E-Commerce & ASEAN Economic Integration

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Introduction

- E-Commerce has becoming increasingly important in ASEAN member countries in recent years

- Whilst the "ASEAN market" is collectively large, there are significant challenges to develop e-commerce in some countries

- The goal of this presentation is to examine the state of e-commerce and its in ASEAN economic integration

- Examine the framework for ASEAN cooperation in the development of e-commerce

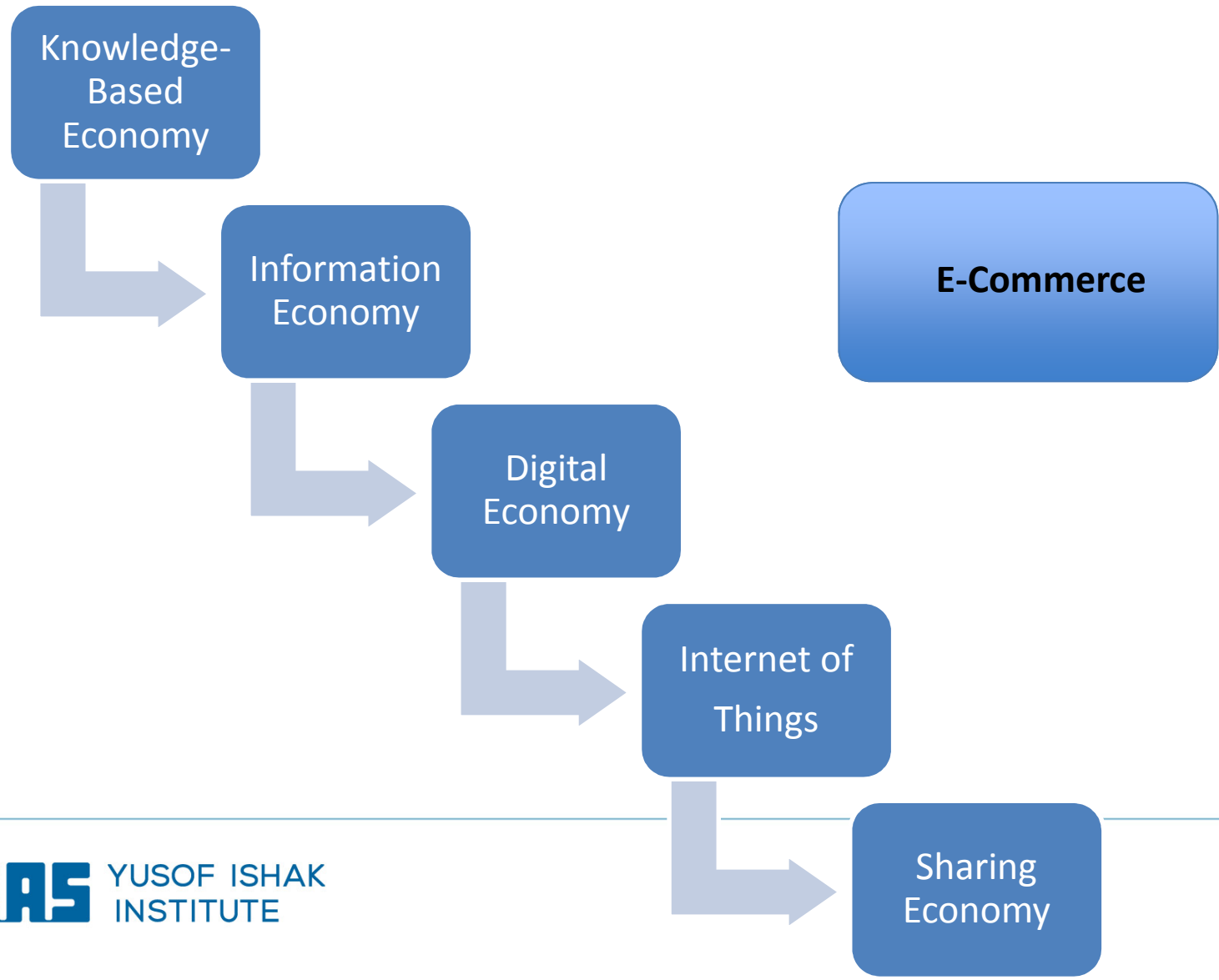- Identify some of the challenges that lies ahead

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Outline of Presentation

- Concepts and Framework

- Measuring E-Commerce

- E-Commerce and ASEAN Economic Integration

- Challenges

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Concepts and Framework

Evolving Discourse on the "New Economy"

Knowledge-Based Economy

Information Economy

Digital Economy

Internet of Things

Sharing Economy

E-Commerce

Evolving Concepts of the "New Economy"

Broad Concepts:

- Knowledge-Based Economy

- Information Economy

- Digital Economy

- Internet of Things

Specific Concepts:

- E-Commerce

- Sharing Economy

Evolving Concepts

"The **knowledge based economy** is an expression coined to describe trends in advanced economies towards <u>greater dependence on knowledge, information and high skill levels</u>, and the increasing need for ready access to all of these by the business and public sectors." (OECD, 2005)

"A distinctive characteristic of the **information economy** is the <u>intensive use, by businesses, of ICT for the collection, storage, processing and transmission of information</u>." (UNCTAD, 2007)

Evolving Concepts …

- "The **digital economy** refers to both the <u>digital access of goods and services</u>, and the <u>use of digital technology to help businesses</u>." (House of Commons, UK, 2016)

- "**Internet of Things** refers to an ecosystem in which <u>applications and services are driven by data collected from devices that sense and interface with the physical world</u>." (OECD, 2016)

- "**Sharing economy**: An economic system based on <u>sharing underused assets or services</u>, for free or for a fee, directly from individuals." (Bostman, 2015)

E-Commerce: Definitions and Concepts

- "The <u>use of the internet and the WWW to transact business</u>" (Laudon & Traver, 2010)

- "Buying and selling using the internet ... all <u>electronically mediated transactions</u> between an organization and any third party it deals with." (Chaffey, 2009)

- "The production, distribution, marketing, sale or delivery of goods and services by <u>electronic means</u>" (WTO)

E-Commerce: Definitions and Concepts

- "An e-commerce transaction is the sale or purchase of goods or services, conducted over <u>computer networks</u> by methods specifically designed for the purpose of <u>receiving or placing of orders</u>." (OECD)

- Computer networks $\approx$ internet

E-Commerce Transactions: Types, Models & Platforms

- Major Types of e-commerce based on types of **participants**:
  - Consumer to Consumer (C2C)
  - Business to Consumer (B2C)
  - Business to Business (B2B)
  - Business to Government (B2G)
- E-Commerce **Models**:
  - C2C, B2C, B2B
  - ++ such as:
    - B2B2C (extended B2C)
    - Brand.com (sub-version of B2C)
- **Platforms**:
  - Sharing, Matching, E-Commerce

Life-Cycle of E-Commerce Models

Classifieds

US:
Craigslist

China:
Ganji, 58

Thailand:
OLX/Kaidee

C2C

US:
eBay

China:
Taobao

Thailand:
Tarad,
WeLoveShopping,
Shopee, LINE Shop

B2C

US:
Amazon (41%),
Shopbop

China:
JD.com

Thailand:
iTruemart, Central
Online, Cdiscount,
Sephora, Lazada
(30%), Zalora

B2B2C

US:
Amazon (59%)

China:
Tmall (100%), JD

Thailand:
Lazada (70%)

