Advancing Free Trade
for Asia-Pacific **Prosperity**

APEC Services Competitiveness Roadmap (ASCR) Baseline Indicators

APEC Policy Support Unit
November 2017

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

- In 2015, APEC Leaders endorsed the APEC Services Cooperation Framework (ASCF) which called for the development of a strategic and long-term Services Competitiveness Roadmap.

- In 2016, APEC Leaders endorsed the APEC Services Competitiveness Roadmap (ASCR) and its accompanying Implementation Plan. The Roadmap contains APEC-wide actions and mutually agreed overarching targets to be achieved by 2025, with a mid-term review in 2021.

- For purposes of monitoring and evaluation, the ASCR tasked the chairs of the accountable fora to report progress on the APEC-wide initiatives, and later assigned the APEC Group of Services (GOS) to coordinate the groups' reporting to the Senior Officials' Meeting (SOM). The GOS, in fulfilling its mandate to track progress in the ASCR implementation, proposed the matrix of action at SOM2 2017. The monitoring of such matrix is the responsibility of GOS and is distinct from this PSU report.

- The Roadmap explicitly tasked the APEC Policy Support Unit (PSU) to facilitate the implementation and monitor progress of the ASCR. The PSU prepared these baseline indicators to facilitate the mid-term review in 2021 and the final review in 2025.

- The PSU uses as guide the indicators proposed in Annex 3 of the ASCR Implementation Plan. Alternative indicators are also used, taking into account such factors as data availability, regularity, comparability, and source credibility. The PSU is cognizant of the fact that selected indicators may be, at best, indirect measures of progress of each APEC-wide action.

- At SOM1 2017, SOM added five additional groups in the ASCR implementation plan namely: IEG, SMEWG, TELWG, PPSTI, and EWG.

- The PSU made presentations at the meetings of all the relevant fora, including the five additional groups, to raise awareness about ASCR and to encourage ownership of their own APEC-wide actions along with the corresponding assessment indicators.

- This report contains the compilation of baseline indicators corresponding to each APEC-wide action and overarching targets. More indicators will be added for the remaining group - PPSTI – as soon as the group has finished its own ASCR discussions.

Overarching target #1: *Ensuring an open and predictable environment for access to services markets by progressively reducing restrictions to services trade and investment.*

The environment for access to services markets is best assessed using the services trade restrictiveness index (STRI). For this purpose, the OECD STRI is used to compute for the average restrictiveness in APEC[1]. Analysis by economy (Table 1) shows that air transport features as the most restrictive sector in four economies (Canada; Japan; New Zealand; and United States), while courier and postal is the most restrictive sector in three economies (Australia; Chile; and China). Figure 1 illustrates that in APEC region, courier and postal services (0.421) is the most restrictive services sector, followed by air transport (0.408), and rail freight transport (0.369). The main type of measures which contribute to the relatively higher restrictive scores for the mentioned three sectors relate to those restricting foreign entry and acting as barriers to competition.

Table 1. OECD STRI most and least restrictive services sectors in APEC, 2016

Economies	Most Restrictive Sector	Least Restrictive Sector
Australia	Courier and postal services	Engineering services
Canada	Air transport	Road freight transport
Chile	Courier and postal services	Accounting and auditing services
China	Courier and postal services	Engineering services
Indonesia	Legal services	Sound recording
Japan	Air transport	Sound recording
Korea	Accounting and auditing services; and Rail freight transport	Distribution services
Mexico	Logistics customs brokerage	Accounting and auditing services
New Zealand	Air transport	Computer services
Russia	Logistics storage and warehouse	Distribution services
United States	Air transport	Telecommunication

Notes: China data have not been officially ratified. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; The Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam. Please refer to accompanying excel spreadsheet OT#1.1 in the PSU website for the complete list of sectors with corresponding OECD STRI.
Source: OECD STRI Database (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 25 April 2017.

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[1] Please refer to: http://www.oecd-ilibrary.org/trade/services-trade-restrictiveness-index-stri_5js7n8wbtk9r-en for the methodology and limitations of OECD STRI.

Figure 1. Average OECD STRI services score for APEC, 2016
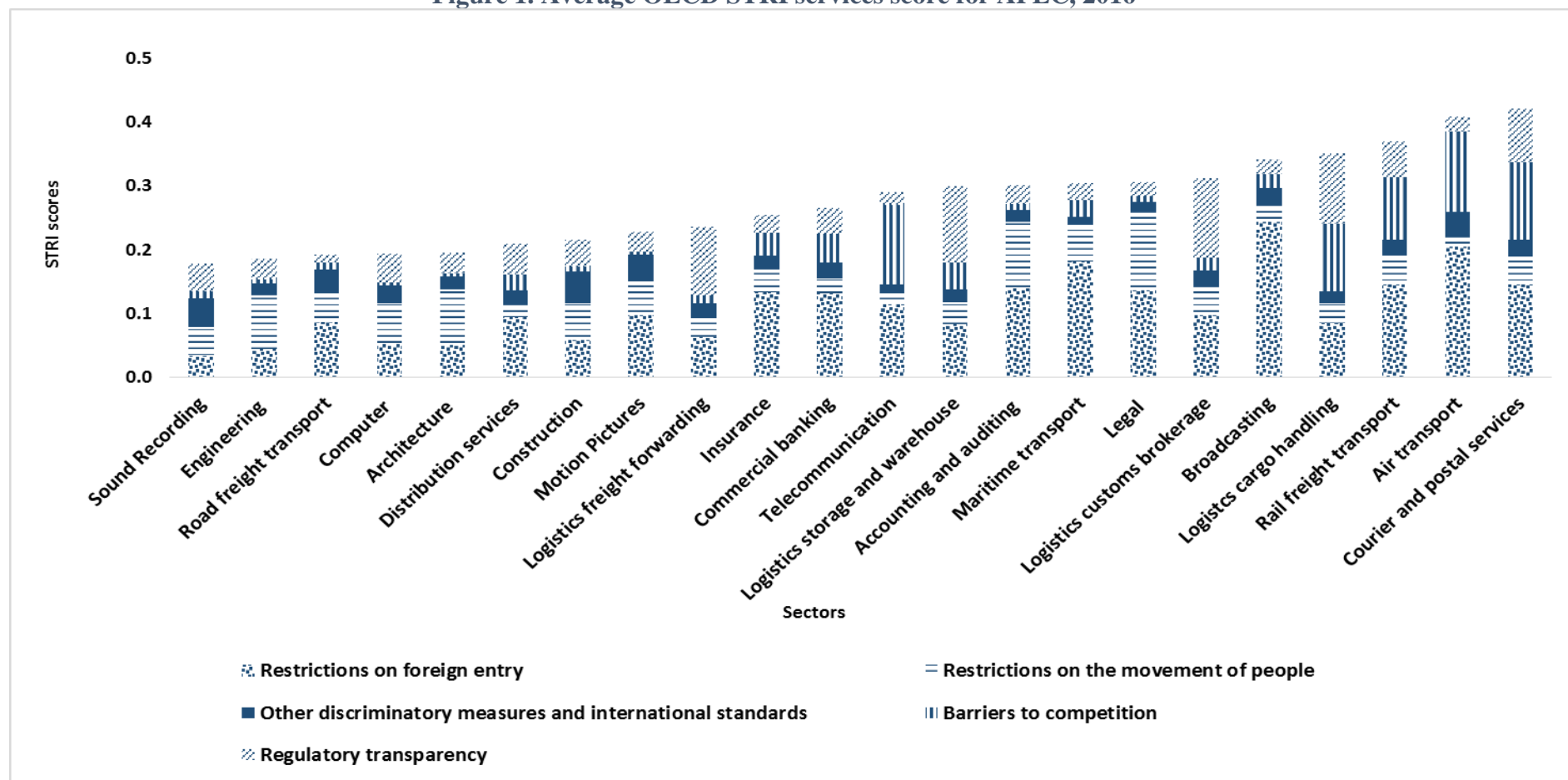
Notes: OECD STRI = 0 (completely open) – 1 (completely closed). China data have not been officially ratified. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; The Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, OECD Services Trade Restrictiveness Index Regulatory (STRI) Database (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 25 April 2017.

Figure 2 shows that restrictions on foreign entry and movement of people contribute the most to the STRI score. In particular, restrictions on foreign entry are among the top two policy measures in in all services sectors except in logistics cargo handling and sound recording. On the other hand, the sectors where restrictions on movement of people is the number one contributor to the STRI are architecture, computer and engineering.

Figure 2. Major contributors to restrictiveness in services sectors, 2016
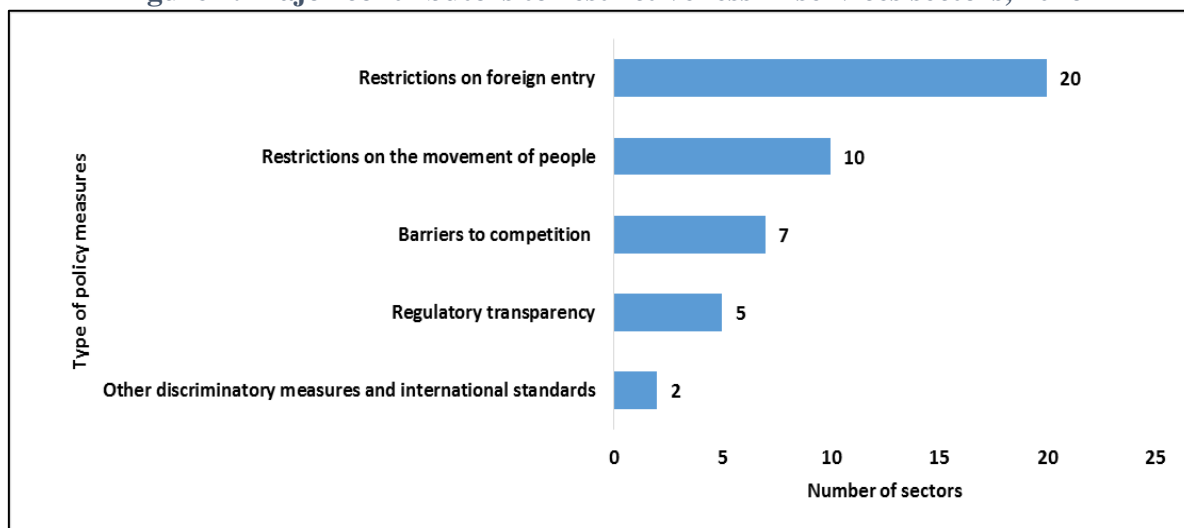
Source: PSU calculations, and OECD STRI Regulatory Database
(http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 25 April 2017.

Overarching target #2: *Increasing the share of services exports from APEC economies in the total world services exports so that it exceeds the current share by 2025.[2]*

APEC's total commercial services exports have generally increased over the last decade. In 2015, APEC's exports of commercial services were valued at more than USD1.9 trillion, up from about USD1.0 trillion in 2006 (Figure 3). APEC's share of world commercial services exports has also increased over time, from around 35 percent in 2006 to 40 percent in 2015.

Figure 3. APEC's export of commercial services and its share of world commercial services export, 2006-2015
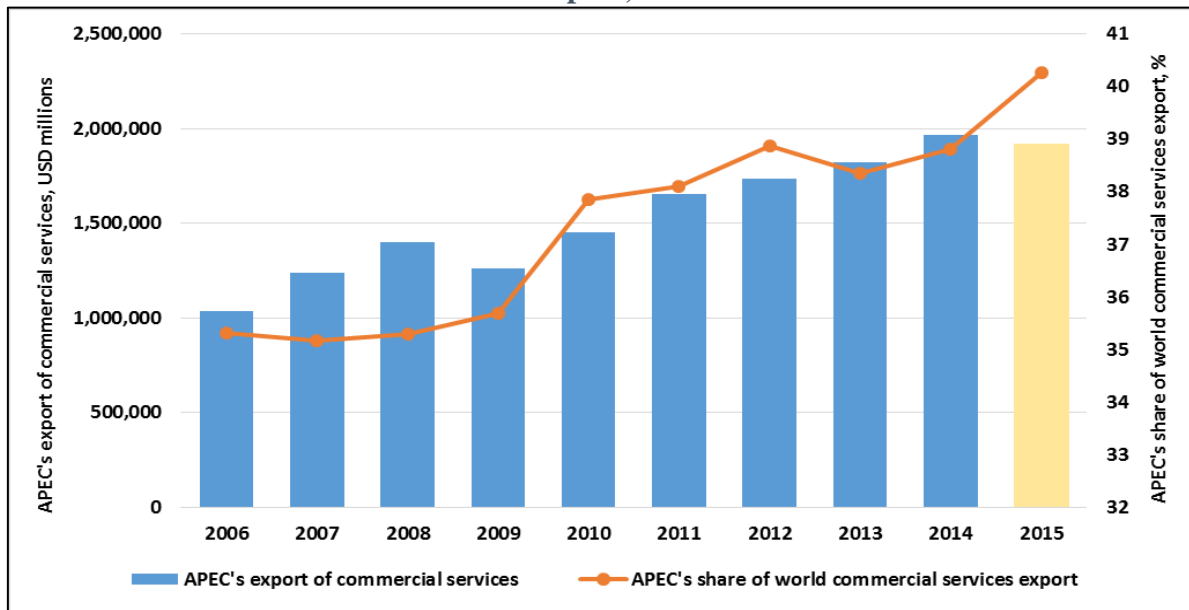
Source: PSU calculations, and World Trade Organization (WTO) Time Series (http://stat.wto.org/StatisticalProgram/WSDBStatProgramSeries.aspx?Language=E), accessed 20 April 2017.

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[2] In 2014, APEC's share of total world services exports was 38.4 per cent.

Overarching target #3: *Increasing trade-in-services in the APEC region so that by 2025, both the compound average annual growth rate (CAGR) exceeds the historic average of 6.8 percent[3] and the share of value-added of the services sector in the total GDP of the APEC region exceeds the global average level.*

APEC's total trade in commercial services increased from USD2.1 trillion in 2006 to USD3.9 trillion in 2015 (Figure 4), at a CAGR of 7.0 percent. The top economies in 2015 are the United States (USD1.2 trillion); China (USD752 billion); and Japan (USD332 billion), which collectively contributed close to 60 percent of APEC's total trade in commercial services.

Figure 4. APEC's trade in commercial services, 2006-2015
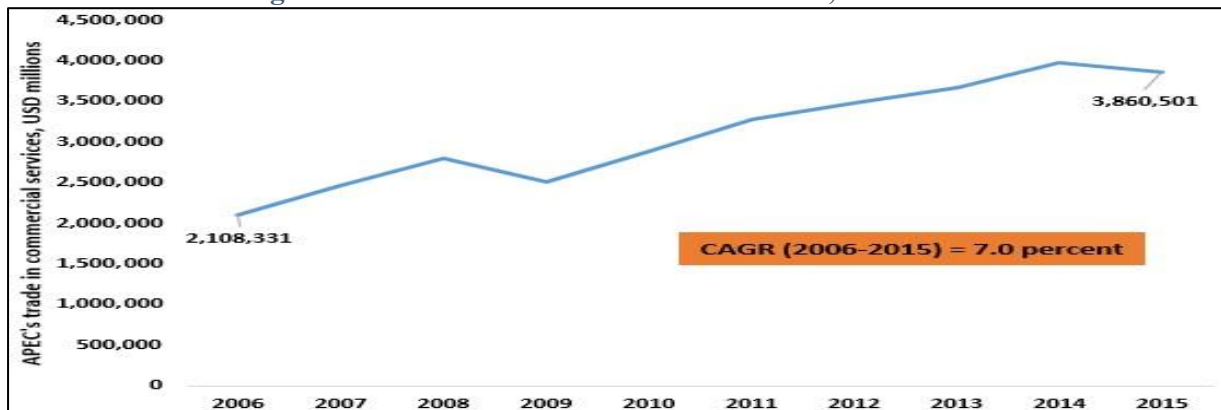
Source: WTO Time Series (http://stat.wto.org/StatisticalProgram/WSDBStatProgramSeries.aspx?Language=E), accessed 20 April 2017.

APEC's services value added (as a percentage of GDP) was 66.4 percent in 2014, lower than the world's at 68.5 percent (Figure 5).

Figure 5. APEC vis-à-vis world services value-added in 2014 (as a percentage of GDP)

Note: For the APEC aggregate, data for Canada referred to 2013 data, while data for New Zealand used 2012 data. Data not available for Papua New Guinea.
Source: World Bank (WB) World Development Indicators (WDI) (http://data.worldbank.org/indicator/NV.SRV.TETC.ZS), and Chinese Taipei's National Statistics (http://eng.stat.gov.tw/ct.asp?xItem=37408&CtNode=5347&mp=5), accessed 21 April 2017.

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[3] WTO Statistics Database

APEC-wide actions summary table

The 19 APEC-wide actions and their corresponding indicators are summarized in Table 2. Details of the PSU's evaluation of APEC's current conditions vis-à-vis these agreed actions using appropriate international benchmarks are detailed in the succeeding sections under each APEC-wide action.

