

Overview

Chapter 1: Macroeconomic assessment and economic outlook for Emerging Asia

Economic growth in Emerging Asia – Southeast Asia, China and India – remains robust: it expanded by 6.5% in 2017, slightly stronger than in 2016. Most countries of the Association of Southeast Asian Nations (ASEAN) grew substantially faster in 2017 than in the previous year (ASEAN's member states are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam). China's growth rate surpassed the government's target, while India managed to navigate quite well the growth obstacles tied to lagged demonetisation effects and the sales tax reform. Strong economic growth in Emerging Asia is projected to continue in 2018 and 2019. This prognosis is backed by generally robust domestic demand. Central banks have started raising their policy rates, largely on concerns related to inflation and exchange rates, but they have used other instruments to keep market liquidity ample. External demand is likely to be relatively reserved, in light of new tariff measures of some economies.

Optimism in capital markets has softened, but Emerging Asian economies' external positions have remained mostly stable so far. Current account balances have improved in a number of the region's economies, while foreign direct investment (FDI) inflows show an even more encouraging picture. Inflation has picked up in some countries, and the build up of price pressures has prompted some central banks to take a more proactive stance, although the prevailing rates are still within tolerance bands. Emerging Asian countries must cope with the following challenges to maintain growth: the impact of rising interest rates in advanced economies, in particular the United States, the implementation of planned infrastructure projects and the acceleration of regional integration amidst rising protectionism.

Overview and main findings: The economic outlook for 2018-19

Emerging Asia's aggregate real gross domestic product (GDP) growth is expected to firm up to 6.6% in 2018 and 6.5% in 2019 (Table 1). Southeast Asia's economy is estimated to grow at a steady pace of 5.3% in the next two years on the back of resilient domestic demand in many countries, though trade prospects are uncertain. In China, GDP growth is forecast to nudge downwards in 2018 and 2019, while GDP growth in India is projected to increase during the same period.

Table 1. Real GDP growth in ASEAN, China and India
Annual percentage change

	2016	2017	2018	2019
ASEAN-5 countries				
Indonesia	5.0	5.1	5.3	5.4
Malaysia	4.2	5.9	5.3	5.1
Philippines	6.9	6.7	6.7	6.7
Thailand	3.3	3.9	4.0	3.9
Viet Nam	6.2	6.8	6.9	6.6
Brunei Darussalam and Singapore				
Brunei Darussalam	-2.5	1.3	1.5	2.1
Singapore	2.4	3.6	3.5	3.0
CLM countries				
Cambodia	6.9	7.0	7.0	7.0
Lao PDR	7.0	6.9	6.8	6.9
Myanmar	5.9	6.8	6.9	7.1
China and India				
China	6.7	6.9	6.7	6.4
India	7.1	6.7	7.4	7.5
Average of ASEAN-10	4.8	5.3	5.3	5.3
Average of Emerging Asia	6.4	6.5	6.6	6.5

Notes: The cut-off date for data used is 18 June 2018. ASEAN and Emerging Asia growth rates are the weighted averages of the individual economies subsumed. Cambodia and Myanmar's 2017 data are preliminary estimates. The data of India and Myanmar follow fiscal years. For Myanmar, 2018 refers to the interim six-month period from April 2018 to September 2018, while 2019 refers to the fiscal year from October 2018 to September 2019. The projections of China, India and Indonesia are based on the OECD Economic Outlook No. 103 (database). Source: OECD Development Centre, *Medium-term Projection Framework* (MPF-2018).