Brand.com

US:
Estee Lauder, Dell,
Nike, Under Armour

China:
Lancome, Estee
Lauder, Dell, Nike

Thailand:
Maybelline, Kiehl's,
Estee Lauder, Adidas

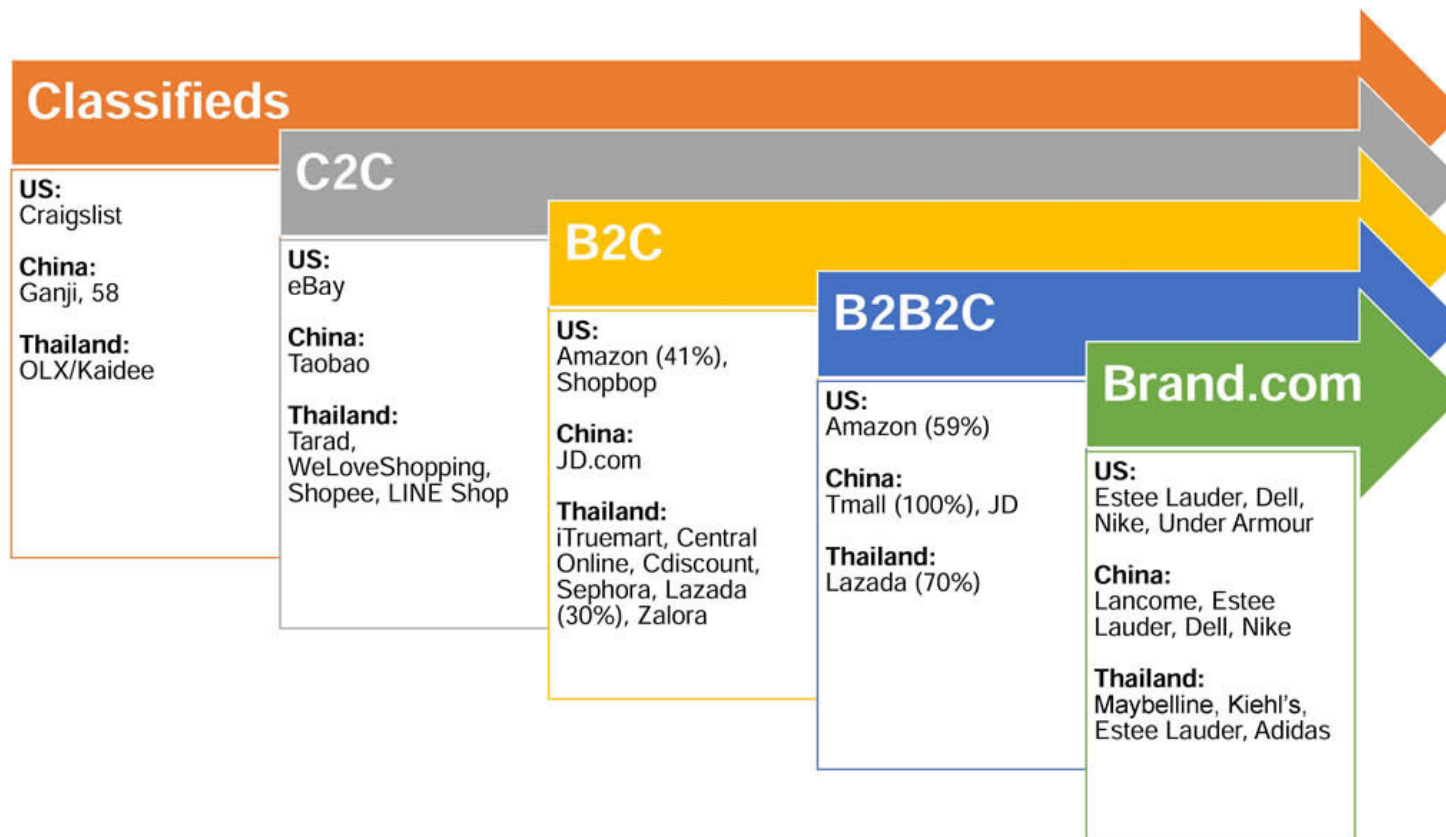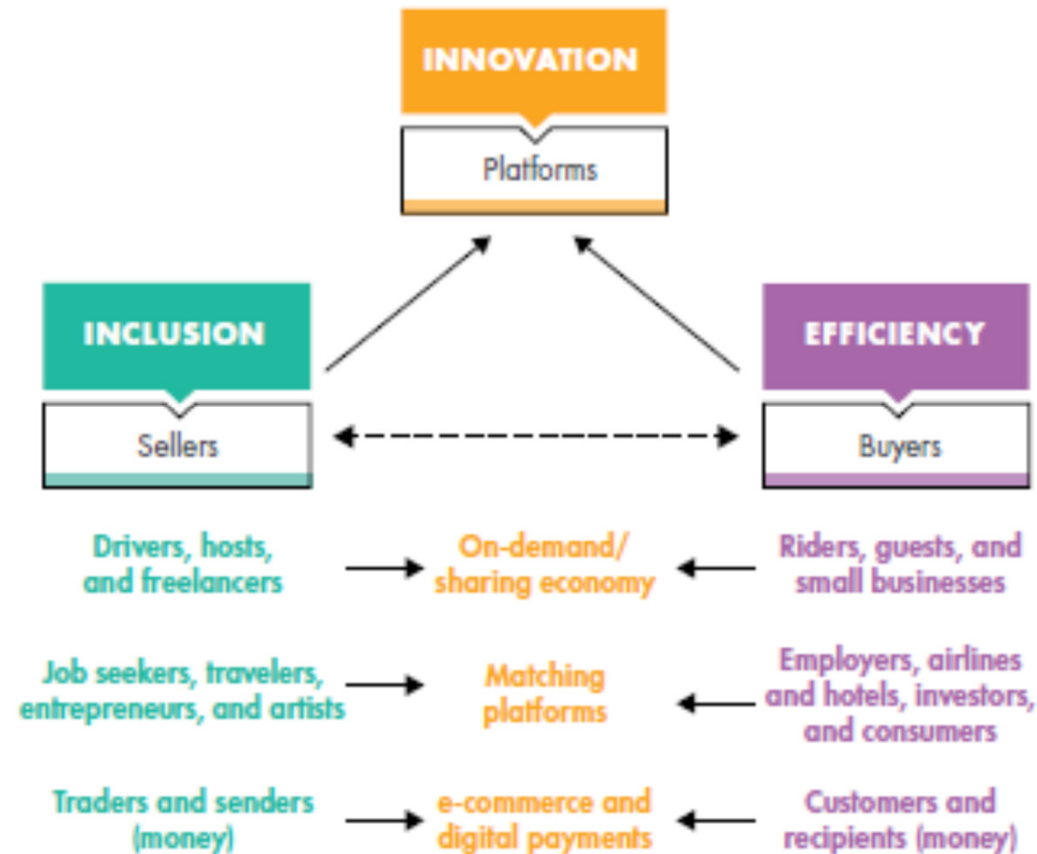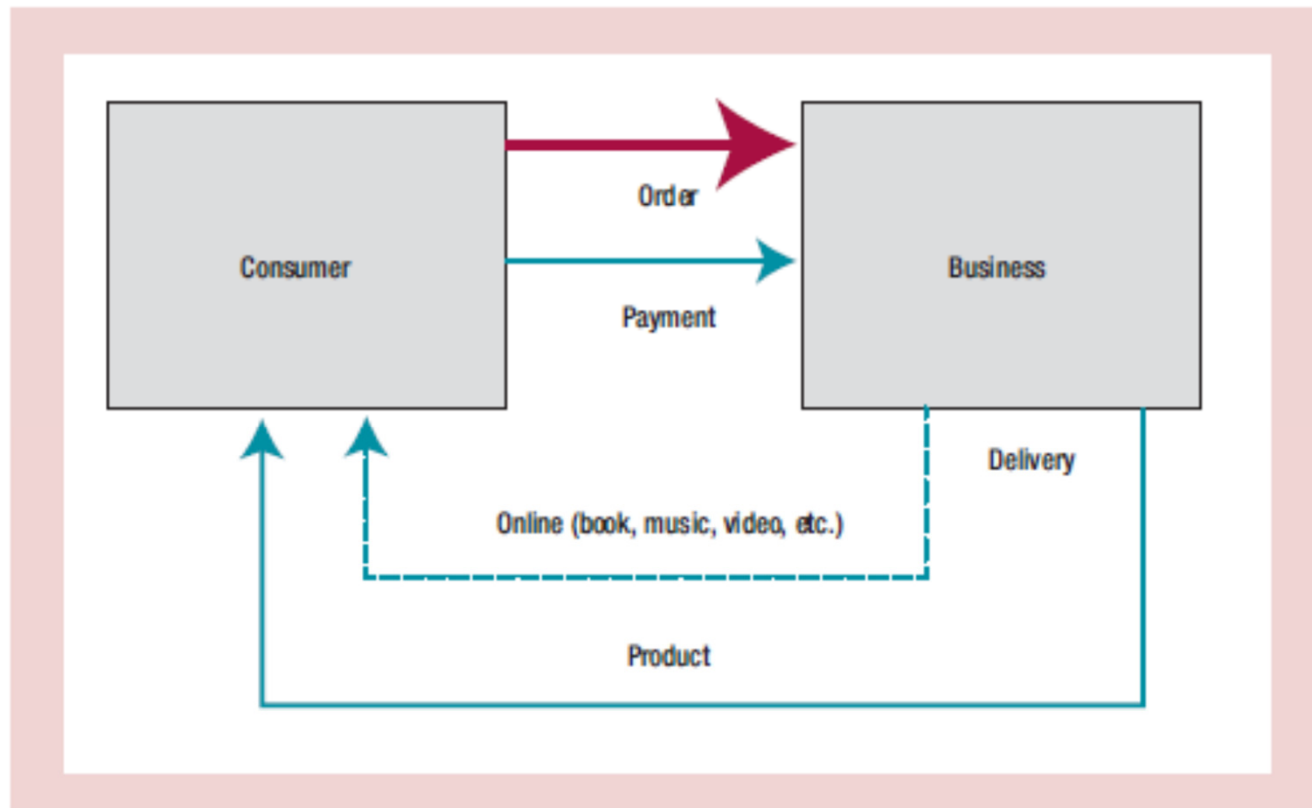Source: http://ecommerceiq.asia/

Figure O.8 Many digital transactions involve all three mechanisms and a two-sided market

INNOVATION

Platforms

INCLUSION

Sellers

EFFICIENCY

Buyers

Drivers, hosts, and freelancers	→ On-demand/ sharing economy ←	Riders, guests, and small businesses
Job seekers, travelers, entrepreneurs, and artists	→ Matching platforms ←	Employers, airlines and hotels, investors, and consumers
Traders and senders (money)	→ e-commerce and digital payments ←	Customers and recipients (money)

Source: WDR 2016 team.

B2C E-Commerce Transaction Process

Source: UNCTAD.

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E-Commerce Ecosystem

Information & Search

Buying & Selling

Payment / Finance

Storage / Warehousing

Delivery / Shipping

Cross-Border Transaction Costs

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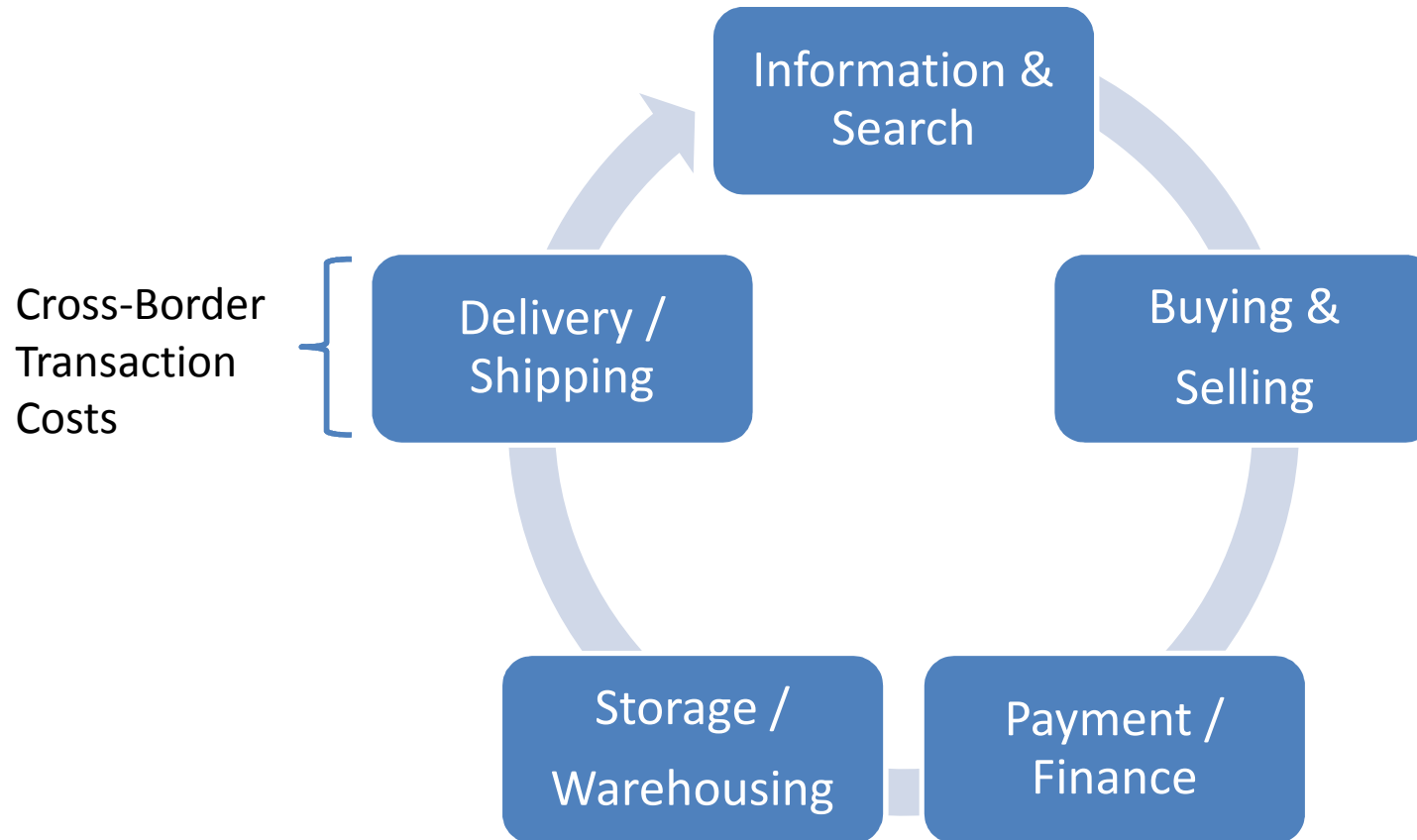
Drivers

