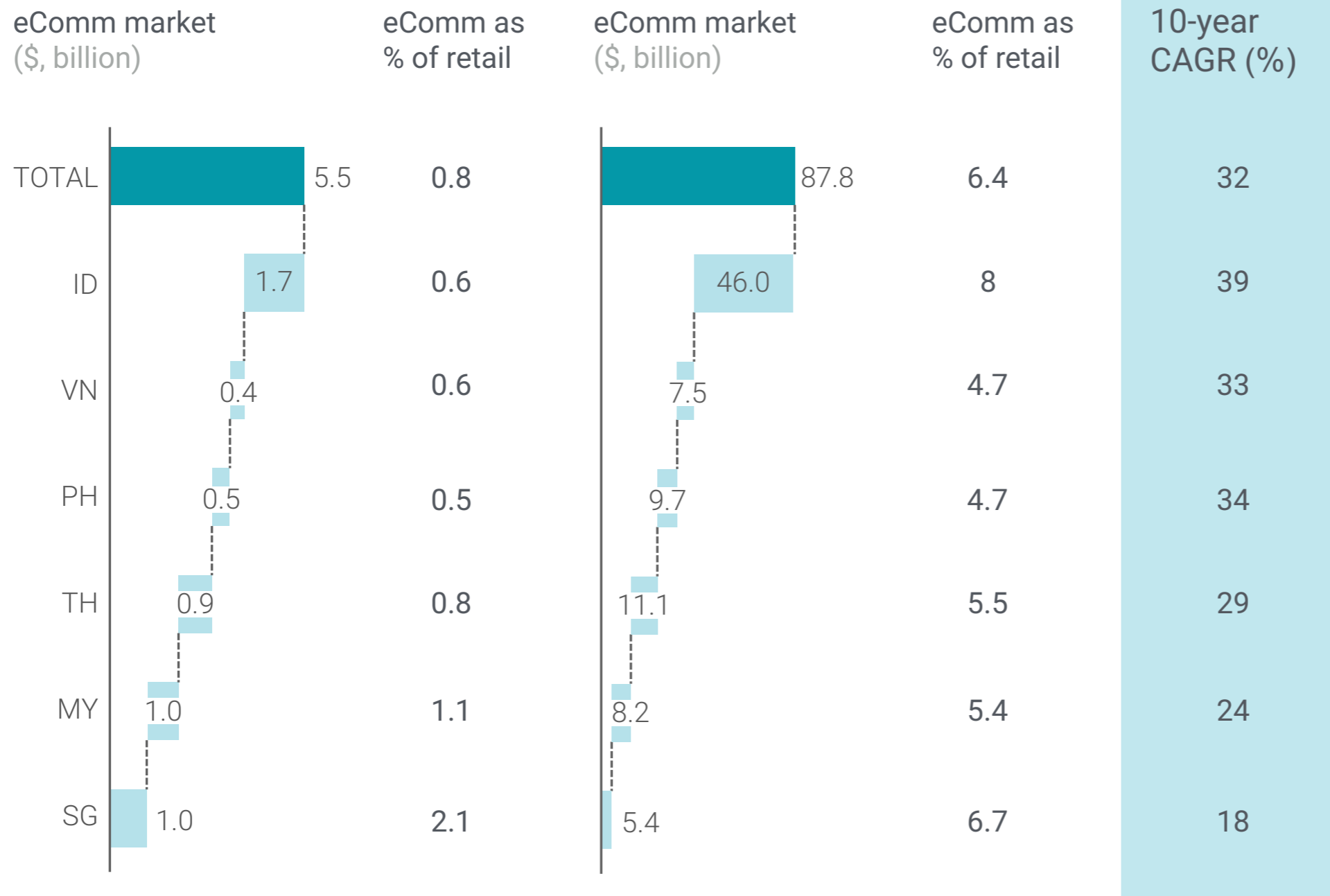
Variable			10-year CAGR (%)	Growth driver

Online buyers
#, million

49 (2015) → 247 (2025)

× (multiply)

Annual purchases per buyer
#

6 (2015) → 14 (2025)

× (multiply)

Average basket size
$

18 (2015) → 26 (2025)

10-year CAGR (%):
- 18
- 8
- 4

27% CAGR in total # of online transactions

Growth driver:
- Internet penetration growth
- Consumer sentiment/security
- Increase in range of available products (e.g., online groceries)
- GDP/capita growth[1]
- Increase in range of available products

= (equals)

SEA eCommerce market size
($, billion)

+32%

5.5 (2015) → 88 (2025)

1 By 2025, all SEA countries will have an eCommerce market >$5 billion; Indonesia expected to reach $46 billion

2015

|	eComm market ($, billion)	eComm as % of retail
TOTAL	5.5	0.8
ID	1.7	0.6
VN	0.4	0.6
PH	0.5	0.5
TH	0.9	0.8
MY	1.0	1.1
SG	1.0	2.1

2025

	eComm market ($, billion)	eComm as % of retail	10-year CAGR (%)
TOTAL	87.8	6.4	32
ID	46.0	8	39
VN	7.5	4.7	33
PH	9.7	4.7	34
TH	11.1	5.5	29
MY	8.2	5.4	24
SG	5.4	6.7	18

- **Indonesia is expected to comprise 52% of eCommerce** in SEA by 2025 (vs 31% in 2015), driven by large middle-class population, increased access to internet, and growth of tier2/3 cities, where access to organized retail is limited

- **Vietnam, Philippines, Thailand and Malaysia will all be sizeable markets,** ranging between $8-11 billion

- **SG eCommerce will be >$5 billion,** larger than the 2015 casino industry (~$4 billion)

2 SEA online travel market expected to 4x by 2025, reaching ~$90 billion (~15% CAGR)

SEA[1] Online travel market size ($, billion)

10-year CAGR (%)

Description
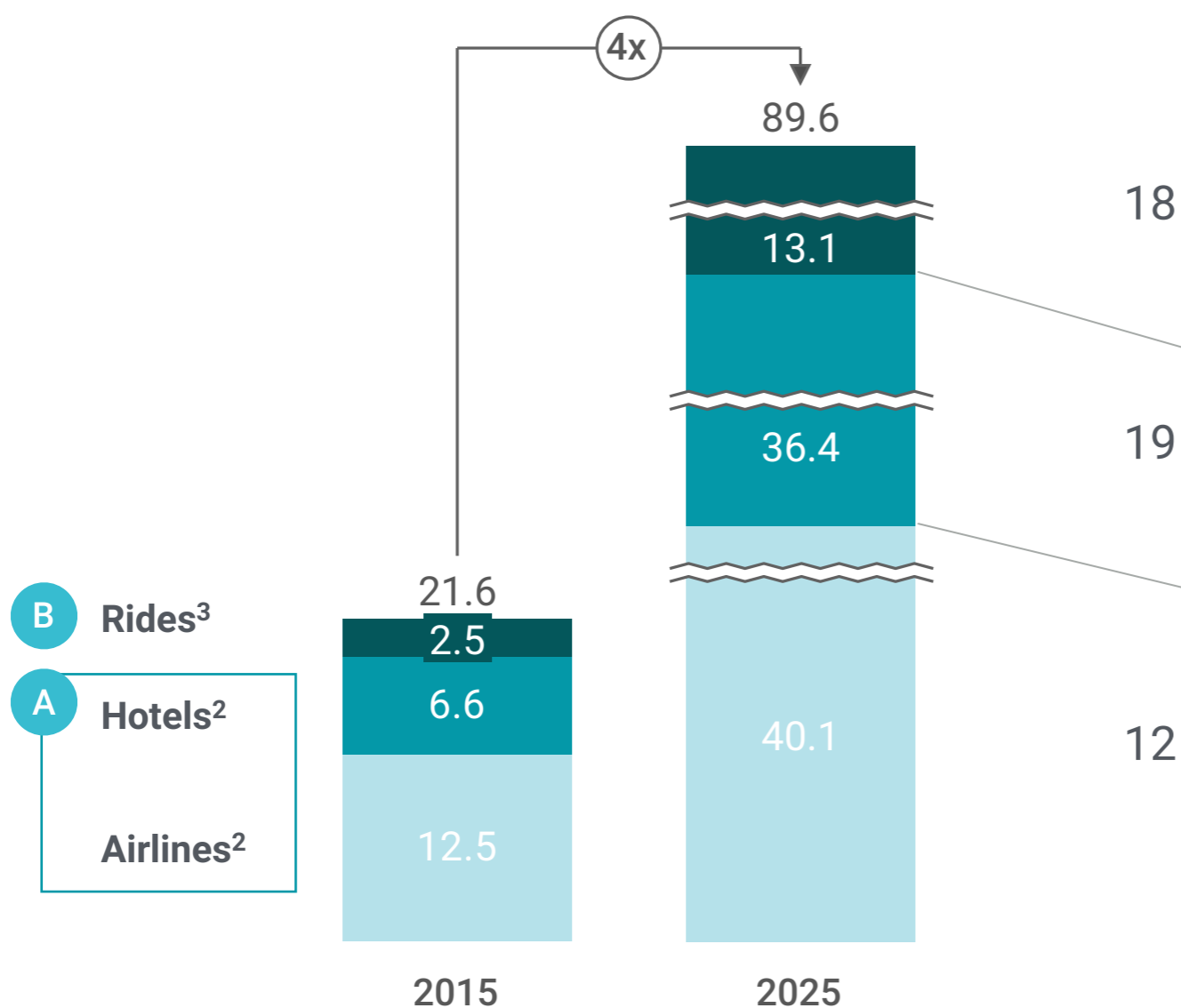
4x

89.6

13.1

36.4

40.1

2015

21.6

2.5

6.6

12.5

2025

B Rides[3]

A Hotels[2]