ASEAN-5

- **Indonesia's** GDP growth will marginally improve to 5.3% in 2018 and 5.4% in 2019 on promising investment trends and robust consumer-demand indicators, anchored by wage adjustments, the hosting of the Asian Games and upcoming presidential elections. GDP growth in the first quarter (Q1) of 2018 was 5.1% more or less the same pace observed in Q4 2017 (Table 2).
- **Malaysia's** economic expansion is projected to moderate to 5.3% in 2018 and 5.1% in 2019 from 5.9% in 2017, largely in line with its average growth rate since 2010, though there are some uncertainties about the new administration's policies. The decision to review large infrastructure investment projects could dampen fixed investment growth. On the upside, private consumption indicators and exports are moving along relatively well. Data in Q1 2018 show that GDP growth has eased to 5.4% from 5.6% in the same period last year.
- The **Philippines** is estimated to replicate its 2017 GDP growth of 6.7% in 2018 and in 2019. Government spending and public investment will likely anchor economic growth, with private consumption facing some friction and exports substantially weakening. Data in Q1 2018 show that the Philippine economy expanded by 6.8%, about 30 basis points faster than in Q1 2017.
- GDP growth in **Thailand** is expected to come in at 4.0% in 2018 and 3.9% in 2019. Exports are still growing strongly, benefitting the domestic industrial sector. Private consumption indicators point to an increase in expenditures, even as the government plans to continue consolidating its fiscal position. The economy started 2018 with an encouraging 4.8% expansion in Q1 2018, up from 3.4% in Q1 2017.

- In **Viet Nam**, GDP is projected to grow by 6.9% in 2018 and 6.6% in 2019. Data in the first half (H1) of 2018 showed a GDP growth of 7.1% (7.5% in Q1 and 6.8% in Q2), up from 5.7% in H1 2017. Private consumption is expected to remain robust. However, exports and investment intake are showing signs of moderating.

Table 2. Recent real GDP growth in ASEAN, China and India
Quarterly, year-on-year percentage change

	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018
ASEAN-5 countries					
Indonesia	5.0	5.0	5.1	5.2	5.1
Malaysia	5.6	5.8	6.2	5.9	5.4
Philippines	6.5	6.6	7.2	6.5	6.8
Thailand	3.4	3.9	4.3	4.0	4.8
Viet Nam	5.2	6.3	7.5	7.7	7.5
Brunei Darussalam and Singapore					
Brunei Darussalam	-1.3	0.2	1.3	5.2	—
Singapore	2.5	2.8	5.5	3.6	4.4
China and India					
China	6.9	6.9	6.8	6.8	6.8
India	5.6	6.3	7.0	7.7	—

Notes: The cut-off date is 18 June 2018. Quarterly data are not available for Cambodia, Lao PDR and Myanmar. Data for India follow fiscal years.

Source: OECD Development Centre based on CEIC and national sources.

Brunei Darussalam and Singapore

- **Brunei Darussalam's** economy grew in 2017 for the first time since 2012, and it is expected to expand by 1.5% in 2018 and by 2.1% in 2019. Higher global oil prices should bode well for exports, fiscal space and the domestic labour market.
- In **Singapore**, the economy is expected to grow by 3.5% in 2018 and by 3.0% in 2019. Data in Q1 2018 show an economic expansion rate of 4.4%, up from 2.5% in Q1 2017, largely on the strength of exports. However, offshore shipments, which underpin a large portion of domestic industrial production and some services segments, could face stiff headwinds due to new tariff schedules in some large economies. The realisation of planned large transportation infrastructure projects should limit downside risks.

CLM countries

- In **Cambodia**, GDP is expected to grow annually by 7.0% in 2018 and 2019. Construction activities will help keep domestic consumption resilient. Exports have also grown sizeably so far in 2018, although substantial risks are looming.
- In **Lao PDR**, GDP growth is estimated to settle at 6.8% in 2018 and to rise to 6.9% in 2019. The expansion of overseas electricity deals and the strong influx of foreign direct investment are a boon to the country's growth prospects in the near term.
- In **Myanmar**, the economy is expected to grow by about 6.9% in the interim six-month period from April 2018 to September 2018 and by 7.1% in fiscal year 2019 (October 2018 to September 2019). Consumption will likely remain buoyant on wage adjustments. The economy should also benefit from infrastructure projects that have been pushed forward to clear the pipeline.

China and India

- China's GDP growth is projected to moderate to 6.7% in 2018 and to 6.4% in 2019. Household consumption is expected to maintain a relatively steady expansion rate on the back of robust real disposable income growth. A potential source of downside risk is escalating trade tensions, leading to tariffs on an increasing number of goods. This could hurt exports and potentially spill over to investment by export-oriented firms. Recent data show that China's GDP grew by 6.8% in Q1 2018, marginally lower than the 6.9% in Q1 2017.
- Meanwhile, India's economic growth is poised to rise to 7.4% in 2018 and 7.5% in 2019. Private spending should benefit from rising credit growth. Improvements in revenue intake should also help the government expand spending coverage. The issues related to banks' non-performing assets will require careful attention.