Table 2. Summary of APEC-wide actions

No.	APEC-wide action	Accountable group	Indicators	Proposed by	Sources
1	Enhancing the critical role of trade in services in global value chains, including through increased participation of MSMEs and women, under the agreed Strategic Blueprint for Promoting Global Value Chains Development and Cooperation.	CTI	• Percentage of small and medium-sized firms that export directly or indirectly (at least 1% of sales)	PSU	WB
			• Percentage of small and medium-sized firms that export directly (at least 1% of sales)	PSU	WB
2	Supporting cross-border mobility for professionals, building on initiatives such as the APEC Architects and Engineers Registers to facilitate mutual recognition arrangements (MRAs).	HRDWG	• STRI in accounting, architecture, engineering, and legal sector	PSU	OECD
			• STRI in accounting, accounting, and legal sector	PSU	WB
			• Cross-recognition of educational standards and professional qualifications	Annex 3	Member survey and various sources
3	Enhancing flexibility for business visitors, building on initiatives such as the APEC Business Travel Card (ABTC).	CTI & BMG	• Development and implementation of an optional APEC-wide online lodgment for ABTC applications	Annex 3	Group update
4	Developing a set of good practice principles on domestic regulations in the services sector.	GOS, CTI & EC	• STRI in selected services sector	PSU	OECD and WB
5	Implementation of the Renewed APEC Agenda on Structural Reform (RAASR), including progressing the 2016 APEC Economic Policy Report (AEPR) on Structural Reform and Services.	GOS, CTI & EC	• STRI in selected services sector	PSU	OECD and WB
6	Supporting liberalization, facilitation and cooperation of environmental services, by	GOS & CTI	• Not available	Annex 3	Not available

No.	APEC-wide action	Accountable group	Indicators	Proposed by	Sources
	implementing and building on the agreed Environmental Services Action Plan (ESAP).				
7	Progressive liberalization and facilitation of manufacturing-related services, by implementing and building upon under the agreed Manufacturing Related Services Action Plan (MSAP).	GOS & CTI	• STRI in selected services sector	PSU	OECD and WB
8	Supporting cooperation in the education sector including promoting internship schemes, overseas student exchange programs, and collaborative policy studies, as well as, in accordance with domestic education systems, information sharing pertinent to economies' education standards, qualifications and credit systems and measures to explore mutual recognition (learning from measures such as the ASEAN Qualifications Reference Framework).	HRDWG	• Inbound internationally mobile students in tertiary education by economy of destination	Annex 3 and PSU	UNESCO and economy sources
			• Cross-recognition of educational standards and professional qualifications	Annex 3	Member survey and various sources
			• Mobility of educated workers within region	Annex 3 and PSU	Member survey
9	Collaboration in responding to the rapid developments in internet-based technology to promote a regulatory approach that provides appropriate prudential oversight, legitimate consumer and security protections while enabling the flow of trade-related data in the context of an increasingly digitalized world.	CTI, ECSG & AHSGIE	• Cross-border data flows and privacy (Number of economies and firms participating in APEC Cross-Border Privacy Rules (CBPR) and Privacy Recognition for Processors (PRP) Systems)	Group	Group update
			• Status of online protection laws	Group and PSU	UNCTAD and member survey
10	Supporting certain cross-border provision of financial services subject to practical needs, domestic circumstances and regulations of each economy, including by engagement by interested economies in the building on the Asia Region Funds Passport initiative.	GOS, CTI & FMP	• STRI in commercial banking and insurance sector	PSU	OECD and WB
			• Number of transactions or cross-border sales between ARFP-participating economies	Annex 3	Member survey

No.	APEC-wide action	Accountable group	Indicators	Proposed by	Sources
11	Supporting APEC's work on developing air, sea and land transportation in line with the APEC Connectivity Blueprint 2015-2025.	TPTWG	• STRI in logistics and transport sector	PSU	OECD and WB
			• Air services agreements	Group	WTO, ICAO, ASEAN and economy sources
12	Support APEC's work on developing the travel and tourism sector for sustainable and inclusive growth, building on the work of the APEC Tourism Strategic Plan.	TWG	• International tourism arrivals	Group	UN WTO and economy sources
			• Intra-APEC visa restrictions	Annex 3	Passport Index and economy sources
			• International tourism receipts	Group	WB
			• Travel and tourism GDP (direct contribution)	Group	WTTC
			• Travel and tourism employment (direct contribution)	Group	WTTC
13	Development of services data and statistics to measure and support implementation of the Roadmap and improve tracking of services trade and investment more broadly.	GOS & CTI	• Availability of trade in services statistics	Annex 3 and PSU	Various sources
14	Progressive facilitation of services to improve the regional food system to ensure access to safe, high quality food supplies across the Asia-Pacific.	PPFS	• Prevalence of food inadequacy	PSU	FAO
15	Strengthen domestic and regional energy security and lower the carbon intensity of energy supply and use across the region.	EWG	• APEC share of renewable energy	Group	APERC
			• APEC energy intensity ratio	Group	APERC
16	Examination of the impact of the Next Generation Trade and Investment Issues on Mode 3 Trade in Services.	IEG	• WB ease of doing business distance to frontier	Group	WB
			• STRI in selected services sector	Group	OECD
			• Intra-APEC Regional Trade Agreement/Free Trade Agreements (RTA/FTAs) with investment chapters	Group and PSU	UNESCAP and economy sources
			• Intra-APEC Double Taxation Agreements (DTAs)	Group and PSU	UNCTAD and economy sources

No.	APEC-wide action	Accountable group	Indicators	Proposed by	Sources
			• Intra-APEC Bilateral Investment Treaties (BITs)	Group and PSU	UNCTAD and economy sources
			• Survey on e-transparency	Group and PSU	Member survey
17	Supporting the development of innovative MSMEs and their participation in the Digital Economy under the SMEWG Strategic Action Plan	SMEWG	• Percentage of SMEs having their own website	PSU	WB
			• Percentage of SMEs using e-mail to interact with clients/suppliers	PSU	WB
			• Percentage of SMEs with a checking or savings account	PSU	WB
18	Enhancing ICT infrastructure and services to support economic growth.	TELWG	• Percentage of individuals using the internet	PSU	ITU
			• Fixed broadband subscriptions per 100 inhabitants	PSU	ITU
			• Active mobile-broadband subscriptions per 100 inhabitants	Group	ITU
19	[Intentionally left blank, pending discussions in PPSTI]	PPSTI	• [intentionally left blank]		

Notes: *Accountable groups*: AHSGIE = Ad Hoc Steering Group on the Internet Economy, BMG = Business Mobility Group, CTI = Committee on Trade and Investment, EC = Economic Committee, ECSG = Electronic Commerce Steering Group, EWG = Energy Working Group, FMP = Finance Ministers' Process, GOS = Group on Services, HRDWG = Human Resources Development Working Group, IEG = Investment Experts Group, PPFS = Policy Partnership on Food Security, PPSTI = Policy Partnership on Science, Technology and Innovation, SMEWG = SME Working Group, TELWG = Telecommunication and Information Working Group, TPTWG = Transportation Working Group, TWG = Tourism Working Group. *Sources:* APERC = Asia Pacific Energy Research Centre, ASEAN = Association of Southeast Asian Nations, FAO = Food and Agriculture Organization, ICAO = International Civil Aviation Organization, ITU = International Telecommunication Union, OECD = Organisation for Economic Co-operation and Development, UNCTAD = United Nations Conference on Trade and Development, UNESCAP = United Nations Economic and Social Commission for Asia and the Pacific, UNESCO = United Nations Educational, Scientific and Cultural Organization, UN WTO = United Nations World Tourism Organization, WB = World Bank, WTTC = World Travel and Tourism Council, WTO = World Trade Organization.
Source: PSU compilations.

APEC-wide actions vis-à-vis Indicators

APEC-wide action #1
Enhancing the critical role of trade in services in global value chains, including through increased participation of MSMEs and women, under the agreed Strategic Blueprint for Promoting Global Value Chains Development and Cooperation.

Accountable Group: CTI	
Indicators	• WB - Percentage of small and medium-sized firms that export directly or indirectly (at least 1% of sales) • WB - Percentage of small and medium-sized firms that export directly (at least 1% of sales)

A large variation exists among APEC economies in the percentage of small- and medium-sized firms that export directly or indirectly, ranging from 2.2 (Thailand, 2016) to 23.0 percent (Papua New Guinea, 2015) for small firms; and from 4.8 percent (Thailand, 2016) to 34.1 percent (Malaysia, 2015) for medium firms (Table 3).

Table 3. Percentage of SMEs in APEC economies exporting directly or indirectly, latest year available

Economies	Latest Year	Percentage of firms exporting directly or indirectly		Percentage of firms exporting directly	
		Small	**Medium**	**Small**	**Medium**
Chile	2010	4.4	12.4	1.8	11.1
China	2012	14.4	26.3	4.7	13.0
Indonesia	2015	9.8	10.7	6.2	7.9
Korea	2005	7.4	33.3	5.8	31.6
Malaysia	2015	11.2	34.1	4.3	19.5
Mexico	2010	2.8	14.4	1.1	10.7
Papua New Guinea	2015	23.0	6.7	11.5	6.7
Peru	2010	3.8	21.3	2.1	17.1
The Philippines	2015	6.2	11.4	4.7	9.6
Russia	2012	9.1	14.6	6.3	10.2
Thailand	2016	2.2	4.8	2.2	3.7
Viet Nam	2015	10.3	21.3	8.0	13.2

Notes: The WB categorizes firms as follows: *small firms* are those with between 5 and 19 employees; *medium firms* are those with between 20 and 99 employees; *firms exporting directly* are those enterprises that sell goods or services directly to customers in another economy; and *firms exporting indirectly* are those enterprises that sell domestically to a third party that exports products. Data of exporting firms collected by the WB refer to firms exporting at least 1% of sales. Data not available for Australia; Brunei Darussalam; Canada; Hong, Kong, China; Japan; New Zealand; Singapore; Chinese Taipei; and the United States.
Source: Enterprise Surveys (http://www.enterprisesurveys.org), The World Bank, accessed 21 March 2017.

APEC-wide action #2
Supporting cross-border mobility for professionals, building on initiatives such as the APEC Architects and Engineers Registers to facilitate mutual recognition arrangements (MRAs).

Accountable Group: HRDWG	
Indicators	• OECD - STRI in accounting, architecture, engineering, and legal sector • WB - STRI in accounting, accounting, and legal sector • Member survey and various sources - Cross-recognition of educational standards and professional qualifications

Table 4. OECD STRI and ratio in selected sectors for APEC economies, 2016

Economies	Accounting		Architecture		Engineering		Legal	
	STRI	Ratio of economy's STRI to lowest STRI value	STRI	Ratio of economy's STRI to lowest STRI value	STRI	Ratio of economy's STRI to lowest STRI value	STRI	Ratio of economy's STRI to lowest STRI value
Australia	0.193	2.382	0.153	1.453	0.123	1.086	0.158	2.037
Canada	0.247	3.045	0.210	1.996	0.179	1.579	0.165	2.123
Chile	0.081	1.000	0.112	1.063	0.113	1.000	0.136	1.745
China	0.423	5.205	0.248	2.347	0.245	2.164	0.472	6.071
Indonesia	0.424	5.218	0.287	2.723	0.286	2.525	0.879	11.311
Japan	0.194	2.384	0.153	1.453	0.153	1.346	0.268	3.447
Korea	1.000	12.312	0.173	1.643	0.137	1.206	0.428	5.512
Mexico	0.145	1.786	0.185	1.756	0.184	1.620	0.170	2.193
New Zealand	0.138	1.705	0.142	1.344	0.127	1.124	0.176	2.266
Russia	0.295	3.631	0.312	2.957	0.287	2.535	0.318	4.087
United States	0.171	2.111	0.177	1.679	0.206	1.817	0.192	2.470
APEC	**0.301**	**3.707**	**0.196**	**1.856**	**0.186**	**1.637**	**0.306**	**3.933**

Notes: OECD STRI = 0 (completely open) – 1 (completely closed). China data have not been officially ratified. Ratios are computed by dividing the index over the lowest positive value in the data set per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, and OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 8 March 2017.

Based on the OECD STRI ratio, the legal sector was the most restrictive professional sector in 8 out of 11 APEC member-economies in 2016, followed by the accounting sector. In contrast, the engineering sector was the least restrictive professional sector in 10 out of 11 economies (Figure 6 and Table 4). It is noted that, the ratios for Indonesia's legal sector at 11.3 and Korea's accounting sector at 12.3 are higher compared to other economies.

Figure 6. Ratio of APEC economies' OECD STRI to lowest OECD STRI value, 2016
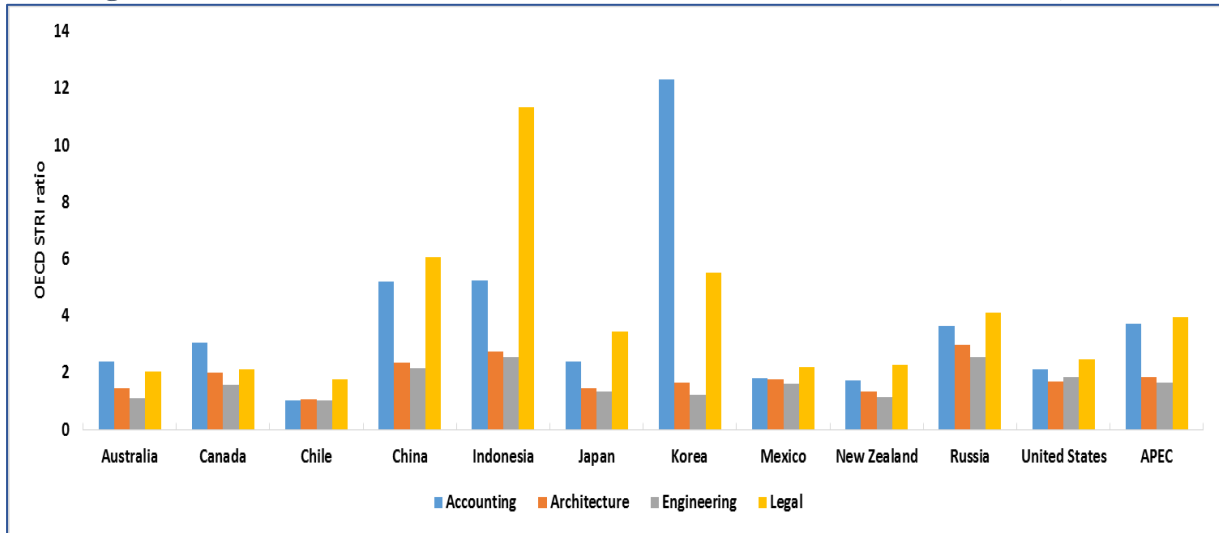
Notes: A higher ratio corresponds to a higher degree of restrictiveness. China data have not been officially ratified. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, and OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 8 March 2017.

Under the three professional sectors covered by the WB STRI, the ratio for APEC as whole is highest for the legal sector, followed by the auditing and accounting sectors (Figure 7 and Table 5). The WB STRI mirrors the OECD STRI since both shows that the legal sector is the most restrictive professional sector in 10 out of 16 economies during the period covered. Meanwhile, the auditing sector is the most restrictive professional sector in six economies. It is worthwhile to note that the ratio for each professional sector varies widely among APEC member-economies.

Figure 7. Ratio of APEC economy's World Bank STRI to lowest World Bank STRI value, 2008 or 2011
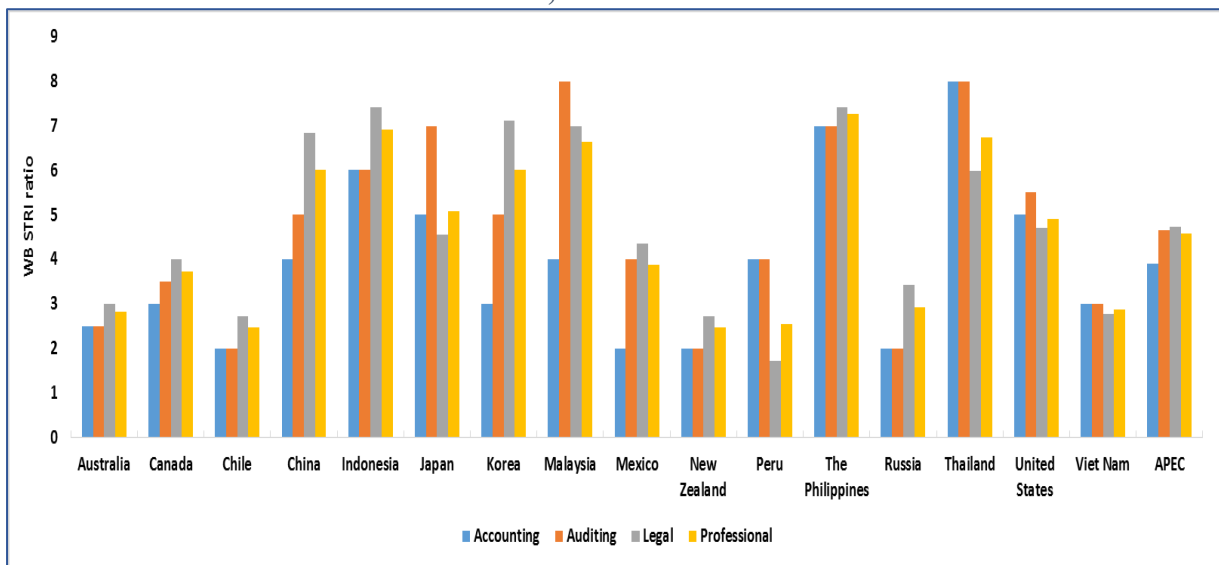
Notes: Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database (http://iresearch.worldbank.org/servicetrade/#), accessed 9 March 2017.

Table 5. World Bank STRI and ratio in selected sectors for APEC economies, 2008 or 2011

Economies	Accounting		Auditing		Legal	
	STRI	Ratio of economy's STRI to lowest STRI value	STRI	Ratio of economy's STRI to lowest STRI value	STRI	Ratio of economy's STRI to lowest STRI value
Australia	25.0	2.5	25.0	2.5	35.0	3.0
Canada	30.0	3.0	35.0	3.5	46.7	4.0
Chile	20.0	2.0	20.0	2.0	31.7	2.7
China	40.0	4.0	50.0	5.0	80.0	6.8
Indonesia	60.0	6.0	60.0	6.0	86.7	7.4
Japan	50.0	5.0	70.0	7.0	53.3	4.6
Korea	30.0	3.0	50.0	5.0	83.3	7.1
Malaysia	40.0	4.0	80.0	8.0	81.7	7.0
Mexico	20.0	2.0	40.0	4.0	50.8	4.3
New Zealand	20.0	2.0	20.0	2.0	31.7	2.7
Peru	40.0	4.0	40.0	4.0	20.0	1.7
The Philippines	70.0	7.0	70.0	7.0	86.7	7.4
Russia	20.0	2.0	20.0	2.0	40.0	3.4
Thailand	80.0	8.0	80.0	8.0	70.0	6.0
United States	50.0	5.0	55.0	5.5	55.0	4.7
Viet Nam	30.0	3.0	30.0	3.0	32.5	2.8
APEC	**39.1**	**3.9**	**46.6**	**4.7**	**55.3**	**4.7**

Notes: WB STRI = 0 (completely open) – 100 (completely closed). Latest year for China and Mexico is 2011, and 2008for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data set per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database
(http://iresearch.worldbank.org/servicetrade/#), accessed 9 March 2017.

The number of MRAs that an economy has with other APEC economies in specific sectors and professions are used to measure the degree of cross-recognition of educational standards and qualifications. Based on the response of economies to PSU's survey as well as PSU's compilations from various sources, economies with significant number of MRAs supporting cross-border mobility of certain professionals with other APEC economies include Australia; Canada; Malaysia; Singapore; and Viet Nam (Figure 8).

Figure 8. Presence of MRAs among APEC economies
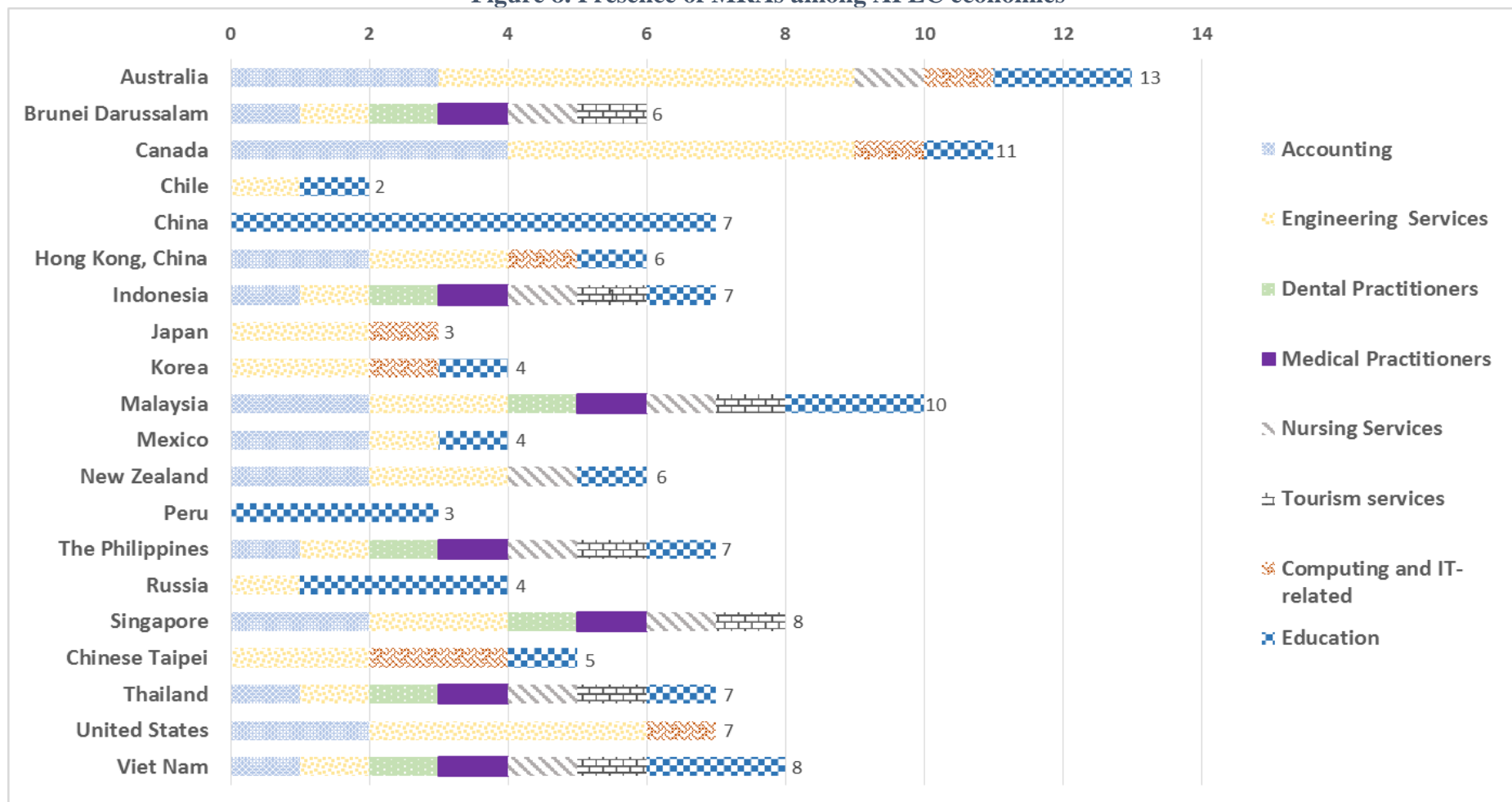
Note: Papua New Guinea: no available information; and did not respond to the survey.
Source: PSU's compilations (March 2017) and survey responses of HRDWG members (April-August 2017).