- **Demand Drivers: Consumers / Firms / Buyers**
  - Preferences
  - Income
  - Knowledge / Capacity / Access
- **Supply Drivers: Sellers**
  - Knowledge / Capacity / Access
  - Technology – Devices, Apps, Platforms
- **Infrastructure:**
  - ICT, Transport, Storage, Payment and Financing
- **Regulation & Policy:**
  - Market Entry and Pricing, Security and Privacy, Competition Law, Taxation, Customs Procedures

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Measuring E-Commerce
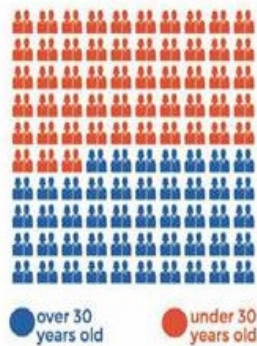
How to "measure" E-Commerce?

- E-Commerce transactions – Utilization and Sales
- Demand – demographics, income per capita, internet usage & behaviour
- Supply – firms (sellers/suppliers) usage of ICT
- Infrastructure – broadband & mobile broadband
- Regulation & Policy – entry/exit, pricing, customs, taxes

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# State of ASEAN E-Commerce Statistics

- E-Commerce sales:
  - Data availability is problem esp. B2B compared to B2C
  - Plenty of data but in private domain and fragmented (Alibaba, Amazon, Lazada, E-Bay, Facebook, Banks, VISA, AMEX etc)
  - National accounting system – captured but not as "e-commerce"
  - Sample survey estimates – AT Kearney, UBS, e-Marketers etc.
  - Cross-border e-commerce data scarce – focus on OECD countries (UNCTAD, 2016)
- ICT statistics
  - Infrastructure and usage
  - Better data – ITU, OECD, World Bank
- Drivers – demographics and income
  - Good data

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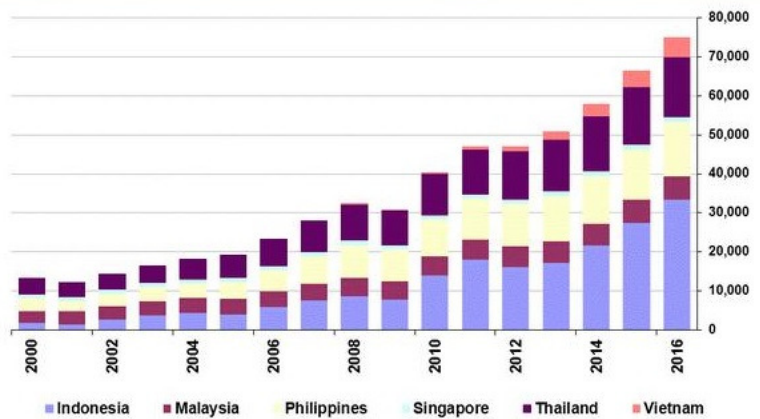
ASEAN E-Commerce: Snapshot

Robust Economic Growth

630 mil pop

480 mil internet users

700 mil mobile users

More than **50%** of ASEAN's population is under 30 years old (compared to 39% of East Asia's and 34% of Europe's)

- over 30 years old
- under 30 years old
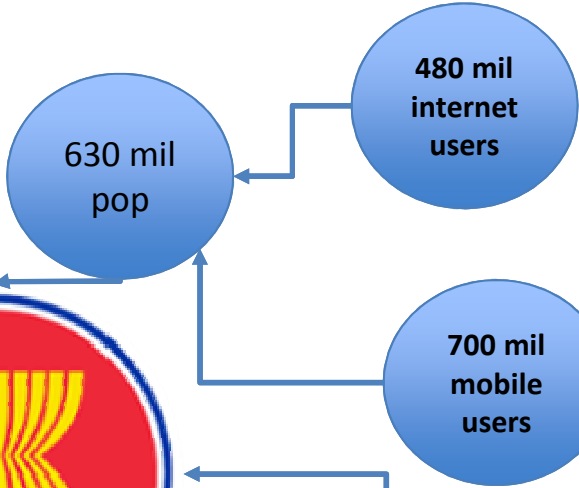
ASEAN: Rise of the middle class

Indonesia | Malaysia | Philippines | Singapore | Thailand | Vietnam

No of households earning >US$10K a year. Source: EIU.

6.6 4.7

ASEAN

Largest Markets:
- Indonesia
- Thailand
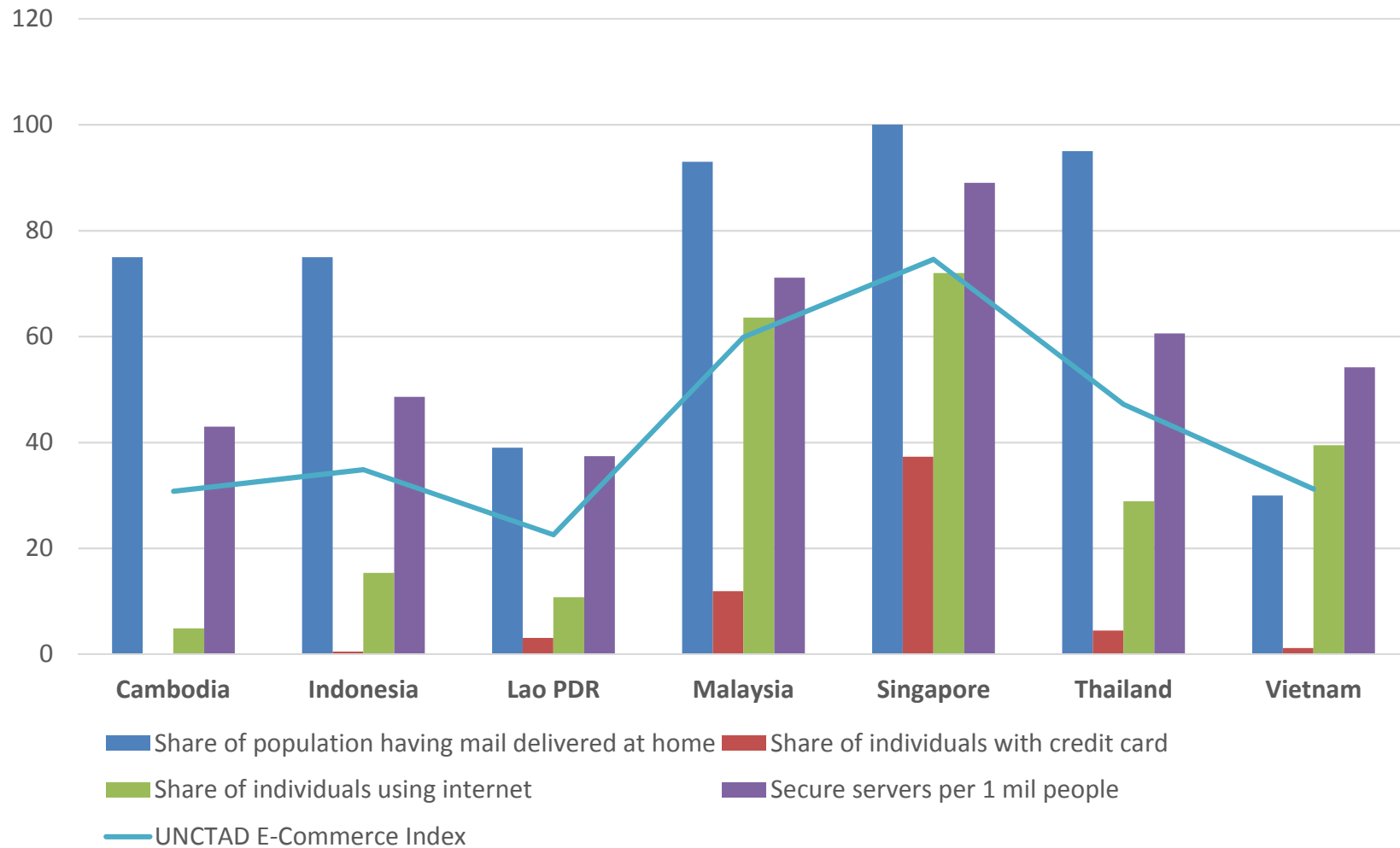- Singapore
- Malaysia
- Vietnam

Market Size of E-Commerce in ASEAN Countries

- Existing estimates on the actual and potential size of e-commerce in ASEAN countries show lack of consensus

- Differences in estimation methodologies

- Most agree that e-commerce (B2C) as a percentage of retail sales is low (except for Singapore, < 1%)

- B2B e-commerce is even more difficult to estimate (different methodology)

