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Second-Term Review of APEC's Progress towards the Bogor Goals: APEC Region

APEC Policy Support Unit
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INTRODUCTION

One of the most important milestones in the history of APEC occurred in November 1994, when gathering in Indonesia, APEC Leaders adopted the Bogor Goals of free and open trade and investment in the Asia-Pacific. Since then, the Bogor Goals have become one of the most known initiatives within APEC, and have inspired member economies in their pursuit for sustainable development and equitable growth through policies which are aimed at enhancing trade and investment flows through economic openness.

When the 1994 Bogor Declaration announced this goal, it was established that the goal would be "pursued promptly by further reducing barriers to trade and investment and by promoting the free flow of goods, services and capital (…) in a GATT-consistent manner (…)"[1]. As mentioned by the APEC Policy Support Unit during the 2010 Assessment of the Bogor Goals, this declaration only provided guidance, but not a prescriptive manner to achieve the goal. In this regard, following GATT/WTO rules, APEC economies can reduce barriers in several ways: 1) on a unilateral basis; 2) through regional/bilateral negotiations (i.e. RTA/FTAs, BITs); and/or 3) through multilateral negotiations (i.e. WTO)[2].

APEC has gone a long way since its inception and APEC member economies have been able to make substantial progress in many areas associated to the Bogor Goals:

- MFN tariff rates are much lower relative to that in the 1990s.
- The number of RTA/FTAs in force has soared since early 2000s.
- Many sectors are more accessible to foreign investment and services trade than before.
- Indicators on trade and investment facilitation have improved over time.

Certainly, there is still more work that APEC economies can do to improve existing trade and investment conditions, as progress has been uneven across the region. However, the progress achieved in these areas so far suggest that APEC –in general– has been advancing towards the right direction, as trade and investment openness has been accompanied by socioeconomic improvements within the region[3].

This assessment does not assert any causality relationship between the Bogor Goals and the progress made by the APEC region on trade and investment liberalization and facilitation. However, throughout the years, the Bogor Goals have inspired a myriad of initiatives within APEC, with voluntary unilateral and concerted action plans and mechanisms to monitor progress, which have encouraged its members to consider the implementation of more open policies aimed at reducing barriers to trade and investment.

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[1] APEC Secretariat (1994), "1994 Leaders' Declaration: Bogor Declaration - APEC Economic Leaders' Declaration of Common Resolve", http://www.apec.org/Meeting-Papers/Leaders-Declarations/1994/1994_aelm.aspx

[2] The Bogor Goals recognized the different development levels within the APEC region and mentioned that industrialized and developing economies should achieved these goals by 2010 and 2020, respectively. In addition, the Bogor Goals referred to a significant reduction of trade and investment barriers with a GATT/WTO-consistent approach. It does not refer to a full elimination of barriers. To be consistent with GATT/WTO, any measure must follow the principle of non-discrimination, or follow one of the exceptions listed by GATT/WTO, such as the implementation of RTA/FTAs covering "substantially all the trade" and "substantial sector coverage" regarding trade in goods and services, respectively. For more details about the requirements to meet GATT/WTO-consistency, please see APEC Policy Support Unit (2010), "Progressing towards the APEC Bogor Goals: Perspectives of the APEC Policy Support Unit", p. 6-7.

[3] APEC Policy Support Unit (2010), op. cit., p. 10-13, 68-74.

CONTEXT OF THE SECOND TERM REVIEW OF THE BOGOR GOALS

After the 2010 Assessment of the Bogor Goals, APEC economies started the discussions on the next steps to assess their progress towards the achievement of the Bogor Goals by 2020. In May 2011, Senior Officials (SOM) endorsed new guidelines to assess the progress by member economies. These guidelines established that economies were going to be reviewed every two years -starting from 2012- with a second-term review to be conducted in 2016, and a final review in 2020, led by the corresponding APEC host economies and the PSU[4].

The objective of the assessments is to find out how much progress APEC has achieved in terms of trade and investment liberalization and facilitation, and which areas have experienced shortcomings, so APEC economies can focus their efforts in the following years.

The guidelines indicate that assessment is based on two types of sources: 1) inputs directly provided by APEC economies, through the submission of their Individual Action Plan (IAP) updates, which includes information on recent policies implemented in specific areas[5]; and 2) external information from other respectable sources, such as international organizations.

In this sense, the 2016 second-term review of the Bogor Goals is comprised of two components:

- A general review of the APEC region's progress as a whole, by examining its trade and investment performance; the evolution of trade liberalization and facilitation indicators; and the changes in growth and development statistics. Where data is available, the analysis will start in 1994, when the Bogor Goals were announced.
- Brief reports for each APEC economy, highlighting their recent progress in the areas included in their IAP updates, and identifying areas in which economies could make further improvements.

With this second-term review, the PSU aims to contribute to the process by providing evidence and analysis to encourage discussions among APEC economies, and assist them in their deliberations, on what could be done in the years to come in order to get closer to achieving the Bogor Goals.

[4] APEC Secretariat (2011), "Bogor Goals Progress Report Guidelines", Document No. 2011/SOM3/032anx1, http://mddb.apec.org/Documents/2011/MM/AMM/11_amm_014app01.doc

[5] The IAP updates include policies implemented in the previous two years, which is the timeframe since economies submitted their previous IAP updates. The reported policies correspond to the areas listed in the Osaka Action Agenda, namely: tariffs; non-tariff measures; services; investment; standards and conformance; customs procedures; intellectual property; competition policy; government procurement; deregulation/regulatory review; WTO obligations; dispute mediation; and mobility of business people. The IAP updates also include new reporting areas such as transparency; RTA/FTAs; and other voluntary reporting areas.

1. HIGHLIGHTS

A. TRADE AND INVESTMENT FLOWS BY APEC ECONOMIES HAVE EXPANDED GREATLY SINCE THE 1990S, BUT TRADE HAS SLOWED DOWN SINCE THE GLOBAL FINANCIAL CRISIS

- Between 1994 and 2014, APEC's total trade in goods increased at a yearly average rate of 7.8%, reaching USD 18.4 trillion in 2014. Intra-APEC trade increased four-fold over this period, but its contribution to APEC's total trade went down from 71.9% to 67.2%.

- However, trade in APEC has slowed down since the 2008 Global Financial Crisis and its growth rates have been falling behind GDP growth rates since 2012. The slowdown seems to have structural reasons, such as the consolidation of global value chains.

- APEC's trade in commercial services increased at a slower annual pace (7.6%) than APEC's trade in goods. Commercial services trade by APEC-developing economies increased at a faster average rate than that by APEC-industrialized economies (9.6% vs. 6.0%).

- FDI inward stocks in APEC increased on average by 11.1% per year between 1994 and 2014, reaching USD 12.4 trillion in 2014. APEC-developing economies increased their share as FDI destinations from 33.4% to 44.7% over this period.

- FDI outward stocks by APEC also increased significantly by 10.6% per year during 1994-2014, totaling USD 12.9 trillion in 2014. The share of APEC-developing economies as FDI sources went up from 9.8% to 32.6%.

B. IN GENERAL, TARIFFS HAVE FALLEN SIGNIFICANTLY, BUT SOME SECTORS STILL FACE HIGH TARIFF RATES

- The simple average MFN tariff in the APEC region fell by almost half from 11.0% in 1996 to 5.5% in 2014. The average tariffs for APEC-industrialized economies and APEC-developing economies in 2014 were equal to 3.3% and 6.3%, respectively.

- While many non-agricultural sectors reported low tariff rates, sectors related to agriculture experienced relatively higher tariff rates in the APEC region. The highest average tariffs in 2014 were found in dairy products (22.3%), beverages and tobacco (16.5%) and cereals and preparations (15.6%).

- The number of zero-tariff product lines in APEC went up from 27.3% in 1996 to 45.4% in 2014. In addition, the percentage of zero-tariff imports also increased substantially from 29.2% in 1996 to 60% in 2014. Nevertheless, for both cases, the percentages have remained steady since 2010.

- Extensive trade liberalization has also taken place in a negotiated manner through RTA/FTAs. APEC economies are parties to 152 RTA/FTAs by the end of 2015, 61 of which are intra-APEC RTA/FTAs.

C. THERE IS AN INCREASING TREND IN THE APPLICATION OF NON-TARIFF MEASURES AFFECTING TRADE

- Information from the WTO Integrated Trade Intelligence Portal indicates that APEC economies increased the number of trade remedies in place between 2010 and 2015.

- The number of unresolved specific trade concerns against an APEC economy reported in the WTO Sanitary and Phytosanitary (SPS) and Technical Barriers to Trade (TBT) Committees also increased during this time.

- Transparency in the application of NTMs appears to have weakened. Between 2010 and 2015, the percentage of specific trade concerns duly notified at WTO by the corresponding APEC economies imposing the measure went down from 43.4% to 31.3% at the WTO SPS Committee, and from 65.1% to 48.1% at the WTO TBT Committee.