APEC-wide action #3
Enhancing flexibility for business visitors, building on initiatives such as the APEC Business Travel Card (ABTC).

Accountable Group: CTI & BMG	
Indicators	• Group update - Development and implementation of an optional APEC-wide online lodgment for ABTC applications

The implementation of this particular APEC-wide action involves the inclusion of the following as part of BMG's development and expansion work: 1) a pilot with a small number of economies involving a client-facing online lodgment system; and 2) the eventual expansion to all economies with client-facing online lodgment. Currently, Australia is developing the online lodgment web-service connection.

APEC-wide action #4
Developing a set of good practice principles on domestic regulations in the services sector.

Accountable Group: GOS, CTI & EC	
Indicators	• OECD - STRI in selected services sector • WB - STRI in selected services sector

The OECD STRI (Table 6) and WB STRI (Table 7) were used to gauge the APEC region's current standing with regards to selected services sector. In particular, APEC's average ratio was computed along with individual member-economies' distance to this APEC-wide ratio.

Table 6. OECD STRI ratio to lowest value in selected services sector for APEC economies, 2016

Economies	Logistics cargo handling	Logistics storage and warehouse	Logistics freight forwarding	Logistics customs brokerage	Motion pictures	Broadcasting	Sound recording	Telecommunication	Air transport	Maritime transport	Road freight transport
Australia	2.371	2.599	2.403	2.103	1.715	1.456	1.913	1.406	1.746	1.654	1.278
Canada	1.774	1.767	1.659	1.587	2.555	2.169	2.063	2.572	2.088	1.485	1.333
Chile	1.975	2.048	2.246	3.515	1.796	2.080	1.937	2.212	1.000	1.672	1.111
China	3.563	3.536	3.476	3.005	6.293	4.854	3.262	3.639	2.348	3.168	2.278
Indonesia	3.543	3.825	3.885	2.625	3.229	2.792	2.429	4.349	2.381	4.498	3.500
Japan	1.843	2.008	2.203	1.769	1.000	1.710	1.000	1.565	1.836	1.544	1.028
Korea	1.307	1.000	1.365	1.180	1.708	1.918	1.357	2.374	2.058	1.986	1.000
Mexico	2.584	2.895	2.753	9.290	2.869	4.409	2.325	1.863	1.945	2.722	1.778
New Zealand	2.457	2.484	2.435	2.105	1.704	1.165	2.103	2.011	1.879	1.662	1.333
Russia	8.152	10.657	2.698	2.595	3.172	2.499	3.024	3.249	2.850	2.936	2.472
United States	1.965	2.268	2.464	2.165	1.887	1.835	2.048	1.017	2.756	2.898	1.528
APEC	**2.867**	**3.190**	**2.508**	**2.904**	**2.539**	**2.444**	**2.133**	**2.387**	**2.081**	**2.384**	**1.694**

(cont.)

Economies	Rail freight transport	Courier and postal	Distribution	Commercial banking	Insurance	Computer	Construction	Accounting	Architecture	Engineering	Legal
Australia	1.407	3.075	1.404	1.324	1.745	1.481	1.577	2.382	1.453	1.086	2.037
Canada	1.116	3.016	2.932	1.484	2.026	1.799	2.405	3.045	1.996	1.579	2.123
Chile	1.478	3.794	1.504	1.679	1.556	1.389	1.158	1.000	1.063	1.000	1.745
China	2.009	6.849	3.053	3.295	4.291	3.090	3.097	5.205	2.347	2.164	6.071
Indonesia	2.397	3.443	7.102	3.837	4.719	2.916	3.816	5.218	2.723	2.525	11.311
Japan	1.182	1.933	1.306	1.559	1.649	1.558	1.000	2.384	1.453	1.346	3.447
Korea	6.783	2.843	1.000	1.435	1.000	1.000	1.098	12.312	1.643	1.206	5.512
Mexico	1.941	3.497	2.006	2.789	2.159	1.918	2.165	1.786	1.756	1.620	2.193
New Zealand	1.338	1.826	1.458	1.497	1.195	1.165	1.167	1.705	1.344	1.124	2.266
Russia	6.738	2.830	2.413	2.881	3.533	3.310	3.488	3.631	2.957	2.535	4.087
United States	1.147	3.125	1.754	1.718	2.759	1.805	2.444	2.111	1.679	1.817	2.470
APEC	**2.503**	**3.294**	**2.358**	**2.136**	**2.421**	**1.948**	**2.129**	**3.707**	**1.856**	**1.637**	**3.933**

Notes: OECD STRI = 0 (completely open) – 1 (completely closed). Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. The higher the ratio, the more restrictive the sector. China data have not been officially ratified. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, and OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 10 March 2017.

The average ratio for the logistics cargo handling sector in the APEC region is 2.87 (Figure 9). Three economies, namely Russia; China; and Indonesia have ratios that are above the average, while the remaining eight have below-average ratios.

Figure 9. OECD STRI ratio to lowest value in logistics cargo handling sector for APEC economies, 2016
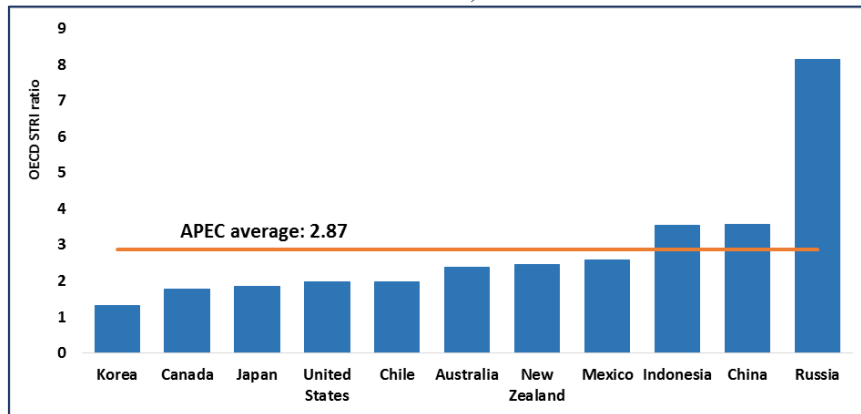
Notes: Ratios are computed by dividing the index over the lowest positive value in the data set per sector. A higher ratio corresponds to a higher degree of restrictiveness. China data have not been officially ratified. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 10 March 2017.

The average ratio for the telecommunications sector in the APEC region is 2.39 (Figure 10). Four economies, namely Indonesia; China; Russia; and Canada have ratios that are above the average, while the remaining seven economies exhibited below-average ratios.

Figure 10. OECD STRI ratio to lowest value in telecommunications sector for APEC economies, 2016

Notes: Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. China data have not been officially ratified. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, and OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 10 March 2017.

In terms of the air transport sector, the average ratio for the APEC region is 2.08 (Figure 11). Five economies, namely Russia; United States; Indonesia; China; and Canada showed ratios that are above the average, while the remaining six economies have below-average ratios.

Figure 11. OECD STRI ratio to lowest value in air transport sector for APEC economies, 2016
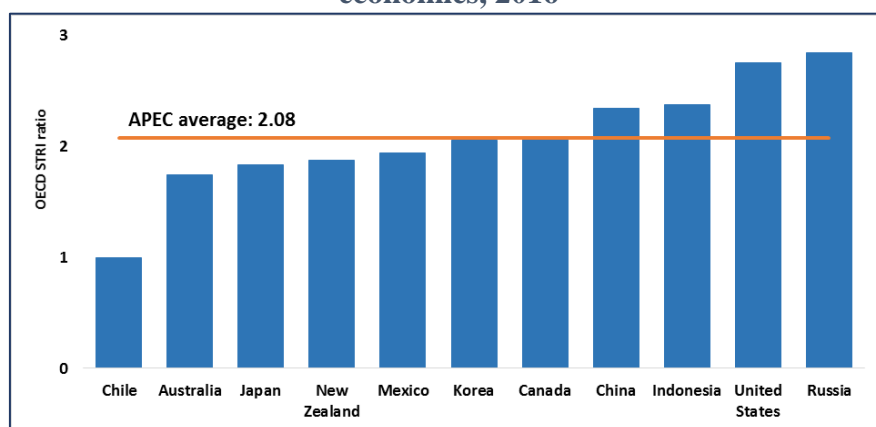
Notes: Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. China data have not been officially ratified. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, and OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 10 March 2017.

For the commercial banking sector in the APEC region, the average ratio is 2.14 (Figure 12). Four economies, namely Indonesia; China; Russia; and Mexico have ratio that are above the average, while the remaining seven have below-average ratio.

Figure 12. OECD STRI ratio to lowest value in commercial banking sector for APEC economies, 2016
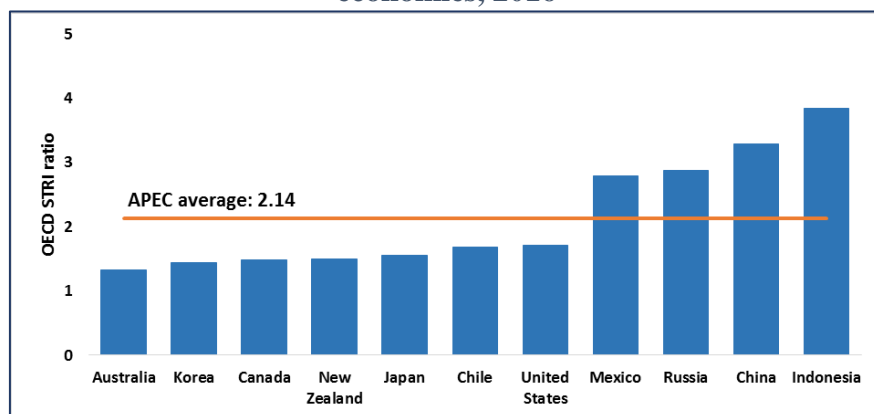
Notes: Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. China data have not been officially ratified. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, and OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 10 March 2017.

Table 7. World Bank STRI and ratio in certain services sector for APEC economies, 2008 or 2011

Economies	Financial		Telecommunications		Transportation		Professional	
	STRI	Ratio of economy's STRI to lowest STRI value	STRI	Ratio of economy's STRI to lowest STRI value	STRI	Ratio of economy's STRI to lowest STRI value	STRI	Ratio of economy's STRI to lowest STRI value
Australia	36.4	121.3	25	2	12.5	4.0	31	2.8
Canada	20.8	69.3	50	4	16.1	5.2	41	3.7
Chile	22.1	73.7	25	2	19.2	6.2	27	2.5
China	34.8	116.0	50	4	19.3	6.2	66	6.0
Indonesia	23.4	78.0	25	2	66.4	21.4	76	6.9
Japan	1.9	6.3	25	2	15.6	5.0	56	5.1
Korea	2.3	7.7	50	4	20.8	6.7	66	6.0
Malaysia	44.6	148.7	25	2	55.4	17.9	73	6.6
Mexico	15.3	51.0	37.5	3	61.5	19.8	42.5	3.9
New Zealand	3.6	12.0	37.5	3	5.4	1.7	27	2.5
Peru	41.6	138.7	0	0	3.1	1.0	28	2.5
The Philippines	45.1	150.3	50	4	44.2	14.3	80	7.3
Russia	46.7	155.7	50	4	14.2	4.6	32	2.9
Thailand	49.4	164.7	50	4	47.1	15.2	74	6.7
United States	21.4	71.3	0	0	7.9	2.5	54	4.9
Viet Nam	40.8	136.0	50	4	38.6	12.5	31.5	2.9
APEC	**28.1**	**93.8**	**34.4**	**2.8**	**28.0**	**9.0**	**50.3**	**4.6**

Notes: WB STRI = 0 (completely open) – 100 (completely closed). Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database
(http://iresearch.worldbank.org/servicetrade/#*), accessed 10 March 2017.*

Average ratio for the financial sector in the APEC region is 93.8 (Figure 13). Eight economies, namely Thailand; Russia; the Philippines; Malaysia; Peru; Viet Nam; Australia; and China have ratios that are above the average, while the remaining eight have below-average ratios.

Figure 13. World Bank STRI ratio to lowest value in financial sector for APEC economies, 2008 or 2011
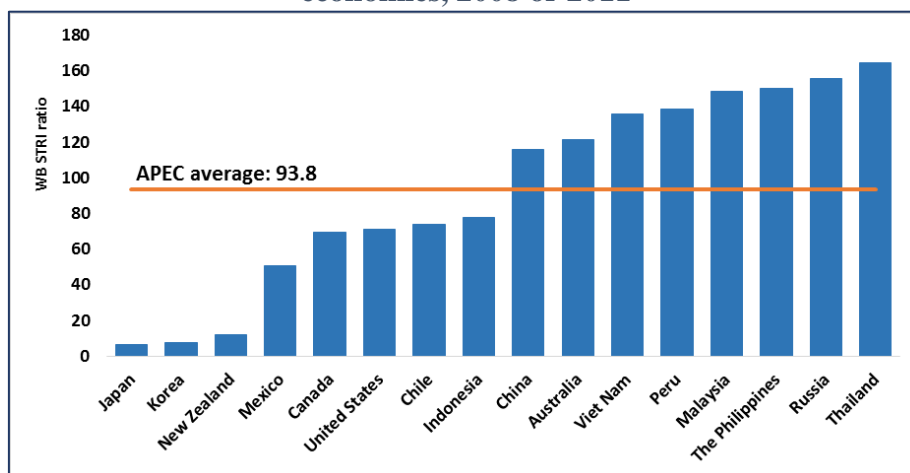
Notes: Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database
(http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

Average ratio for the telecommunications sector in the APEC region is 2.8 (Figure 14). Nine economies, namely Viet Nam; Thailand; Russia; the Philippines; Korea; China; Canada; New Zealand; and Mexico have ratios that are above the average, while the remaining seven have below-average ratios.

Figure 14. World Bank STRI ratio to lowest value in telecommunications sector for APEC economies, 2008 or 2011

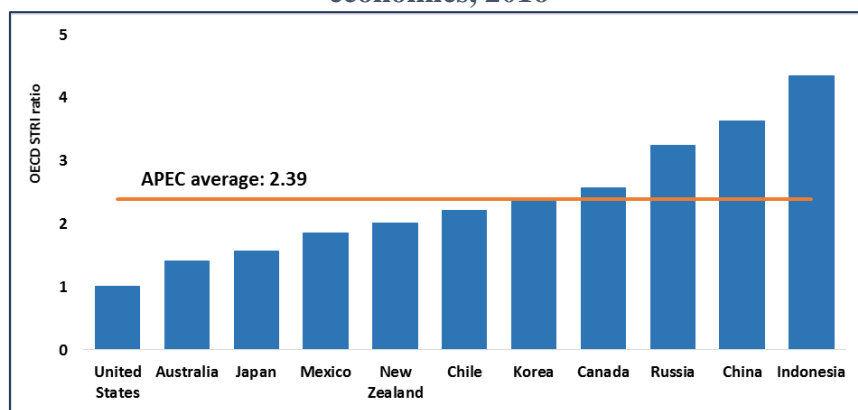Notes: Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database
(http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

Average ratio for the transportation sector in the APEC region is 9.0 (Figure 15). Six economies, namely Indonesia; Mexico; Malaysia; Thailand; the Philippines; and Viet Nam have ratios that are above the average, while the remaining ten have below-average ratios.

Figure 15. World Bank STRI ratio to lowest value in transportation sector for APEC economies, 2008 or 2011

Notes: Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database (http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

Average ratio for the professional sector in the APEC region is 4.6 (Figure 16). Eight economies, namely the Philippines; Indonesia; Thailand; Malaysia; Korea; China; Japan; and United States have ratios that are above the average, while the remaining eight have below-average ratios.

Figure 16. World Bank STRI ratio to lowest value in professional sector for APEC economies, 2008 or 2011
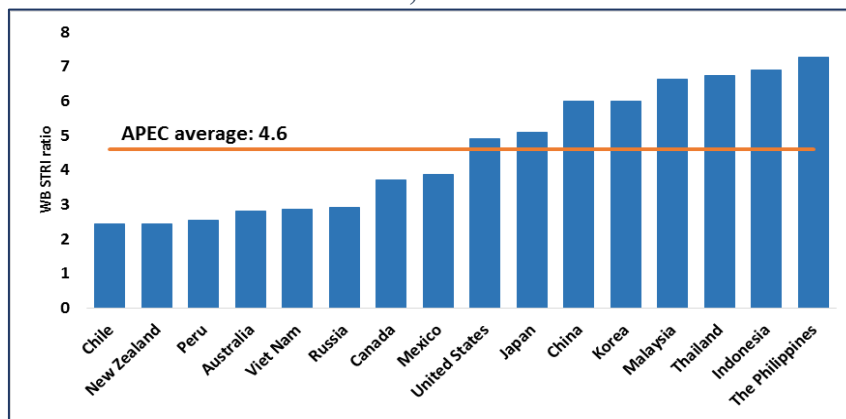
Notes: Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database (http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

APEC-wide action #5

Implementation of the Renewed APEC Agenda on Structural Reform (RAASR), including progressing the 2016 APEC Economic Policy Report (AEPR) on Structural Reform and Services.

Accountable Group: GOS, CTI & EC	
Indicators	• Same as in Action #4

APEC-wide action #6

Supporting liberalization, facilitation and cooperation of environmental services, by implementing and building on the agreed Environmental Services Action Plan (ESAP).

Accountable Group: GOS & CTI	
Indicators	• Not available

APEC-wide action #7

Progressive liberalization and facilitation of manufacturing-related services, by implementing and building upon under the agreed Manufacturing Related Services Action Plan (MSAP).

Accountable Group: GOS & CTI	
Indicators	• Same as in Action #4

APEC-wide action #8
Supporting cooperation in the education sector including promoting internship schemes, overseas student exchange programs, and collaborative policy studies, as well as, in accordance with domestic education systems, information sharing pertinent to economies' education standards, qualifications and credit systems and measures to explore mutual recognition (learning from measures such as the ASEAN Qualifications Reference Framework).