Other key points of the economic outlook and assessment

- Overall, the external positions of Emerging Asian economies have remained stable so far. Current account balances have improved in a number of economies in the region. FDI data show an even more encouraging picture. Overall risk perception in financial markets in the region has risen since early 2018, although the degree of concern is still relatively limited.
- Monetary authorities in Emerging Asia have started raising policy rates, mainly on the grounds of rising inflation and weakening of some local currencies. However, they have also used the mandated reserve requirement ratio for banks to keep the system liquid, presumably to isolate the direct monetary policy impact on exchange rates, inflation and domestic credit flows. Headline inflation in several Emerging Asian countries has been climbing since the end of 2017, propelled partly by the rise in global oil prices and the strengthening of the US dollar. Local currencies like the Philippine peso, Indonesian rupiah and Indian rupee have depreciated this year.
- Overall, the fiscal positions of Emerging Asian economies are relatively sound. The fiscal policy direction, however, is mixed. Revenue performances (i.e. revenue-to-GDP ratio) diverged across the region from 2016 to 2017. While the revenue ratios of Cambodia, the Philippines, Singapore and Viet Nam have either improved or remained stable, the ratios of Brunei Darussalam, China, India, Indonesia, Lao PDR, Malaysia and Thailand have deteriorated.

Challenges to the outlook

Economies in the region will need to cope with several challenges to maintain robust growth. A few prominent issues highlighted in this report are:

- the impact of rising interest rates in advanced economies, in particular the United States;
- the implementation of infrastructure projects; and
- the acceleration of regional integration amidst rising protectionism.

The impact of rising interest rates in advanced economies, in particular the United States, on Emerging Asia requires careful attention. Although the risk is benign at this point, the potential that it can trigger substantial capital outflows cannot be set aside, considering the recent broadening of domestic inflation pressures, weakening of currencies in the region and growing credit risk perception. The risk that domestic demand could be dampened because of higher domestic borrowing costs is another concern. Some central banks in the region have recently raised policy rates in response to the currency weakness and

inflation build-up, which can be partly associated with the monetary policy of the United States (Table 3). Incidentally, the correlation of 1-year benchmark bond yields has also strengthened this year compared with previous periods. With domestic interest rates rising more sternly, consumption and investment prospects could be diminished, which will consequently negatively influence trade. This may also create some complications in the ongoing efforts to resolve financial asset quality issues in some of the Emerging Asia economies.

Table 3. Summary of recent central bank policy rate changes in Emerging Asia

Country	Policy rate action	Primary underlying reasons
India	6 June 2018: RBI raised the policy repo rate, reverse repo rate, marginal standing facility rate and the bank rate by 25 bps each.	RBI raised rates to achieve the medium-term target of 4.0% (+/-2 percentage points) for consumer price index (CPI) inflation, which has responded strongly to the recent global oil price volatility.
Indonesia	17 May 2018: BI raised the seven-day reverse repo rate, deposit facility rate and lending facility rates by 25 bps each.	BI increased rates to maintain economic stability amid escalating global financial market risks and the global liquidity downturn. BI will continue with rupiah exchange-rate stabilisation measures, while maintaining adequate liquidity in the foreign exchange and money markets.
	30 May 2018: BI raised the seven-day reverse repo rate, deposit facility rate and lending facility rates by 25 bps each.	The rate hikes were a pre-emptive move to maintain exchange rate stability against a higher-than-expected US Federal Funds Rate increase and rising risks in the global financial market, while keeping inflation in check. BI will continue to intervene in the foreign-exchange and government-securities markets to stabilise rupiah exchange rates, adjust fair prices in the financial markets, and maintain adequate liquidity in the money and interbank swap markets.
	29 June 2018: BI raised the 7-day Reverse Repo rate, deposit facility rate and lending facility rates by 50 bps each.	The rate hikes were a pre-emptive measure to maintain the domestic financial market's competitiveness against several countries' changing monetary policies as well as high global uncertainty consistent with the framework of dual intervention policy in the foreign exchange market and government securities markets.
Malaysia	25 January 2018: BNM raised the overnight policy rate and its corresponding floor and ceiling rates by 25 bps.	BNM increased rates to normalise the degree of monetary accommodation, given the economy's reassuring strength, and to prevent the build-up of risks that could arise from protracted low interest rates.
Philippines	10 May 2018: BSP raised the overnight reverse repurchase rate, overnight lending rate and overnight deposit rate by 25 bps each.	BSP raised rates to arrest an increase in inflation expectations amid broadening inflation pressures. BSP noted that it continues to survey the domestic and global economic environment, including the potential impact of the monetary policy normalisation in advanced economies.
	20 June 2018: BSP raised overnight reverse repurchase rate, overnight lending rate and overnight deposit rate by 25 bps each.	BSP raised rates to mitigate upside risks to inflation outlook and the risk of second-round effects. BSP will remain vigilant against domestic and international developments, including excessive peso volatility, that could affect the outlook for inflation.