- According to data from Global Trade Alert and the European Commission, food products were one of the types of products heavily affected by NTMs in APEC. Other sectors identified by Global Trade Alert with high prevalence of NTMs are basic chemicals, basic metals, especially purposed machinery and transport equipment.

D. SERVICES RESTRICTIONS HAVE BEEN FALLING IN RECENT YEARS, EVEN THOUGH LEVELS OF RESTRICTIVENESS VARY ACROSS ECONOMIES AND SECTORS

- The energy, telecommunications, and transportation sectors appear to be less restrictive in recent years in several APEC economies. Similarly, retail and some professional services sectors are also experiencing a more competition-friendly regulatory stance.

- Some sectors offer a more open regulatory framework. For instance, telecommunications appear to enjoy fewer restrictions than energy or transportation. Professional services related to engineering and architecture are less restrictive than those related to accounting and legal services.

- In general, APEC economies have been offering more comprehensive services commitments in their RTA/FTAs in comparison with those offered at WTO/GATS When the best services commitments by APEC economies in RTA/FTAs are compared with their GATS commitments or public revised offers, RTA/FTA commitments are 23% deeper than those at WTO/GATS.

- Computing, telecommunications, distribution, tourism, and construction services are among those with the best RTA/FTA commitments in mode 1 (cross-border trade in services) and mode 3 (commercial presence) within APEC. The health and social services sector remains as the most restrictive.

E. NEGATIVE PERCEPTIONS ON RESTRICTIONS FACING FOREIGN INVESTORS ARE MORE PREVALENT NOW. HOWEVER, GOVERNMENTS HAVE BEEN IMPLEMENTING MEASURES TO IMPROVE THE INVESTMENT CLIMATE

- Regulations affecting FDI show that the restrictiveness on FDI in APEC has decreased over the years. APEC economies have been implementing measures to ease entry conditions for foreign investors, promote and facilitate investments and improve the general business atmosphere.

- Nevertheless, restrictions remain in the APEC region. Screening and prior approval mechanisms have been identified as the main constraints in industrialized economies. Foreign equity limitations were the main constraints in developing economies.

- After the Global Financial Crisis, there have been negative perceptions regarding the investment climate in APEC. For example, growing perceptions of lower prevalence of foreign ownership over the years in APEC-developing economies, and an increasing sentiment that business rules are discouraging FDI in APEC-industrialized economies.

F. THERE HAVE BEEN POSITIVE EFFORTS IN TRADE FACILITATION IN THE APEC REGION

- On average, it is getting faster for APEC economies to trade across borders. It took around 13 days to trade in 2013, more than two days faster in relation to 2006. While it took nearly 9 days in APEC-industrialized economies to complete the formalities to trade, it took more than 14 days to do so in APEC-developing economies.

- Between 2006 and 2013, the average cost to export and import in APEC went up by 17% and 12.2% respectively. However, the increase in the overall cost to trade has been more benign than the average inflation, which reached 30% over the same period.

- For APEC-developing economies, it is cheaper to trade across borders than for APEC-industrialized economies. In 2013, the cost of trading for the former was around 75% of the cost for the latter.

- Logistics in the APEC region seem to have improved between 2007 and 2014. The perception on the quality of infrastructure has improved according to survey responses obtained from logistics professionals.

G. IMPORTANT STEPS TO FACILITATE INVESTMENTS IN APEC, BUT INVESTORS ARE STILL FACING OBSTACLES WHICH INCREASE THEIR COSTS

- Between 2006 and 2015, the average number of procedures to start a business in the APEC region went down from nearly 9 to 6. The average time to start a business fell by three weeks, from 37 to 15 days.

- Progress has also been reported regarding the average time to register property and obtain a construction permit in APEC. In 2015, registering property took on average 35 days (12 days shorter than in 2006), while getting a construction permit took 137 days (44 days shorter than in 2006).

- Among the existing bureaucratic obstacles, the cost of enforcing contracts has slightly increased. In addition, firms of all sizes have identified restrictions in the access to electricity and corruption as one of the main obstacles to do business.

- While SMEs pointed out tax rates, inadequate access to finance, and informal sector practices as some of the main obstacles; large firms identified unsatisfactory telecommunications infrastructure, customs and labor regulations, and poor workforce skills as obstacles to their operations.

H. PROGRESS IN ECONOMIC GROWTH AND SOCIAL OUTCOMES, BUT EMPLOYMENT LEVELS HAVE NOT RECOVERED SINCE THE GLOBAL FINANCIAL CRISIS

- APEC's economic growth outperformed that for the rest of the world. Between 1994 and 2014, APEC's real GDP grew at 3% per annum, while the rest of the world grew by 2.5% per annum. GDP per capita in APEC rose at an annual average rate of 2.2%.

- Poverty has fallen significantly. The number of people living under poverty conditions within APEC fell by 802 million between 1993 and 2012. Similarly, the number of people living in extreme poverty fell by 83.5%, from 842 million to 139 million.

- Living standards have improved in APEC. For example, life expectancy has been increasing throughout the region, reaching 75.6 years in 2013.

- Access to electricity has expanded. Currently, 98.8% of the people in APEC have access to electricity. Also, more people have access to clean water. An additional 605.6 million people gained access to improved water sources in APEC-developing economies during the period 1994-2012, reaching 91.9% of the population in APEC-developing economies.

- Enrollment in tertiary education more than doubled in APEC economies, from 21.2% to 42.4%, between 1994 and 2013.

- Unemployment rates in the APEC region increased after the 2008 Global Financial Crisis. The unemployment rate in the region stood at 4.9% in 2013, higher than the rate of 4.4% achieved in 2007.

I. APEC HAS MIXED OUTCOMES ON ENVIRONMENTALLY SUSTAINABLE GROWTH

- Within APEC, carbon dioxide emissions increased at an annual rate of 2.7% between 1994 and 2014. The amount of carbon dioxide emissions per capita also increased by 1.8% per year.

- However, the carbon dioxide emissions per dollar of GDP fell by 1.4% per year, which means that the carbon intensity of production is falling in the APEC region.

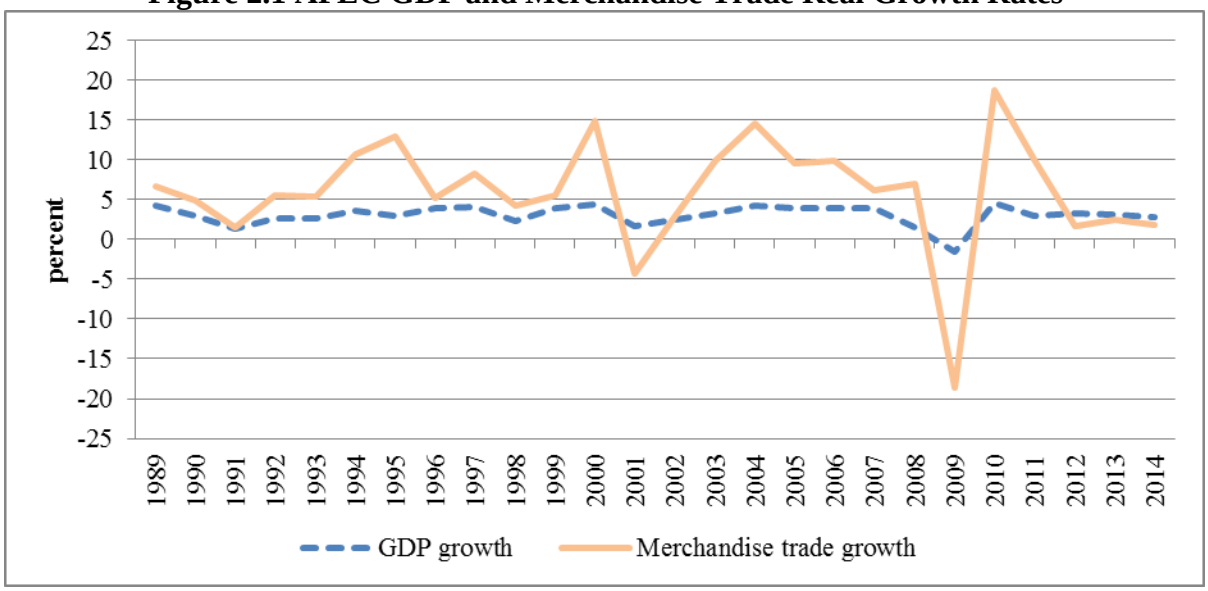
2. TRADE AND INVESTMENT PERFORMANCE

A. TRADE IN GOODS

The total trade in 2014 amounted to USD 18.4 trillion, more than four times the value in 1994. The share of intra-APEC trade out of the total APEC trade in goods went down from 71.9% in 1994 to 67.2% in 2014.