Accountable Group: HRDWG	
Indicators	• UNESCO and economy sources - Inbound internationally mobile students in tertiary education by economy of destination • Member survey and various sources - Cross-recognition of educational standards and professional qualifications (Same as in Action #2) • Member survey - Mobility of educated workers within region

The top destination economy for inbound students from other APEC economies is the United States (451,975), followed by Australia (174,252), and Japan (117,215) (Table 8).

Table 8. Inbound students in tertiary education from other APEC economies to destination economies

Destination economies	Year	Inbound students	Number of other APEC economies sending students to destination economy
Australia	2014	174,252	19
Brunei Darussalam	2014	212	13
Canada	2013	66,184	19
Chile	2014	546	6
Hong Kong, China	2014	28,971	18
Indonesia	2010	3,240	7
Japan	2014	117,215	18
Korea	2013	45,852	19
Malaysia	2014	8,861	17
New Zealand	2014	26,119	18
Russia	2014	12,402	17
Chinese Taipei	2014	76,537	20
Thailand	2014	6,559	18
United States	2014	451,975	19
Viet Nam	2014	570	7

Notes: Please refer to accompanying excel spreadsheet 8.1 in the PSU website for the data. Data for China; Mexico; Papua New Guinea; Peru; the Philippines; and Singapore; as destination economies are not available from 2010 to 2014. CT data is the sum of non-citizen students studying for diploma and non-diploma degrees.
Sources: PSU calculations, and UNESCO (http://data.uis.unesco.org/#), accessed 11 March 2017. CT data: Ministry of Education (http://stats.moe.gov.tw/files/ebook/Education_Statistics/104/104edu_EXCEL.htm), accessed 22 June 2017. HKC data taken from the Education Bureau of the Hong Kong Special Administrative Region Government.

The number and profile of nationals working in other APEC economies as professionals is intended to measure if there is an increase in the mobility of educated workers in the region. However, survey responses submitted by five economies (Canada; Chile; Hong, Kong, China; Japan; and Chinese Taipei) indicate that they do not collect such information.

APEC-wide action #9
Collaboration in responding to the rapid developments in internet-based technology to promote a regulatory approach that provides appropriate prudential oversight, legitimate consumer and security protections while enabling the flow of trade-related data in the context of an increasingly digitalized world.

Accountable Group: CTI, ECSG & AHSGIE	
Indicators	• Group update - Number of economies and firms participating in APEC Cross-Border Privacy Rules (CBPR) and Privacy Recognition for Processors (PRP) Systems • UNCTAD and member survey - Status of online protection laws

Five economies, namely Canada; Japan; Korea; Mexico; and the United States are currently participating in the APEC CBPR system, while there is no APEC economy currently involved in the APEC PRP system (Table 9). Meanwhile, in the private sector, there are 20 firms that are participating in the CBPR System at the time of this report, while there is no participant from the private sector in the PRP System (Table 10).

Table 9. Status of member economies' participation in APEC CBPR and PRP Systems

Economy	Participation in APEC CBPR System	Participation in APEC PRP System
Australia	No	No
Brunei Darussalam	No	No
Canada	Yes	No
Chile	No	No
China	No	No
Hong Kong, China	No	No
Indonesia	No	No
Japan	Yes	No
Korea	Yes	No
Malaysia	No	No
Mexico	Yes	No
New Zealand	No	No
Papua New Guinea	No	No
Peru	No	No
The Philippines	No	No
Russia	No	No
Singapore	No	No
Chinese Taipei*	No	No
Thailand	No	No
United States	Yes	No
Viet Nam	No	No

Note: *Chinese Taipei has twice declared its intention to participate in CBPR during the annual ministerial meeting in 2016 and the ECSG meetings in February 2017.
Source: APEC ECSG.

Table 10. Number of firms participating in the APEC CBPR and PRP Systems

	Participation in APEC CBPR System	Participation in APEC PRP System
Number of firms	20	0

Source: APEC ECSG.

In general, APEC economies have legislations in place that cover online protection laws in the areas of electronic transactions, consumer protection, data protection and privacy, and cybercrime (Table 11). This finding is indicative of the existence of a strong online regulatory environment in the APEC region.

Table 11. Status of online protection laws in APEC

Economies	Electronic Transactions	Consumer Protection	Data Protection and Privacy	Cybercrime
Australia	Legislated	Legislated	Legislated	Legislated
Brunei Darussalam	Legislated	Legislated	No legislation	Legislated
Canada	Legislated	Legislated	Legislated	Legislated
Chile	Legislated	Legislated	Legislated	Legislated
China	Legislated	Legislated	Legislated	Legislated
Hong Kong, China	Legislated	Legislated	Legislated	Legislated
Indonesia	Legislated	Legislated	Legislated	Legislated
Japan	Legislated	No data	Legislated	Legislated
Korea	Legislated	Legislated	Legislated	Legislated
Malaysia	Legislated	Legislated	Legislated	Legislated
Mexico	Legislated	Legislated	Legislated	Legislated
New Zealand	Legislated	Legislated	Legislated	Legislated
Papua New Guinea	Draft	No data	No legislation	No legislation
Peru	Legislated	Legislated	Legislated	Legislated
The Philippines	Legislated	Legislated	Legislated	Legislated
Russia	Legislated	No data	Legislated	Legislated
Singapore	Legislated	Legislated	Legislated	Legislated
Chinese Taipei	Legislated	Legislated	Legislated	Legislated
Thailand	Legislated	Legislated	Draft	Legislated
United States	Legislated	Legislated	Legislated	Legislated
Viet Nam	Legislated	Legislated	Legislated	Legislated

Notes: Legislated = enactment and enforcement of relevant legislation. Draft = the law is pending for adoption. No data = information about an economy's legislation adoption was not readily available. The UNCTAD defines the following: electronic transactions laws are those that facilitate e-commerce by providing legal certainty for the recognition of electronic communications, electronic records, and electronic signatures; consumer protection laws are those government regulations on transactions between consumers and businesses; data protection and privacy laws are those that relate to the right of individuals to control what happens with their personal information; and cybercrime laws are those that address criminal behavior and security issues in online commerce.
Sources: UNCTAD (http://unctad.org/en/Pages/DTL/STI_and_ICTs/ICT4D-Legislation/eCom-Global-Legislation.aspx); Hong Kong, China; and Chinese Taipei data, PSU compilation from various sources, please refer to accompanying excel spreadsheet 9.2 in the PSU website. Accessed 06 June 2017, UNCTAD.

APEC-wide action #10
Supporting certain cross-border provision of financial services subject to practical needs, domestic circumstances and regulations of each economy, including by engagement by interested economies in the building on the Asia Region Funds Passport initiative.

Accountable Group: GOS, CTI & FMP	
Indicators	• OECD - STRI in commercial banking and insurance sector
	• WB - STRI in banking and insurance sector
	• Member survey - Number of transactions or cross-border sales between ARFP-participating economies

Table 12. OECD STRI and ratio in commercial banking and insurance sector for APEC economies, 2016

Economies	Commercial banking		Insurance	
	STRI	Ratio of economy's STRI to lowest STRI value	STRI	Ratio of economy's STRI to lowest STRI value
Australia	0.164	1.324	0.183	1.745
Canada	0.184	1.484	0.213	2.026
Chile	0.208	1.679	0.164	1.556
China	0.409	3.295	0.451	4.291
Indonesia	0.476	3.837	0.496	4.719
Japan	0.194	1.559	0.173	1.649
Korea	0.178	1.435	0.105	1.000
Mexico	0.346	2.789	0.227	2.159
New Zealand	0.186	1.497	0.126	1.195
Russia	0.358	2.881	0.371	3.533
United States	0.213	1.718	0.290	2.759
APEC	**0.265**	**2.136**	**0.254**	**2.421**

Notes: OECD STRI = 0 (completely open) – 1 (completely closed). Ratios are computed by dividing the index over the lowest positive value in the data per sector. The higher the ratio, the more restrictive the sector. China data have not been officially ratified. APEC data excludes Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, and OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 10 March 2017.

The average ratio for the commercial banking sector in the APEC region is 2.14 (Figure 17). Four economies, namely Indonesia; China; Russia; and Mexico have ratios that are above the average, while the other seven economies have below-average ratios.

Figure 17. OECD STRI ratio to lowest value in commercial banking sector for APEC economies, 2016
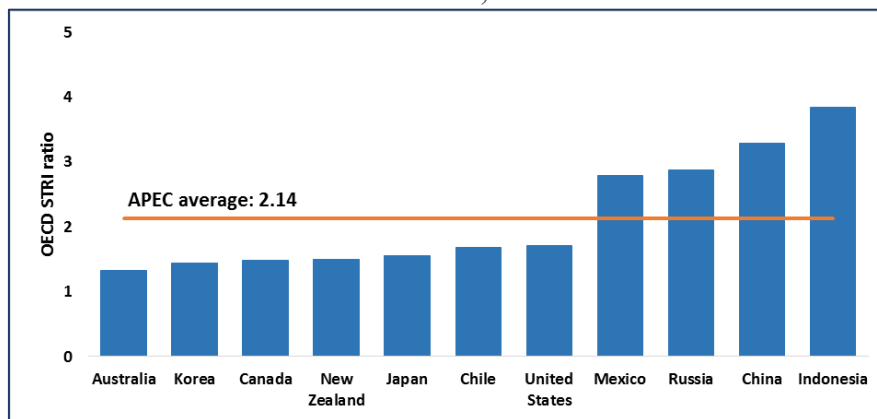
Notes: Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. China data have not been officially ratified. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, and OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 10 March 2017.

Average ratio for the insurance sector in the APEC region is 2.42 (Figure 18). Four economies, namely Indonesia; China; Russia; and United States have ratios that are above the average, while the remaining seven economies have below-average ratios.

Figure 18. OECD STRI ratio to lowest value in insurance sector for APEC economies, 2016

Notes: Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. China data have not been officially ratified. APEC data excludes Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, and OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 10 March 2017.

Table 13. World Bank STRI and ratio in banking and insurance sector for APEC economies, 2008 or 2011

Economies	Financial		Banking		Insurance	
	STRI	Ratio of economy's STRI to lowest STRI value	STRI	Ratio of economy's STRI to lowest STRI value	STRI	Ratio of economy's STRI to lowest STRI value
Australia	36.4	121.3	42.5	22.4	26.7	33.4
Canada	20.8	69.3	21.3	11.2	20	25.0
Chile	22.1	73.7	21.3	11.2	23.3	29.1
China	34.8	116.0	32.5	17.1	38.3	47.9
Indonesia	23.4	78.0	21.3	11.2	26.7	33.4
Japan	1.9	6.3	0.0	0.0	5	6.3
Korea	2.3	7.7	0.0	0.0	5.8	7.3
Malaysia	44.6	148.7	44.4	23.4	45	56.3
Mexico	15.3	51.0	11.3	5.9	21.7	27.1
New Zealand	3.6	12.0	0.0	0.0	9.2	11.5
Peru	41.6	138.7	36.3	19.1	50	62.5
The Philippines	45.1	150.3	46.3	24.4	43.3	54.1
Russia	46.7	155.7	42.5	22.4	53.3	66.6
Thailand	49.4	164.7	57.5	30.3	36.7	45.9
United States	21.4	71.3	21.3	11.2	21.7	27.1
Viet Nam	40.8	136.0	51.9	27.3	23.3	29.1
APEC	**28.1**	**93.8**	**28.2**	**14.8**	**28.1**	**35.2**

Notes: WB STRI = 0 (completely open) – 100 (completely closed). Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database
(http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

Average ratio for the financial sector in the APEC region as measured by the WB STRI is 93.8 (Figure 19). Eight economies, namely Thailand; Russia; the Philippines; Malaysia; Peru; Viet Nam; Australia; and China have ratios that are above the average, while the remaining eight economies have below-average ratios.

Figure 19. World Bank STRI ratio to lowest value in financial sector for APEC economies, 2008 or 2011
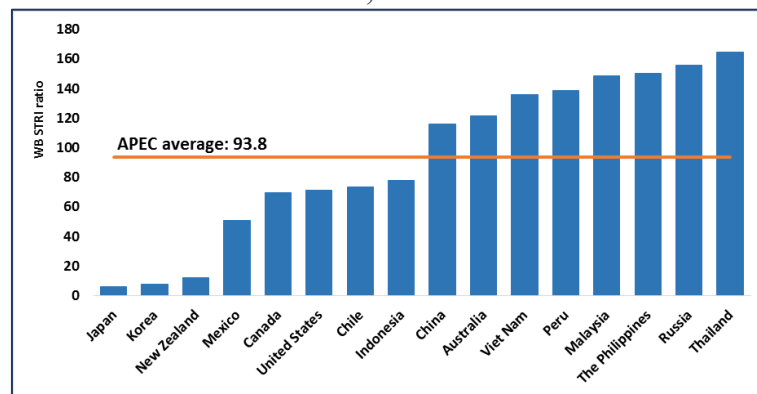
Notes: Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data excludes Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database
(http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

Average ratio for the banking sector in the APEC region as measured by the WB STRI is 14.8 (Figure 20). Eight economies, namely Thailand; Viet Nam; the Philippines; Malaysia; Russia; Australia; Peru; and China have ratios that are above the average, while the other eight economies have below-average ratio.

Figure 20. World Bank STRI ratio to lowest value in banking sector for APEC economies, 2008 or 2011
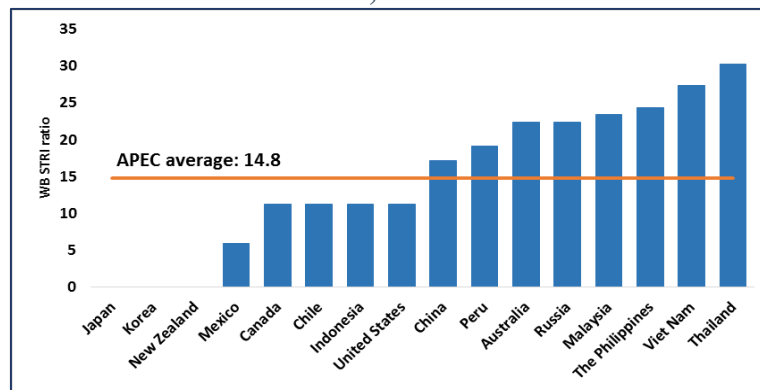
Notes: Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database
(http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

Average ratio for the insurance sector in the APEC region as measured by the WB STRI is 35.2 (Figure 21). Six economies, namely Russia; Peru; Malaysia; the Philippines; China; and Thailand have ratios that are above the average, while the remaining ten economies have below-average ratios.

Figure 21. World Bank STRI ratio to lowest value in insurance sector for APEC economies, 2008 or 2011

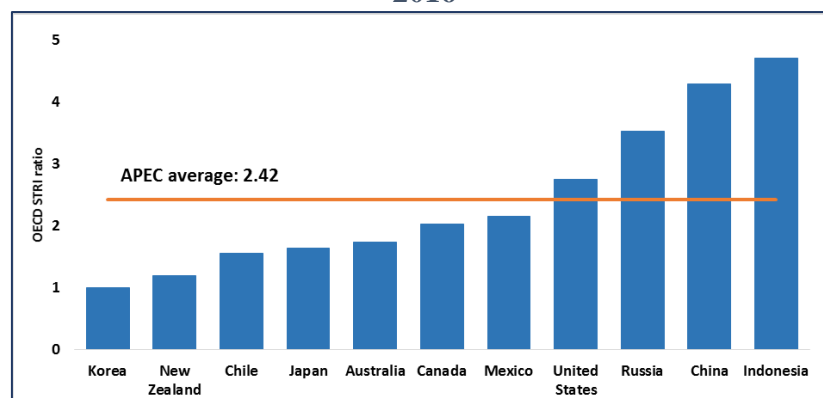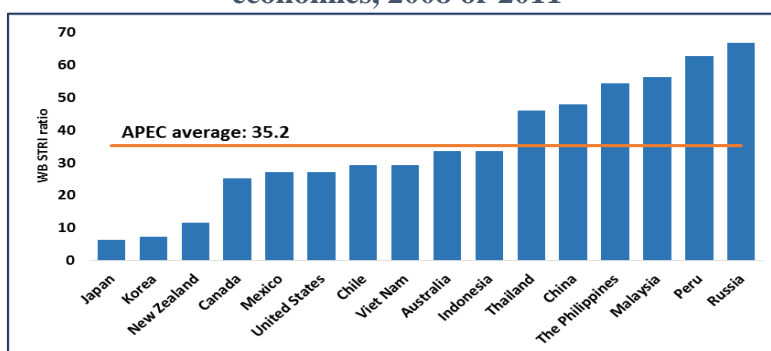Notes: Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database
(http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

Based on the survey responses, Japan; New Zealand; and Thailand have already expressed their intent to participate in the ARFP initiative, although to date, no transactions have been recorded (Table 14). In contrast, Brunei Darussalam; Canada; Hong Kong, China; Mexico; the Philippines; Chinese Taipei; and the United States did not participate in this initiative.

Table 14. Status of APEC economies' participation in Asia Region Funds Passport (ARFP) initiative

Economy	Participation in ARFP initiative	Number of transactions or cross-border sales using ARFP	Year
Australia	NA	NA	NA
Brunei Darussalam	No	NA	NA
Canada	No	NA	NA
Chile	NA	NA	NA
China	NA	NA	NA
Hong Kong, China	No	NA	NA
Indonesia	NA	NA	NA
Japan	Yes	No transactions to date	
Korea	NA	NA	NA
Malaysia	NA	NA	NA
Mexico	No	NA	NA
New Zealand	Yes*	No transactions to date	
Papua New Guinea	NA	NA	NA
Peru	NA	NA	NA
The Philippines	No	NA	NA
Russia	NA	NA	NA
Singapore	NA	NA	NA
Chinese Taipei	No	NA	NA
Thailand	Yes*	No transactions to date	
United States	No	NA	NA
Viet Nam	NA	NA	NA

Notes: NA = not available; and/or did not respond to the survey. *New Zealand anticipates its ARFP implementation in late 2017. *Thailand is in the process of preparing for ARFP implementation framework.
Source: PSU survey compilations from FMP members.

APEC-wide action #11
Supporting APEC's work on developing air, sea and land transportation in line with the APEC Connectivity Blueprint 2015-2025.

Accountable Group: TPTWG	
Indicators	• OECD - STRI in logistics and transport sector
	• WB - STRI in logistics and transport sector
	• WTO, ICAO, ASEAN and economy sources - Air services agreements

Average ratio for the logistics freight forwarding sector in the APEC region as measured by the OECD STRI is 2.51 (Figure 22). Four economies, namely Indonesia; China; Mexico; and Russia have ratios that are above the average, while the remaining seven economies have below-average ratios.

Figure 22. OECD STRI ratio to lowest value in logistics freight forwarding sector for APEC economies, 2016
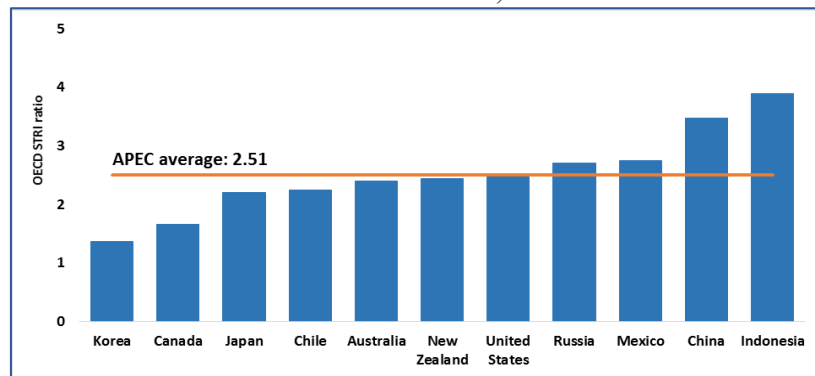
Notes: Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. China data have not been officially ratified. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, and OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 10 March 2017.