Source: OECD Development Centre compilation based on national central bank sources.

The extent of the effectiveness of infrastructure-project implementation can be both an upside and downside risk to economic activity. Timely and efficient implementation of infrastructure plans can be a strong impetus for sustained growth. However, difficulties in efficiently implementing infrastructure projects mean that the planned investments' potential gains may not be realised. In many respects, the region is doing well in implementing its infrastructure projects. More generally, recent actual capital expenditure has been close to budget appropriations or estimates in many countries in the region (Table 4). Nevertheless, delays in completing infrastructure projects are still common in developing countries, induced by factors such as reduced funding, communications failures, delayed disbursements, issues regarding contractors' site management, and legislative or regulatory barriers.

Table 4. Recent capital expenditure in selected Emerging Asian countries

Country	Time period	Budget appropriation or expected expenditure	Actual expenditure
Lao PDR	FY 2014/15	LAK 10.7 trillion	LAK 11.4 trillion
Philippines	FY 2017	PHP 773.3 billion	PHP 858.1 billion
Singapore	FY 2017	SGD 18.8 billion	SGD 17.8 billion
Thailand	FY 2017	THB 632.6 billion	THB 380.8 billion
India	2016/17	INR 3.1 trillion	INR 2.8 trillion

Note: Singapore totals refer to “development expenditure”, which includes “expenses that represent a longer-term investment or result in the formation of a capitalisable asset”.

Source: OECD Development Centre compilation, based on national sources.

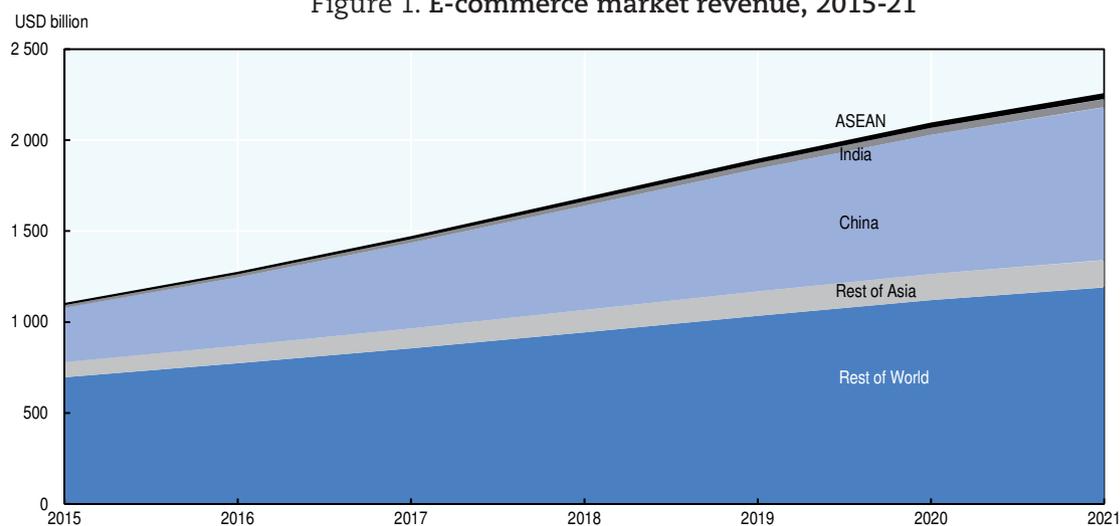
Lastly, rising trade protectionism in some countries has the potential to soften growth in the region. While this risk is mostly beyond the control of Emerging Asian economies, the region stands to cope with the potential drags better by deepening intra- and inter-regional integration. This can be done by aligning trade standards and regulations as well as fostering trade agreements. Over the last few years, progress has been made in terms of reducing tariffs within ASEAN while free trade agreements beyond ASEAN are gaining momentum. However, the scope remains ample for co-operation in streamlining non-tariff barriers (NTMs), despite the initiatives that have been undertaken to address this issue. The use of NTMs is still prevalent among ASEAN member countries. In 2015, it was recorded that all ASEAN countries implemented all types of technical measures, which include sanitary and phytosanitary measures (SPS), technical barriers to trade (TBT) and pre-shipment inspection, and other formalities. All countries have also used non-technical measures, which include non-automatic licensing, quotas, prohibitions and quantity control measures other than for SPS or TBT, and price-control measures, including additional taxes and charges.