Nonetheless, trade growth in the APEC region has been slowing down, falling behind GDP growth from 2012 onwards (Figure 2.1). This is not specific to the region, but reflects a general trend where world trade has also been slowing down since the 2008 Global Financial Crisis[6]. Research has also shown that this slowdown is not cyclical, but rather due to long term structural issues[7]. One reason is the consolidation in the global value chain in APEC economies[8].

Figure 2.1 APEC GDP and Merchandise Trade Real Growth Rates



Source: WDI data and APEC PSU estimates.

i. Export of Goods

The total nominal value of goods exported by the APEC region grew at an annual rate of 7.8%, from USD 2.0 trillion in 1994 to USD 9.1 trillion in 2014. Additionally, exports of developing APEC economies increased at a rate of 10.1% from 1994 to 2014, almost double the growth rate for industrialized economies (5.1%).

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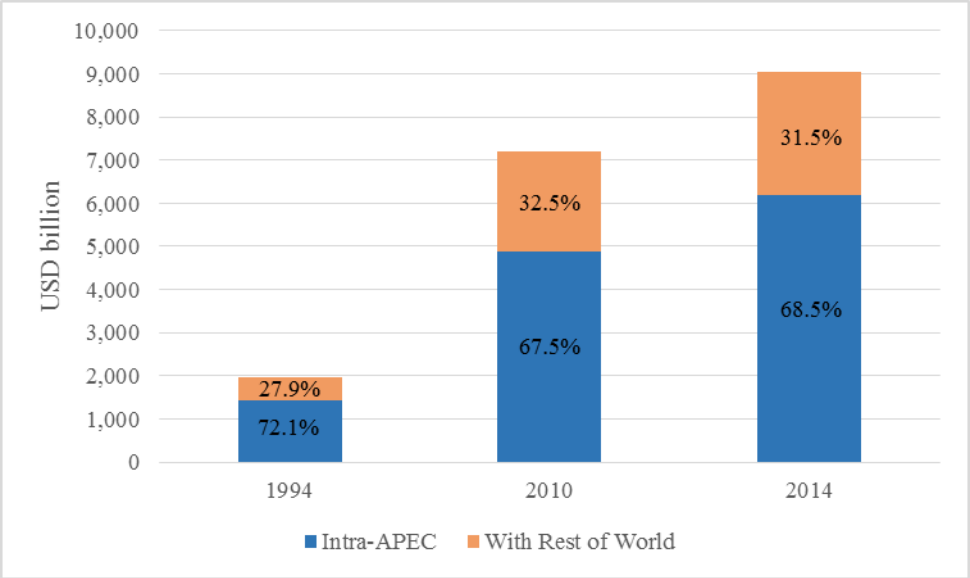
[6] International Centre for Trade and Sustainable Development, "Strengthening the Global Trade and Investment System in the 21st Century Synthesis Report". January 2016. Available at: http://e15initiative.org/wp-content/uploads/2015/09/WEF_Synthesis_Report_Strengthening_Global_Trade_Investment_System_21st_Century2.pdf

[7] APEC Policy Support Unit, "Structural Reform for Resilient and Inclusive Growth". Policy Brief No. 13. September 2015. Available at: http://publications.apec.org/publication-detail.php?pub_id=1646

[8] APEC Policy Support Unit, "Assessment of the APEC Leaders' Growth Strategy". November 2015. Available at: http://publications.apec.org/publication-detail.php?pub_id=1687

Figure 2.2 Export of Goods by APEC



Source: International Monetary Fund (IMF), Direction of Trade Statistics database
Note: The shares of intra-APEC and extra-APEC exports appear in each column.

Table 2.1 Export of Goods to the World

	APEC Economies	USD billion			Annual average growth 1994-2014
		1994	**2010**	**2014**	
Industrialized	Australia	47.5	211.7	240.6	8.5%
	Canada	161.3	387.5	474.6	5.5%
	Japan	395.3	769.8	690.2	2.8%
	New Zealand	12.0	31.3	41.8	6.4%
	United States	512.5	1,277.5	1,620.5	5.9%
	Industrialized Total	**1,128.5**	**2,677.7**	**3,067.8**	**5.1%**
Developing	Brunei Darussalam	3.3	8.3	9.4	5.4%
	Chile	11.7	71.1	75.7	9.8%
	China	120.9	1,578.4	2,343.2	16.0%
	Hong Kong, China	151.5	390.4	474.0	5.9%
	Indonesia	40.1	157.8	176.3	7.7%
	Korea	101.4	466.4	572.7	9.0%
	Malaysia	58.8	198.8	234.3	7.2%
	Mexico	60.9	298.5	397.1	9.8%
	Papua New Guinea	3.0	9.9	14.2	8.0%
	Peru	4.5	34.9	38.4	11.3%
	Philippines	13.4	51.4	61.8	7.9%
	Russia	63.1	373.7	497.6	10.9%
	Singapore	96.9	352.3	410.1	7.5%

	Chinese Taipei	93.7	274.6	311.2	6.2%
	Thailand	46.1	193.4	225.2	8.3%
	Viet Nam	4.1	69.8	143.0	19.5%
	Developing Total	**8,73.3**	**4,529.5**	**5,984.0**	**10.1%**
APEC	**Total**	**2,001.8**	**7,207.2**	**9,051.8**	**7.8%**

Source: International Monetary Fund (IMF), Direction of Trade Statistics database

Table 2.2 Intra-APEC Export of Goods

APEC Economies		USD billion			Annual average growth 1994-2014
		1994	**2010**	**2014**	
Industrialized	Australia	36.5	163.2	199.0	8.8%
	Canada	147.7	331.8	416.1	5.3%
	Japan	295.2	588.2	536.7	3.0%
	New Zealand	8.6	22.3	30.5	6.5%
	United States	324.6	774.1	1,001.6	5.8%
	Industrialized Total	**812.7**	**1,879.6**	**2,183.8**	**5.1%**
Developing	Brunei Darussalam	3.3	8.0	8.4	4.9%
	Chile	6.4	45.6	49.4	10.8%
	China	93.9	965.1	1,493.2	14.8%
	Hong Kong, China	115.6	316.8	382.0	6.2%
	Indonesia	30.9	115.7	124.7	7.2%
	Korea	69.2	319.6	415.0	9.4%
	Malaysia	45.9	150.7	180.5	7.1%
	Mexico	55.1	262.1	347.7	9.6%
	Papua New Guinea	2.2	5.2	8.2	6.7%
	Peru	2.4	19.6	22.1	11.8%
	Philippines	10.6	42.0	52.5	8.3%
	Russia	11.2	65.2	107.2	12.0%
	Singapore	74.3	265.7	316.0	7.5%
	Chinese Taipei	73.5	225.2	261.5	6.5%
	Thailand	32.4	132.2	153.4	8.1%
	Viet Nam	3.0	48.9	98.4	19.0%
	Developing Total	**629.8**	**2,987.6**	**4,020.1**	**9.7%**
APEC	**Total**	**1,442.5**	**4,867.2**	**6,203.9**	**7.6%**

Source: International Monetary Fund (IMF), Direction of Trade Statistics database

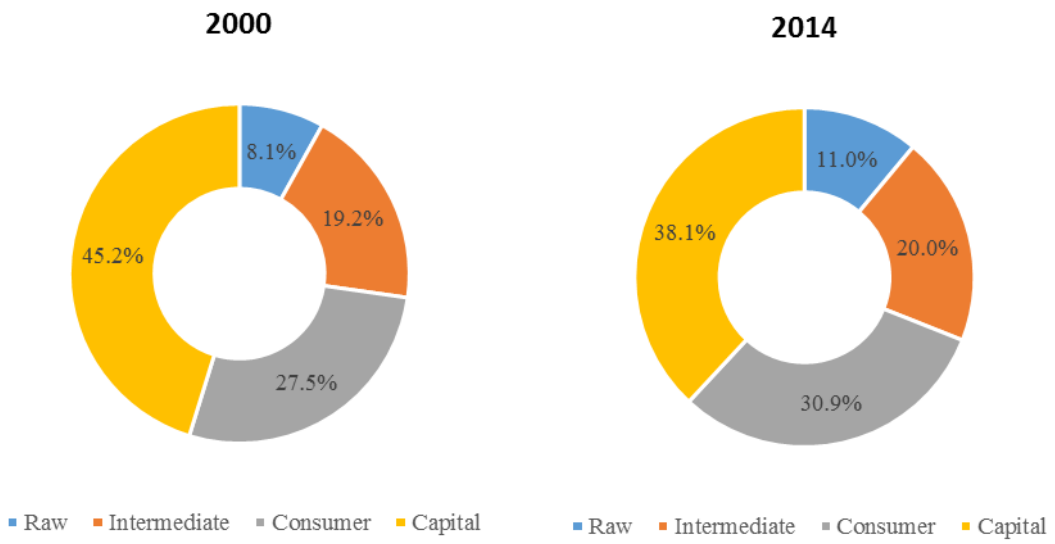
Exports by Type of Product

Based on the classification of goods developed by UNCTAD — raw, intermediate, consumer and capital goods[9] — there was a marked drop in the proportion of capital goods exported from 45.2% in 2000 to 38.1% in 2014, while the proportion of the other three types of goods increased slightly. Exports of raw materials and consumer goods experienced the sharpest increase in their shares by going up from 8.1% to 11.0% and 27.5% to 30.9%, respectively.