Average ratio for the maritime transport sector in the APEC region as measured by the OECD STRI is 2.38 (Figure 23). Five economies, namely Indonesia; China; Russia; United States; and Mexico have ratios that are above the average, while the remaining six economies have below-average ratio.

Figure 23. OECD STRI ratio to lowest value in maritime transport sector for APEC economies, 2016
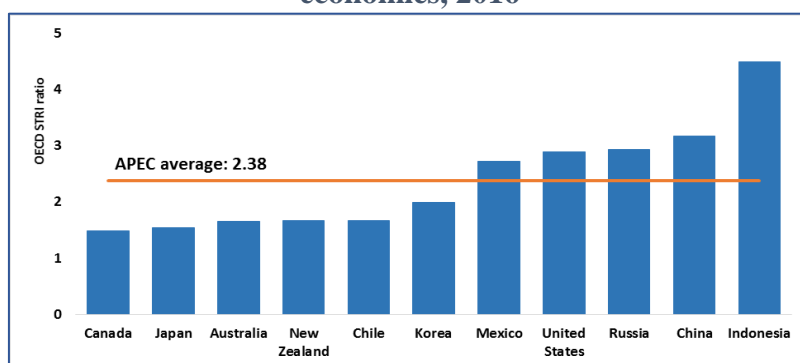
Notes: Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. China data have not been officially ratified. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, and OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 10 March 2017.

Average ratio for the road freight sector in the APEC region as measured by the OECD STRI is 1.69 (Figure 24). Four economies, namely Indonesia; Russia; China; and Mexico have ratios that are above the average, while the remaining seven economies have below-average ratios.

Figure 24. OECD STRI ratio to lowest value in road freight transport sector for APEC economies, 2016
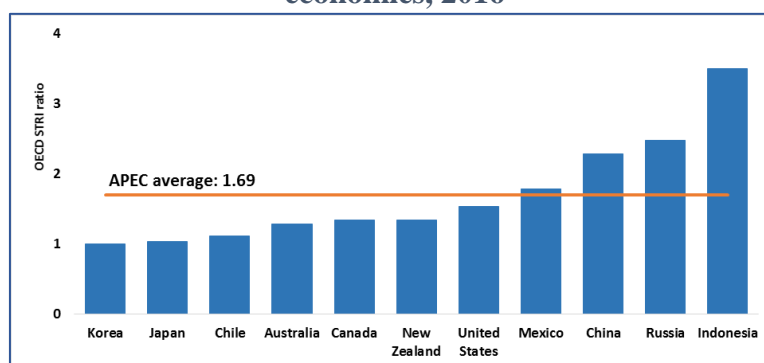
Notes: Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. China data have not been officially ratified. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, and OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 10 March 2017.

Average ratio for the courier and postal sector in the APEC region as measured by the OECD STRI is 3.29 (Figure 25). Four economies, namely China; Chile; Mexico; and Indonesia have ratios that are above the average, while the remaining seven economies have below-average ratios.

Figure 25. OECD STRI ratio to lowest value in courier and postal sector for APEC economies, 2016
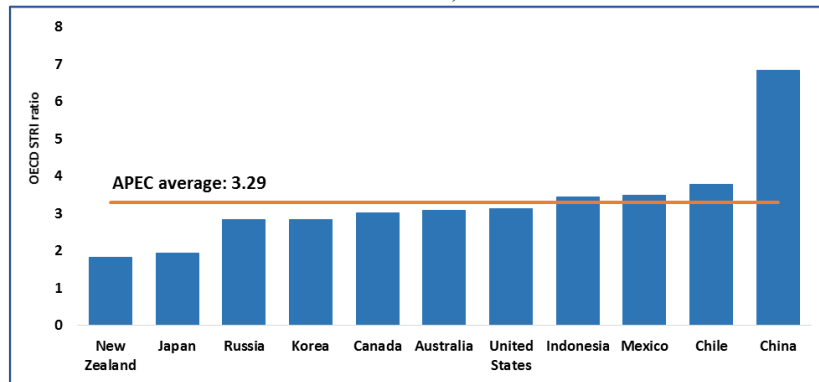
Notes: Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. China data have not been officially ratified. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 10 March 2017.

Table 15. OECD STRI ratio in logistics and transportation sector for APEC economies, 2016

Economies	Logistics cargo handling	Logistics storage and warehouse	Logistics freight forwarding	Logistics customs brokerage	Air transport	Maritime transport	Road freight transport	Rail freight transport	Courier and postal
Australia	2.371	2.599	2.403	2.103	1.746	1.654	1.278	1.407	3.075
Canada	1.774	1.767	1.659	1.587	2.088	1.485	1.333	1.116	3.016
Chile	1.975	2.048	2.246	3.515	1.000	1.672	1.111	1.478	3.794
China	3.563	3.536	3.476	3.005	2.348	3.168	2.278	2.009	6.849
Indonesia	3.543	3.825	3.885	2.625	2.381	4.498	3.500	2.397	3.443
Japan	1.843	2.008	2.203	1.769	1.836	1.544	1.028	1.182	1.933
Korea	1.307	1.000	1.365	1.180	2.058	1.986	1.000	6.783	2.843
Mexico	2.584	2.895	2.753	9.290	1.945	2.722	1.778	1.941	3.497
New Zealand	2.457	2.484	2.435	2.105	1.879	1.662	1.333	1.338	1.826
Russia	8.152	10.657	2.698	2.595	2.850	2.936	2.472	6.738	2.830
United States	1.965	2.268	2.464	2.165	2.756	2.898	1.528	1.147	3.125
APEC	**2.867**	**3.190**	**2.508**	**2.904**	**2.081**	**2.384**	**1.694**	**2.503**	**3.294**

Notes: OECD STRI = 0 (completely open) – 1 (completely closed). Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. China data have not been officially ratified. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: PSU calculations, and OECD (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 10 March 2017.

Table 16 shows that APEC economies are signatories of various air service agreements with each other. These agreements can be bilateral or multilateral, aimed at facilitating air transport between economies. Based on PSU compilations, the economies with the most number of ASA signatories are Malaysia (20); United States (19); Australia (18); Canada (18); and Singapore (18). The APEC economies with the least number of ASA signatories are Papua New Guinea (6); Peru (5); and Chinese Taipei (5).

Table 16. Type of air service agreements (ASAs)[4]

Economies	Signatories																				
	AUS	BD	CDA	CHL	PRC	HKC	INA	JPN	ROK	MAS	MEX	NZ	PNG	PE	PHL	RUS	SGP	CT	THA	USA	VN
AUS		o	o,Y	o	o,Y	o	E	o	E,Y	o	E	o,Y	o	NA	E	o	G	NA	E	G,Y	o
BD			NA	V	B,X	o	D,W	o	o	F,W	NA	o,V	NA	NA	D,W	B	o,V,W	NA	C,W	G,V	A,W
CDA				i	E	o,Z	Z	o,Z	C,Y	B	A	i,Y	NA	D	B	E	Z	Z	C	G,Y	Z
CHL					o	NA	NA	NA	o	✓ (5th freedom)	F	G,V	NA	NA	NA	NA	G,V	NA	NA	G,V	NA
PRC						NA	A,X	NA	B	A,X	B	F	NA	i	i,X	E	E,X	NA	A,X	o	A,X
HKC							o	o	o	o	✓	o	✓	NA	o	✓	o	NA	o	o	o
INA								o	NA	F,W	NA	E	NA	NA	W	C	o,W	NA	W	G,Y	W
JPN									o	o	B	F	B	NA	F	C	o	o	F	o,Y	o
ROK										F	E	F,Y	NA	NA	C	B	F	NA	C	G,Y	NA
MAS											E	G	✓	✓ (5th freedom)	A,W	D	F,W	✓ (5th freedom)	E,W	G,Y	W
MEX												o	NA	A	i	i	E	NA	A	F	NA
NZ													D	NA	✓	o	G,V	Y	F	G,V	o
PNG														NA	NA	NA	D	NA	NA	NA	NA
PE															NA	NA	NA	NA	NA	o,Y	NA

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[4] According to the International Air Transport Association report, the first two freedoms of air (known as technical freedoms) are enshrined in a multilateral agreement known as the International Air Services Transit Agreement signed at the Chicago Conference (https://www.icao.int/secretariat/legal/List%20of%20Parties/Transit_EN.pdf). Indonesia; Papua New Guinea; Peru; Chinese Taipei; and Viet Nam are not signatories of the said agreement. In addition, Canada and Russia have chosen to negotiate these rights bilaterally.

Economies	Signatories																				
	AUS	BD	CDA	CHL	PRC	HKC	INA	JPN	ROK	MAS	MEX	NZ	PNG	PE	PHL	RUS	SGP	CT	THA	USA	VN
PHL																NA	E,W	NA	C,W	o	A,W
RUS																	D	NA	C	G	NA
SGP																		NA	E,W	G,V	o,W
CT																			NA	Y	NA
THA																				G,Y	W
USA																					G,Y
VN																					

Notes: NA = no available information. Freedoms of the Air and International Regulations (2015) defines the following terms: *air service agreements* are those bilateral air transport agreements which two economies sign to allow international commercial air transport services between their territories; and *freedoms of the air* are those economic and diplomatic protocols agreed to by the economies for the commercial flow of revenue traffic by air. There are nine basic freedoms of the air and are only valid when the economies involved sign the appropriate bilateral or multilateral agreements (please refer to accompanying excel spreadsheet 11.2 in the PSU website).
Sources: A-G, i and o - https://www.wto.org/asap/index.html; V - https://www.icao.int/Meetings/ATConf5/Documents/Kiser.pdf; W -
http://www.aseanbriefing.com/news/2015/01/02/asean-open-skies-policy-implemented-2015.html; X - http://asean.org/wp-
content/uploads/images/archive/transport/Protocol%201%20on%20Unlimited%20Third%20and%20Fourth%20Freedom%20Traffic%20Rights%20between%20any%20Poi
nts%20in%20Contracting%20Parties.pdf; Y - https://www.transportation.gov/policy/aviation-policy/open-skies-agreements-being-applied; and Z - https://otc-
cta.gc.ca/eng/transport-agreements, accessed 16 June 2017.

Legends: A-G, i and o from WTO types of ASAs based on 2011 data. *Please refer to this link for more details of the WTO legend's description: https://www.wto.org/asap/resource/data/html/methodology_e.htm*

A   Allows 3rd and 4th freedoms of air; single designation; substantive ownership and effective control; double approval; pre-determination
B   Allows 3rd and 4th freedoms of air; multi-designation; substantive ownership and effective control; double approval; pre-determination
C   Allows 3rd, 4th and 5th freedoms of air; single designation; substantive ownership and effective control; double approval; pre-determination
D   Allows 3rd, 4th and 5th freedoms of air; single designation; substantive ownership and effective control; double approval; bermuda 1
E   Allows 3rd, 4th and 5th freedoms of air; multi-designation; substantive ownership and effective control; double approval; pre-determination
F   Allows 3rd, 4th and 5th freedoms of air; multi-designation; substantive ownership and effective control; double approval; bermuda 1
G   Allows 3rd, 4th and 5th freedoms of air; multi-designation; substantive ownership and effective control or community of interest or principal place of business; free pricing or double disapproval; free determination
i   Incomplete International Civil Aviation Organization (ICAO) coding - when ICAO's original coding of an agreement is incomplete and, as such, not all features could be coded (specifically, withholding, tariff or capacity clauses)
o   All other combinations - indicative of an agreement that did not fall under the other types (i.e. types A to G), and is a sort of "catch all", residual category
V   Allows unlimited traffic rights between each country under 3rd, 4th, 5th and 6th freedoms, as well as unlimited 7th freedom traffic rights for cargo-only flights (Multilateral Agreement on the Liberalization of Air Transport)

W   Allows 3rd, 4th, 5th, and 7th freedoms of the air (ASEAN Single Aviation Market)

X   Allow 3rd and 4th freedoms of the air (ASEAN-China Air Transport Agreement)

Y   Allows carriers of the two nations to operate any route between the two countries without restrictions on capacity, frequency or price, and to have the right to operate 5th and 6th freedom services (with Open Skies Agreement)

Z   The routes and associated rights were agreed ad referendum and remain confidential until definitively entered into force (Canada Transport Agreements). The agreement however is very much active on an administrative basis. Presently, no information on freedoms that the agreements cover is available publicly.

✓   There is an ASA published on the economy's website but the type of freedoms is unclear.

The average ratio for the transportation sector in the APEC region as measured by the WB STRI is 9.0 (Figure 26). Six economies, namely Indonesia; Mexico; Malaysia; Thailand; the Philippines; and Viet Nam have ratios that are above the average, while the other ten economies have below-average ratios.

Figure 26. World Bank STRI ratio to lowest value in transportation sector for APEC economies, 2008 or 2011

Notes: Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data set per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database
(http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

Average ratio for the air passenger international sector in the APEC region as measured by the WB STRI is 7.4 (Figure 27). Seven economies, namely Russia; China; Viet Nam; Australia; Thailand; Malaysia; and Korea have ratios that are above the average, while the remaining nine economies have below-average ratios.

Figure 27. World Bank STRI ratio to lowest value in air passenger international sector for APEC economies, 2008 or 2011

Notes: Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data set per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database
(http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

Average ratio for the maritime shipping international sector in the APEC region as measured by the WB STRI is 4.0 (Figure 28). Eight economies, namely Thailand; the Philippines; Mexico; Malaysia; Indonesia; Japan; Canada; and Australia have ratios that are above the average, while the remaining eight economies have below-average ratios.

Figure 28. World Bank STRI ratio to lowest value in maritime shipping international sector for APEC economies, 2008 or 2011
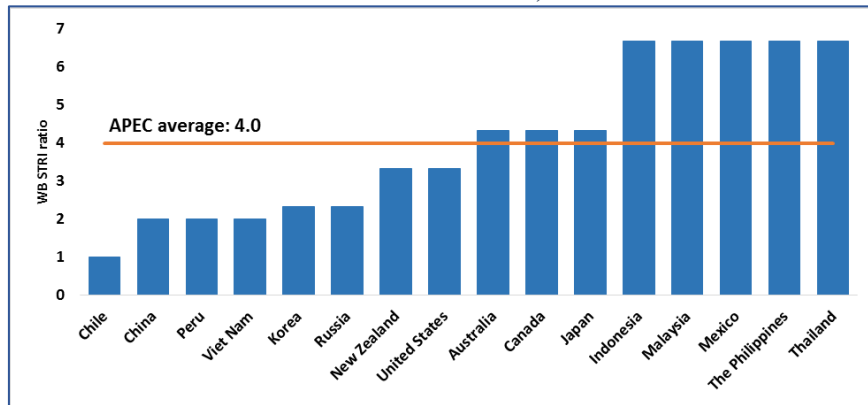
Notes: Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data set per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data excludes Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database
(http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

Average ratio for the maritime auxiliary sector in the APEC region as measured by the WB STRI is 0.8 (Figure 29). Eight economies, namely Thailand; the Philippines; Malaysia; Indonesia; Viet Nam; Mexico; China; and Chile have ratios that are above the average, while the remaining eight economies have below-average ratios.

Figure 29. World Bank STRI ratio to lowest value in maritime auxiliary sector for APEC economies, 2008 or 2011
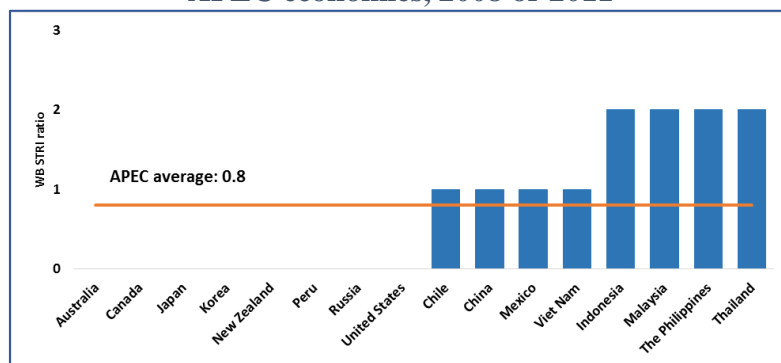
Notes: Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data set per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database
(http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

Average ratio for the road freight domestic sector in the APEC region as measured by the WB STRI is 1.1 (Figure 30). Six economies, namely Mexico; Indonesia; Viet Nam; Thailand; the Philippines; and Malaysia have ratio that are above the average, while the remaining ten have below-average ratio.

Figure 30. World Bank STRI ratio to lowest value in road freight domestic sector for APEC economies, 2008 or 2011
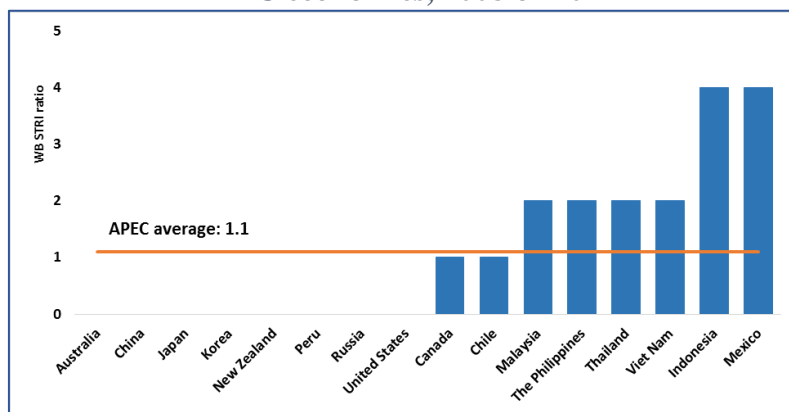
Notes: Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data set per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data excludes Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, WB Services Trade Restrictions Database (http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

Average ratio for the rail freight domestic sector in the APEC region as measured by the WB STRI is 1.5 (Figure 31). Eight economies, namely Mexico; Malaysia; Indonesia; Korea; Viet Nam; Thailand; the Philippines; and Japan have ratios that are above the average, while the remaining eight economies have below-average ratios.