Airlines[2]

18

19

12

- **Number of riders biggest driver of growth;** 30-day active riders expected to reach ~29m (vs 7.3m in 2015)

- **Average fare per ride to decrease slightly** due to increased competition as well as growth of PH, TH, VN, ID, and MY markets, where average ride per fare is ~1/3rd of SG

- **Smaller GMV than airlines but higher profit pool** (15~20% of gross booking value vs 1~5% for airlines)

- **Largest segment within travel** (~45% of total GMV)

- **Growth will be driven by high demand for Low Cost Carriers** (35% of gross booking in SEA vs 13% in rest of APAC), which have much higher online penetration (55% vs 35% for regional carriers)

1 defined as PH, TH, VN, ID, MY, and SG
2 only includes passenger revenue and is attributed to the market where the company is based (i.e., 100% of SIA revenue attributed to Singapore)
3 Includes consumer spend on taxis, buses and rail. Excludes air travel

2A **Online hotels and airlines expected to 5x by 2025, reaching ~$76 billion (15% CAGR) and making up 85% of the total travel market**
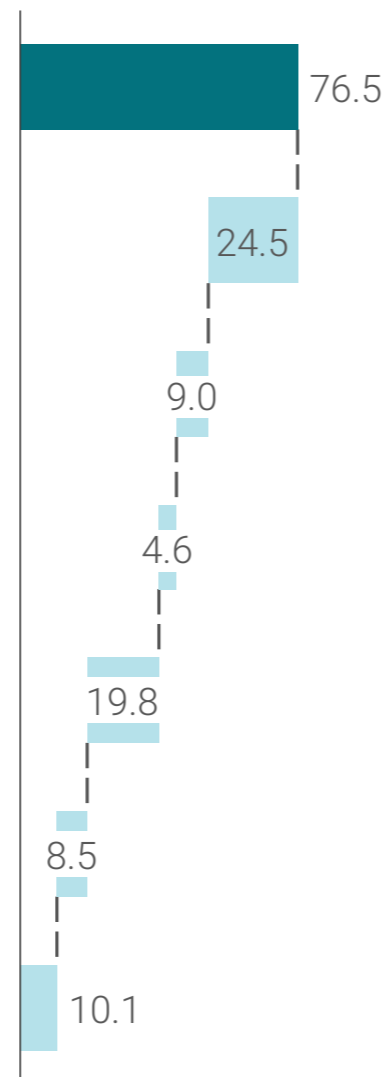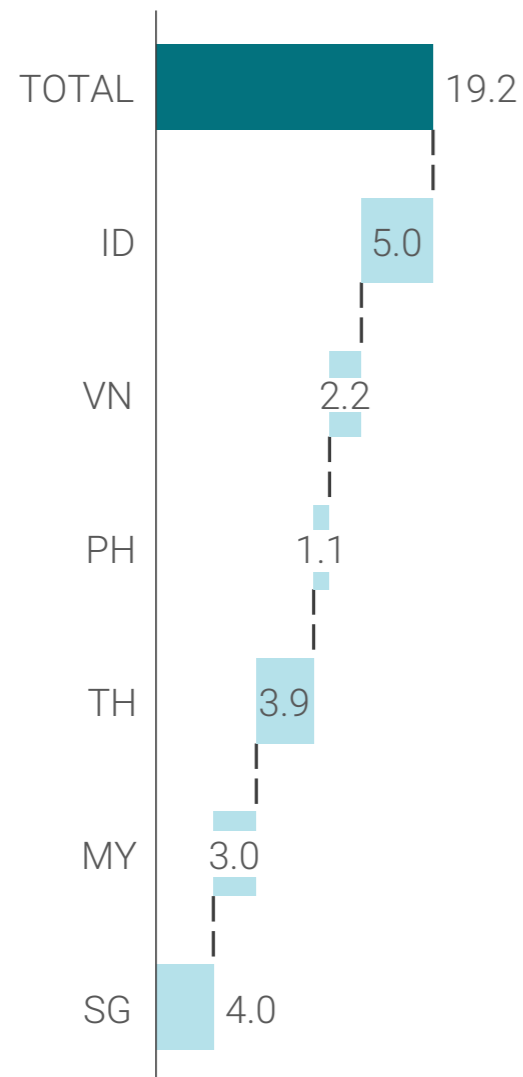
2015

2025

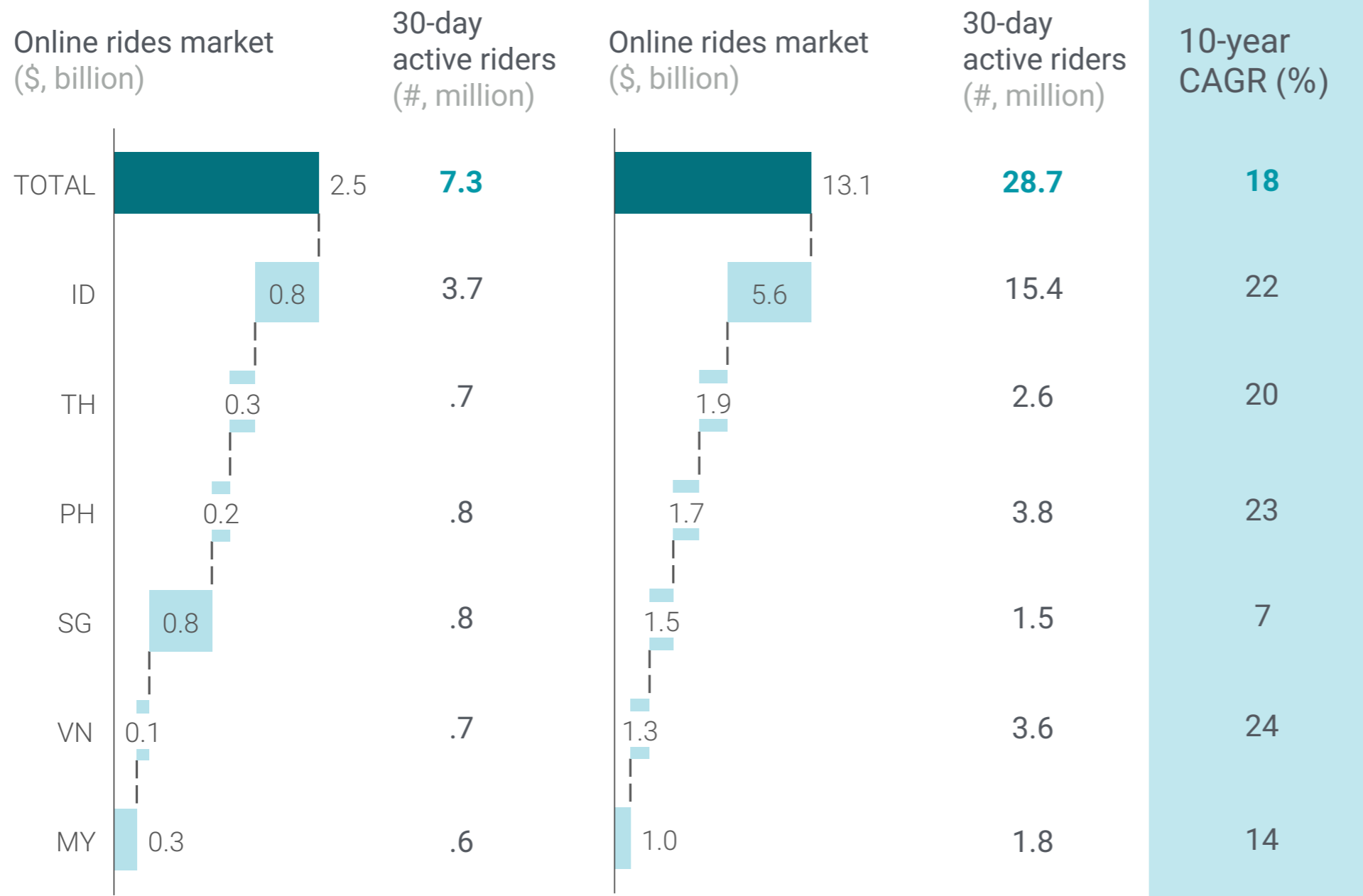|	Online hotels + airlines market ($, billion)	Online as % of total	Online hotels + airlines market ($, billion)	Online as % of total	10-year CAGR (%)
TOTAL	19.2	**34**	76.5	**56**	**15**
ID	5.0	37	24.5	55	17
VN	2.2	25	9.0	37	15
PH	1.1	25	4.6	34	15
TH	3.9	36	19.8	69	18
MY	3.0	36	8.5	69	11
SG	4.0	39	10.1	69	10

- **Hotels + airlines to reach ~ $77 billion market by 2025,** bigger than gross booking size of the largest market players in 2015: (Expedia, Inc. = $60 billion; Priceline = $55 billion, globally)

- **Indonesia is expected to be the largest market,** comprising 32% of online travel in SEA by 2025 (vs 26% in 2015)

- **Thailand positioned to be the second largest market** in SEA due to booming tourism industry (Bangkok is 2nd most visited city in the world[1])

- **VN, SG and MY will also be sizeable** (~$8-10 billion)

2B # Online rides expected to 5x by 2025, reaching ~$13 billion and making up 15% of the total travel market

2015

	Online rides market ($, billion)	30-day active riders (#, million)
TOTAL	2.5	**7.3**
ID	0.8	3.7
TH	0.3	.7
PH	0.2	.8
SG	0.8	.8
VN	0.1	.7
MY	0.3	.6