The increasing share of raw materials in APEC's export composition from 2000 to 2014 is probably explained by rising commodity prices. According to the IMF, the All Commodity Price Index — which includes fuel and non-fuel price indices — went up significantly by 172.3% between 2000 and 2014.

Furthermore, the increasing share of consumer goods in APEC's export composition can probably be explained by a growing demand for such goods due to rising global income. Taking the world real GDP per capita as a proxy of global income per person, it is evident that income increased worldwide in this period. Indeed, world GDP per capita at constant 2005 values rose from USD 6,672.6 in 2000 to USD 7,995.8 in 2014[10].

Figure 2.3 APEC Exports by Type of Product

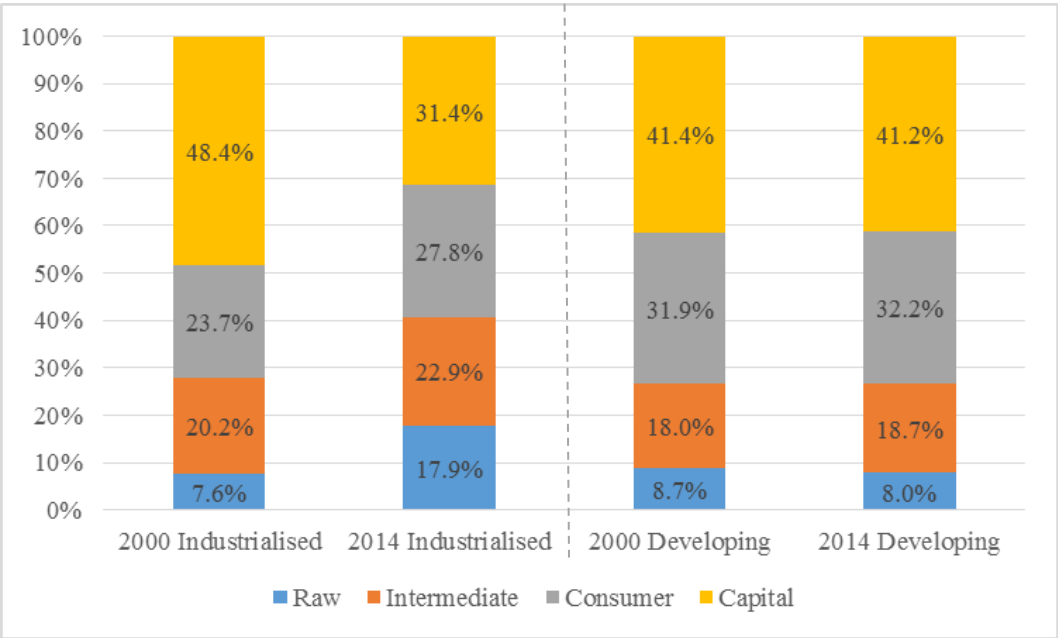


Source: United Nations Conference on Trade and Development (UNCTAD), International Trade Statistics online database

The proportion of capital goods exported by APEC industrialized economies fell significantly from 48.4% in 2000 to 31.4% in 2014. Conversely, the share of raw materials exported by the industrialized economies grew considerably from 7.6% in 2000 to 17.9% in 2014. In contrast, the composition of goods exported by APEC developing economies generally remained steady between 2000 and 2014.

[9] Export data for APEC economies following this classification of goods is only available from year 2000
[10] Source: World Bank, World Development Indicators

Figure 2.4 Export Breakdown by Type of Product and Development Level

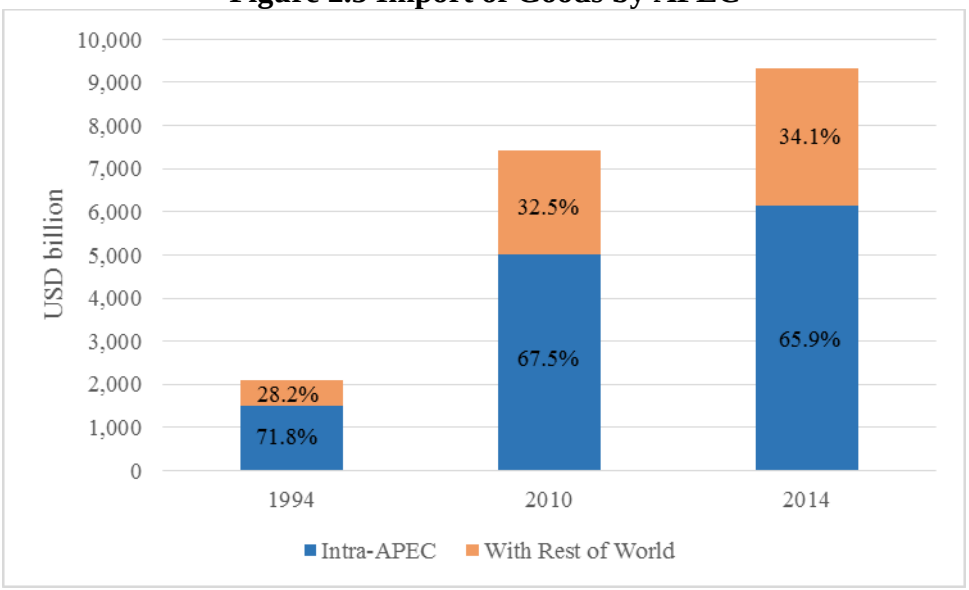


Source: United Nations Conference on Trade and Development (UNCTAD), International Trade Statistics online database

ii. Import of Goods

The total nominal value of goods imported by the APEC region grew at an annual rate of 7.8% from USD 2.1 trillion in 1994 to USD 9.3 trillion in 2014. Similar to the case of APEC exports, imports of developing APEC economies increased at a rate of 9.4% from 1994 to 2014, significantly higher than the 6.2% growth rate for industrialized economies.

Figure 2.5 Import of Goods by APEC



Source: International Monetary Fund (IMF), Direction of Trade Statistics database
Note: The shares of intra-APEC and extra-APEC imports appear in each column.

Table 2.3 Import of Goods from the World

APEC Economies		USD billion			Annual average growth 1994-2014
		1994	**2010**	**2014**	
Industrialized	Australia	55.1	212.5	250.5	7.9%
	Canada	166.7	431.3	507.0	5.7%
	Japan	274.3	694.1	812.2	5.6%
	New Zealand	11.9	30.7	42.3	6.5%
	United States	689.4	1,968.1	2,347.7	6.3%
	Industrialized Total	**1,197.4**	**3,336.7**	**3,959.8**	**6.2%**
Developing	Brunei Darussalam	2.8	3.1	7.2	4.9%
	Chile	11.6	59.2	72.2	9.6%
	China	115.7	1,393.9	1,963.1	15.2%
	Hong Kong, China	161.8	433.5	544.9	6.3%
	Indonesia	32.0	135.7	178.2	9.0%
	Korea	102.3	425.2	525.5	8.5%
	Malaysia	59.6	164.7	209.0	6.5%
	Mexico	87.3	331.6	440.0	8.4%
	Papua New Guinea	1.5	5.1	6.2	7.2%
	Peru	6.1	33.1	46.6	10.7%
	Philippines	22.5	60.2	71.0	5.9%
	Russia	38.6	217.4	285.8	10.5%
	Singapore	102.6	310.9	366.3	6.6%
	Chinese Taipei	85.3	251.2	274.0	6.0%
	Thailand	55.1	185.1	228.0	7.4%
	Viet Nam	5.8	83.4	144.6	17.4%
	Developing Total	**890.6**	**4,093.3**	**5,362.6**	**9.4%**
APEC	**Total**	**2,088.0**	**7,430.0**	**9,322.4**	**7.8%**

Source: International Monetary Fund (IMF), Direction of Trade Statistics database; Chinese Taipei's Bureau of Foreign Trade (http://cus93.trade.gov.tw/ENGLISH/FSCE/)