Figure 31. World Bank STRI ratio to lowest value in rail freight domestic sector for APEC economies, 2008 or 2011
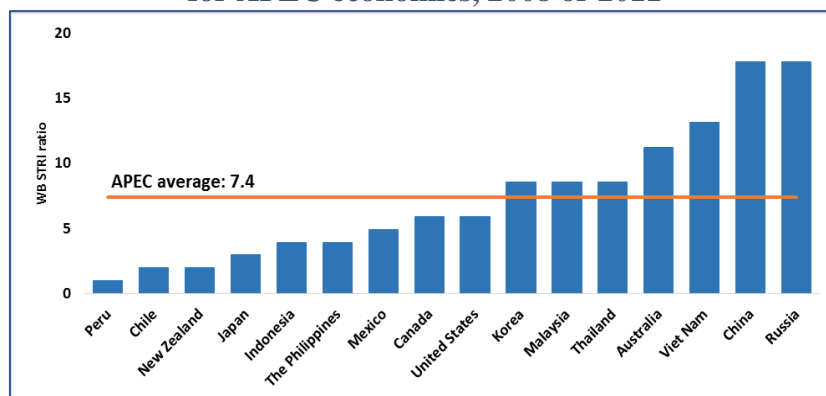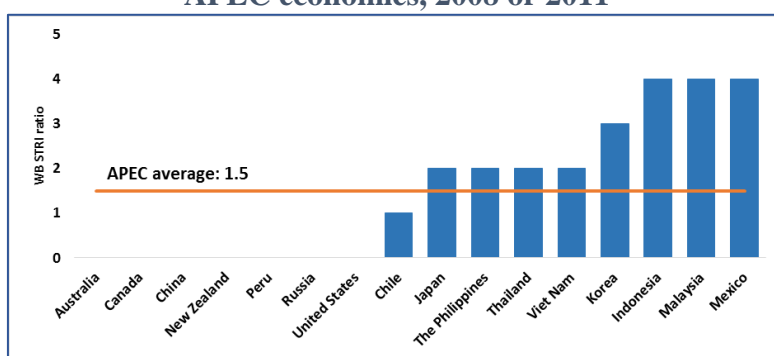

Notes: Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database (http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

Table 17. World Bank STRI ratio in logistics and transportation sector for APEC economies, 2008 or 2011

| Economies	Transportation	Air passenger international	Maritime shipping international	Maritime auxiliary services	Road Freight Domestic	Rail Freight Domestic
Australia	4.0	11.2	4.3	0	0	0
Canada	5.2	5.9	4.3	0	1	0
Chile	6.2	2.0	1.0	1	1	1
China	6.2	17.8	2.0	1	0	0
Indonesia	21.4	3.9	6.7	2	4	4
Japan	5.0	3.0	4.3	0	0	2
Korea	6.7	8.6	2.3	0	0	3
Malaysia	17.9	8.6	6.7	2	2	4
Mexico	19.8	4.9	6.7	1	4	4
New Zealand	1.7	2.0	3.3	0	0	0
Peru	1.0	1.0	2.0	0	0	0
The Philippines	14.3	3.9	6.7	2	2	2
Russia	4.6	17.8	2.3	0	0	0
Thailand	15.2	8.6	6.7	2	2	2
United States	2.5	5.9	3.3	0	0	0
Viet Nam	12.5	13.2	2.0	1	2	2
APEC	**9.0**	**7.4**	**4.0**	**0.8**	**1.1**	**1.5**

Notes: WB STRI = 0 (completely open) – 100 (completely closed). Latest year for China and Mexico is 2011, and 2008 for the rest of APEC economies. Ratios are computed by dividing the index over the lowest positive value in the data set per sector. A higher ratio corresponds to a higher degree of restrictiveness. APEC data exclude Brunei Darussalam; Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: PSU calculations, and WB Services Trade Restrictions Database
(http://iresearch.worldbank.org/servicetrade/#), accessed 10 March 2017.

APEC-wide action #12
Support APEC's work on developing the travel and tourism sector for sustainable and inclusive growth, building on the work of the APEC Tourism Strategic Plan.

Accountable Group: TWG	
Indicators	• UN WTO and economy sources - International tourism arrivals
	• Passport Index and economy sources - Intra-APEC visa restrictions
	• WB - International tourism receipts
	• WTTC - Travel and tourism GDP (direct contribution)
	• WTTC - Travel and tourism employment (direct contribution)

Annual tourist arrivals to APEC reached over 681 million in 2016 (Table 18). The same year saw the United States as the top tourist destination with more than 174 million tourist arrivals, followed by China (134 million), Mexico (87 million), and Hong Kong, China (57 million) (Figure 32). The total tourist arrivals in APEC economies had been increasing over the years, with a CAGR of 2.9 percent from 2012 to 2016. Individually, the CAGR was highest for Japan (30.2 percent), followed by Korea (11.5 percent), and Chile (11.2 percent).

Table 18. International tourism arrivals to APEC economies

Economies	CAGR 2012-2016 (in percent)	International tourism arrivals, 2016 (in thousands)
Australia	8.2	8,263
Brunei Darussalam	1.2	219
Canada	4.5	30,142
Chile	11.2	6,712
China	0.3	133,820
Hong Kong, China	3.9	56,655
Indonesia	6.7	10,407
Japan	30.2	24,040
Korea	11.5	17,242
Malaysia	1.7	26,757
Mexico	3.2	87,129
New Zealand	7.9	3,494
Papua New Guinea	3.1	198
Peru	6.7	4,718
The Philippines	5.8	5,361
Russia	-3.4	24,571
Singapore	3.1	16,404
Chinese Taipei	10.0	10,690
Thailand	7.6	29,923
United States	0.5	174,462
Viet Nam	10.0	10,013
APEC	2.9	681,220

Note: Inbound tourism comprises overnight visitors (tourists) and same-day visitors (including excursionists; cruise passengers); 2015 data was used for China; Indonesia; Mexico; the Philippines; and Thailand.
Sources: PSU calculations, UNWTO (http://www.e-unwto.org/toc/unwtotfb/current); and Singapore 2016 data Singapore Tourism Board (https://www.stb.gov.sg/statistics-and-market-insights/Pages/statistics-visitor-arrivals.aspx), accessed 06 October 2017.

Figure 32. Top 10 international tourism arrivals to APEC economies, 2016
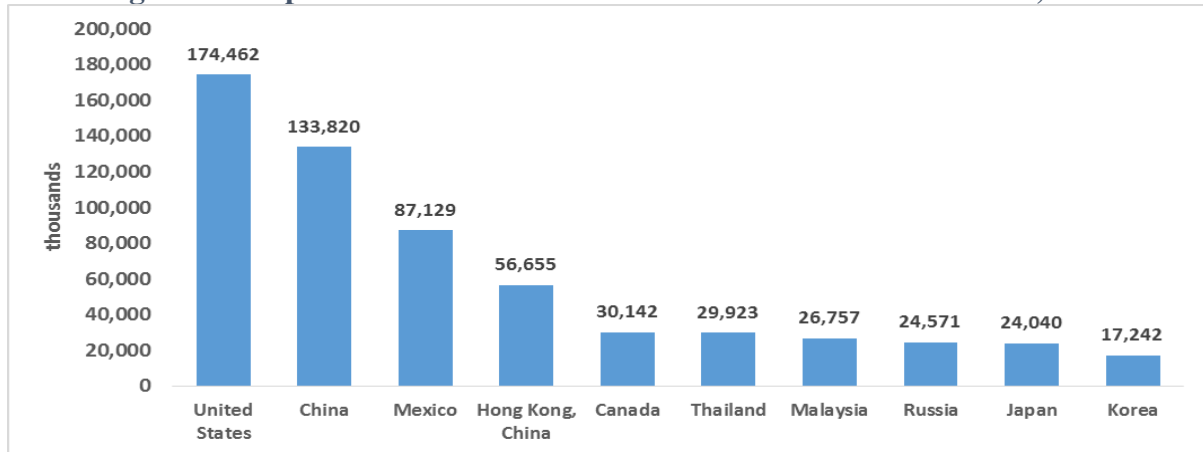
Note: Inbound tourism comprises overnight visitors (tourists) and same-day visitors (including excursionists; cruise passengers); 2015 data was used for China; Mexico; and Thailand.
Source: UN WTO, accessed 06 October 2017.

There are variations in visa requirements among APEC economies. From the perspective of the origin economy, between 5 to 17 other APEC economies would require their nationals to obtain visas within the APEC region (Table 19). For example, Chinese nationals need visas to visit 17 other APEC economies. On the other hand, nationals from economies like Canada; Hong Kong, China; Singapore; and the United States only require visas to travel to 5 other APEC economies.

From another perspective, destination economies require, at most, all other APEC economies to obtain visas (Table 20). On one end of the scale, Indonesia and Malaysia do not require visas for nationals from any other APEC economy, while Australia and Papua New Guinea requires all other APEC economies to obtain visas. It should be acknowledged, however, that some APEC economies have facilitated the visa requirement process through the use of electronic travel authorization (eTA), eVisa, and visa on arrival.

Table 19. Number of APEC economies requiring visa from the origin economy

Origin economy	Of economies requiring visa from nationals of origin economy	
	Number via eTA, eVisa, and visa on arrival	Number via non-electronic submission of requirements
Australia	4	3
Brunei Darussalam	4	3
Canada	2	3
Chile	4	2
China	3	14
Hong Kong, China	3	2
Indonesia	2	9
Japan	4	2
Korea	4	2
Malaysia	2	4
Mexico	3	7
New Zealand	4	3
Papua New Guinea	3	11
Peru	2	7
The Philippines	2	9
Russia	2	10
Singapore	4	1
Chinese Taipei	9	3
Thailand	2	5
United States	2	3
Viet Nam	1	13

Note: eTA refers to electronic travel authorization. Passport index data have been adjusted using economy sources, e.g. Hong Kong, China residents do not need visa for China but nevertheless need to have "Home Return Permit" (HRP). The table above considers the two as distinct and, for the purpose of the Table, HRP is not counted as visa requirement.

Source: Passport Index (https://www.passportindex.org/comparebyPassport.php?p1=nz&s=yes), accessed 15 November 2017 and economy sources.

Table 20. Number of APEC economies required to obtain visa by the destination economy

Destination economy	Of economies required to obtain visa by the destination economy	
	Number via eTA, eVisa, and visa on arrival	Number via non-electronic submissions
Australia	20	0
Brunei Darussalam	3	4
Canada	10	8
Chile	0	5
China	1	15
Hong Kong, China	1	1
Indonesia	0	0
Japan	0	7
Korea	0	5
Malaysia	0	0
Mexico	1	8
New Zealand	0	8
Papua New Guinea	17	3
Peru	0	2
The Philippines	1	1
Russia	0	15
Singapore	0	2
Chinese Taipei	1	7
Thailand	3	1
United States	8	11
Viet Nam	0	13

Note: eTA refers to electronic travel authorization. Passport index data have been adjusted using economy sources. Hong Kong, China as a destination economy does not require visa for Chinese citizens but requires an exit-entry permit for travelling to and from Hong Kong, China. For the purpose of the Table, exit-entry permit is not counted as visa.requirement.
Source: Passport Index (https://www.passportindex.org/comparebyPassport.php?p1=nz&s=yes), accessed 15 November 2017 and economy sources.

APEC's total international tourism receipts is more than USD660 billion in 2015. Collectively, the top 10 APEC economies contributed close to 90 percent of the group's international tourism receipts during the same year. The United States is the top recipient economy, receiving more than USD246 billion from tourism (Figure 33 and Table 21). An upward trend in international tourism receipts by APEC economies is observed from 2012 to 2015, with a CAGR of 7.9 percent.

Table 21. APEC international tourism receipts, 2015

Economies	Tourism receipts (in USD million)
Australia	31,283
Brunei Darussalam	140
Canada	16,203
Chile	3,229
China	114,109
Hong Kong, China	42,601
Indonesia	12,054
Japan	27,285
Korea	19,126
Malaysia	17,614
Mexico	18,729
New Zealand	9,140
Papua New Guinea	1.7
Peru	4,151
The Philippines	6,418
Russia	13,249
Singapore	16,743
Chinese Taipei	14,615
Thailand	48,527
United States	246,229
Viet Nam	7,350
APEC	**668,796**

Note: 2014 data was used for Chinese Taipei.
Source: PSU calculations, WB WDI (http://data.worldbank.org/indicator/ST.INT.RCPT.CD). Chinese Taipei's data sourced from the Ministry of Transportation and Communications, accessed 15 April 2017.

Figure 33. Top 10 APEC economies in international tourism receipts, 2015
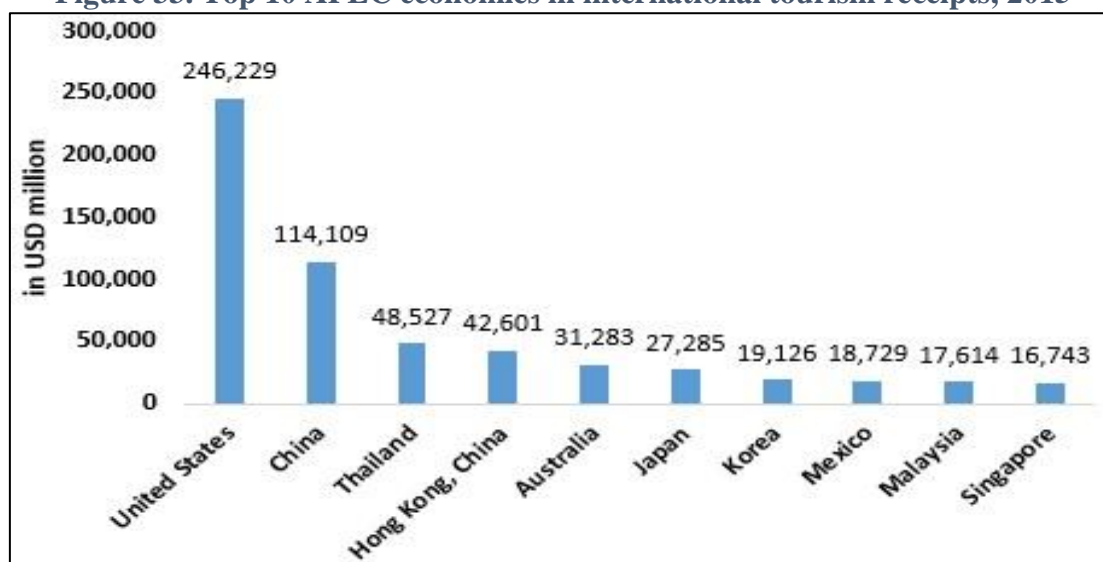
Source: WB WDI (http://data.worldbank.org/indicator/ST.INT.RCPT.CD), accessed 15 April 2017.

The travel and tourism sector directly and significantly contributes to APEC member-economies' GDP and employment. In 2016, the sector contributed more than USD1.2 trillion to APEC's GDP directly and provided direct employment to approximately 48 million people. These contributions have increased over the years, with a CAGR of 5.5 percent and 2.2 percent for GDP and employment, respectively, between 2010 and 2016. For APEC as a whole, the direct GDP contribution per person employed in the travel and tourism sector is about USD26,000 in 2016. By individual member economy, employed persons in Japan's tourism industry contributed the most to GDP at more than USD98,000 in 2016 alone (Figure 34 and Table 22). This was followed by the United States; Hong Kong, China; and Singapore.

Table 22. Direct contribution of APEC travel and tourism to Gross Domestic Product (GDP) and employment, 2016

Economies	Tourism GDP (2016 constant prices, USD billion)	Employment (in thousands)	Tourism GDP/employment (USD per employed person)
Australia	36.9	545.0	67,784.9
Brunei Darussalam	0.2	5.2	38,126.9
Canada	27.9	543.4	51,305.3
Chile	8.1	269.2	29,992.0
China	275.2	23,680.6	11,622.4
Hong Kong, China	14.6	189.6	77,095.5
Indonesia	17.0	1,944.2	8,756.0
Japan	110.5	1,124.8	98,198.8
Korea	25.0	601.2	41,525.0
Malaysia	14.0	639.7	21,848.6
Mexico	76.7	4,059.3	18,884.8
New Zealand	9.5	223.9	42,243.1
Papua New Guinea	0.1	17.8	6,361.2
Peru	7.6	403.5	18,815.5
The Philippines	25.0	2,219.0	11,256.0
Russia	15.8	869.4	18,169.0
Singapore	12.4	164.0	75,668.1
Chinese Taipei	10.6	296.1	35,693.4
Thailand	36.7	2,313.7	15,859.6
United States	503.7	5,485.8	91,816.0
Viet Nam	9.3	1,959.6	4,757.5
APEC	**1,236.6**	**47,555.0**	**26,004.4**

Notes: Direct contribution to GDP refers to the income generated by industries that deal directly with tourists, including hotels, travel agents, airlines, and other passenger transport services, as well as the activities of restaurants and leisure industries that deal directly with tourists. Direct contribution to employment includes the number of direct jobs within travel and tourism.
Source: PSU calculations – Tourism GDP/employment; and WTTC (https://www.wttc.org/research/economic-research/economic-impact-analysis/country-reports/#undefined), accessed 13 April 2017.

Figure 34. Top 10 APEC economies in terms of direct contribution to GDP per person employed in the tourism sector, 2016
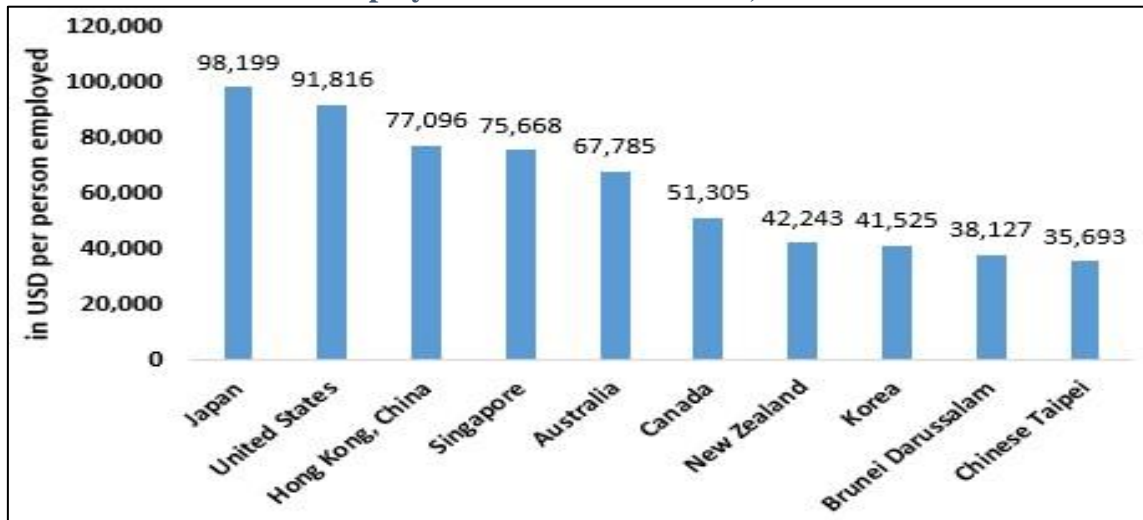
Source: PSU calculations from WTTC (https://www.wttc.org/research/economic-research/economic-impact-analysis/country-reports/#undefined, accessed 13 April 2017.

APEC-wide action #13

Development of services data and statistics to measure and support implementation of the Roadmap and improve tracking of services trade and investment more broadly.

Accountable Group: GOS & CTI	
Indicators	• Various sources - Availability of trade in services statistics

There is variation in data availability among APEC economies, depending on the services trade indicators of interest. While APEC economies perform relatively well when it comes to data availability on cross-border trade in services, services trade in value added as well as the number of arrivals/departures, improvements can be made regarding data availability on intra-APEC trade in services and inward/outward foreign affiliate trade in services (FATS). It is also worthwhile to note that, despite 17 economies having data on services foreign direct investment (FDI), the latest year where data is available is 2012, and even earlier for other economies (Table 23).