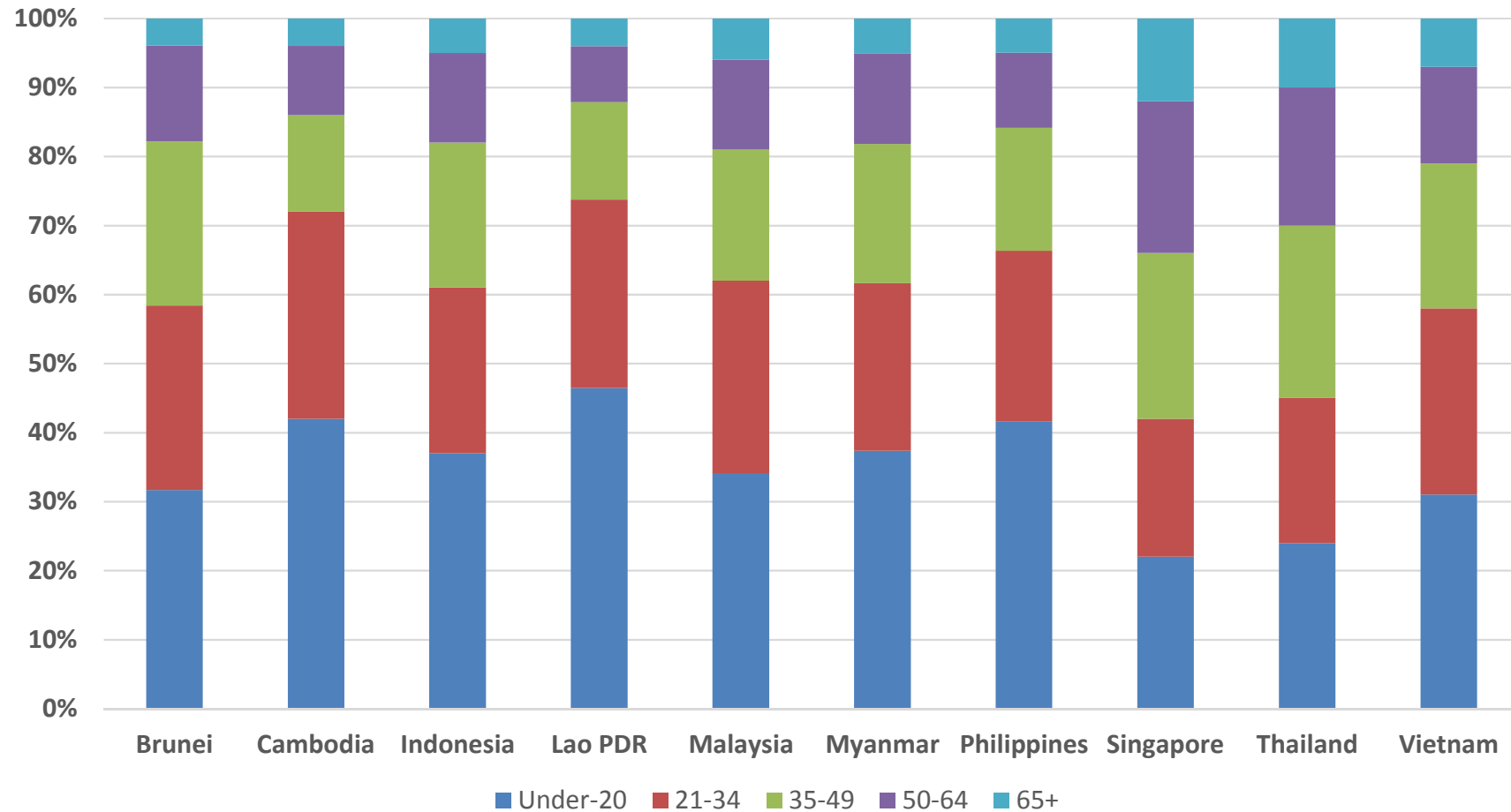- Cross-border e-commerce transactions

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Size of E-Commerce Market in ASEAN Countries

	Retail E-Commerce 2013 (USD, bil) [AT Kearney]	Theoretical Potential (USD, bil) [AT Kearney]	Online Sales 2014 (USD, bil) [Euromonitor]	E-Commerce Retail Sales 2013 (USD, bil) [UBS]	Retail E-Commerce Sales 2016 (USD, bil) [Statistica]
Brunei					
Cambodia					
Indonesia	1.3	25-30	1.1	0.10	5.29
Lao PDR					
Malaysia	1.3	10-15	0.496	0.20	1.97
Myanmar					
Philippines	1.0	8-12		0.10	0.05
Singapore	1.7	7-10	0.86	0.30	2.13
Thailand	0.9	12-15	1.1	0.19	2.89
Vietnam	0.8	5-7		0.08	1.71

UNCTAD's B2C E-Commerce Index, 2016

- Share of population having mail delivered at home
- Share of individuals with credit card
- Share of individuals using internet
- Secure servers per 1 mil people
- UNCTAD E-Commerce Index

Source: Information Economy Report 2015, UNCTAD

Age Profile of Population in ASEAN Countries

Legend: Under-20 | 21-34 | 35-49 | 50-64 | 65+

Source: UN

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Percent of firms having their own Web site

All Countries	44.2	
High income: OECD	77.5	
Cambodia (2016)	24.2	
Indonesia (2015)	20.5	
Lao PDR (2016)	12.8	
Malaysia (2015)	31.5	
Myanmar (2014)	14.8	
Philippines (2015)	52.4	
Thailand (2016)	45.5	
Vietnam (2015)	48.6	

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Source: World Bank
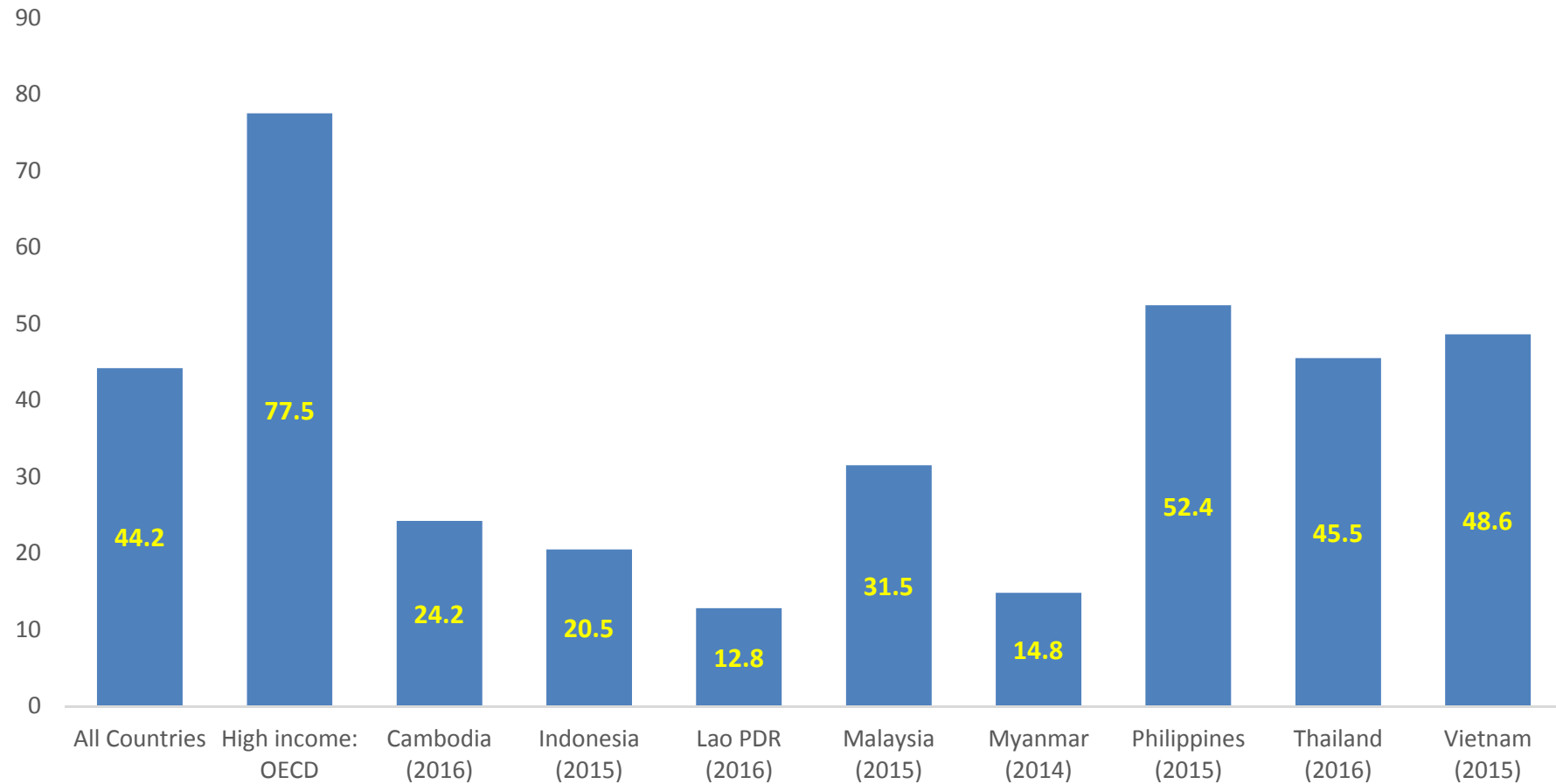
Percent of firms using e-mail to interact with clients/suppliers

All Countries	72.1
High income: OECD	94.4
Cambodia (2016)	57.5
Indonesia (2015)	30.6
Lao PDR (2016)	24.3
Malaysia (2015)	46.2
Myanmar (2014)	30.1
Philippines (2015)	80.4
Thailand (2016)	52.9
Vietnam (2015)	91.5