Table 2.4 Intra-APEC Import of Goods

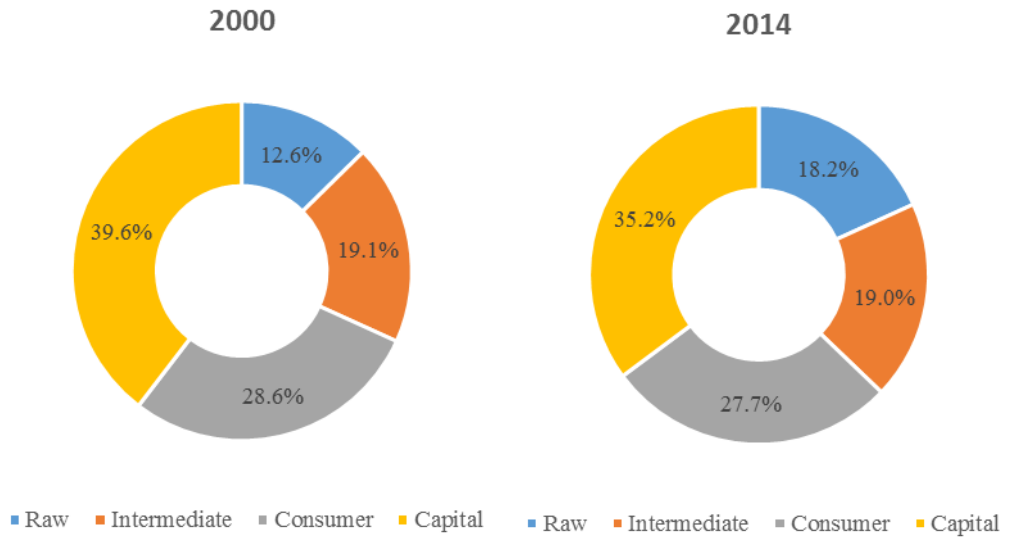
APEC Economies		USD billion			Annual average growth 1994-2014
		1994	**2010**	**2014**	
Industrialized	Australia	38.0	150.0	177.9	8.0%
	Canada	135.5	333.6	407.8	5.7%
	Japan	188.7	465.4	530.8	5.3%
	New Zealand	8.6	22.9	30.4	6.5%
	United States	470.1	1,272.2	1,546.7	6.1%
	Industrialized Total	**841.1**	**2,244.2**	**2,693.6**	**6.0%**
Developing	Brunei Darussalam	2.2	2.6	6.4	5.6%
	Chile	5.5	33.1	42.0	10.7%
	China	87.1	829.7	1,067.0	13.3%
	Hong Kong, China	136.9	373.4	464.0	6.3%
	Indonesia	22.3	106.1	134.3	9.4%
	Korea	71.7	278.8	312.2	7.6%
	Malaysia	47.2	129.4	155.7	6.2%
	Mexico	73.2	274.4	362.9	8.3%
	Papua New Guinea	1.5	4.6	5.8	7.1%
	Peru	3.3	19.5	29.5	11.6%
	Philippines	17.2	48.6	54.6	5.9%
	Russia	5.8	76.6	104.2	15.6%
	Singapore	77.9	217.6	250.0	6.0%
	Chinese Taipei	63.9	176.4	184.7	5.5%
	Thailand	38.7	129.1	153.2	7.1%
	Viet Nam	4.2	69.7	122.8	18.4%
	Developing Total	**658.3**	**2,769.4**	**3,449.3**	**8.6%**
APEC	**Total**	**1,499.3**	**5,013.6**	**6,142.9**	**7.3%**

Source: International Monetary Fund (IMF), Direction of Trade Statistics database

Imports by Type of Product

Between 2000 and 2014, only the proportion of raw goods imported by the APEC region increased significantly, from 12.6% in 2000 to 18.2% 2014. The rise in commodity prices in this period is one of the main reasons behind the growing proportion of raw products imported by APEC. The share of capital goods had the largest drop, from 39.6% in 2000 to 35.2% in 2014.

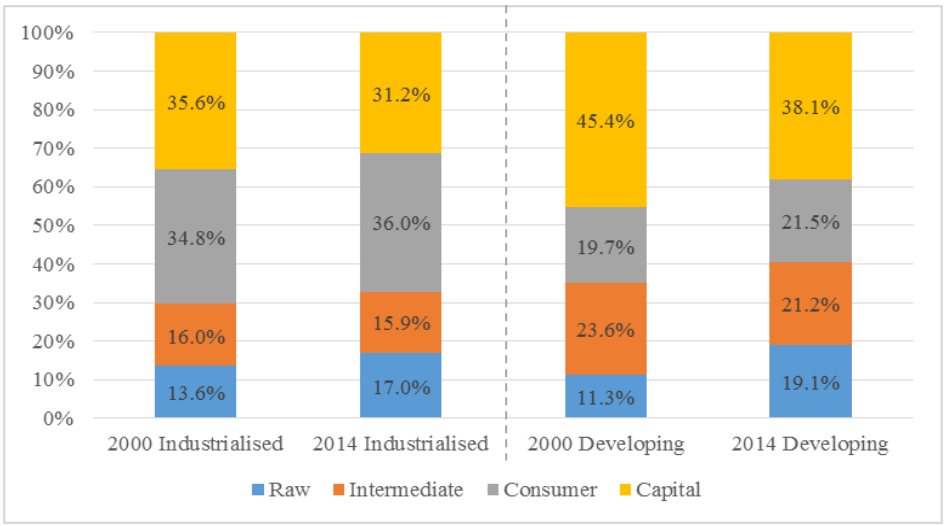
Figure 2.6 APEC Imports by Type of Product



Source: United Nations Conference on Trade and Development (UNCTAD), International Trade Statistics online database

Both industrialized and developing economies experienced similar trends in the proportion of imported goods from 2000 to 2014. The share of raw products for both groups of economies rose the most, while that of capital goods experienced the greatest decline.

Figure 2.7 Import Breakdown by Type of Product and Development Level



Source: United Nations Conference on Trade and Development (UNCTAD), International Trade Statistics online database

B. TRADE IN COMMERCIAL SERVICES

Trade in services increased more than four times in the APEC region, from USD 880.2 billion in 1994 to USD 3.8 trillion in 2014, equivalent to an annual average growth rate of 7.6%.

i. Export of Commercial Services

Commercial service exports by the APEC region increased from USD 438.0 billion in 1994 to USD 1.9 trillion in 2014 at an annual growth rate of 7.6%. Most of this growth was driven by developing economies, whose services exports grew at a rate of 9.1% per year, compared to that of the industrialized economies, equivalent to 6.5% per year.

Table 2.5 Export of Commercial Services to the World^

APEC Economies		USD billion			Annual average growth 1994-2014^
		1994	**2010**	**2014**	
Industrialized	Australia	14.1	45.8	53.4	6.9%
	Canada	23.2	71.9	84.9	6.7%
	Japan	56.8	138.7	158.1	5.3%
	New Zealand	3.6	11.3	14.4	7.2%
	United States	186.9	540.6	687.6	6.7%
	Industrialized Total	**284.6**	**808.3**	**998.4**	**6.5%**
Developing	Brunei Darussalam	N.A.	1.1	0.5	-1.3%*
	Chile	2.8	11.0	11.2	7.3%
	China	16.4	161.2	232.5	14.2%
	Hong Kong, China	30.3	105.0	106.0	6.5%
	Indonesia	4.7	16.2	22.9	8.3%
	Korea	17.0	86.3	105.8	9.6%
	Malaysia	9.2	31.7	39.4	7.5%
	Mexico	10.1	15.2	21.0	3.7%
	Papua New Guinea	0.2	0.3	0.2	-1.4%
	Peru	1.0	3.6	5.7	9.4%
	Philippines	4.6	17.6	24.8	8.3%**
	Russia	8.4	44.6	64.9	10.7%
	Singapore	22.9	94.2	140.1	9.5%
	Chinese Taipei	13.1	40.1	41.2	5.9%
	Thailand	11.4	34.1	54.9	8.2%
	Viet Nam	1.3	7.4	10.8	11.3%
	Developing Total	**153.4**	**669.5**	**881.9**	**9.1%**
APEC	**Total**	**438.0**	**1,477.8**	**1,880.3**	**7.6%**

Source: World Trade Organization (WTO), Time Series on International Trade online database.
*Growth rate for Brunei Darussalam from 1996-2014
**Growth rate for the Philippines from 1993-2014
^ The annual average growth 1994-2014 is for reference purposes only. Data for years 1994 and 2010 were calculated based on the 5th edition of the IMF Balance of Payments and International Investment Position Manual (BPM5). Figures for year 2014 is not strictly comparable with those from previous years as the 2014 data was calculated based on the 6th edition (BPM6).

ii. Import of Commercial Services

Similarly, APEC imports of commercial services also increased from USD 442.2 billion in 1994 to USD 1.9 trillion in 2014 at a rate of 7.6% per year. Import of commercial services by APEC developing economies increased at an annual rate of 10.0%, greater than the 5.6% annual growth rate by APEC industrialized economies.