Chapter 2: Emerging Asia in the era of cross-border e-commerce

E-commerce is an increasingly important form of economic activity. These interactions and transactions can take place between governments, businesses and consumers. The cross-border business-to-business (B2B) and business-to-consumer (B2C) transactions in Emerging Asia look set to drastically reshape trade and business in the region. E-commerce growth in Asia has been the fastest in the world, with China leading the region. China is the world’s largest B2C e-commerce market and among the frontrunners of cross-border e-commerce. Cross-border B2B e-commerce has been growing steadily since the 1990s. Growth accelerated in the 21st century with the expansion and deepening of global value chains (GVCs). While B2B still dominates cross-border e-commerce, international B2C e-commerce has been growing faster than B2B transactions.

While the e-commerce market remains smaller than traditional markets, further growth in e-commerce is expected in the future in the region and globally. From 2015 to 2021, the region’s total B2C e-commerce market revenue is expected to increase from about USD 320 billion (US dollars) to more than USD 900 billion (Figure 1). Emerging Asia also accounts for a disproportionate share of Internet and e-commerce users, a trend that is expected to continue. The region accounted for 50% of the world’s Internet population in 2015. Emerging Asia will host about 60% of total Internet users and a large number of e-commerce users by the end of 2021, thanks to its growing population and Internet penetration rate (Figure 2).

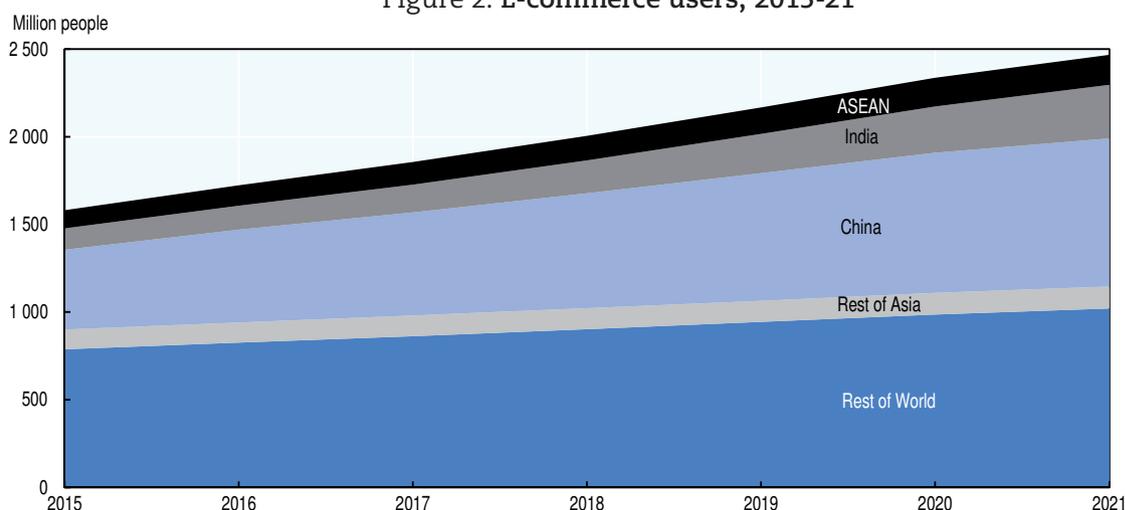
Figure 1. E-commerce market revenue, 2015-21



Source: Statista.