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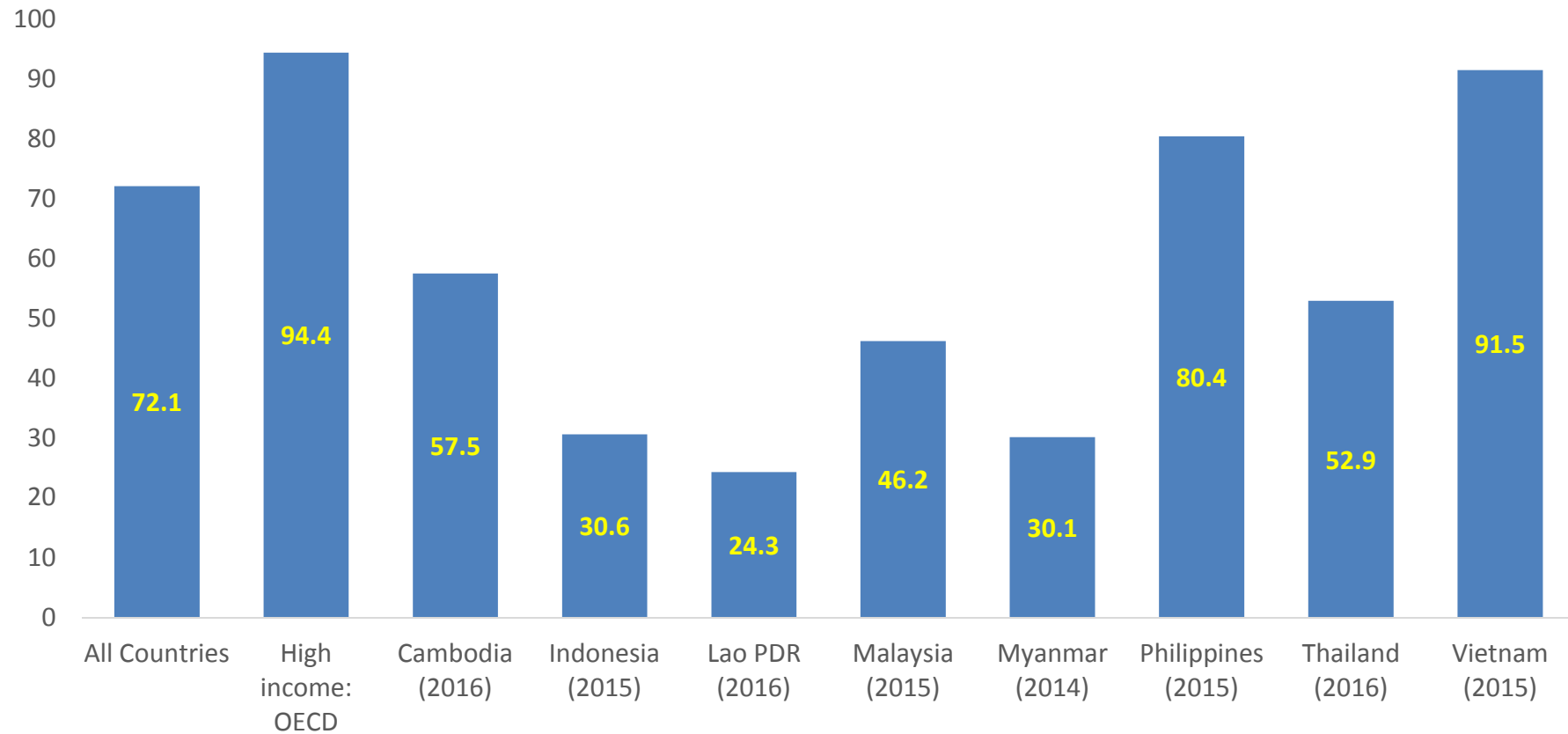
ICT & E-Commerce: ASEAN Manufacturing Microdata

- ERIA-ISEAS SME Survey, 2015-2016
- 1,539 firms from selected ASEAN countries: Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Thailand and Vietnam
- What role does ICT and e-commerce play in exporting?
- Small and large firms use ICT differently:
  - Small firms: website (marketing)
  - Large firms: procurement (outsourcing)
- Sectoral differences:
  - Food and beverage: procurement
  - Textiles: online payment

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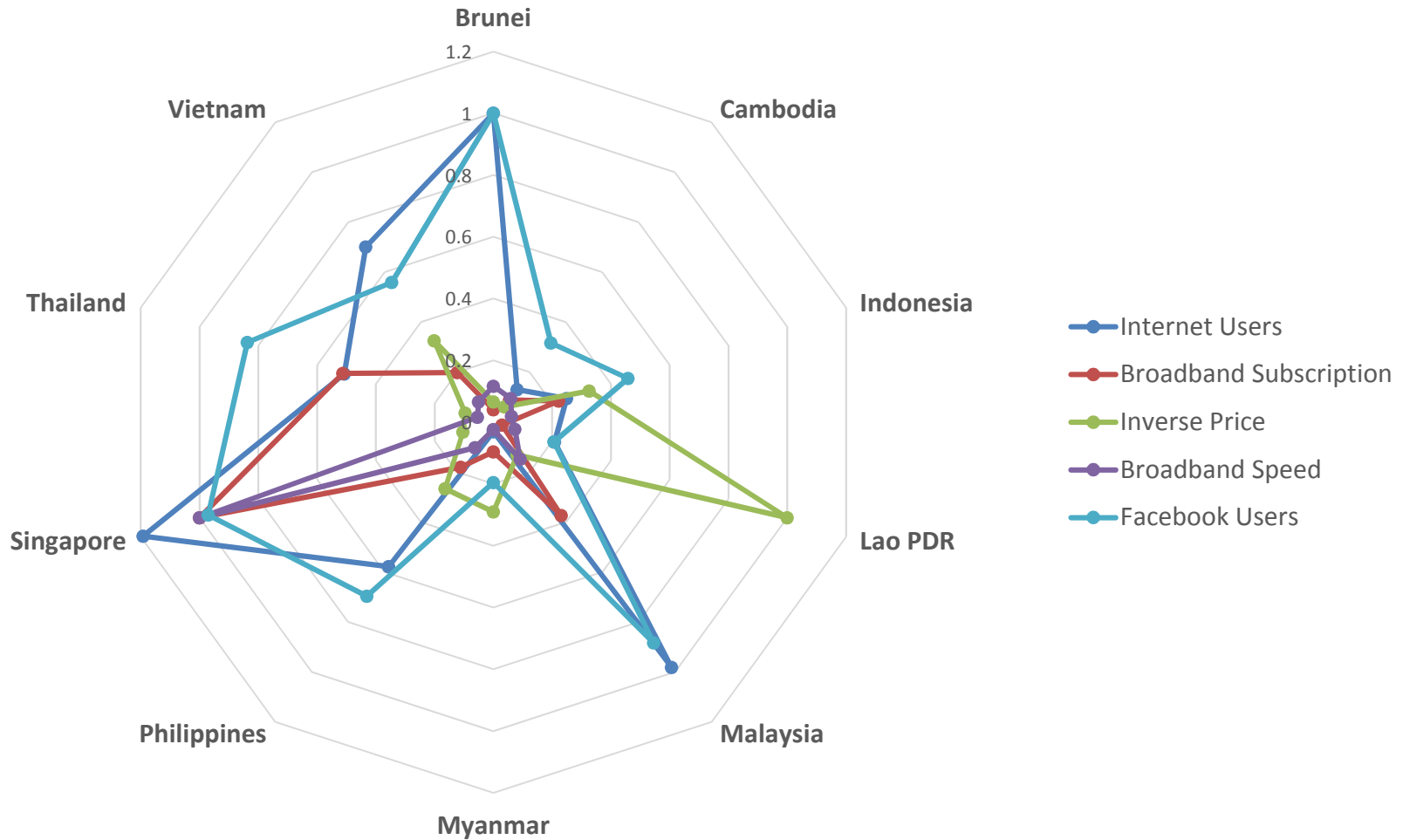
E-Commerce & ICT Infrastructure
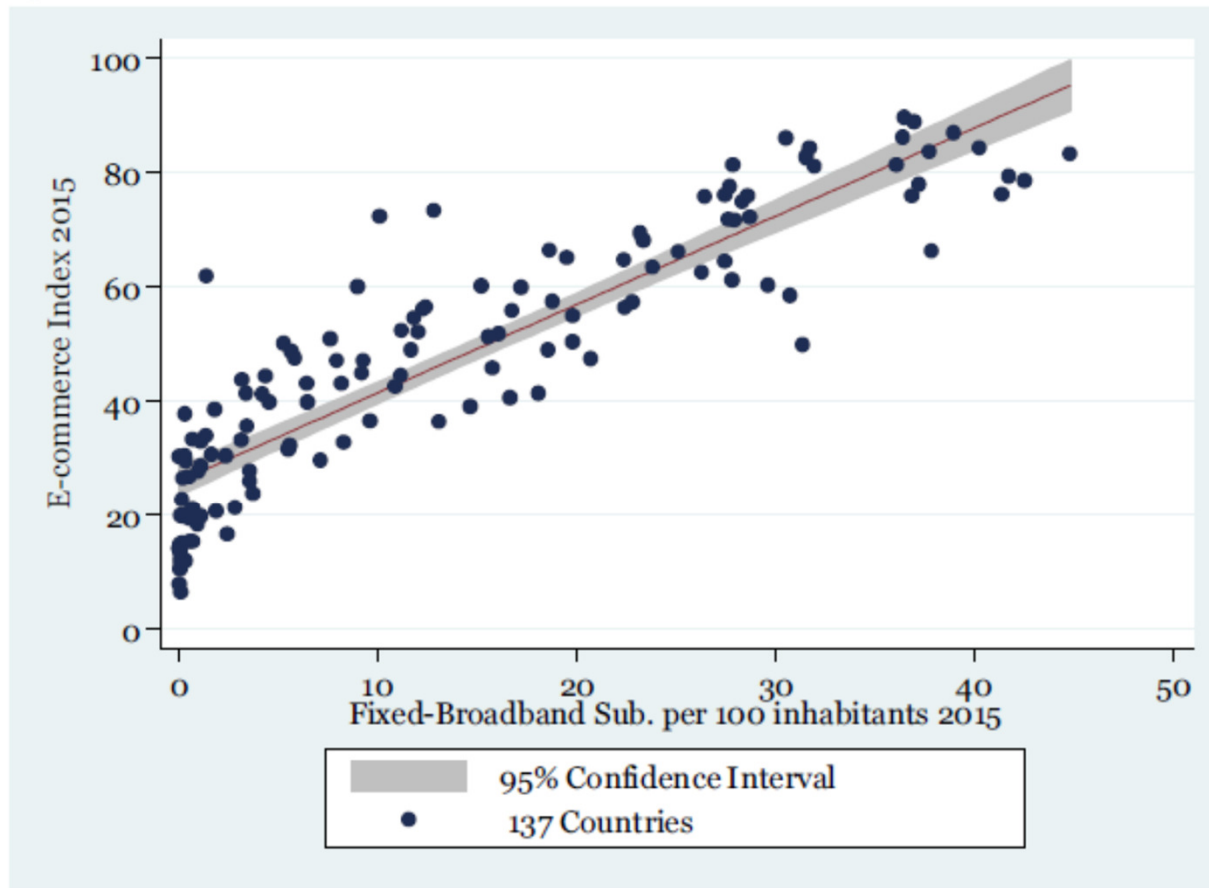
Sources: ESCAP estimates; UNCTAD B2C E-Commerce Index 2016; and fixed broadband per 100 sourced from ITU.
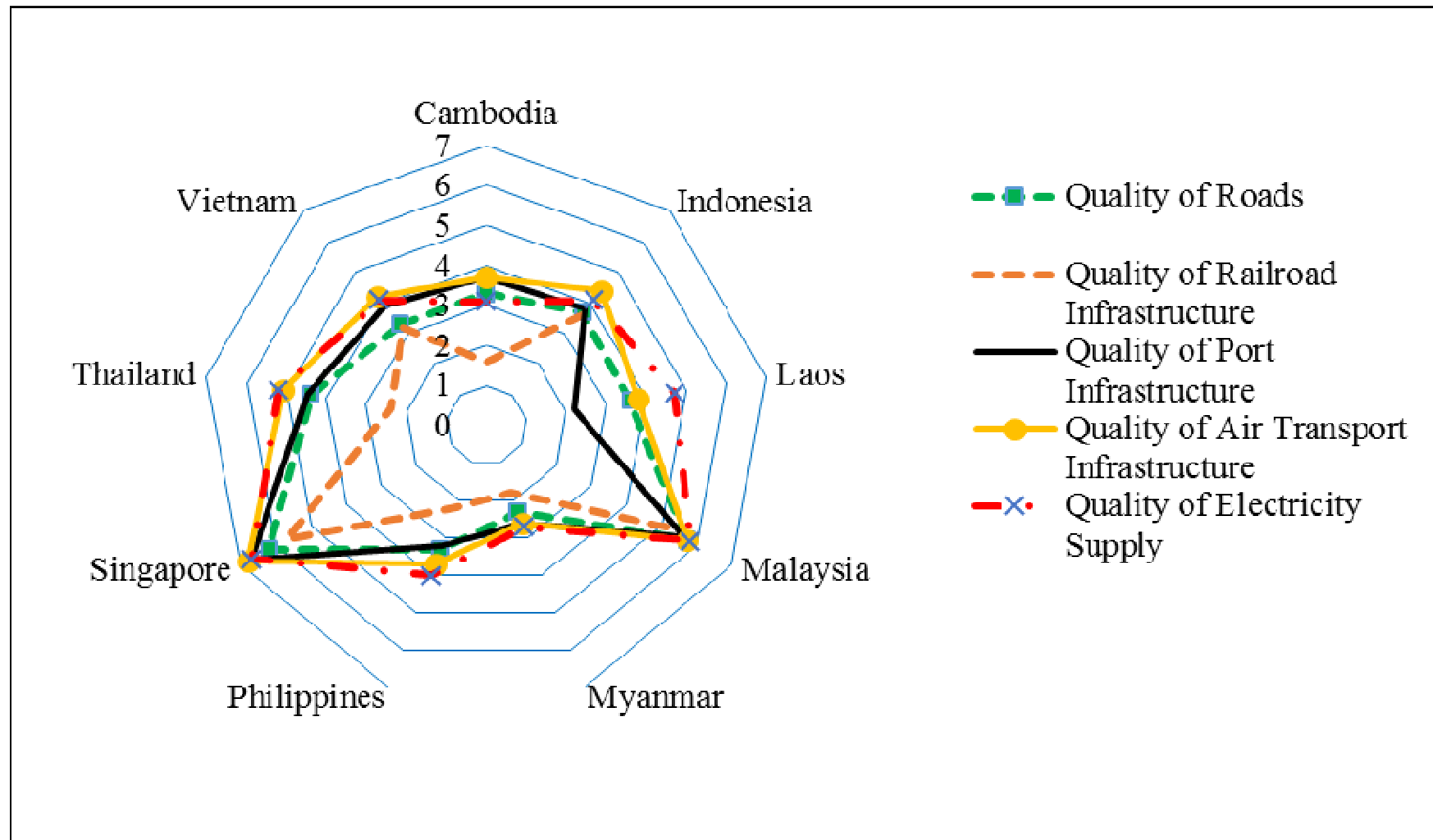
ICT Infrastructure – Penetration and Usage