Table 2.6 Import of Commercial Services from the World^

	APEC Economies	USD billion			Annual average growth 1994-2014^
		1994	**2010**	**2014**	
Industrialized	Australia	15.2	50.5	62.4	7.3%
	Canada	32.1	95.9	106.0	6.2%
	Japan	105.4	155.6	189.9	3.0%
	New Zealand	3.9	9.9	12.9	6.1%
	United States	120.8	374.9	451.7	6.8%
	Industrialized Total	**277.4**	**686.8**	**822.9**	**5.6%**
Developing	Brunei Darussalam	N.A.	1.4	2.0	6.7%*
	Chile	2.9	12.7	14.6	8.5%
	China	15.8	192.2	381.6	17.3%
	Hong Kong, China	21.0	50.7	75.6	6.6%
	Indonesia	11.1	25.6	33.1	5.6%
	Korea	18.4	95.0	114.0	9.6%
	Malaysia	11.9	32.1	44.7	6.8%
	Mexico	12.4	22.3	31.7	4.8%
	Papua New Guinea	0.6	2.7	2.3	6.8%
	Peru	1.5	5.9	7.5	8.6%
	Philippines	3.1	11.6	19.7	9.2%**
	Russia	15.4	71.4	118.9	10.7%
	Singapore	13.8	100.4	141.3	12.3%
	Chinese Taipei	20.5	37.1	50.8	4.6%
	Thailand	15.2	44.8	52.9	6.4%
	Viet Nam	1.3	9.8	14.3	12.9%
	Developing Total	**164.8**	**715.5**	**1,105.0**	**10.0%**
APEC	**Total**	**442.2**	**1,402.4**	**1,927.9**	**7.6%**

Source: World Trade Organization (WTO), Time Series on International Trade online database.
*Growth rate for Brunei Darussalam from 1996-2014
**Growth rate for the Philippines from 1993-2014

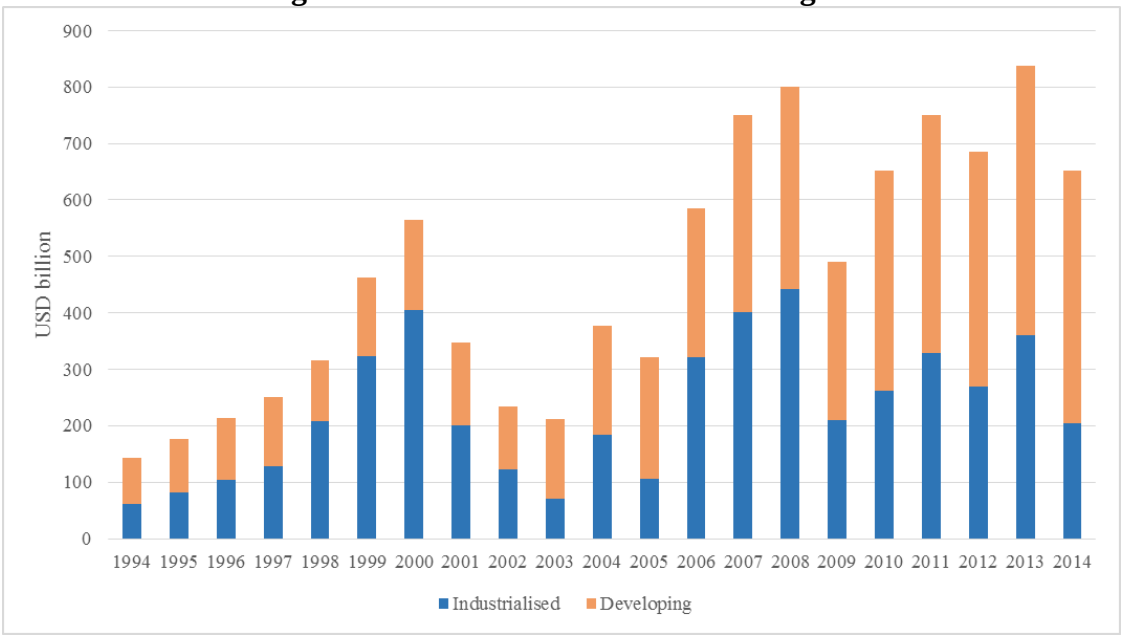
^ The annual average growth 1994-2014 is for reference purposes only. Data for years 1994 and 2010 were calculated based on the 5th edition of the IMF Balance of Payments and International Investment Position Manual (BPM5). Figures for year 2014 is not strictly comparable with those from previous years as the 2014 data was calculated based on the 6th edition (BPM6).

C. FOREIGN DIRECT INVESTMENT

i. FDI Inflows

FDI inflows in the APEC region exhibited a clear upward trend until 2000, when international economic crises, triggered after the Asian Financial Crisis in 1998, affected investors' confidence. From 2001 onwards, FDI inflows have been more volatile, but in general have been rising since. In 2014, FDI inflows amounted to USD 651.8 billion, more than four times the level in 1994, which represents an increase of 7.9% per year. Developing economies appear to be driving most of the FDI inflows' growth in recent years. FDI inflows from APEC developing economies went up by 8.9% per year, increasing faster than those from industrialized economies (6.2% per year).

Figure 2.8 FDI Inflows in the APEC Region



Source: United Nations Conference on Trade and Development (UNCTAD), Foreign Direct Investment Statistics online database

ii. FDI Inward Stocks

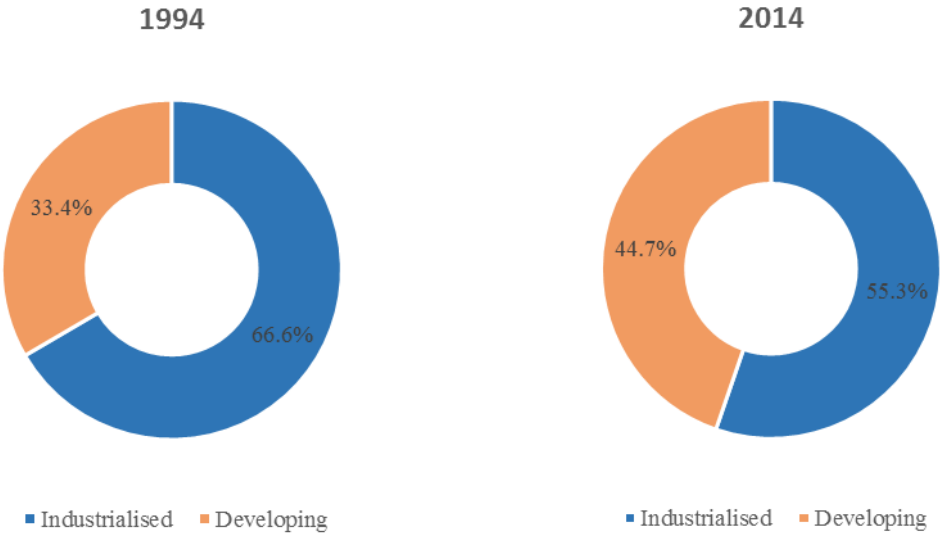
FDI inward stocks in the APEC region increased from USD 1.5 trillion in 1994 to USD 12.4 trillion 2014 at a yearly rate of 11.1%. This growth is driven mainly by APEC developing economies, whose FDI inward stocks grew at a combined rate of 12.7% per annum. The proportion of APEC developing economies in the total APEC FDI inward stock increased from 33.4% in 1994 to 44.7% in 2014.

Table 2.7 FDI Inward Stocks in APEC

	APEC Economies	USD billion			Annual average growth 1994-2014
		1994	**2010**	**2014**	
Industrialized	Australia	101.3	527.1	564.6	9.0%
	Canada	110.2	591.9	631.3	9.1%
	Japan	19.2	214.9	170.6	11.5%
	New Zealand	22.1	61.1	76.8	6.4%
	United States	757.9	3,422.3	5,409.9	10.3%
	Industrialized Total	**1,010.7**	**4,817.2**	**6,853.2**	**10.0%**
Developing	Brunei Darussalam	0.1	4.1	6.2	26.2%
	Chile	21.5	152.6	207.7	12.0%
	China	74.2	587.8	1,085.3	14.4%
	Hong Kong, China	221.3	1,067.5	1,549.8	10.2%
	Indonesia	16.2	160.7	253.1	14.7%
	Korea	14.9	135.5	182.0	13.4%
	Malaysia	22.9	101.6	133.8	9.2%
	Mexico	33.2	363.8	338.0	12.3%
	Papua New Guinea	1.6	3.7	3.9	4.6%
	Peru	4.5	43.0	79.4	15.5%
	Philippines	5.3	25.9	57.1	12.7%
	Russia	3.3	490.6	378.5	26.8%
	Singapore	54.9	632.8	912.4	15.1%
	Chinese Taipei	14.2	63.0	69.3	8.3%
	Thailand	15.7	139.3	199.3	13.5%
	Viet Nam	4.0	57.0	91.0	17.0%
	Developing Total	**507.5**	**4,029.0**	**5,546.8**	**12.7%**
APEC	**Total**	**1,518.1**	**8,846.2**	**12,400.0**	**11.1%**

Source: United Nations Conference on Trade and Development (UNCTAD), Foreign Direct Investment Statistics online database and Chinese Taipei's Central Bank.