2025

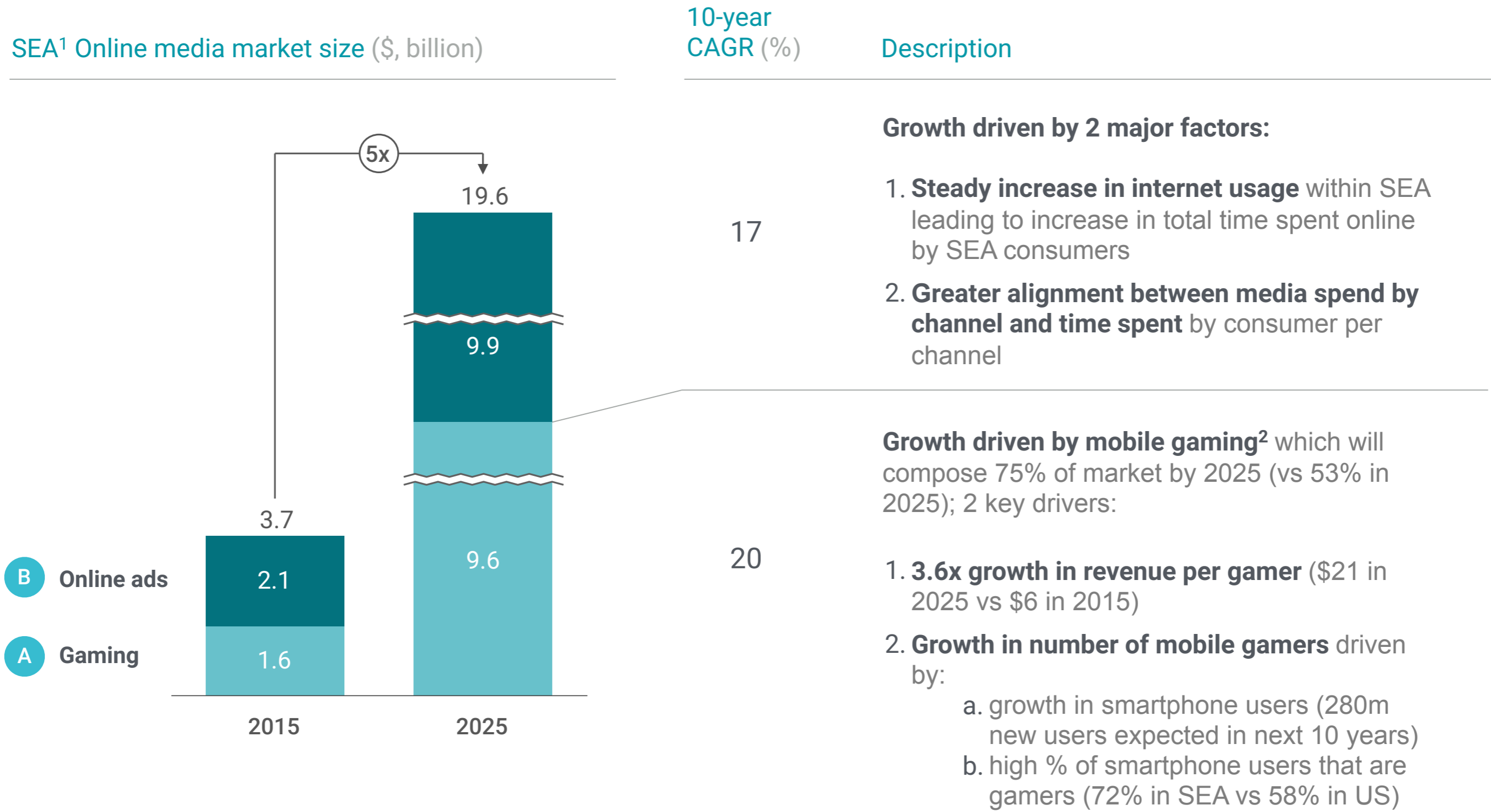|	Online rides market ($, billion)	30-day active riders (#, million)	10-year CAGR (%)
TOTAL	13.1	**28.7**	**18**
ID	5.6	15.4	22
TH	1.9	2.6	20
PH	1.7	3.8	23
SG	1.5	1.5	7
VN	1.3	3.6	24
MY	1.0	1.8	14

- **28.7 million active riders each month** (4x over 2015)
- **All SEA markets to exceed $1 billion by 2025**; Indonesia expected to become largest market due to population size, growing at 22% CAGR
- **Thailand and Philippines to become ~$2 billion market**, growing at 20% and 23% respectively, over the next 10 years
- **Singapore will continue to have highest fare per trip** (~3x of SEA average)

③ Online media is expected to increase by 5x, reaching ~ $20 billion by 2025 (~18% CAGR)
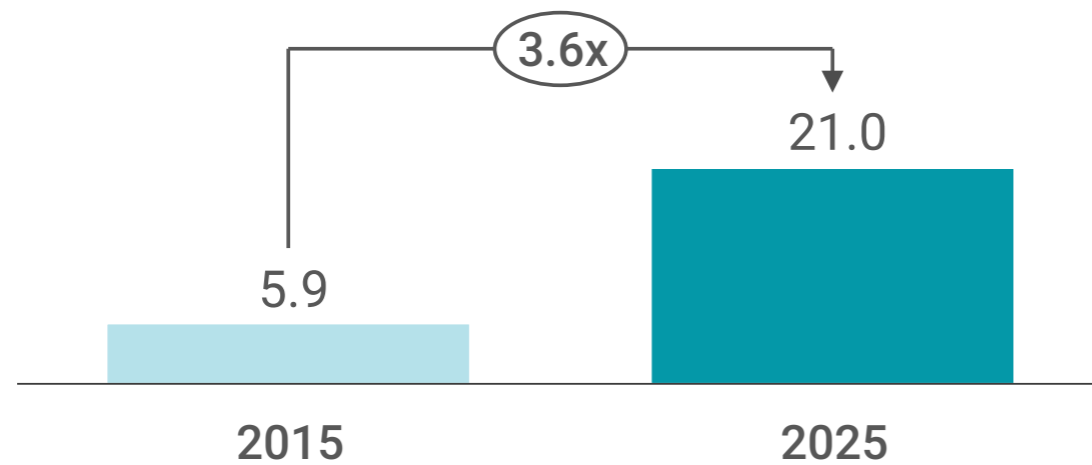
SEA[1] Online media market size ($, billion)

5x

19.6

9.9

9.6

3.7

2.1

1.6

B Online ads

A Gaming

2015   2025

10-year CAGR (%)	Description
	Growth driven by 2 major factors:
17	1. **Steady increase in internet usage** within SEA leading to increase in total time spent online by SEA consumers 2. **Greater alignment between media spend by channel and time spent** by consumer per channel

20	**Growth driven by mobile gaming[2]** which will compose 75% of market by 2025 (vs 53% in 2025); 2 key drivers:
	
	1. **3.6x growth in revenue per gamer** ($21 in 2025 vs $6 in 2015)
	
	2. **Growth in number of mobile gamers** driven by:
	    a. growth in smartphone users (280m new users expected in next 10 years)
	    b. high % of smartphone users that are gamers (72% in SEA vs 58% in US)

1 defined as PH, TH, VN, ID, MY, and SG
2 includes smartphone, tablet, and handheld games (<1%)

3A # 3.6x increase in revenue per mobile gamer will drive growth of mobile segment from 53% to 75% of total GMV

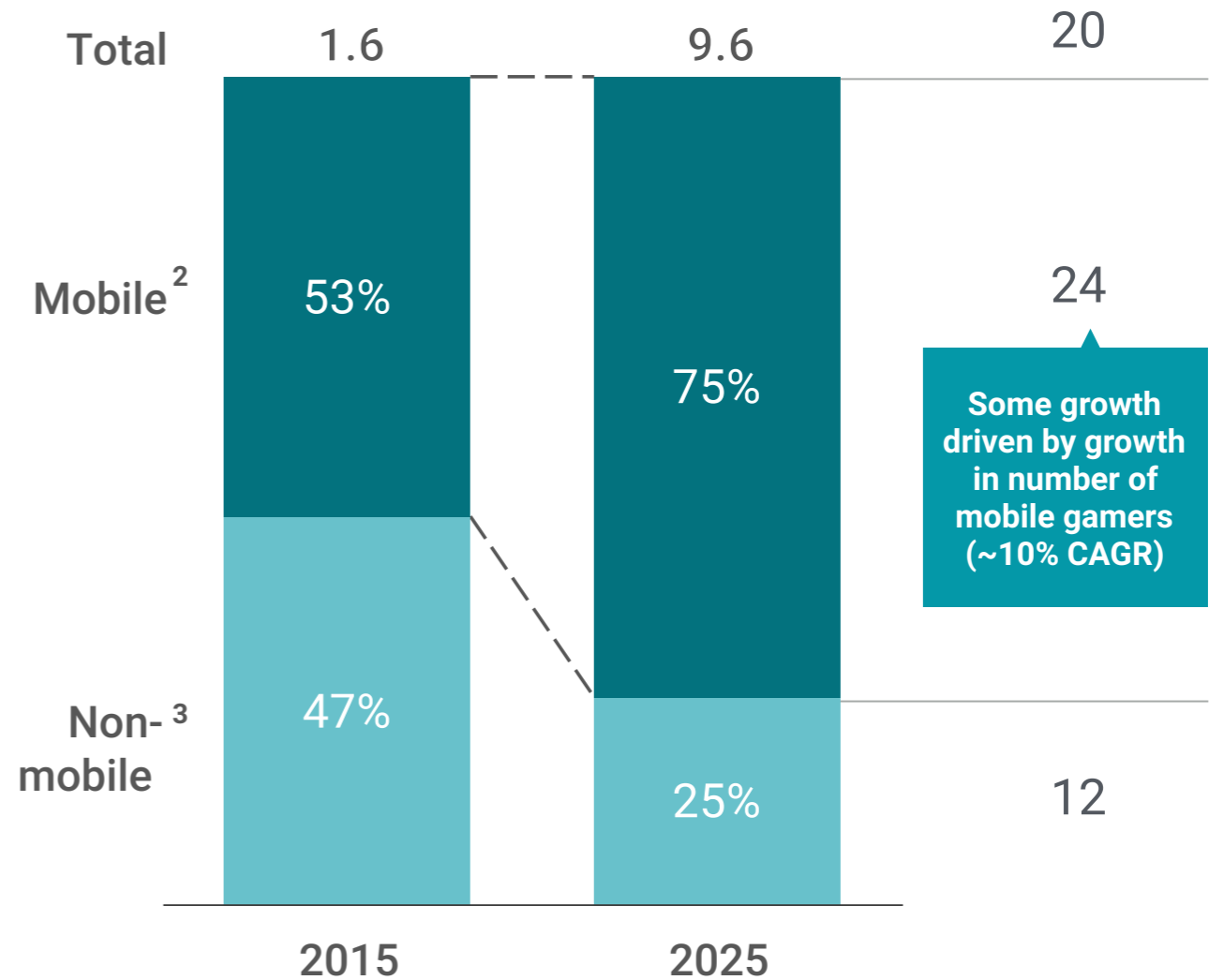Revenue per mobile gamer is expected to 3.6x between 2015 and 2025…