StatLink  <https://doi.org/10.1787/888933799587>

Figure 2. E-commerce users, 2015-21



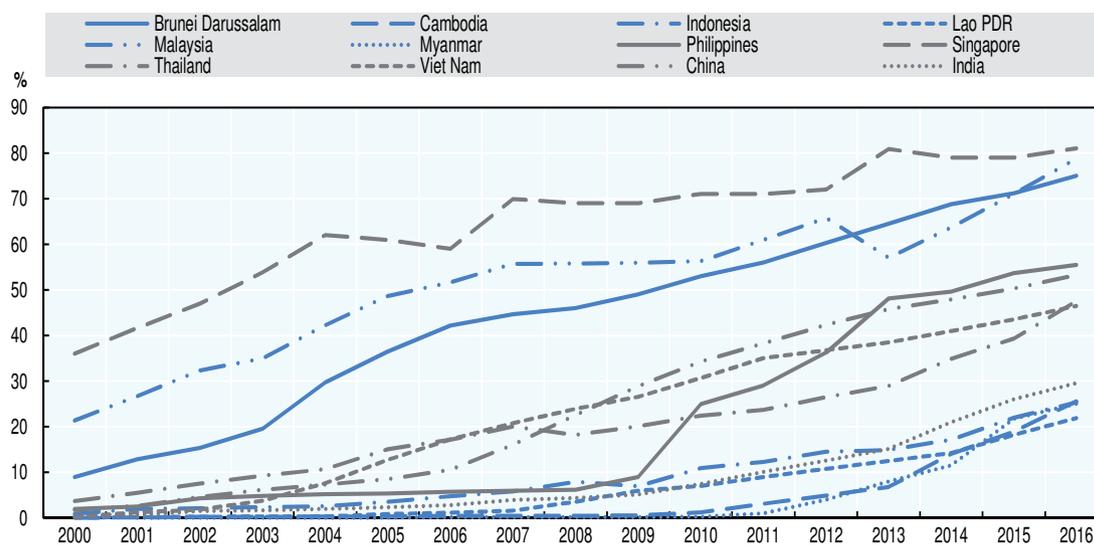
Source: Statista.

StatLink  <https://doi.org/10.1787/888933799606>

The scale of e-commerce in the region and the potential for its further development are the result of multiple factors, including levels of ICT use, the development of ICT infrastructure, transportation infrastructure and logistics capabilities, the use of e-payment systems, and the legal and regulatory environment.

The percentage of the population using the Internet has risen steadily across the region in recent years, although significant differences still exist between countries. In high-income countries like Singapore and Brunei Darussalam, as well as in middle-income Malaysia, the figure is higher than in other countries in the region (Figure 3). Involvement in GVCs and second mover advantages have helped firms in Emerging Asia to become relatively quick adopters of the new technologies needed to participate in cross-border e-commerce. Businesses in the region – particularly those in China, Indonesia, Malaysia and Thailand – have relatively high rates of technology use, though engagement in e-commerce also varies within countries in the region, with smaller firms less likely to take part.

Figure 3. Internet users as a percentage of population, 2000-16



Source: World Bank (2017), World Development Indicators.

StatLink <https://doi.org/10.1787/888933799625>

The growth of e-commerce depends upon the development of extensive and high-quality Internet connections, and significant improvements are needed to ICT infrastructure in much of the region. Broadband Internet speeds, measured by the connection speeds of Internet Protocol version 4 (IPv4) addresses, are below the global average in much of the region, for example (Table 5). Geography and financing challenges have been barriers to the spread of fibre-optic connections across much of the region, though rates of mobile Internet use are high and can be especially important to residents of rural areas. Mobile technologies are also playing a large role in the growth of e-commerce in the region. However, broadband and mobile Internet accesses are expensive relative to income levels in several countries in the region, making access unaffordable for many.