Figure 2.9 FDI Inward Stock in APEC by Development Level

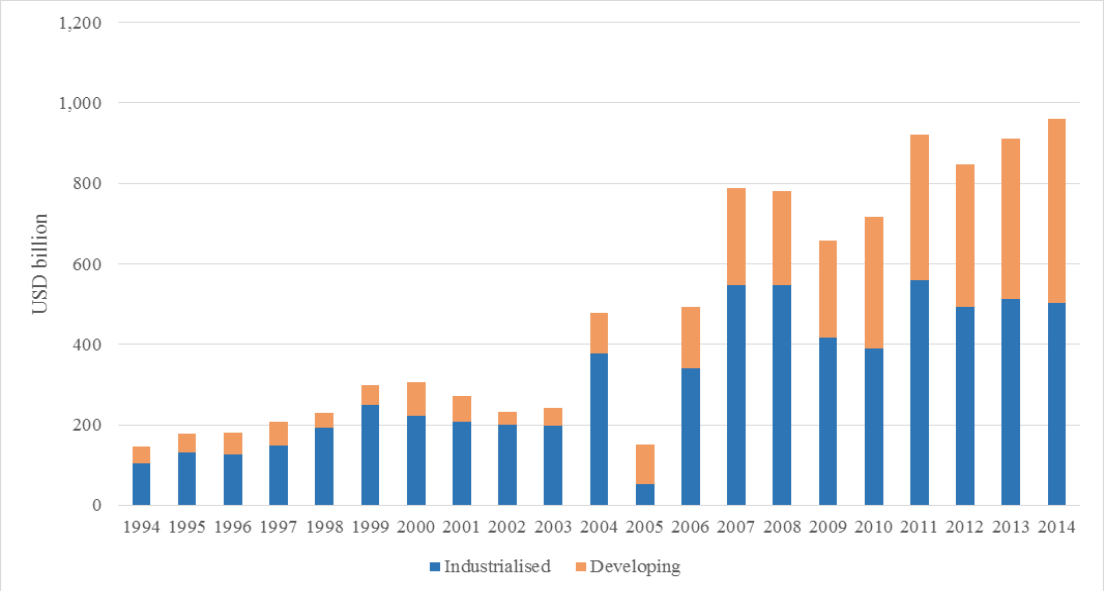


Source: United Nations Conference on Trade and Development (UNCTAD), Foreign Direct Investment Statistics online database

iii. FDI Outflows

FDI outflows from APEC economies grew over six times, from USD 146.8 billion in 1994 to USD 959.5 billion in 2014 at a growth rate of 9.8% per year. Similar to FDI inflows, the average annual growth rate for APEC developing economies (12.7%) is higher than that of the industrialized economies' rate of 8.2%. APEC FDI outflows have increased significantly from 2006, explained mostly by the increasing capacity of firms located in APEC developing economies to invest overseas.

Figure 2.10 FDI Outflows from the APEC Region



Source: United Nations Conference on Trade and Development (UNCTAD), Foreign Direct Investment Statistics online database

iv. FDI Outward Stocks

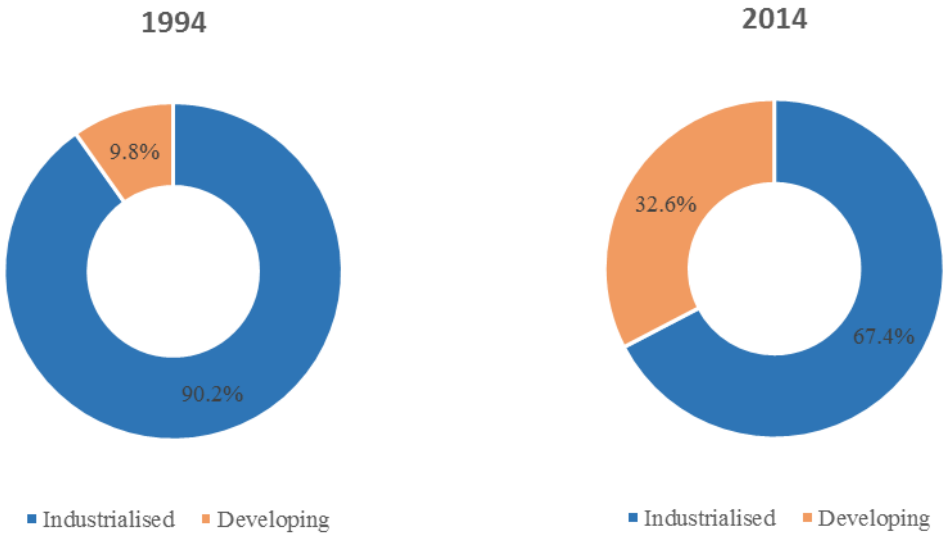
FDI outward stocks from APEC economies increased from USD 1.7 trillion in 1994 to USD 12.9 trillion 2014 at a rate of 10.6% per annum. The share of outward FDI stocks from APEC developing economies grew more than three times, from 9.8% in 1994 to 32.6% in 2014. Between 1994 and 2014, FDI outward stocks by APEC developing economies grew at an annual average rate of 17.5%, almost twice as much as the growth rate by APEC industrialized economies (9.0% per year).

Table 2.8 FDI Outward Stocks from APEC

	APEC Economies	USD billion			Annual average growth 1994-2014
		1994	**2010**	**2014**	
Industrialized	Australia	53.8	449.7	443.5	11.1%
	Canada	104.3	636.7	714.6	10.1%
	Japan	275.6	831.1	1,193.1	7.6%
	New Zealand	5.9	16.7	18.7	5.9%
	United States	1,114.6	4,809.6	6,318.6	9.1%
	Industrialized Total	**1,554.1**	**6,743.8**	**8,688.5**	**9.0%**
Developing	Brunei Darussalam	0.1	0.7	0.1	0.4%
	Chile	2.0	52.4	89.7	20.9%
	China	15.8	317.2	729.6	21.1%
	Hong Kong, China	58.8	943.9	1,459.9	17.4%
	Indonesia	4.6	6.7	24.1	8.6%
	Korea	9.7	144.0	258.6	17.8%
	Malaysia	2.6	97.0	135.7	21.8%
	Mexico	4.4	110.0	131.2	18.4%
	Papua New Guinea	0.2	0.2	0.3	1.5%
	Peru	0.1	3.3	4.2	20.0%
	Philippines	0.2	6.7	35.6	29.6%
	Russia	2.6	366.3	431.9	29.2%
	Singapore	26.3	458.6	576.4	16.7%
	Chinese Taipei	39.6	190.8	297.1	10.6%
	Thailand	1.5	21.4	65.8	21.0%
	Viet Nam	N.A.	2.2	7.5	69.5%*
	Developing Total	**168.5**	**2,721.5**	**4,247.7**	**17.5%**
APEC	**Total**	**1,722.7**	**9,465.4**	**12,936.2**	**10.6%**

Source: United Nations Conference on Trade and Development (UNCTAD), Foreign Direct Investment Statistics online database and Chinese Taipei's Central Bank.
*Growth rate for Viet Nam is from 2005-2014

Figure 2.11 FDI Outward Stock from APEC by Development Level



Source: United Nations Conference on Trade and Development (UNCTAD), Foreign Direct Investment Statistics online database

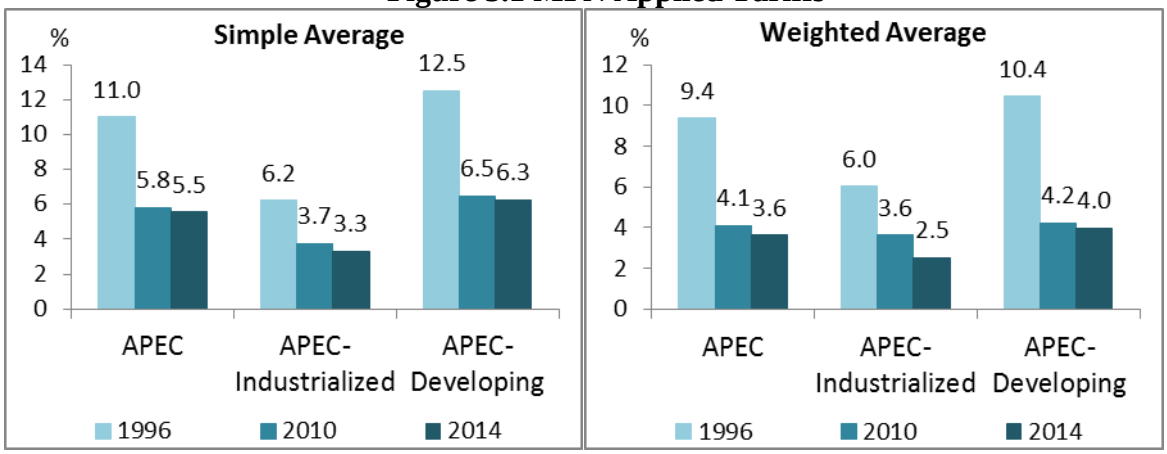
3. PROGRESS ON TRADE AND INVESTMENT LIBERALIZATION

A. TARIFFS

The substantial reduction of tariffs is one of the main objectives towards achieving the Bogor Goals. As one of the traditional aspects of trade liberalization, APEC economies have achieved remarkable progress during 1996 and 2014 in lowering and eliminating tariffs.