Country	% of Individuals Using Internet	Mobile Broadband Subscriptions per 100 Capita	Monthly Mobile Subscription Cost (US$)	Mobile Internet Download Speed Mbit/s (3G+LTE)	Facebook Users, mil (% of Internet Users)
Brunei	68.8	6.3	28 (1.5GB)	1.97	0.27 (67.5%)
Cambodia	9.0	14.0	30 (1.5GB)	1.60	3.30 (21.4%)
Indonesia	17.1	34.7	7.6 (2GB)	1.04	78.0 (30.9%)
Lao PDR	14.3	4.6	6.2 (5GB)	1.24	0.96 (13.9%)
Malaysia	67.5	58.3	9.5 (1GB)	2.48	18.0 (59.6%)
Myanmar	2.1	14.9	10.7 (2.5GB)	0.4	7.10 (13.2%)
Philippines	39.7	28.0	7 (1.5GB)	1.72	47.0 (47.0%)
Singapore	82.0	156.1	24 (2GB)	16.85	3.6 (65.5%)
Thailand	34.9	79.9	9.7 (0.75GB)	0.91	38 (56.5%)
Vietnam	48.3	31.0	5.7 (1.5GB)	1.38	35 (37.8%)

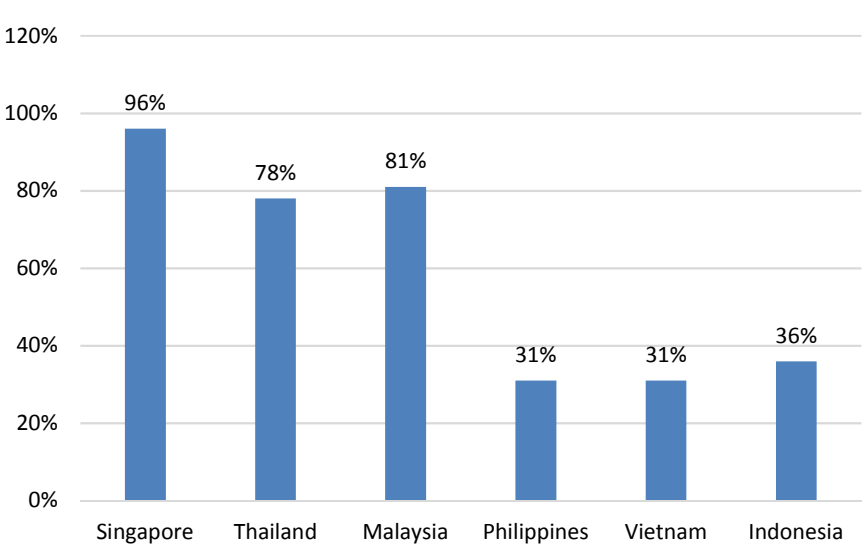Sources: UN and ITU, The State of Broadband 2015, ISOC & TPRC (2015) Unleashing the Potential of the Internet for ASEAN Economies, Akamai State of Internet Q3 2015, http://www.internetsociety.org/, http://www.internetworldstats.com/asia.htm

ICT Infrastructure Quality

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Infrastructure Quality in ASEAN Countries

Notes: Index 1 (extremely underdeveloped) to 7 (extensive and efficient) for the Quality of Roads, Railroad, Port and Air Transport Infrastructure.
Index 1 (extremely unreliable) to 7 (extremely reliable) for the Quality of Electricity
Data for Brunei is not available; Railroad infrastructure data is not available for Laos

Payment Mechanisms

Percentage of adult population with bank account (age 15+), 2014

Singapore 96%, Thailand 78%, Malaysia 81%, Philippines 31%, Vietnam 31%, Indonesia 36%

Source: Global Findex, World Bank

Online shoppers using online payments, 2013

Singapore 50%, Thailand 11%, Malaysia 5%, Indonesia 4%, Philippines 3%, Vietnam 2%

Source: AT Kearney

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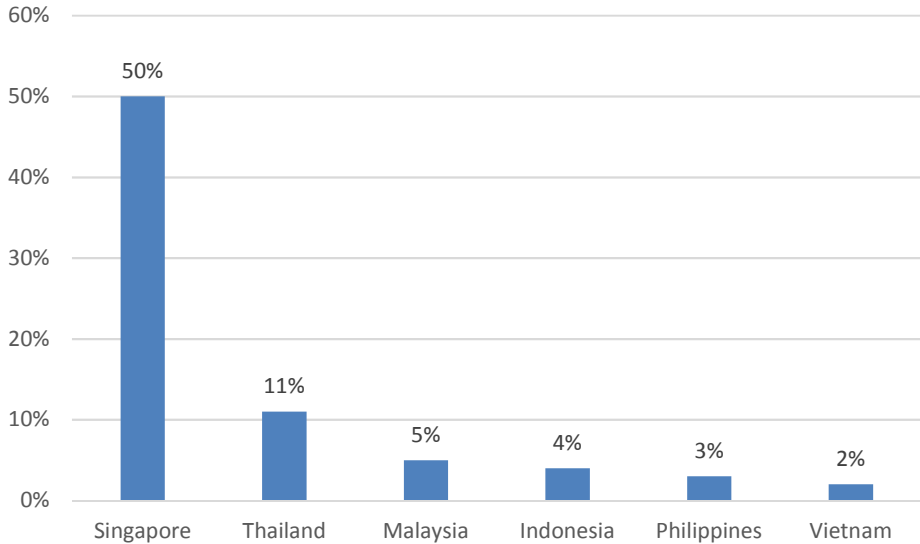
Regulation & Policy: E-Commerce Law

Table 1.	Status of e-commerce law harmonization in ASEAN as of March 2013					
Member Country	**Electronic Transactions**	**Privacy**	**Cybercrime**	**Consumer Protection**	**Content Regulation**	**Domain Names**
Brunei Darussalam	Enacted	None	Enacted	Partial	Enacted	Enacted
Cambodia	Draft	None	Draft	None	Draft	Enacted
Indonesia	Enacted	Partial	Enacted	Partial	Enacted	Enacted
Lao People's Democratic Republic	Enacted	None	None	Draft	Enacted	Partial
Malaysia	Enacted	Enacted	Enacted	Enacted	Enacted	Enacted
Myanmar	Enacted	None	Enacted	Enacted	Enacted	Enacted
Philippines	Enacted	Enacted	Enacted	Enacted	None	Enacted
Singapore	Enacted	Enacted	Enacted	Enacted	Enacted	Enacted
Thailand	Enacted	Partial	Enacted	Enacted	Partial	Partial
Viet Nam	Enacted	Partial	Enacted	Enacted	Enacted	Enacted