…resulting in 24% CAGR (vs 12% CAGR for non-mobile gaming revenue)
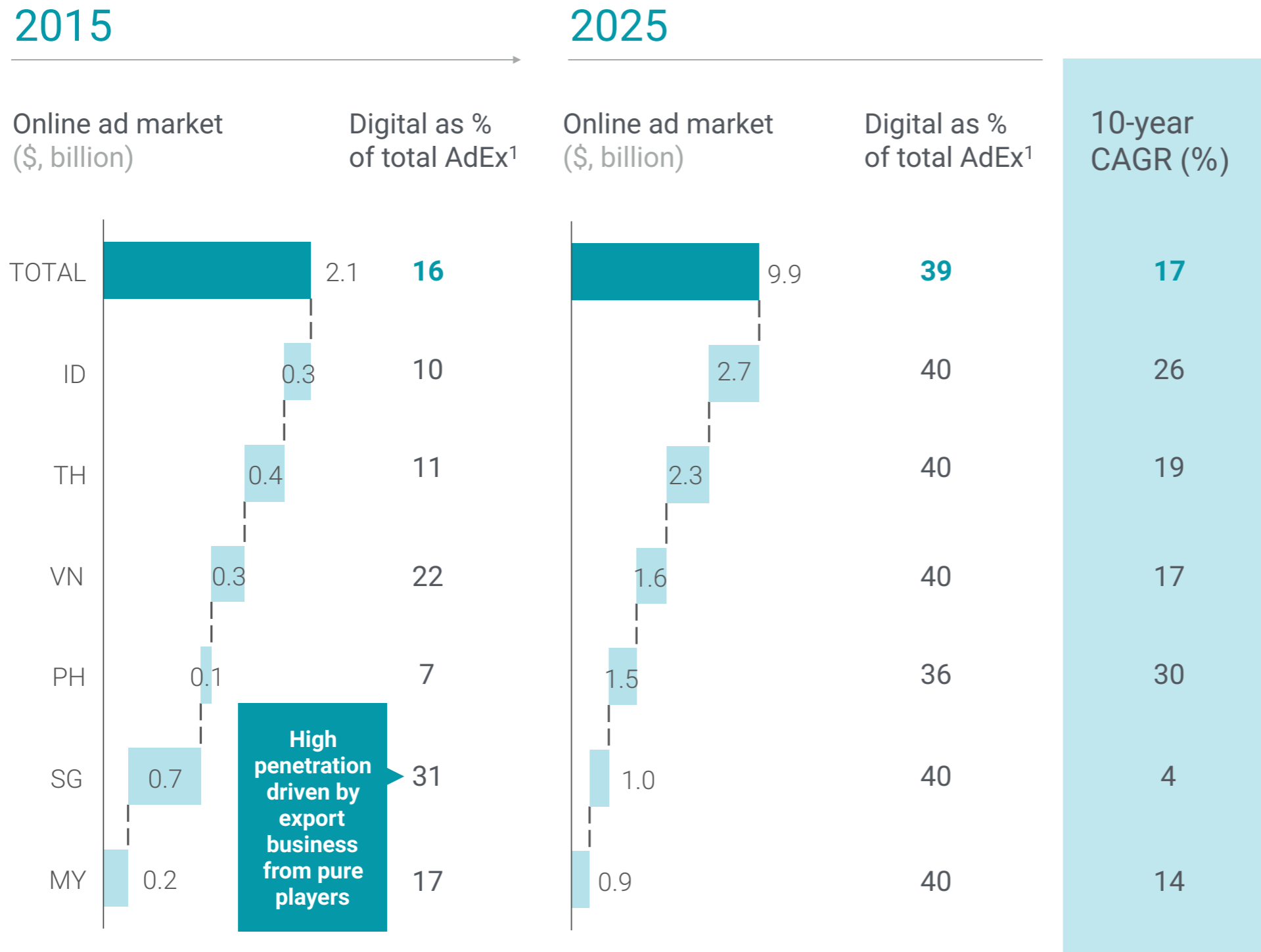
Mobile revenue per gamer ($)

3.6x

21.0

5.9

2015   2025

3 main drivers in growth of RPU:

1. **Greater engagement** due to improvement in quality of mobile games

2. **Growth in GDP / capita**; all SEA countries except VN will break the ~$3k barrier

3. **Prominence and growth of messenger platforms** in SEA, which have a 2-3x higher LTV than regular gamers

SEA[1] Online gaming revenue by segment (% of total)

10-year CAGR (%)

Total   1.6   9.6   20

Mobile[2]   53%   75%   24

Some growth driven by growth in number of mobile gamers (~10% CAGR)

Non-[3] mobile   47%   25%   12

2015   2025

SOURCE: Newzoo, Google   19

3B **The online ads market is expected to increase by 5x, reaching ~$10 billion by 2025 (17% CAGR)**

2015

2025

	Online ad market ($, billion)	Digital as % of total AdEx[1]	Online ad market ($, billion)	Digital as % of total AdEx[1]	10-year CAGR (%)
TOTAL	2.1	**16**	9.9	**39**	**17**
ID	0.3	10	2.7	40	26
TH	0.4	11	2.3	40	19
VN	0.3	22	1.6	40	17
PH	0.1	7	1.5	36	30
SG	0.7	31	1.0	40	4
MY	0.2	17	0.9	40	14

High penetration driven by export business from pure players

- **All SEA markets ~$1B+ by 2025**, with Indonesia and Thailand >50% of total market due to large population size and media consumption behavior (e.g., Thailand has highest YouTube watch time in the world)

- **Digital penetration to reach ~39% of total ad spend** (vs 16% in 2015) as media spend by channel aligns more closely with consumer time spent by channel

Capturing the $200 billion SEA internet opportunity will require ~$40-50 billion of investment over next 10 years

VC investment as a percent of GDP[1] (%, 2014)

Chart values:
- US: 0.30
- India: 0.25
- China: 0.15
- Europe: 0.06
- SEA: 0.04

India to SEA: 5.7x
China to SEA: 3.4x
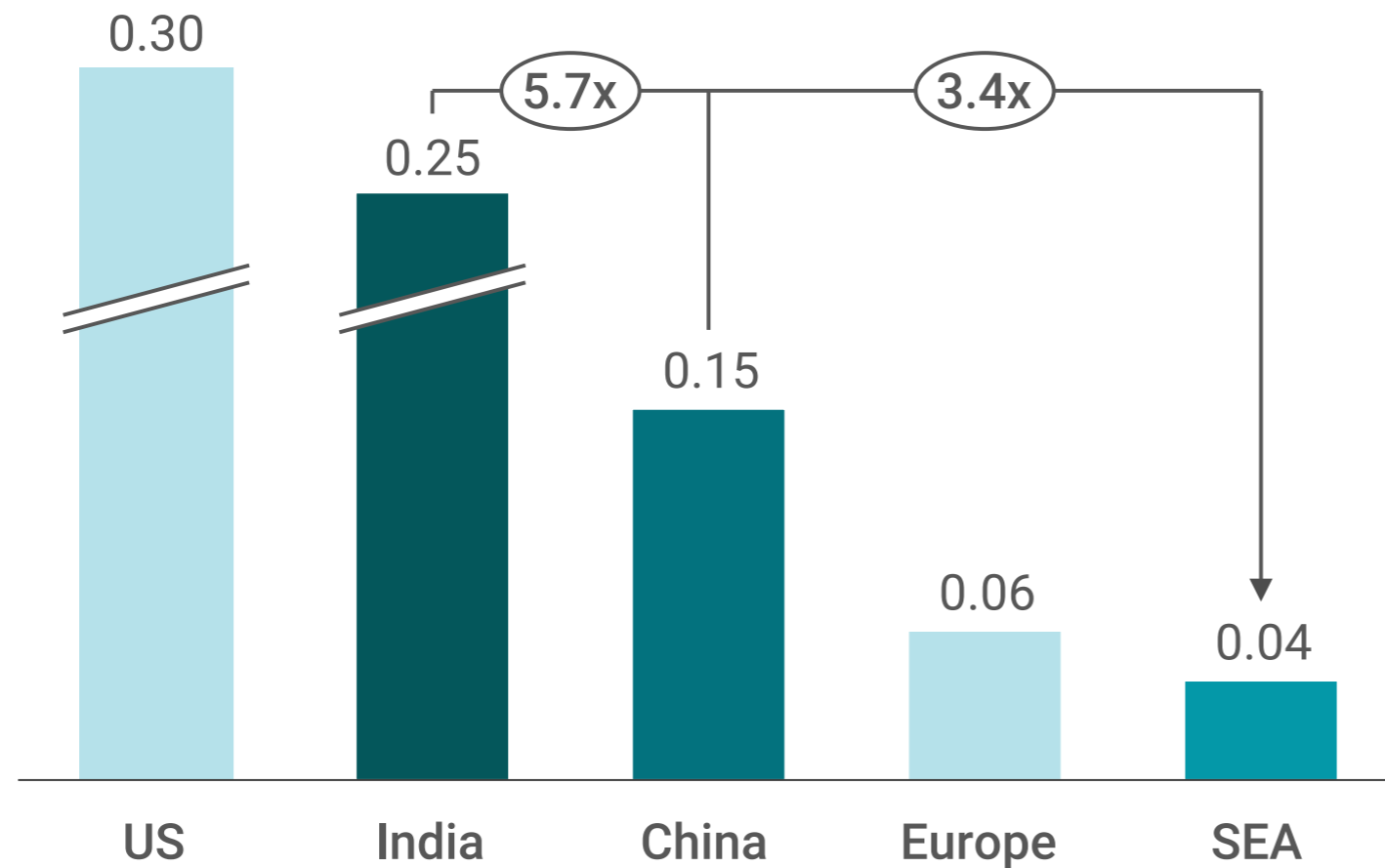
- **Investments levels in SEA are lagging India and China;** although SEA had a larger GDP[1] than India in 2014 ($2.4 trillion vs $2.1 trillion), it received less than a fifth of the funding