In addition to ICT infrastructure, e-commerce, like traditional forms of business, still depends on transport infrastructure and logistics services for the trade and delivery of physical goods. E-commerce places higher demands on speed and transparency, posing additional challenges to storage, parcel delivery and express postal services. Since Emerging Asia faces obstacles in these areas, the development of e-commerce will require additional efforts in terms of both physical connectivity and trade-supporting services.

Table 5. IPv4 addresses by broadband connection speed in Emerging Asia, Q1 2017

Country	% Above 4 Mbps	% Above 10 Mbps	% Above 15 Mbps
Indonesia	76 (71)	18 (68)	5 (69)
Malaysia	72 (80)	32 (52)	14 (52)
Philippines	39 (107)	11 (78)	6.2 (63)
Singapore	94 (17)	72 (4)	51 (6)
Thailand	97 (4)	72 (5)	43 (13)
Viet Nam	86 (49)	37 (48)	11 (57)
China	81 (59)	20 (62)	5 (70)
India	42 (104)	19 (64)	10 (58)
World average	82	45	28

Note: The number in the bracket indicates the country's global ranking.

Source: Akamai (2017), State of the Internet Connectivity Report.

Safe and reliable e-payment systems are also important in facilitating e-commerce transactions. Cash on delivery, however, remains the preferred payment method in many Emerging Asian countries, especially those in Southeast Asia, though it is not a viable option for transactions across borders. Building and maintaining the e-payment system requires intensive resources in terms of capital, technology and people. This will be a big challenge for those Emerging Asian countries whose domestic banking and financial sectors are still at an early stage of development, though digital technologies also offer opportunities for improving financial access.

Legal and regulatory reforms are needed to facilitate fair competition and prevent the creation of grey zones of international trade associated with problems such as tax evasion, fake products and violations of intellectual property rights (IPRs). Much of the region has already enacted or drafted laws on key areas affecting e-commerce: electronic transactions, privacy, cybercrime, consumer protection, content regulation and domain names (Table 6). Taxation is another important issue, which can be complicated by cross-border e-commerce, and several countries in the region are implementing or considering new rules for taxing e-commerce. Data protection, privacy and security measures will play key roles in increasing confidence in the use of online platforms.

Table 6. E-commerce laws in ASEAN Member States, 2013

Country	Electronic transactions	Privacy	Cybercrime	Consumer protection	Content regulation	Domain names
Brunei Darussalam	Enacted	n.a.	Enacted	Partial	Enacted	Enacted
Cambodia	Draft	n.a.	Draft	n.a.	Draft	Enacted
Indonesia	Enacted	Partial	Enacted	Partial	Enacted	Enacted
Lao PDR	Enacted	n.a.	n.a.	Draft	Enacted	Partial
Malaysia	Enacted	Enacted	Enacted	Enacted	Enacted	Enacted
Myanmar	Enacted	n.a.	Enacted	Enacted	Enacted	Enacted
Philippines	Enacted	Enacted	Enacted	Enacted	n.a.	Enacted
Singapore	Enacted	Enacted	Enacted	Enacted	Enacted	Enacted
Thailand	Enacted	Partial	Enacted	Enacted	Partial	Partial
Viet Nam	Enacted	Partial	Enacted	Enacted	Enacted	Enacted

Source: UNCTAD (2013), *Review of E-commerce Legislation Harmonization in the Association of Southeast Asian Nations*.