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Source: UNCTAD

Cross-Border Regulations

- Inconsistent and time-consuming custom procedures
 - The total customs value of a $100 dress purchased from another ASEAN country
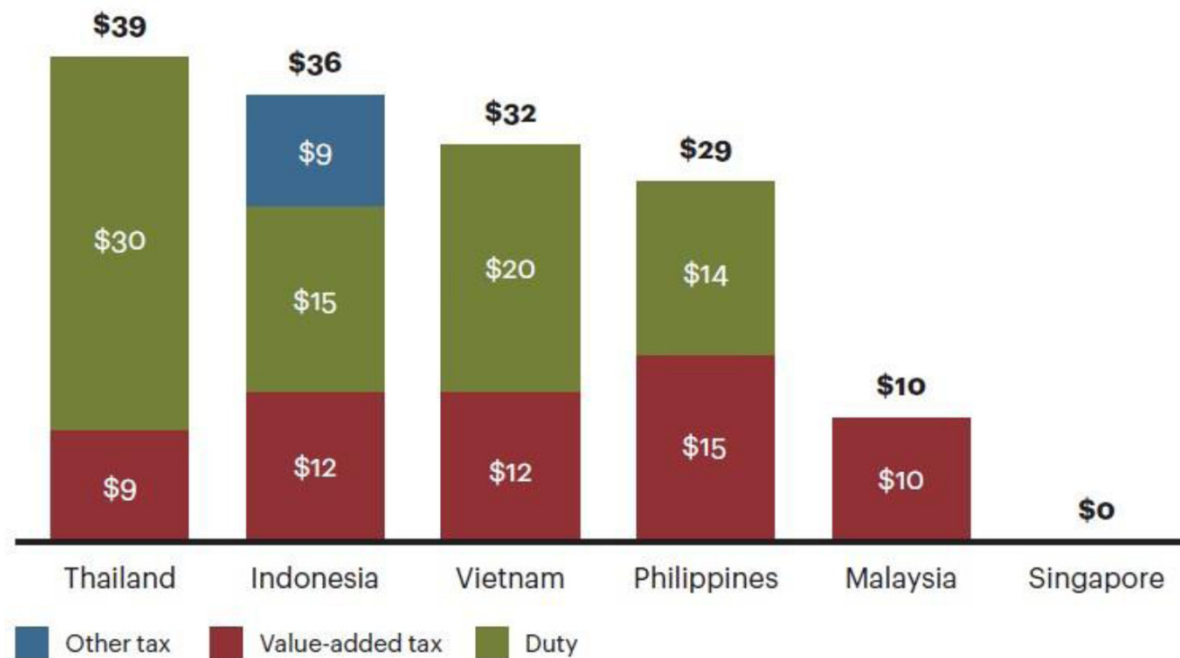
Source: http://unctad.org/meetings/en/Presentation/CII_EM5_P_BYuwono_en.pdf

ASEAN Economic Integration and E-Commerce

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Framework for E-Commerce and ASEAN Economic Integration

- What role does e-commerce play in ASEAN economic integration?

- Trade:
  - Intra-ASEAN Trade

    (cross-border trade)
  - Inter-ASEAN Trade

    (global production networks)

- Competitiveness:
  - Productivity
  - Market Access & Share

Figure O.11 Vietnamese firms using e-commerce have higher TFP growth, 2007–12
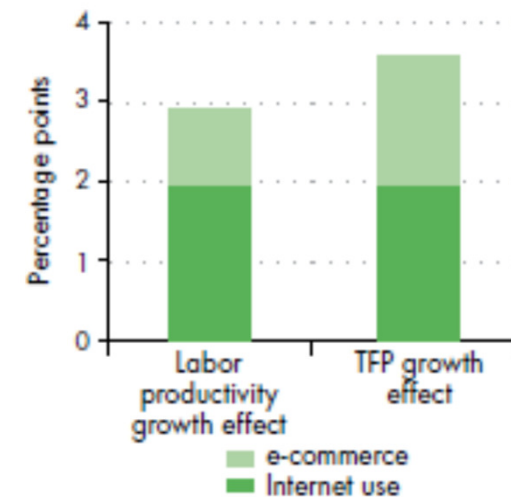
Source: Nguyen and Schiffbauer 2015 for the 2016 WDR. Data at http://bit.do/WDR2016-FigO_11.

Note: For more details see figure 1.9 in the full Report. TFP = total factor productivity.

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Source:
World Development Report 2016

Situating E-Commerce Within ASEAN / AEC

- Develop ICT Industry and services
- Policy and legal infrastructure for e-commerce
- Facilitate cross-border transactions

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Situating E-Commerce Within ASEAN / AEC

- e-ASEAN Framework Agreement
  - Signed by ASEAN Leaders in Nov 2000
- Six Focus Areas:
  - Establishment of ASEAN Information Infrastructure (AII)
  - Growth of electronic commerce
  - Liberalisation of trade in ICT products and services and of investments
  - Facilitation of trade in ICT products and services
  - Capacity building and e-Society
  - e-Government

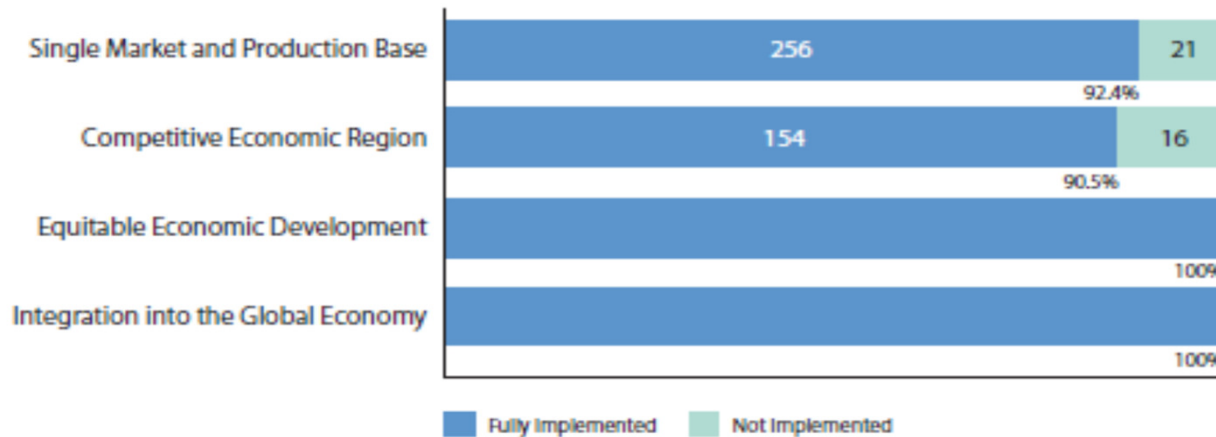| Areas of coverage under electronic commerce – led by Singapore (co-partners Malaysia & Brunei) |
|---|
| a.   e-Commerce Legal Framework |
| e-Commerce legislation on electronic transactions and electronic signatures |
| b. Consumer Protection |
| Online alternative dispute resolution |
| Privacy and personal data protection |
| c. Regional Electronic Payments System |
| d. Intellectual Property Rights |
| e. Cybercrime legislation and prevention |
| f. Developing authentication and security policies |
| Mutual recognition of digital signature framework |
| Security policy |
| g. Taxation Issues |

E-Commerce Within the AEC 2015
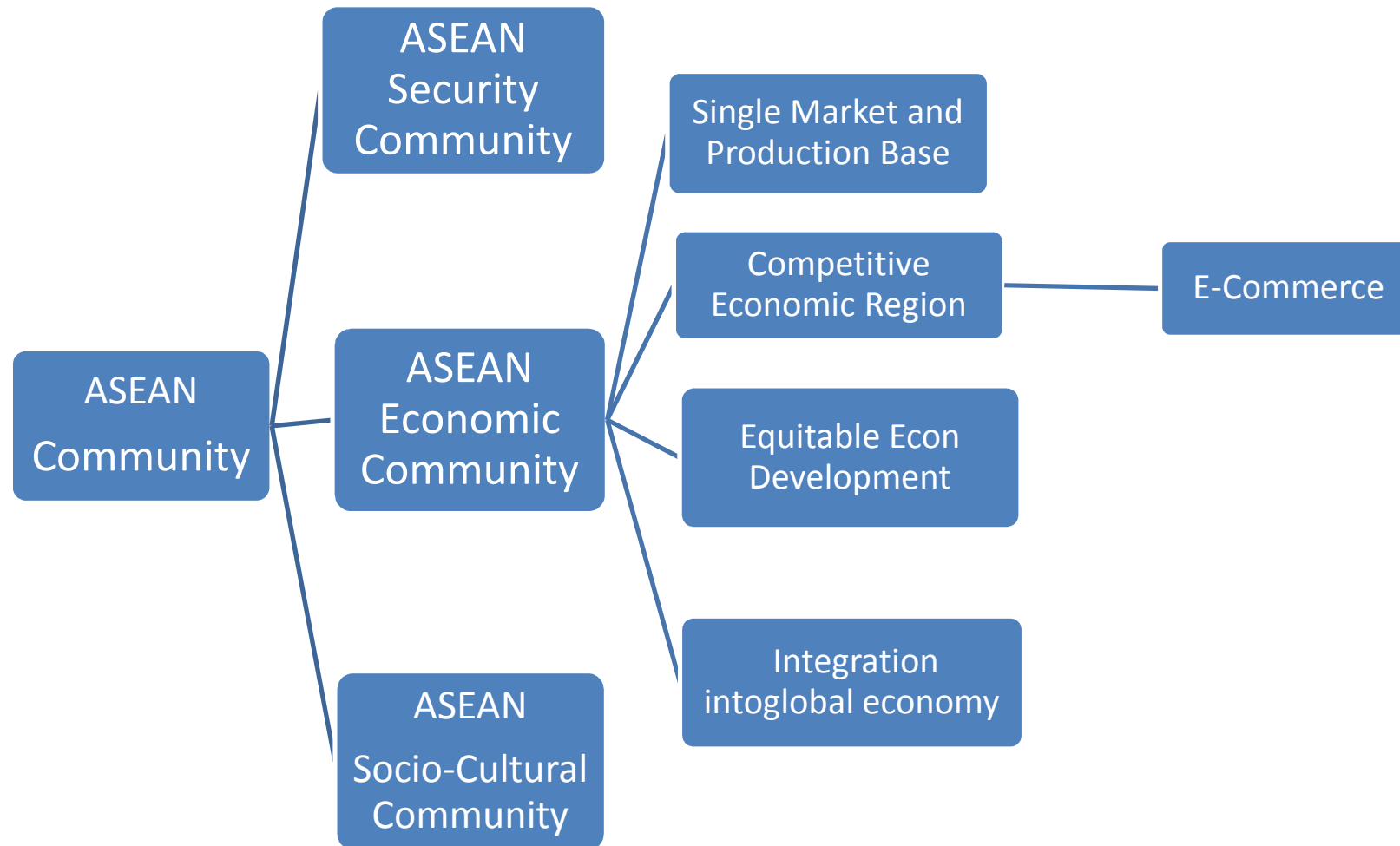
Situating E-Commerce Within ASEAN / AEC