- **SEA's funding profile must catch up to that of India's by 2025** in order for the online economy to reach $200 billion

- **This implies an investment of ~$40-50 billion over next 10 years,** assuming SEA GDP[1] growth of 5.3% and a straight line CAGR growth of VC investment as a % of GDP[1] from 0.04% to 0.25% from 2014 to 2025

A total of ~$40-50bn of investments must be injected over next 10 years to make SEA a ~$200 billion internet economy in 2025

Overview of SEA Startup and VC landscape

1 VC landscape overview

- **~$1.1 billion invested in SEA in 2015**; with 355 total deals
- **~88% of deal value in SG and ID** representing 227 deals (~64% of total)
- **eCommerce and logistics contribute ~61.4%** of total investments from 2010 to 2015
- **~65% of investments going to just 5 startups in 2015[1]** (GrabTaxi, PropertyGuru, Trikomsel, Qoo10, and iCarsClub)

2 Startup landscape overview

- **~7k startups in SEA** with ~80% in ID, SG, and VN
- **Lifestyle and eCommerce** sectors with most startups (~18.8% of total)
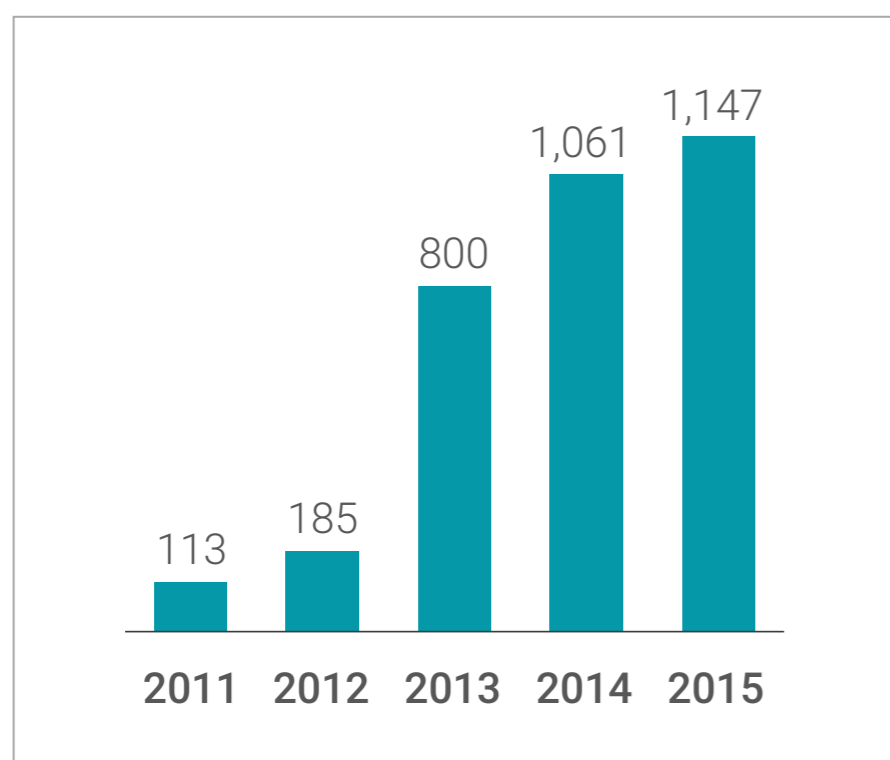- **4 unicorns** (>$1billion valuation) all of which are in SG (Garena, GrabTaxi, Lazada, and Razer)
- **<7% (~450) of startups have raised funding post seed[2]** or have been acquired

1 Deal flow growing but activity is concentrated to SG and ID with majority of funding going to few prominent startups

DEAL FLOW ($, million; 2015)

Year	Value
2011	113
2012	185
2013	800
2014	1,061
2015	1,147

- **Deal flow in SEA lags that of India, US, and China,** despite seeing 127% CAGR from 2010 to 2015
- **5 startups making up 65% of total investments**; including GrabTaxi and PropertyGuru

DEALS BY COUNTRY (#; 2015)

Country	Deals	Agg value ($, million)
SG	131	820
ID	96	188
MY	50	49
PH	28	28
VN	26	35
TH	24	26
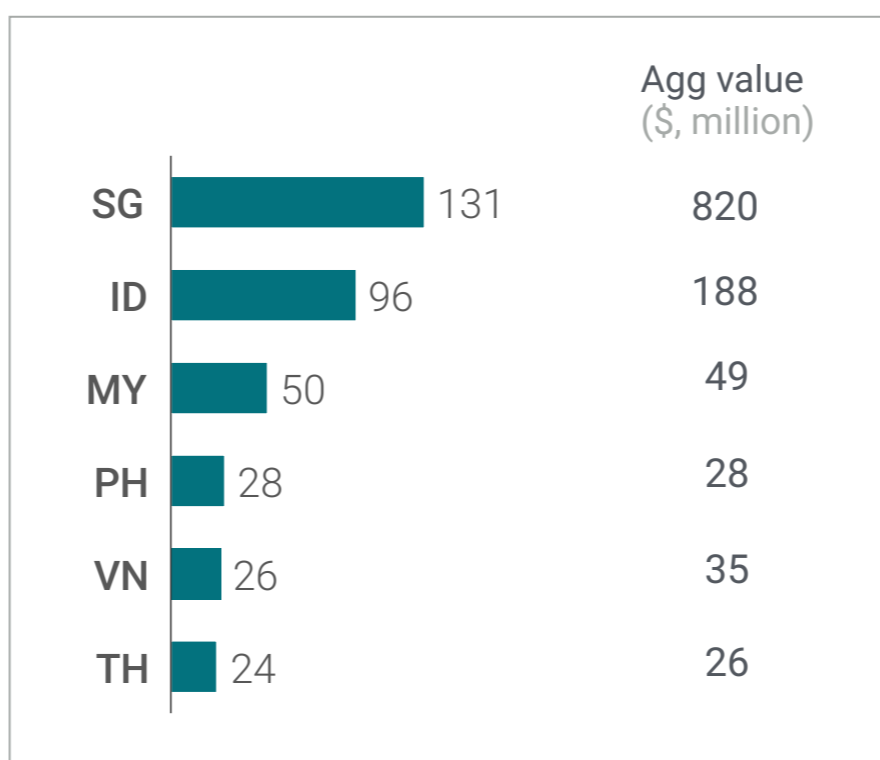
- **SG most active country** w/ ~37% of deal quantity and 72% of deal value
- **SG activity driven by Grabtaxi and PropertyGuru** (~350m and ~ $130m investment respectively)

FUNDING BY SECTOR (%; 2010-2015)