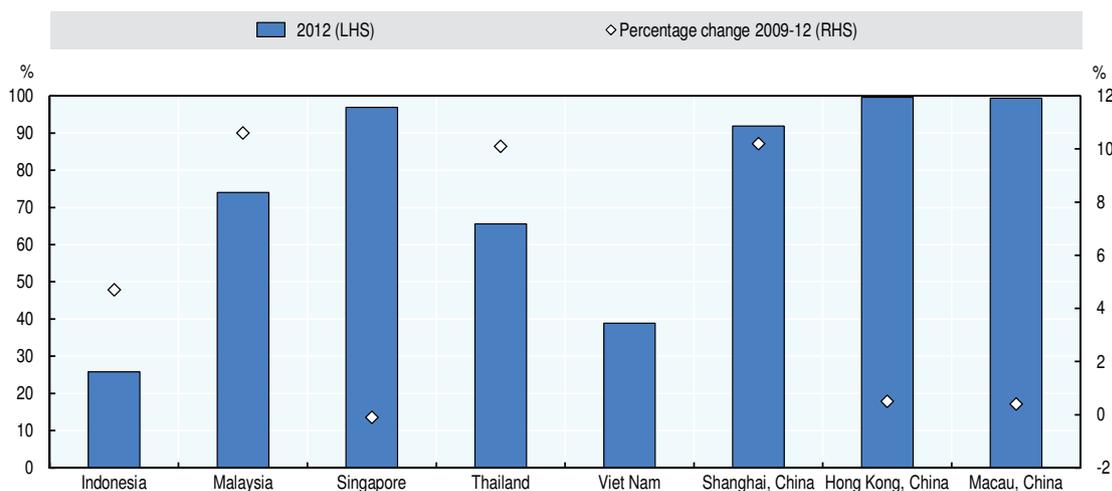
The importance of developing e-commerce capabilities is widely recognised in the region; expanding e-commerce for its own sake and to support policy goals is a priority in the medium-term national development plans of several Emerging Asian countries. Achieving goals for the sector will require efforts by policy makers on improving connectivity, addressing constraints related to skills and human capital development, ensuring digital security and consumer protection, and pursuing regional and international co-operation.

While the public sector should take the lead in infrastructure development, to improve connectivity in terms of reach and quality, governments should strive for a multi-stakeholder approach to infrastructure development, broader regional co-operation and more vibrant market competition. Strengthened market competition should also help to improve logistics and Internet services and to lower prices.

Skilled workers and knowledgeable consumers will be needed to drive the ongoing development of e-commerce, which is a knowledge-intensive area of economic activity. Workers will also need to adapt to increasingly sophisticated global value chains supported by digital technologies, to get used to changing technologies and to participate

in the innovation that supports competitiveness. Emerging Asia will need to leverage its considerable human resource potential to succeed in this environment. Many Emerging Asian countries lack digital literacy, and this negatively affects Internet penetration and can hold back smaller firms in particular. Improvements can be made by including digital literacy courses in educational curricula, providing sufficient equipment such as computers to schools to implement these courses, and offering other training programmes. Of the eight jurisdictions in Emerging Asia included in the OECD's 2012 Programme for International Student Assessment (PISA) survey, a majority of students had access to at least one home computer in all jurisdictions except Indonesia and Viet Nam (Figure 4).

Figure 4. Students with at least one computer at home, 2009-12



Note: Percentage change in 2009-12 is not available for Viet Nam.

Source: OECD (2015), PISA 2012 Database, www.oecd.org/pisa/pisaproducts/pisa2012database-downloadabledata.htm.
StatLink  <https://doi.org/10.1787/888933799644>

To improve digital security and consumer protection, countries will need to provide their consumer-protection enforcement agencies with the authority to investigate, pursue, obtain and, where appropriate, share relevant information and evidence, particularly on matters relating to cross-border fraudulent and deceptive commercial practices. Many countries in Emerging Asia still have no national legislation to support cross-border e-commerce and existing laws may not be suitable for managing disputes. Authorities should co-operate with foreign consumer-protection enforcement agencies and other appropriate foreign counterparts.

International co-operation is relevant in multiple policy areas related to e-commerce, including the harmonisation of regulatory frameworks and the establishment of rules ensuring free data flows, fair play, competition and security. Moreover, when e-commerce involves buyers and sellers in different countries, transactions are subjected to almost all issues that apply to other forms of trade, meaning that co-operation on trade facilitation would be beneficial. Regional measures – such as the ASEAN Agreement on E-commerce that ASEAN countries are currently discussing – and multilateral trade negotiations are both important areas of international co-operation on e-commerce to be pursued.