Table 23. Baseline measures/indicators for trade in services, latest year available

Baseline measure/ indicator	AUS	BD	CDA	CHL	PRC	HKC	INA	JPN	ROK	MAS	MEX	NZ	PNG	PE	PHL	RUS	SGP	CT	THA	USA	VN
Cross-border trade in services	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	×	'15	'15	'15
Trade in services by sector	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	'15	×	'15	'15	×
Intra-APEC trade in services	'15	×	'15	×	×	×	×	×	'14	×	×	'15	×	×	×	×	×	×	×	'14	×
Services trade in value added	'11	'11	'11	'11	'11	'11	'11	'11	'11	'11	'11	'11	×	×	'11	'11	'11	'11	'11	'11	'11
Share of services in manufacturing sector	'11	'11	'11	'11	'11	'11	'11	'11	'11	'11	'11	'11	×	×	'11	'11	'11	'11	'11	'11	'11
Inward/Outward foreign affiliate trade in services (FATS)	x	x	'14	x	x	'14	x	'14	x	x	x	'12	x	x	x	x	'15	x	'14	'14	x
Foreign direct investment (FDI) in tertiary sector	'12	'11	'12	'12	'11	'10	'11	'12	'12	'12	'12	×	×	'11	'12	'10	×	×	'11	'12	'12
Investment in services by sector	'12	'11	'12	'12	'11	'10	'11	'12	'12	'12	'12	×	×	'11	'12	'10	×	×	'11	'12	'12
Number of arrivals/departures	'15	'15	'15	'16	'15	'16	'15	'15	'16	'15	'15	'15	'15	'15	'16	'15	'15	'16	'16	'15	'16

Note: × no data. The years accounted for are from 2010-2016.
Source: Authors' compilation, accessed February-April 2017.

APEC-wide action #14
Progressive facilitation of services to improve the regional food system to ensure access to safe, high quality food supplies across the Asia-Pacific.

Accountable Group: PPFS	
Indicators	● FAO - Prevalence of food inadequacy

The prevalence of food inadequacy among APEC member- economies ranged from less than 5 percent to 20.7 percent during the period 2014-2016 (Table 24). Generally, the prevalence of food inadequacy among APEC developed economies is relatively lower compared to developing economies in the region.

Table 24. Prevalence of food inadequacy, 2014-2016

Economies	Prevalence of food inadequacy (in percent)
Australia	<5
Brunei Darussalam	5
Canada	<5
Chile	7.3
China	15.9
Indonesia	13.9
Japan	<5
Korea	<5
Malaysia	5.5
Mexico	8.6
New Zealand	<5
Peru	14.2
The Philippines	20.7
Russia	<5
Thailand	15.5
United States	<5
Viet Nam	17.9

Notes: The prevalence of food inadequacy is conceptually analogous to the prevalence of undernourishment, but the former is calculated by setting the caloric threshold at a higher level corresponding to the energy needed for physical activity level (PAL): for moderate (PAL = 1.75), normal (PAL = 1.85), and intense (PAL = 2.25). It measures the percentage of the population at risk of not covering the food requirements associated with particular levels of physical activity. <5 – refers to the proportion of food inadequacy less than five percent. Data not available for Hong Kong, China; Papua New Guinea; Singapore; and Chinese Taipei.
Source: FAO database (http://www.fao.org/faostat/en/#data/FS), accessed 12 March 2017.

APEC-wide action #15
Strengthen domestic and regional energy security and lower the carbon intensity of energy supply and use across the region.

Accountable Group: EWG	
Indicators	• APERC - APEC share of renewable energy
	• APERC - APEC energy intensity ratio

The use of renewable energy in APEC has been increasing, with the share of renewables in power generation up by 4 percent from 2010 to 2017 (Table 25). In contrast, APEC's aggregate energy intensity ratio continues to decrease (i.e from 11.2 in 2005 to 9.5 in 2017) (Table 26). These outcomes are in line with APEC's goal of doubling the share of renewable energy and reducing energy intensity.

Table 25. APEC share of renewable energy, 2010, 2015-2017

Year	APEC share of renewable energy (in percent)	
	Power Generation	TFEC
2010	16	5.2
2015	19	5.9
2016 (estimate)	19	6.0
2017 (estimate)	20	6.1

Note: Excludes traditional biomass from Total Final Energy Consumption (TFEC).
Sources: Analysis: APEC Energy Demand and Supply Outlook 6th Ed, Asia Pacific Energy Research Centre 2016; Data: International Energy Agency (IEA).

Table 26. APEC energy intensity ratio, 2005, 2010, 2015-2017

Year	APEC energy intensity ratio (energy/GDP)
2005	11.2
2010	10.2
2015	9.7
2016 (estimate)	9.6
2017 (estimate)	9.5

Source: Analysis: APEC Energy Demand and Supply Outlook 6th Ed, Asia Pacific Energy Research Centre 2016; Data: IEA.

APEC-wide action #16
Examination of the impact of the Next Generation Trade and Investment Issues on Mode 3 Trade in Services.

Accountable Group: IEG	
Indicators	• WB - Ease of Doing Business Distance to Frontier (DTF) • OECD - STRI in selected sector (same as in overarching target #1) **Based on Investment Facilitation Action Plan** • UNESCAP and economy sources - Intra-APEC Regional Trade Agreement/Free Trade Agreements (RTA/FTAs) with investment chapters • UNCTAD and economy sources - Intra-APEC Double Taxation Agreements (DTAs) • UNCTAD and economy sources - Intra-APEC Bilateral Investment Treaties (BITs) • Member survey - Survey on e-transparency

Figure 35 shows that New Zealand (87.0); Singapore (85.1); and Hong Kong, China (84.2) are the three economies with the highest distance to frontier scores in APEC, indicating that their regulatory environment are relatively more conducive to business operations than other member economies.

Figure 35. Distance to Frontier Scores in APEC, 2016
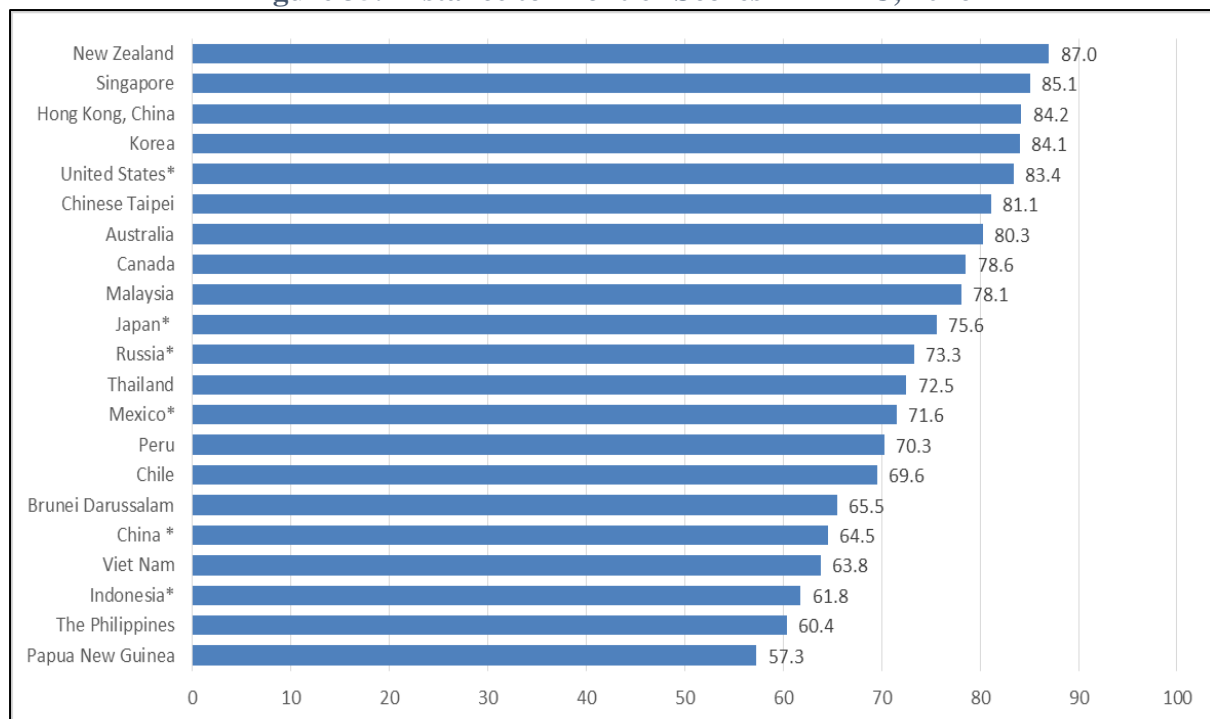
Notes: * Since DB2014, there are 6 APEC member economies where data from the second largest business city are also collected, namely China; Indonesia; Japan; Mexico; Russia; and United States. Data for these economies above refer only to the largest business city. The DTF score measures the distance of each economy to the "frontier," which represents the best performance observed on each of the indicators across all economies in the Doing Business sample since 2005 (World Bank Doing Business). The scores are based on reports from the following year i.e. the scores for 2016 are from the Doing Business 2017 report. Score: 0 (lowest performance) – 100 (represents the frontier).
Source: World Bank Doing Business database (http://www.doingbusiness.org/data/distance-to-frontier), accessed 22 September 2017

Table 27. OECD STRI in services sector for APEC economies, 2016

Economy	Australia	Canada	Chile	China	Indonesia	Japan	Korea	Mexico	New Zealand	Russia	USA
Accounting and auditing services	0.193	0.247	0.081	0.423	0.424	0.194	1.000	0.145	0.138	0.295	0.171
Architecture services	0.153	0.210	0.112	0.248	0.287	0.153	0.173	0.185	0.142	0.312	0.177
Broadcasting	0.203	0.303	0.290	0.678	0.390	0.239	0.268	0.616	0.163	0.349	0.256
Computer services	0.148	0.180	0.139	0.309	0.291	0.156	0.100	0.192	0.116	0.331	0.180
Engineering services	0.123	0.179	0.113	0.245	0.286	0.153	0.137	0.184	0.127	0.287	0.206
Legal services	0.158	0.165	0.136	0.472	0.879	0.268	0.428	0.170	0.176	0.318	0.192
Air transport	0.342	0.409	0.196	0.461	0.467	0.360	0.404	0.382	0.369	0.559	0.541
Courier and postal services	0.394	0.386	0.486	0.877	0.441	0.247	0.364	0.448	0.234	0.362	0.400
Maritime transport	0.212	0.190	0.214	0.405	0.575	0.198	0.254	0.348	0.213	0.376	0.371
Rail freight transport	0.207	0.165	0.218	0.296	0.353	0.174	1.000	0.286	0.197	0.993	0.169
Road freight transport	0.146	0.152	0.127	0.259	0.399	0.117	0.114	0.203	0.152	0.282	0.174
Telecommunication	0.171	0.313	0.270	0.443	0.530	0.191	0.289	0.227	0.245	0.396	0.124
Commercial banking	0.164	0.184	0.208	0.409	0.476	0.194	0.178	0.346	0.186	0.358	0.213
Insurance	0.183	0.213	0.164	0.451	0.496	0.173	0.105	0.227	0.126	0.371	0.290
Distribution services	0.125	0.260	0.133	0.271	0.630	0.116	0.089	0.178	0.129	0.214	0.156
Construction	0.159	0.243	0.117	0.313	0.386	0.101	0.111	0.219	0.118	0.352	0.247
Motion Pictures	0.154	0.230	0.162	0.566	0.291	0.090	0.154	0.258	0.153	0.285	0.170
Sound Recording	0.160	0.172	0.162	0.273	0.203	0.084	0.113	0.194	0.176	0.253	0.171
Logistics cargo-handling	0.291	0.218	0.242	0.437	0.435	0.226	0.160	0.317	0.301	1.000	0.241
Logistics storage and warehouse	0.244	0.166	0.192	0.332	0.359	0.188	0.094	0.272	0.233	1.000	0.213
Logistics freight forwarding	0.226	0.156	0.212	0.327	0.366	0.207	0.129	0.259	0.229	0.254	0.232
Logistics customs brokerage	0.226	0.171	0.378	0.324	0.283	0.190	0.127	1.000	0.227	0.279	0.233

Notes: OECD STRI = 0 (completely open) – 1 (completely closed). China data have not been officially ratified. The higher the index, the more restrictive the sector. APEC data exclude Brunei Darussalam; Hong Kong, China; Malaysia; Papua New Guinea; Peru; The Philippines; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: OECD Services Trade Restrictiveness Index Regulatory (STRI) Database (http://stats.oecd.org/Index.aspx?DataSetCode=STRI), accessed 25 April 2017.

Australia; China; Korea; and Singapore have the highest number of trade agreements in force within APEC, all with investment chapters except for China-Chile (Table 28). Papua New Guinea and Russia have only one trade agreement, with Australia and Viet Nam, respectively. These agreements can be regional (signed between an economy and a group of trading partners) and bilateral (signed between two economies).

Table 28. Intra-APEC Regional Trade Agreement/Free Trade Agreement year in force, with investment chapter

	AUS	BD	CDA	CHL	PRC	HKC	INA	JPN	ROK	MAS	MEX	NZ	PNG	PE	PHL	RUS	SGP	CT	THA	USA	VN
AUS		AANZFTA 2010	NA	2009	2015	NA	AANZFTA 2010	2015	2014	2013; AANZFTA 2010	NA	1983; AANZFTA 2010	1977	NA	AANZFTA 2010	NA	2003; AANZFTA 2010	NA	2005; AANZFTA 2010	2005	AANZFTA 2010
BD			NA	NA	ACFTA 2005	NA	ACIA 2012	2008; AJCEP 2008	AKIA 2009	ACIA 2012	NA	AANZFTA 2010	NA	NA	ACIA 2012	NA	ACIA 2012	NA	ACIA 2012	NA	ACIA 2012
CDA				1997	NA	NA	NA	NA	2015	NA	NAFTA 1994	NA	NA	2009	NA	NA	NA	NA	NA	NAFTA 1994	NA
CHL					2006*	2014	NA	2007	2004	2012*	1999; PAAP 2016	NA	NA	2009; PAAP 2016	NA	NA	NA	NA	2015*	2004	2014*
PRC						2003	ACFTA 2005	NA	2015	ACFTA 2005	NA	2008	NA	2010	ACFTA 2005	NA	2009; ACFTA 2005	2011	ACFTA 2005	NA	ACFTA 2005
HKC							NA	NA	NA	NA	NA	2011*	NA	NA	NA	NA	NA	NA	NA	NA	NA
INA								2008; AJCEP 2008	AKIA 2009	ACIA 2012	NA	AANZFTA 2010	NA	NA	ACIA 2012	NA	ACIA 2012	NA	ACIA 2012	NA	ACIA 2012
JPN									NA	2006; AJCEP 2008	2005	NA	NA	2012*	2008; AJCEP 2008	NA	2002; AJCEP 2008	NA	2007; AJCEP 2008	NA	2009*; AJCEP 2008
ROK										AKIA 2009	NA	2015	NA	2011	AKIA 2009	NA	2006; AKIA 2009	NA	AKIA 2009	2012	2015; AKIA 2009
MAS											NA	2010	NA	NA	ACIA 2012	NA	ACIA 2012	NA	ACIA 2012	NA	ACIA 2012
MEX												NA	NA	2012; PAAP 2016	NA	NA	NA	NA	NA	NAFTA 1994	NA
NZ													NA	NA	AANZFTA 2010	NA	2001; AANZFTA 2010	2013	2005; AANZFTA 2010		AANZFTA 2010
PNG														NA	NA	NA	NA	NA	NA	NA	NA
PE															NA	NA	2009	NA	2011	2009	NA

	AUS	BD	CDA	CHL	PRC	HKC	INA	JPN	ROK	MAS	MEX	NZ	PNG	PE	PHL	RUS	SGP	CT	THA	USA	VN
PHL																NA	ACIA 2012	NA	ACIA 2012	NA	ACIA 2012
RUS																	NA	NA	NA	NA	EEU 2016*
SGP																		2014	ACIA 2012	2004	ACIA 2012
CT																			NA	NA	NA
THA																				NA	ACIA 2012
USA																					NA
VN																					

Notes: * RTA/FTA with no investment/establishment chapter. NA = No available information. AANZTA = ASEAN Australia New Zealand Free Trade Area; ACFTA = ASEAN-China Free Trade Area; AJCEP = ASEAN-Japan Comprehensive Economic Partnership; AKIA = ASEAN-Korea Investment Agreement; ACIA = ASEAN Comprehensive Investment Agreement; EEU = Eurasia Economic Union; PAAP = Pacific Alliance Protocol; and NAFTA = North American Free Trade Agreement

Source: UNESCAP Asia-Pacific Trade and Investment Database (APTIAD) (http://www.unescap.org/content/aptiad/); and PSU compilations, accessed August-September 2017.

Most APEC economies have entered into various types of double taxation agreements (DTAs) with respect to taxes on income and/or other taxes for the purpose of eliminating double taxation between them. Australia; Canada; and Singapore have the most DTAs signed with other members (18), followed by China; Japan; Korea; and Malaysia with 17 each (Table 29).

Table 29. Intra-APEC Double Taxation Agreements, year signed

	AUS	BD	CDA	CHL	PRC	HKC	INA	JPN	ROK	MAS	MEX	NZ	PNG	PE	PHL	RUS	SGP	CT	THA	USA	VN
AUS		C, 2013	D, 1980; H, 2002	D, 2010	A, 1985; D, 1988	NA	D, 1991; H, 2011	D, 2008; I, 2007	D, 1982	D, 1980; H, 1999, 2002, 2010	D, 2002	D, 2009	D, 1989	NA	D, 1979	D, 2000	D, 1969; H, 1989, 2009	D, 1996	D, 1989	D, 1982; G, 1953; H, 2001	D, 1992
BD			NA	NA	D, 2004	D, 2010	NA	D, 2009	NA	D, 2009	NA	NA	NA	NA	NA	NA	D, 2005	NA	NA	NA	NA
CDA				E, 1998	D, 1986	D, 2012	D, 1979; H, 1998	D, 1986; H, 1999	D, 1978; D, 2006	E, 1976	D, 1991; D, 2006	D, 1980; D, 2012; H, 2014	E, 1987	E, 2001	D, 1976	E, 1995	E, 1976; H, 2011	NA	E, 1984	E, 1983; E, 1984; E, 1995; E, 1997; C, 2014; H, 2007	E, 1997
CHL					NA	NA	NA	D, 2016	E, 2002	D, 2004	E, 1998	D, 2003	NA	E, 2001	NA	E, 2004	NA	NA	D, 2006	A, 1975; E, 2010	NA
PRC						D, 2006	D, 2001	A, 1975; D, 1983	D, 1994; H, 2006	E, 1985; H, 2000	D, 2005	E, 1986	E, 1994	NA	E, 1999	D, 1994	D, 2007; E, 1986	NA	E, 1986	A, 1982; E, 1984	E, 1995
HKC							D, 2010	D, 2010	A, 1996; D, 2014	A, 2006; D, 2012		A, 1996; D, 2010	NA	NA	NA	A, 1999; D, 2016	A, 2003	NA	D, 2005	A, 1989	D, 2008
INA								D, 1982	D, 1988	E, 1991; H, 2006	D, 2002	E, 1987	NA	NA	E, 1981	E, 2002; H, 1999	E, 1990	E, 1995	E, 2001	E, 1988; J, 1988	D, 1997
JPN									D, 1970; D, 1998	D, 1963; D, 1970; D, 1999; H, 2010	D, 1996	D, 1963; H, 1967; D, 2012	NA	NA	D, 1980; D, 2006	D, 1986	D, 1961; D, 1971; H, 1981; D, 1994; H, 2010	NA	D, 1963; D, 1990	D, 1954; G, 1954; H, 1957; H, 1960; H, 1962; D, 1971; A, 1989; B, 2003;	D, 1995

	AUS	BD	CDA	CHL	PRC	HKC	INA	JPN	ROK	MAS	MEX	NZ	PNG	PE	PHL	RUS	SGP	CT	THA	USA	VN
																				D, 2003; I, 2004; H, 2013	
ROK										D, 1982	D, 1994	D, 1981; H, 1997	D, 1996	NA	D, 1984	D, 1992	D, 1979	NA	D, 1974; H, 2006	D, 1976	D, 1994
MAS											NA	E, 1976; H, 1994	E, 1993	NA	E, 1982	E, 1987	D, 2004; E, 1968	NA	E, 1982; H, 1995	A, 1989	E, 1995
MEX												D, 2006	NA	D, 2011	NA	D, 2004	D, 1994; H, 2009	NA	NA	; C, 1989; D, 1992; H, 1994; H, 2002	NA
NZ													NA	NA	E, 2002	D, 2000	D, 2009; E, 1973	E, 1996	E, 1998	NA	NA
PNG														NA	NA	NA	E, 1991	NA	NA	NA	NA
PE															NA	NA	NA	NA	NA	A, 1989; C, 1990	NA
PHL																E, 1995	E, 1977	NA	E, 1982	E, 1976	D, 2001
RUS																	D, 2002	NA	E, 1999	A, 1994; E, 1992	E, 2002
SGP																		E, 1981	E, 1975	A, 1988	E, 1994
CT																			E, 1999	A, 1989	E, 1998
THA																				E, 1996	E, 1992
USA																					NA
VN																					

Notes: NA = No available information. The following types of taxes are covered in the DTA: A = Air and Sea Transport; B = Tax Implementation Agreement; C = Cooperation and Exchange of Information; D = Income; E = Income and Capital; F = Information; G= Inheritance and Gift, Specific; H= Protocol; I = Social Security; J = Techn/Admin/Arbitration

Sources: Australia: Department of Foreign Affairs and Trade; Canada: Global Affairs Canada; and UNCTAD Country-specific Lists of Double Taxation Treaties (http://unctad.org/en/Pages/DIAE/International%20Investment%20Agreements%20(IIA)/Country-specific-Lists-of-DTTs.aspx); and economy sources, accessed 25 August 2017.