- eCommerce 37%
- Logistics 25%
- Consumer Internet 23%
- Real estate 8%
- Finance 6%
- 1%
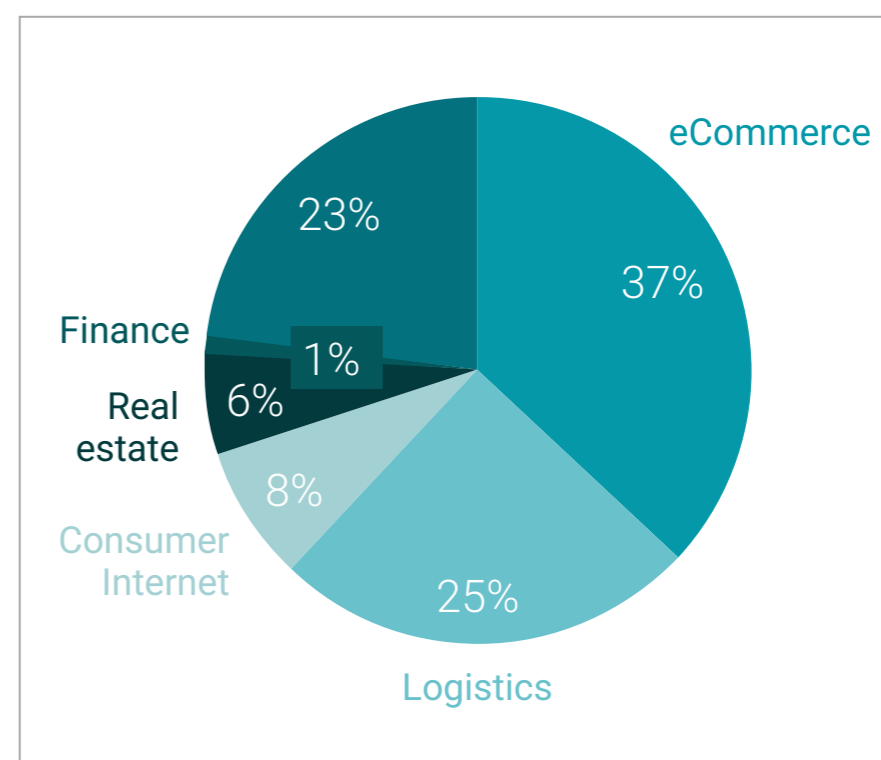
- **eCommerce and Logistic** verticals contribute 61.4% of total investments from 2010 to 2015 because of large investments into Grab and Lazada
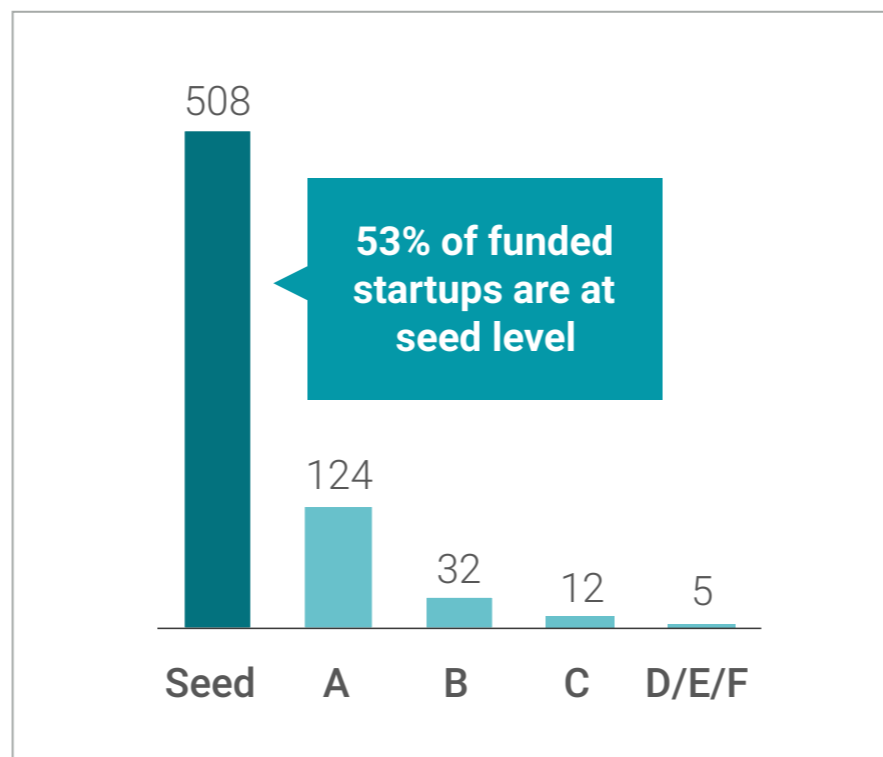
② SEA startups are currently concentrated in SG, ID, and VN; focus mostly on eCommerce
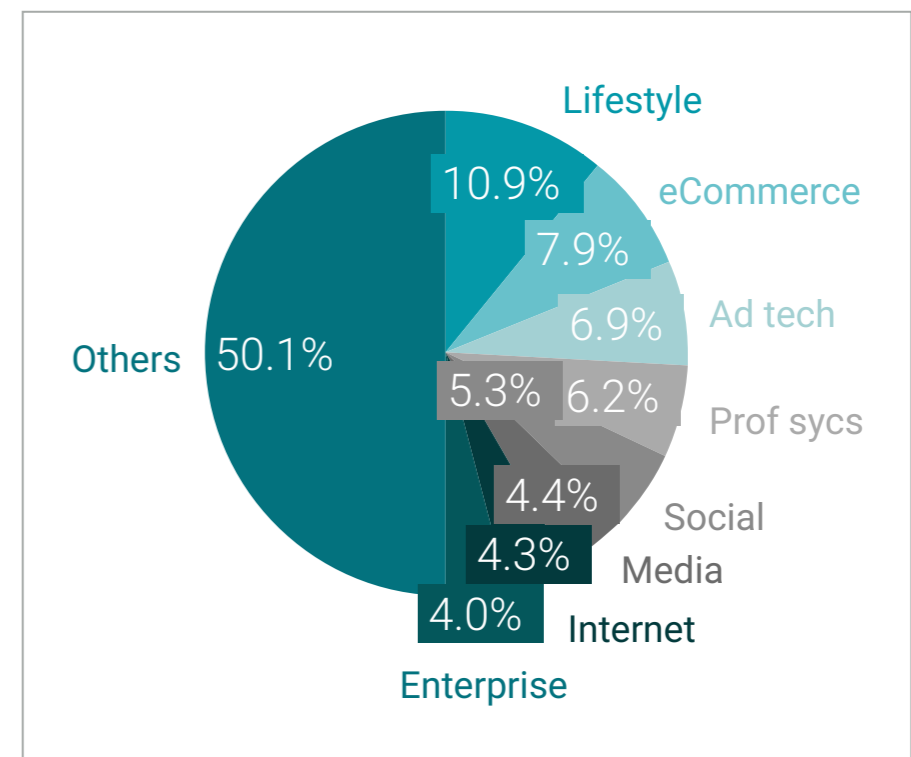
STARTUPS BY COUNTRY (#)

ID — 2,033
SG — 1,850
VN — 1,541 } 80% of total
MY — 759
PH — 385
TH — 358
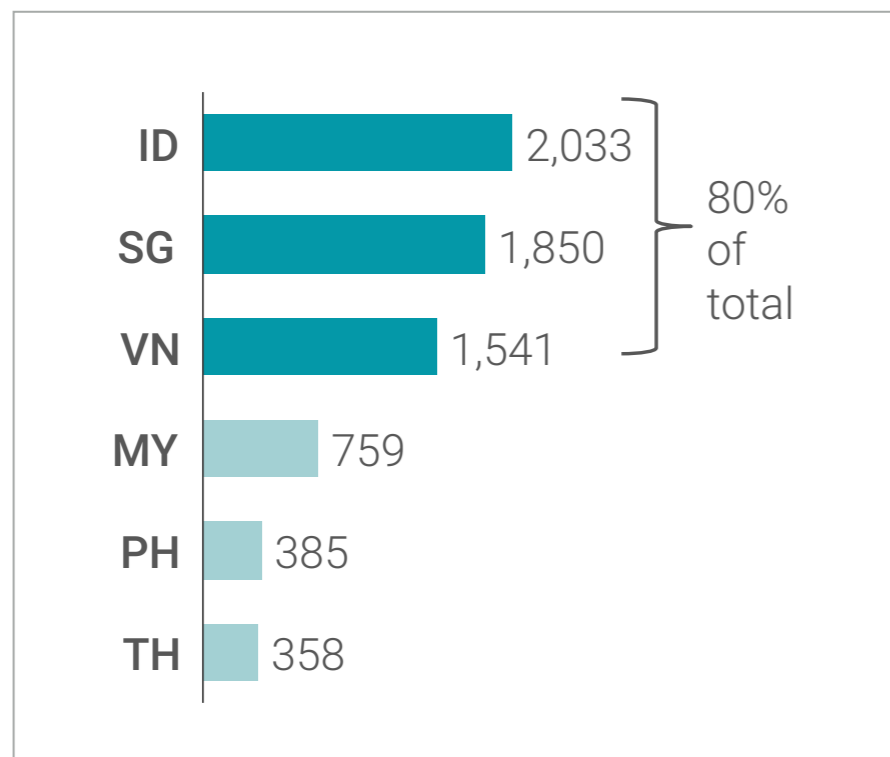
- **Total of 7k startups in region** w/ ~80% in ID, SG, VN
- **4 startups with >$1billion valuation** (Garena; GrabTaxi; Lazada; Razer)

STARTUPS BY STAGES (#)