- AEC 2015 Blueprint – Competitive Economic Region
  - E-Commerce - To lay the policy and legal infrastructure for electronic commerce and enable on-line trade in goods (e-commerce) within ASEAN through the implementation of the e-ASEAN Framework Agreement and based on common reference frameworks

AEC 2015: E-Commerce and Implementation

AEC Scorecard Measures, Fully Implemented
ASEAN-wide and high-priority measures, by AEC Pillar, 2008–2015
Number of Measures (as at 31 October 2015)

Pillar	Fully Implemented	Not Implemented	Percentage
Single Market and Production Base	256	21	92.4%
Competitive Economic Region	154	16	90.5%
Equitable Economic Development			100%
Integration into the Global Economy			100%

Legend: ■ Fully Implemented ■ Not Implemented

2008-09	2010-2011	2012-2013	2014-2015
Member countries to enact their e-commerce laws **Implement harmonised guidelines and principles for electronic contracting and online dispute resolution services** **Adopt regional framework and strategy for mutual recognition of digital signatures** **Continued capacity building and information sharing for member countries on e-commerce legal infrastructure activities (e.g. Public Key Infrastructure, institutional strengthening for Certification Authority, etc)**	Update and/or amend relevant legislations in line with regional best practices and regulations in e-commerce activities Adopt the best practices/ guidelines on other cyber-law issues to support the regional e-commerce activities Advancing cross-border electronic transactions, through pilot implementation of mutual recognition of foreign digital signatures		A harmonised legal infrastructure for e-commerce fully in place in ASEAN

AEC 2015: E-Commerce and Implementation

- AEC Scorecards

	Phase I (2008-09)		Phase II (2010-11)	
	Fully implemented	Not fully implemented	Fully implemented	Not fully implemented
E-Commerce	-	-	1	0

- ASEAN Integration Report 2015
  - states in page 59 that 'The elements of taxation and electronic commerce are beyond the scope of this analysis'.
- Other Sources (Deloitte-US-ASEAN Business Council/ UNDP 2013)

Status of e-commerce legislation in ASEAN
(Percentages indicate the status of legislation in 10 member states)

	Electronic transaction	Privacy	Cybercrime	Consumer Protection	Content regulation	Domain names
Enacted	90%	30%	80%	60%	70%	80%
Partial	10%	30%	10%	30%	20%	20%
None		40%	10%	10%	10%	

  - Some progress has been made, at least in the rule books. Least progress has been made in putting in place legislation and regulation to protect data privacy and consumer protection

ASEAN Economic Integration, 2025

- The AEC Blueprint 2025 will build on the AEC Blueprint 2015

- 5 interrelated characteristics
  - A Highly Integrated and Cohesive Economy
  - A Competitive, Innovative, and Dynamic ASEAN
  - Enhanced Connectivity and Sectoral Cooperation
  - A Resilient, Inclusive, People-Oriented, and People-Centred ASEAN
  - A Global ASEAN

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Situating E-Commerce Within ASEAN / AEC

- AEC 2025 Blueprint - Enhanced Connectivity and Sectoral Cooperation
    - E-Commerce - ASEAN shall intensify cooperation on e-Commerce building upon Article 5 of e-ASEAN Framework Agreement adopted by ASEAN Leaders in November 2000, with a view to develop an ASEAN Agreement on e-Commerce to facilitate cross-border e-Commerce transactions in ASEAN.

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AEC 2025 – Consolidated Strategic Action Plan

| Strategic Measures	Key Action Lines	Timeline	Sectoral Work Plan and Sectoral Body
Harmonised consumer rights & protection laws	Integrate e-commerce considerations into the ASEAN High-level Consumer Protection Principles Develop guidelines/code of good on-line business practice based on self-regulation best practices Conduct regular consumer right awareness training for consumers and consumer associations	2016-2025	Draft ASEAN Work Programme on E-Commerce Involves: ICT, Consumer Protection, [Financial integration and Trade Facilitation]
Harmonised legal framework for online dispute resolution, taking into account available international standards	Establish Alternative Dispute Resolution (ADR) mechanisms, including online dispute resolution systems, to facilitate the resolution of claims over e-commerce transactions	2016-2025	
Inter-operable, mutually recognised, secure, reliable and user-friendly e-identification and authorisation (electronic signature) schemes	Study suitable mechanisms for authentication of electronic signatures and trade documents, based on internationally recognised practices Establish an international coordination mechanism amongst cyber security agencies in responding to cyber security incidents	2016-2025	
Coherent and comprehensive framework for personal data protection	Develop Regional Data Protection and Privacy Principles (Rules System) Identify the responsibilities of businesses in personal data protection	2016-2025	

Situating E-Commerce Within ASEAN / AEC

- ## ASEAN ICT Masterplan 2015

  - 3 pillars – Economic transformation to promote trade and investment in the ICT sector; People Empowerment to enhance quality of life through ICT; Innovation to nurture and innovate a green ICT sector

  - These 3 will be delivered on basis of 3 foundations – Infrastructure development, Human Capital Development and Bridging the Digital Divide

- ## ASEAN ICT Masterplan 2020

  - 8 strategic areas

  - Economic Development and Transformation- includes action line like promote digital trade in ASEAN that targets e-commerce and digital service delivery in ASEAN

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Situating E-Commerce Within ASEAN / AEC

- Collaboration with other regions/bodies
  - ASEAN-CER
    - Covers transparency, domestic regulatory framework in line with UNCITRAL Model Law on Electronic Commerce 1996, electronic authentication and digital certificate, consumer protection, data protection, paperless trading and cooperation on e-commerce (assisting SME, encourage information flow).
  - RCEP (under negotiation)

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Challenges
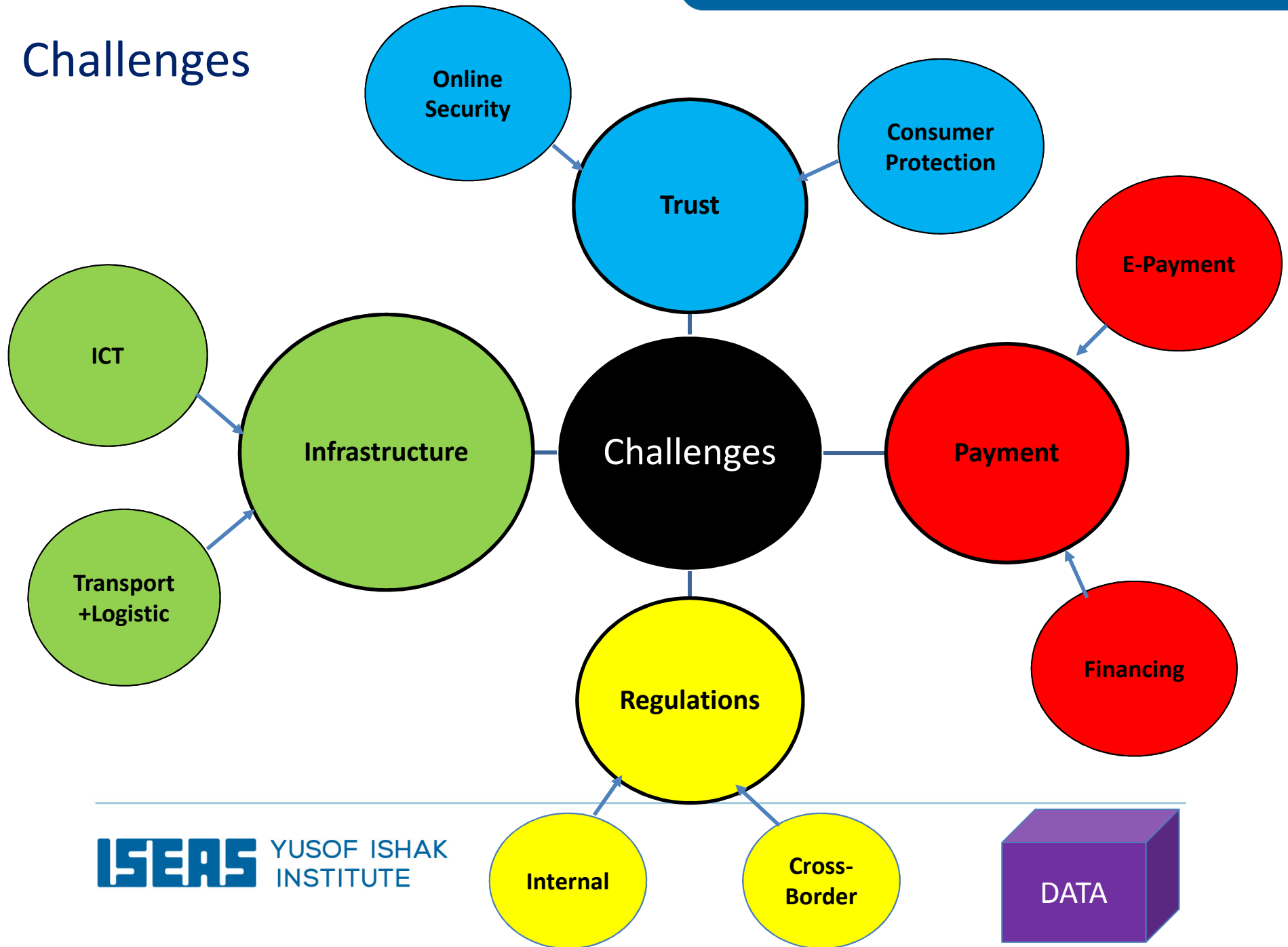
Challenges

Challenges with E-Commerce Policy Making at ASEAN level

- Different e-commerce framework at national level (e.g. payment system, consumer protection)

- Multiple agencies deal with the policy issue – trade, ICT, finance, consumer protection, customs and others

- Cross-border bigger challenge with domestic tax system, customs, logistics

- Lack of human resource

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