China has the highest number of bilateral investment treaties in force (16) followed by Korea and Viet Nam with 11 and 10 each (Table 30). Economies with the least number of BIT in force include Brunei Darussalam (1); and New Zealand (2). United States has no BIT in force among APEC economies but has signed BIT with Russia.

Table 30. Status of Bilateral Investment Treaties, year of entry into force

	AUS	BD	CDA	CHL	PRC	HKC	INA	JPN	ROK	MAS	MEX	NZ	PNG	PE	PHL	RUS	SGP	CT	THA	USA	VN
AUS		NA	NA	T, 1999	IF, 1988	IF, 1993	IF, 1993	NA	NA	NA	IF, 2007	NA	IF, 1991	IF, 1997	IF, 1995	NA	NA	NA	NA	NA	IF, 1991
BD			NA	NA	S	NA	NA	IF, 2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CDA				NA	IF, 2014	IF, 2016	NA	NA	NA	NA	NA	NA	NA	IF, 2007	IF, 1996	IF, 1991	NA	NA	IF, 1998	NA	NA
CHL					IF, 1995	S	S	NA	T, 1999	IF, 1995	NA	S	NA	IF, 2001	NA	IF, 1997	NA	NA	NA	NA	S
PRC						IF, 2017	T, 1995	IF, 1989	IF, 2007	IF, 1990	IF, 2009	IF, 1989	IF, 1993	IF, 1995	IF, 1995	IF, 2009	IF, 1986	NA	IF, 1985	NA	IF, 1993
HKC							NA	IF, 1997	IF, 1997	NA	NA	IF, 1995	NA	NA	NA	NA	NA	NA	IF, 2006	NA	NA
INA								NA	IF, 1994	T, 1999	NA	NA	NA	NA	S	IF, 2009	T, 2006	NA	IF, 1998	NA	T, 1994
JPN									IF, 2003	NA	NA	NA	IF, 2014	IF, 2009	NA	IF, 2000	NA	NA	NA	NA	IF, 2004
ROK										IF, 1989	IF, 2002	NA	NA	T, 1994	IF, 1996	IF, 1991	NA	NA	IF, 1989	NA	IF, 2004
MAS											NA	NA	NA	S	IF, 1995	NA	NA	IF, 1993	NA	NA	IF, 1992
MEX												NA	NA	NA	NA	NA	IF, 2011	NA	NA	NA	NA
NZ													NA	NA	NA	NA	NA	NA	NA	NA	NA
PNG														NA	NA	NA	NA	NA	NA	NA	NA
PE															NA	NA	T, 2006	NA	IF, 1991	NA	NA
PHL																IF, 1998	NA	IF, 1992	IF, 1996	NA	IF, 1993
RUS																	IF, 2012	NA	S	S	IF, 1996
SGP																		IF, 1990	NA	NA	IF, 1992
CT																			IF, 1996	NA	IF, 1993

	AUS	BD	CDA	CHL	PRC	HKC	INA	JPN	ROK	MAS	MEX	NZ	PNG	PE	PHL	RUS	SGP	CT	THA	USA	VN
THA																				NA	IF, 1992
USA																					NA
VN																					

Notes: NA = No available information; IF = in force; S = signed; T = terminated.
Source: Investment Policy Hub (http://investmentpolicyhub.unctad.org/IIA); and economy sources, accessed 25 August 2017.

Survey responses submitted by five economies (Australia; Canada; Indonesia; Japan; and Mexico) indicated that they have English language websites providing information on investment-related laws/regulations.

Table 31. English language website availability on investment-related laws/regulations

Economies	Availability (Yes/No)	Website Links
Australia	Yes	www.legislation.gov.au; and www.firb.gov.au
Brunei Darussalam	NA	NA
Canada	Yes	http://laws.justice.gc.ca/eng/; and https://www.ic.gc.ca/eic/site/ica-lic.nsf/eng/home
Chile	NA	NA
China	NA	NA
Hong Kong, China	NA	NA
Indonesia	Yes	http://www.bkpm.go.id/en/investment-procedures
Japan	Yes	https://www.jetro.go.jp/en/invest/setting_up.html
Korea	NA	NA
Malaysia	NA	NA
Mexico	Yes	https://www.gob.mx/se/acciones-y-programas/competitividad-y-normatividad-inversion-extranjera-directa?state=published
New Zealand	NA	NA
Papua New Guinea	NA	NA
Peru	NA	NA
The Philippines	NA	NA
Russia	NA	NA
Singapore	NA	NA
Chinese Taipei	NA	NA
Thailand	NA	NA
United States	NA	NA
Viet Nam	NA	NA

Note: NA = did not respond to the survey.
Source: PSU survey compilations from IEG members.

APEC-wide action #17
Supporting the development of innovative MSMEs and their participation in the Digital Economy under the SMEWG Strategic Action Plan

Accountable Group: SMEWG	
Indicators	• WB - Percentage of SMEs having their own website • WB - Percentage of SMEs using e-mail to interact with clients/suppliers • WB - Percentage of SMEs with a checking or savings account

The adoption of information and communications technology (ICT) and access to bank accounts are some of the critical prerequisites that firms including SMEs need to meet prior to participation in the digital economy. On ICT adoption, Table 32 shows that the share of small firms with their own website is generally lower than that of medium firms across all economies where data is available. The same can be said for firms that use email to interact with their clients and suppliers, with the exception of Papua New Guinea and Thailand.

Table 32. SMEs having their own website and using emails to interact with clients/suppliers (percent), latest year available

Economies	**Latest year**	**Firms having their own website**		**Firms using email to interact with clients/suppliers**	
		Small	**Medium**	**Small**	**Medium**
Chile	2010	68.2	80.7	92.5	97.6
China	2012	55.3	77.6	80.5	89.8
Indonesia	2015	13.7	43.5	23.0	55.8
Malaysia	2015	25.1	43.4	35.9	73.4
Mexico	2010	43.1	71.5	66.9	96.0
Papua New Guinea	2015	40.1	78.4	100.0	98.3
Peru	2010	43.7	54.8	81.0	85.8
The Philippines	2015	49.4	56.1	74.3	89.7
Russia	2012	55.2	68.8	92.4	97.5
Thailand	2016	41.1	46.9	51.7	48.6
Viet Nam	2015	39.6	58.0	87.0	97.1

Note: The WB categorizes firms as follows: *small firms* are those with between 5 and 19 employees; *medium firms* are those with between 20 and 99 employees. Data is not available for Australia; Brunei Darussalam; Canada; Hong, Kong, China; Japan; Korea; New Zealand; Singapore; Chinese Taipei; and United States.
Source: Enterprise Surveys (http://www.enterprisesurveys.org), The World Bank, accessed 26 September 2017.

On access to bank accounts, Figure 37 illustrates that the share of small firms with a checking or savings account is generally lower than that of medium firms across all economies except Viet Nam where the share is the same for both small and medium firms.

Figure 36. SMEs with a checking or savings account (percent), latest year available
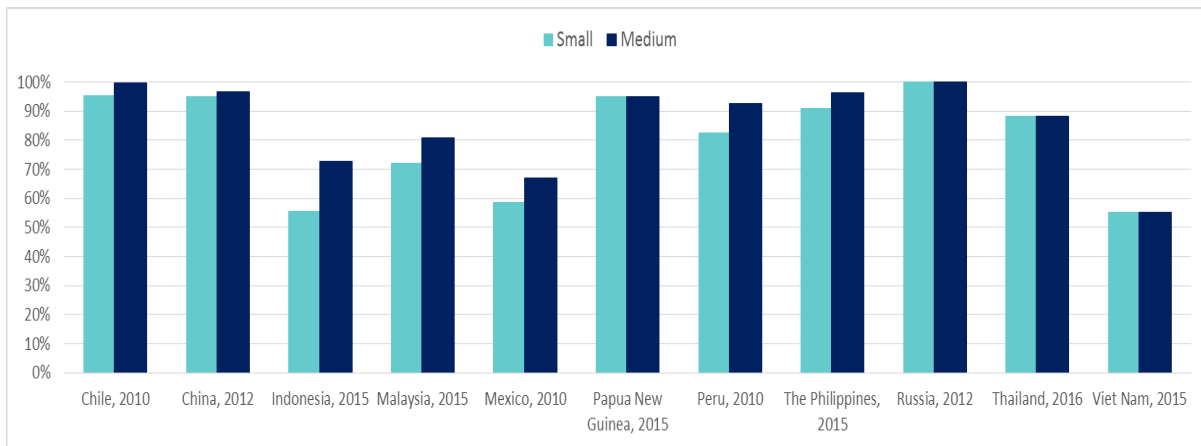
Note: The WB categorizes firms as follows: *small firms* are those with between 5 and 19 employees; *medium firms* are those with between 20 and 99 employees. Data is not available for Australia; Brunei Darussalam; Canada; Hong, Kong, China; Japan; Korea; New Zealand; Singapore; Chinese Taipei; and United States.
Source: Enterprise Surveys (http://www.enterprisesurveys.org), The World Bank, accessed 26 September 2017.

**APEC-wide action #18**
Enhancing ICT infrastructure and services to support economic growth.

| Accountable Group: TELWG	
Indicators	• ITU - Percentage of individuals using the internet • ITU - Fixed broadband subscriptions per 100 inhabitants • ITU - Active mobile-broadband subscriptions per 100 inhabitants

There remains great disparity between APEC economies in terms of share of individuals with access to the internet. While more than 80 percent of individuals have internet access in seven economies (Korea; Japan; Canada; New Zealand; Australia; Hong Kong, China; and Singapore), less than 50 percent of individuals can do so in five economies (Papua New Guinea; Indonesia; Peru; Viet Nam; and Thailand) (Figure 37).

**Figure 37. Individuals using the internet (percent), 2016**
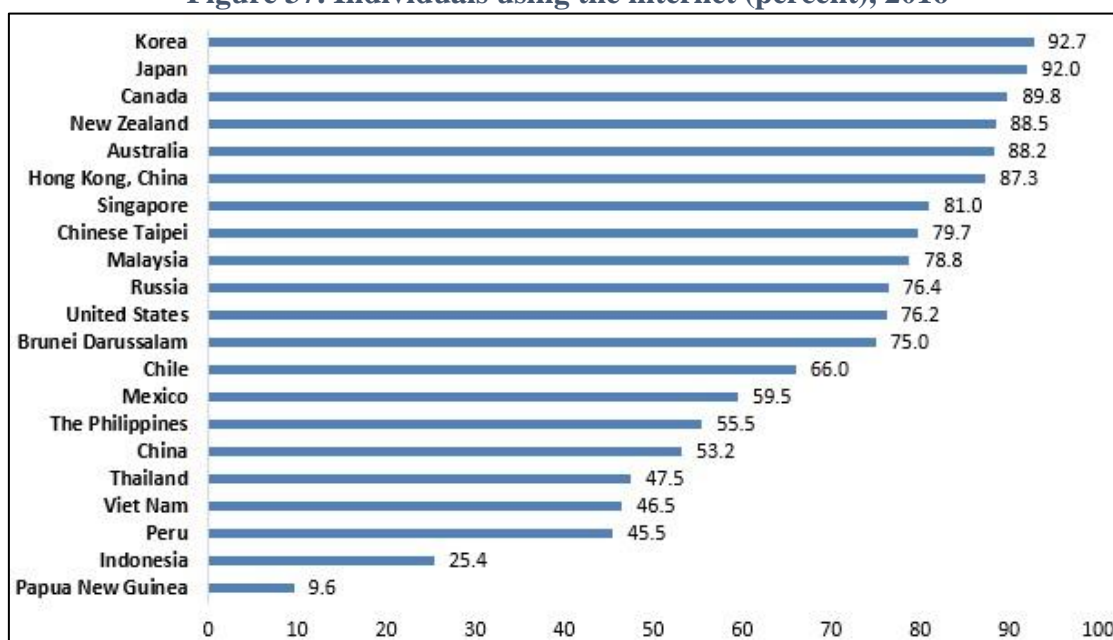
Source: International Telecommunication Union (ITU) (http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx), accessed 13 October 2017.

The differences among APEC economies can also be observed when viewed from the perspective of fixed broadband subscriptions. While Korea; Canada; and Hong Kong, China have 41.1, 37.3 and 35.5 subscribers per 100 inhabitants respectively, Papua New Guinea; Indonesia; and the Philippines only have 0.2, 1.9 and 5.5 subscribers per 100 inhabitants respectively (Figure 38).

Figure 38. Fixed-broadband subscriptions per 100 inhabitants, 2016
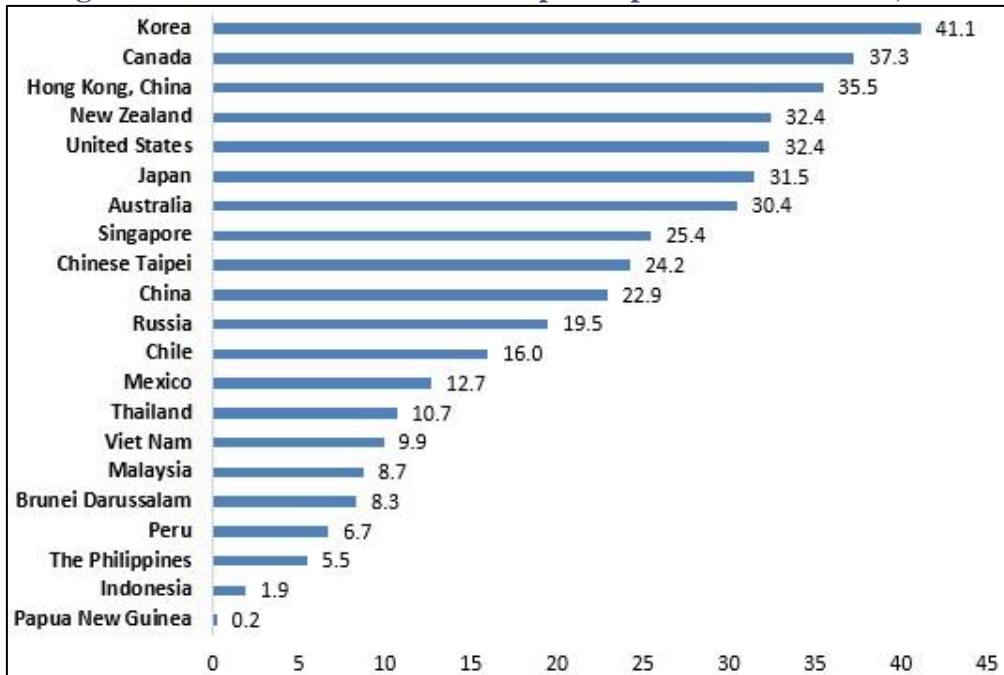
Source: ITU (http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx), accessed 13 October 2017.

The same can be said in terms of active mobile-broadband subscriptions. On one end of the spectrum, Singapore, Japan and New Zealand have 142.2, 126.4 and 114.2 subscribers per 100 inhabitants, while on the other end, Brunei Darussalam and Papua New Guinea have 4.5 and 6.1 subscribers per 100 inhabitants (Figure 39).

Figure 39. Active mobile-broadband subscriptions per 100 inhabitants, 2015
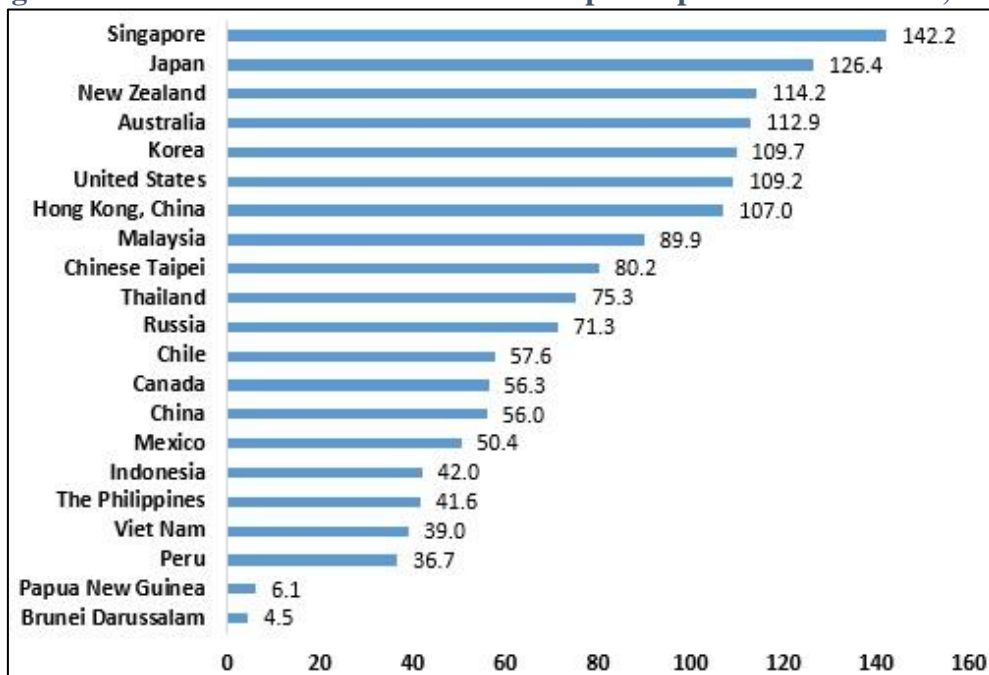
Source: ITU Measuring the Information Society Report 2016 (https://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2016/MISR2016-w4.pdf) and World Telecommunication/ICT Indicators database 2017 (http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx), accessed 31 October 2017.

APEC-wide action #19

[Group to fill up]

Accountable Group: PPSTI	
Indicators	• Still under discussion

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APEC-wide action #19

[Group to fill up]

Accountable Group: PPSTI	
Indicators	• Still under discussion