508 — Seed
124 — A
32 — B
12 — C
5 — D/E/F

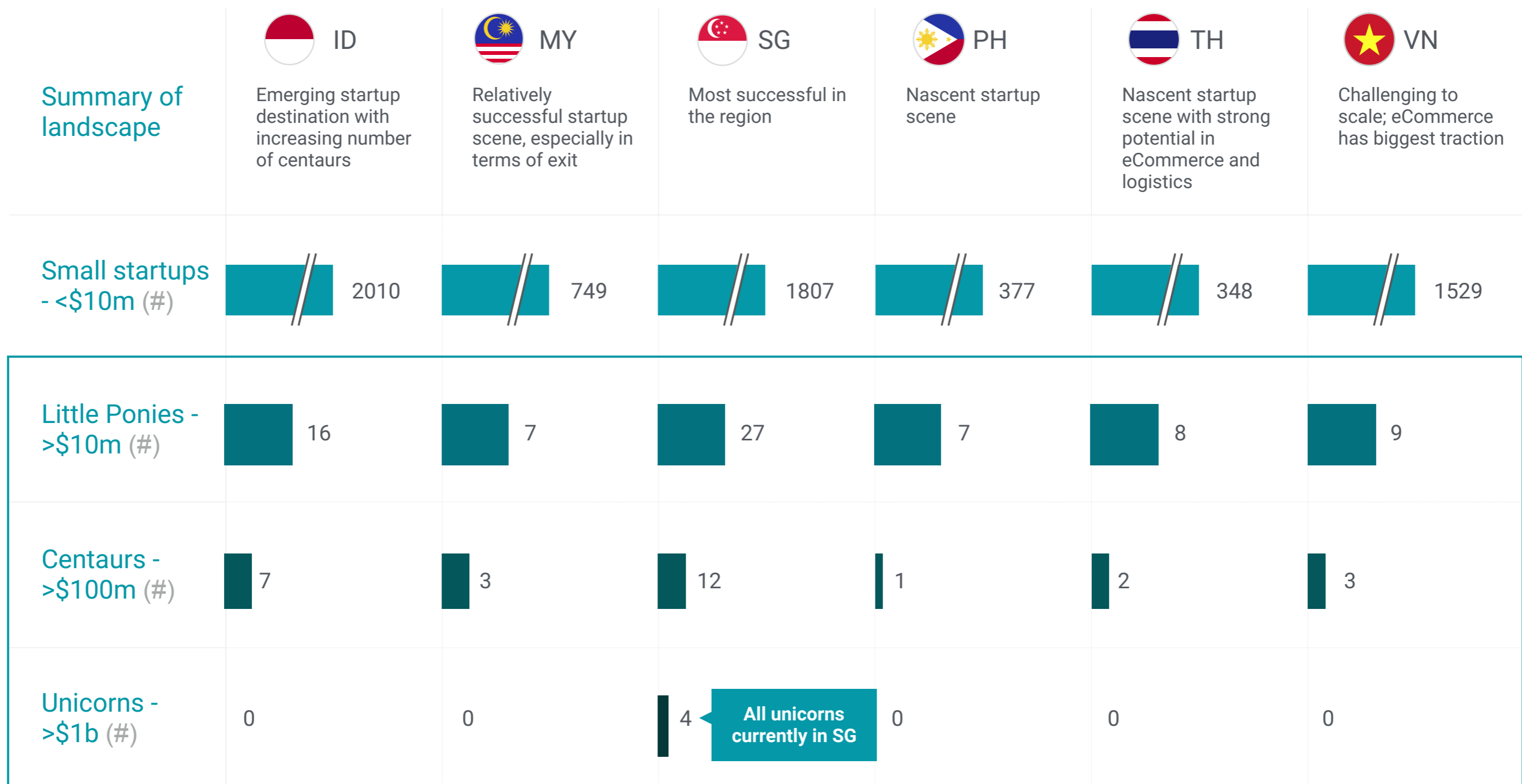**53% of funded startups are at seed level**

- **~681 startups[1]** have received some type of equity funding
- **Type of funding is concentrated at seed level** (exponential drop-off from seed to Series D/E/F)

STARTUPS BY SECTOR (#)

Others 50.1%
Lifestyle 10.9%
eCommerce 7.9%
Ad tech 6.9%
Prof sycs 6.2%
Social Media 5.3%
4.4%
Internet 4.3%
Enterprise 4.0%

- **Highly fragmented split,** with long-tail sectors making up 50% of total
- **Lifestyle and eCommerce** are sectors with the most startups at 18.8%

SG currently most active country for VC; ID and VN have potential to drive significant value creation with appropriate investments

2

Summary of landscape	ID Emerging startup destination with increasing number of centaurs	MY Relatively successful startup scene, especially in terms of exit	SG Most successful in the region	PH Nascent startup scene	TH Nascent startup scene with strong potential in eCommerce and logistics	VN Challenging to scale; eCommerce has biggest traction
Small startups - <$10m (#)	2010	749	1807	377	348	1529
Little Ponies - >$10m (#)	16	7	27	7	8	9
Centaurs - >$100m (#)	7	3	12	1	2	3
Unicorns - >$1b (#)	0	0	4	0	0	0

All unicorns currently in SG

Only ~106 startups (~1.5% of total) have reached a valuation of >$10mn

Agenda

Overview of SEA Internet economy
The SEA internet opportunity
SEA VC and startup landscape
Challenges to overcome

6 big challenges must be overcome in order to make SEA a $200bn internet market (1/2)

CHALLENGE	DESCRIPTION	☐ Details follow

1 Talent / Engineering
- **Limited developer and leadership talent** in the region. Most successful startups have relied on talent from China or U.S, with VCs consistently highlighting the need for strong, senior talent, especially for CXO and senior development roles

2 Funding Capital
- Most funds focused on seed stage investments than in early stage investments; <7% have raised funding post seed
- **Lack of a healthy M&A system** (~70 acquisitions between 2010 and 2015); most large players in SEA build from scratch rather than buy out start-ups

3 Payment mechanisms
- **60-70% of citizens in ID, PH, and VN are "unbanked"**, posing big hurdle for online transactions and increasing dependence on 'Cash on Delivery'
- **Still no scalable e-payment alternative** to bankcards like AliPay in China; which is critical to growth as it is less risky and costly for merchants than offline payment methods

4 Internet infrastructure
- **Low internet penetration** particularly in SEA countries that are archipelagos with populations spread across thousands of islands (e.g., ID and PH)
- All markets except SG have internet speeds lower than the global average (23.3mbps); PH, particularly is the slowest in the world only before Afghanistan

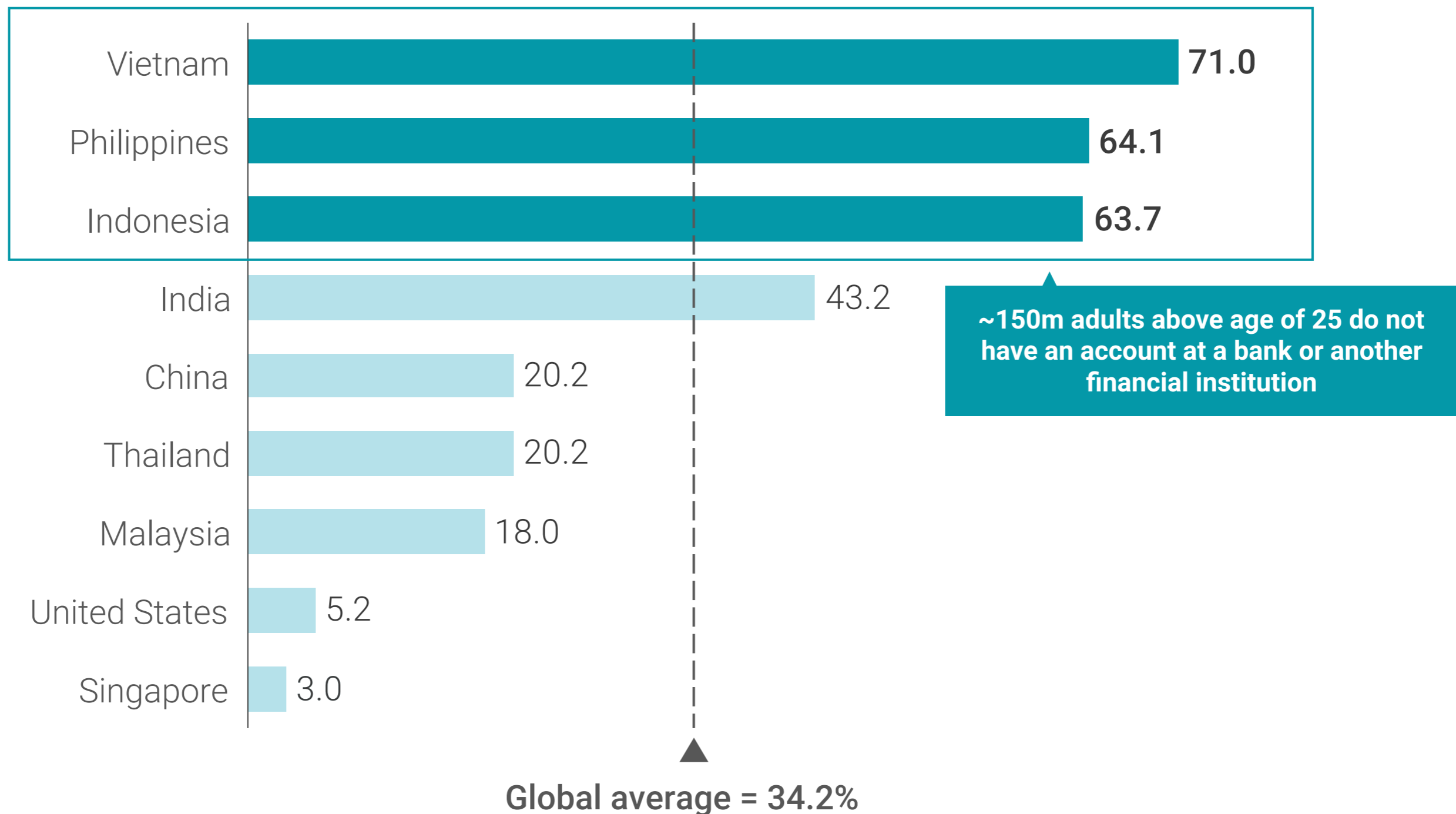# 6 big challenges must be overcome in order to make SEA a $200bn internet market (2/2)

CHALLENGE	DESCRIPTION	☐ Details follow

5 **Logistics Infrastructure**

- **Weak last-mile delivery options** across all markets outside Singapore, especially in a region where 'Cash on Delivery' is a predominant channel of payment
- **Challenging topographical structure**, with 2 major markets being archipelagoes consisting of thousands of islands (e.g., in Indonesia, delivering goods outside of Java can take more than 10 days and sea freight costs can exceed $1,000 for a 20 ft container)

6 **Lack of consumer trust**

- **ID, PH and MY see high levels of fraud and cyber attacks**, leading to consumers to be wary of transacting online; **58% of citizens in SEA have expressed concerns** over financial information being shared online (global average is 49%)
- **Lack of governing entity** at regional level that can fight cybercrime and settle cross-border disputes, which is a major issue in SEA, where cross-border trading is high

② >150m adults 25+ in SEA are unbanked, with >100m existing in Vietnam, Philippines, and Indonesia

Adults over the age of 25 that do not have a bank account (% of total)

Country	Value
Vietnam	**71.0**
Philippines	**64.1**
Indonesia	**63.7**
India	43.2
China	20.2
Thailand	20.2
Malaysia	18.0
United States	5.2
Singapore	3.0

~150m adults above age of 25 do not have an account at a bank or another financial institution

Global average = 34.2%

(2) SEA internet speeds outside Singapore range from 3.6 to 19.8 mbps (vs global average of 23.3 mbps)

Average download speed (Mbps)

Country	Speed
Singapore	**122.4**
Japan	82.1
Korea	59.8
Thailand	**19.8**
Vietnam	**17.7**
Bangladesh	9.9
Cambodia	9.4
India	7.4
Malaysia	**7.3**
Indonesia	**6.7**
Myanmar	6.5
Pakistan	4.0
Philippines	**3.6**
Afghanistan	2.5

■ SEA country

Global average = 23.3 Mbps
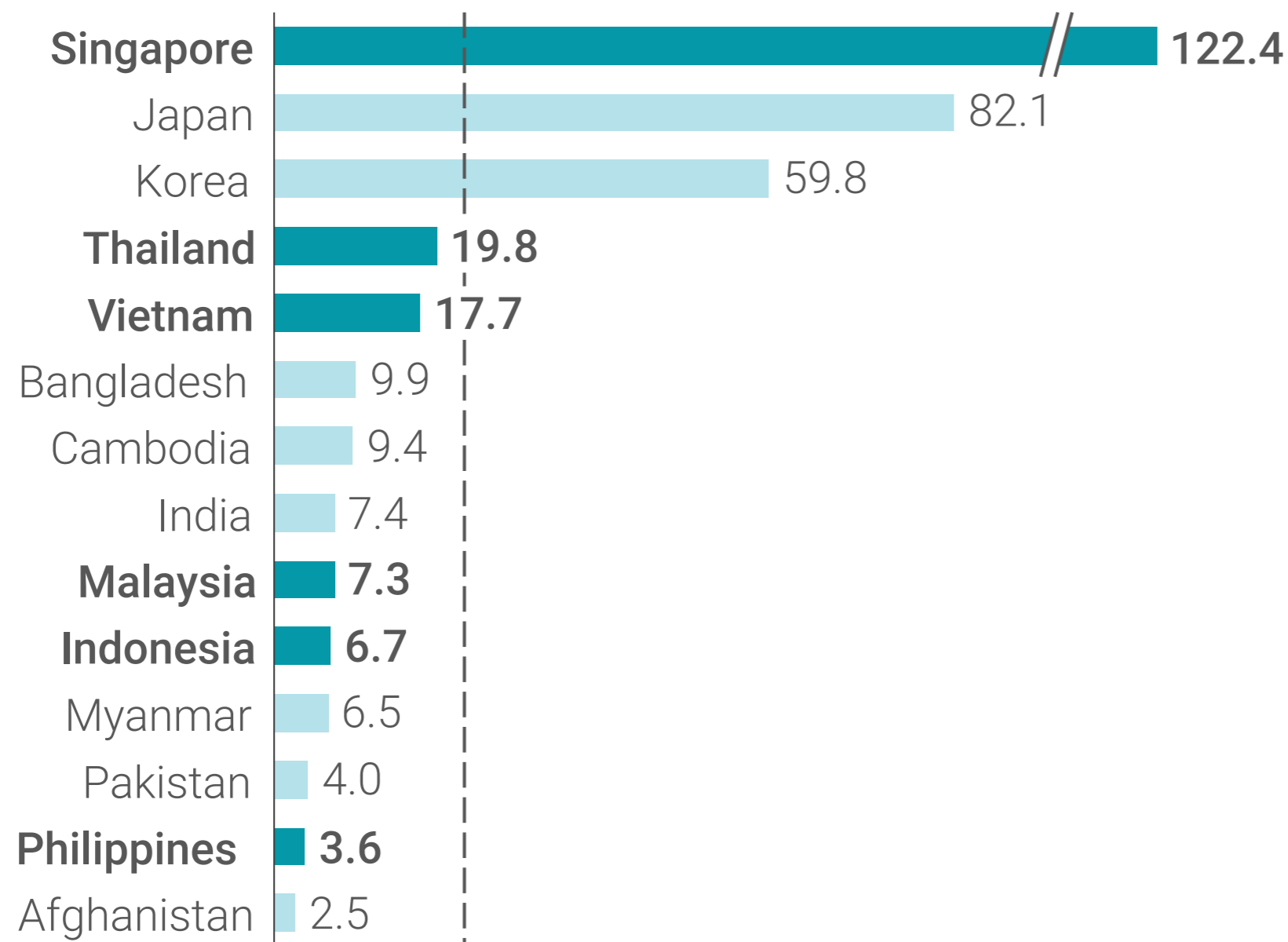
- Although internet speed and penetration is rapidly growing in SEA, all countries except Singapore still have internet speeds that are slower than the global average

- Indonesia and Philippines have slowest internet due to difficult topographical compositions and unfavorable regulatory structures
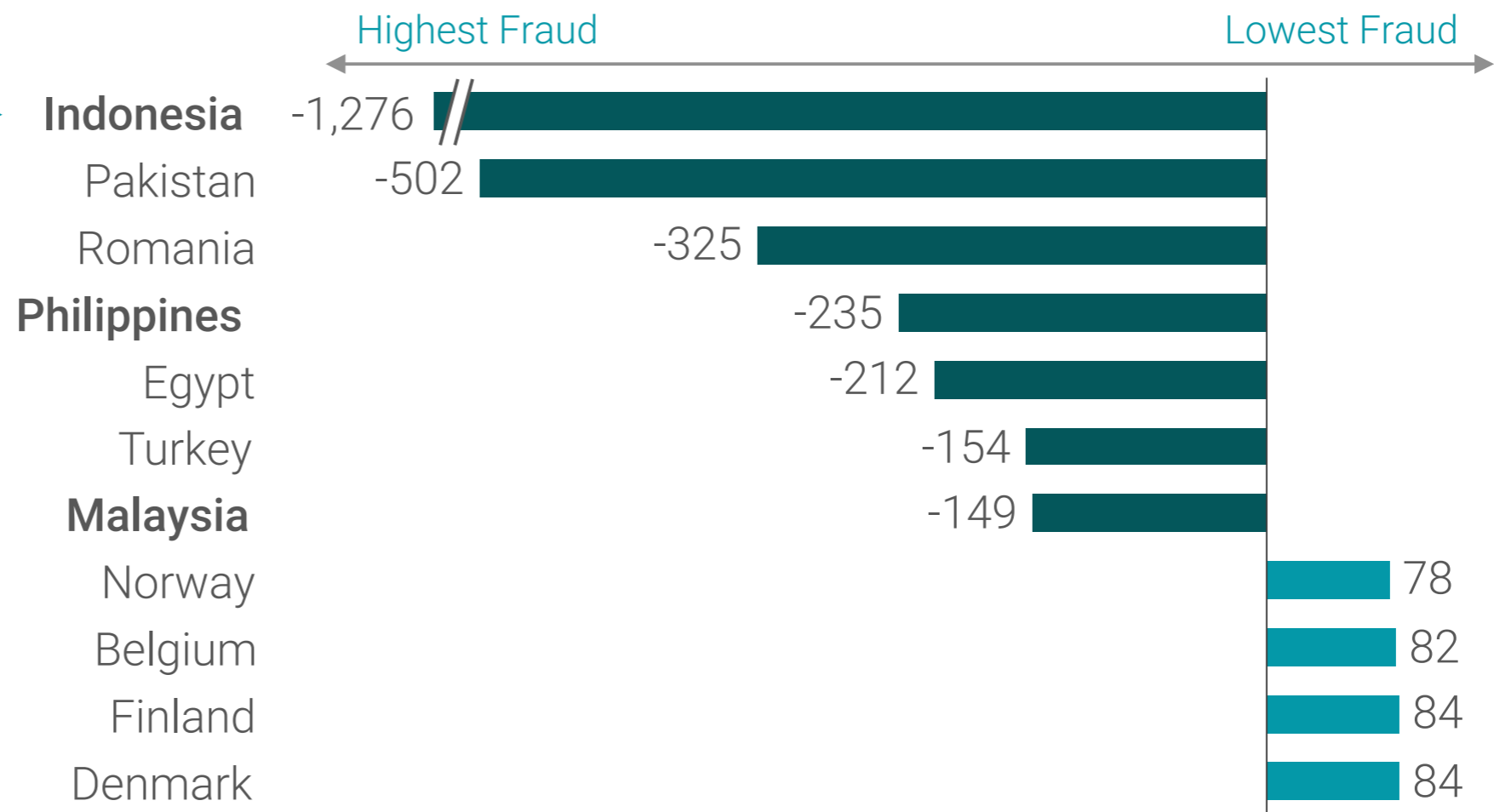
2 Some SEA countries see a significant amount of fraudulent activity, leading to poor consumer sentiment

The countries that experience the most fraudulent activities by buyer's billing address (Fraud Index)

Orders originating in Indonesia are 12x more likely to be fraudulent than global average

Fraud index is based off a "fraud rate" which is calculated by dividing the number of attempted fraud incidents by number of transactions

Highest Fraud   Lowest Fraud

Country	Value
Indonesia	-1,276
Pakistan	-502
Romania	-325
Philippines	-235
Egypt	-212
Turkey	-154
Malaysia	-149
Norway	78
Belgium	82
Finland	84
Denmark	84

Indonesia, Malaysia and Philippines all see a significant amount of fraudulent activity

e-conomy SEA

Unlocking the $200 billion digital opportunity in Southeast Asia

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