The simple average MFN applied tariff rates of APEC economies fell by almost half from 11.0% in 1996 to 5.5% in 2014. This was explained by consistent improvement from both APEC-industrialized and developing economies, which reduced their tariffs by 2.9 percentage points and 6.2 percentage points respectively between 1996 and 2014. However, there have been sporadic signs that the pace of tariff reduction has slowed down after the Great Financial Crisis. While 20 out of 21 APEC economies reported lower or the same simple average MFN applied tariffs in 2014 compared to 1996, 5 APEC economies reported higher tariffs in 2014 compared to 2010. Nevertheless, across the APEC region, the simple average tariff in 2014 is still 0.3 percentage points lower than that in 2010.

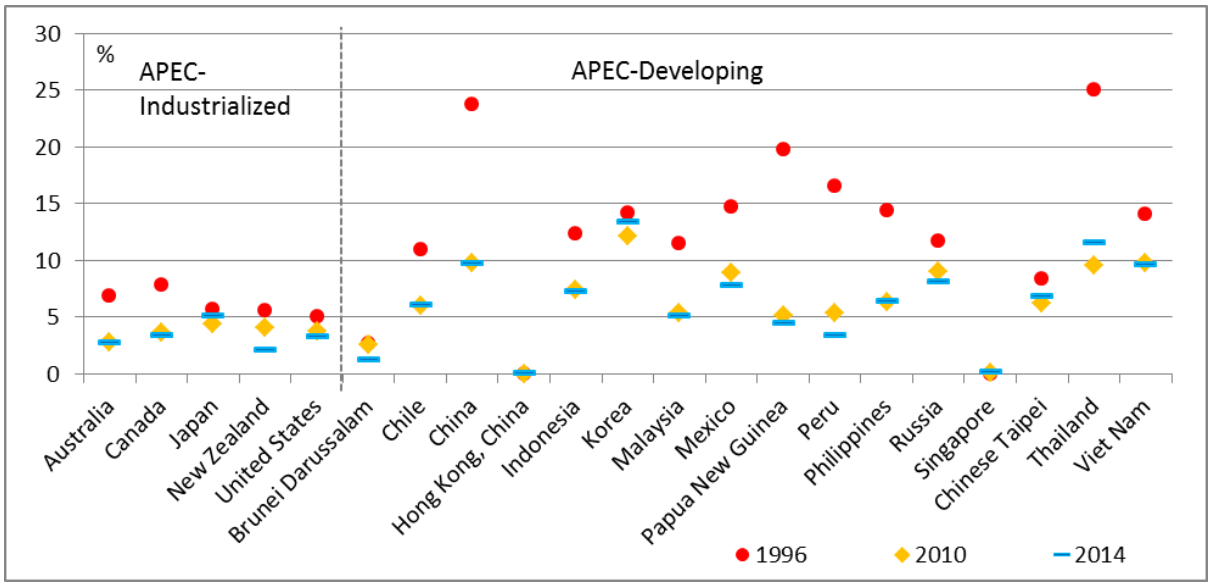
Figure 3.1 MFN Applied Tariffs



Note: Tariff data for Chile; Indonesia; Malaysia; Mexico; Papua New Guinea and Philippines in 2013 are used instead of 2014. Instead of tariff data in 1996, 1994 tariff rates are used for Viet Nam, 1995 tariff rates are used for Peru and Thailand, and 1997 tariff rates are used for Papua New Guinea. Tariff data includes AVEs for non-ad valorem rates to the extent possible.
Source: UNCTAD – Trade Analysis Information System (TRAINS) database and APEC Policy Support Unit calculations

At the individual economy level, Figure 3.2 shows that APEC economies made good progress between 1996 and 2014 with some APEC-developing economies slashing their tariffs substantially.

Figure 3.2 Simple Average of MFN Applied Tariffs, by Economy

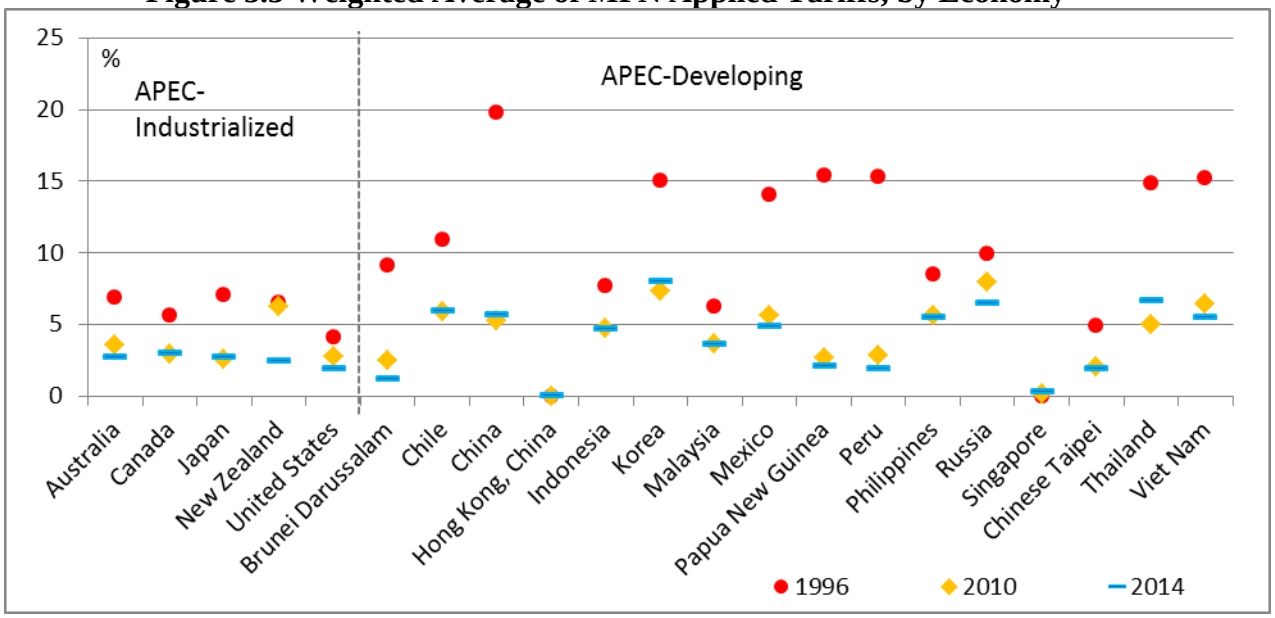


Note: Tariff data for Chile; Indonesia; Malaysia; Mexico; Papua New Guinea and Philippines in 2013 are used instead of 2014. Instead of tariff data in 1996, 1994 tariff rates are used for Viet Nam, 1995 tariff rates are used for Peru and Thailand, and 1997 tariff rates are used for Papua New Guinea. Tariff data includes AVEs for non-ad valorem rates to the extent possible.
Source: UNCTAD – Trade Analysis Information System (TRAINS) database and APEC Policy Support Unit calculations

The extent of the tariff reduction is more pronounced when the MFN applied rates are weighted by the product import shares corresponding to each partner economy. APEC economies' weighted mean tariffs fell by almost two-thirds from 9.4% in 1996 to 3.6% in 2014. Eight out of 21 APEC economies had weighted average MFN tariffs above 10% in 1996 and all APEC economies had weighted average MFN tariffs below 8% as of 2014.

In recent years, progress was very clear among APEC-industrialized economies, with their weighted average MFN applied tariffs falling by almost one-third from 3.6% in 2010 to 2.5% in 2014. For APEC-developing economies, weighted average MFN tariffs dropped slightly from 4.2% in 2010 to 4.0% in 2014.

Figure 3.3 Weighted Average of MFN Applied Tariffs, by Economy



Note: Tariff data for Chile; Indonesia; Malaysia; Mexico; Papua New Guinea and Philippines in 2013 are used instead of 2014. Instead of tariff data in 1996, 1994 tariff rates are used for Viet Nam, 1995 tariff rates are used for Peru and Thailand, and 1997 tariff rates are used for Papua New Guinea. Tariff data includes AVEs for non-ad valorem rates to the extent possible.
Source: UNCTAD – Trade Analysis Information System (TRAINS) database and APEC Policy Support Unit calculations

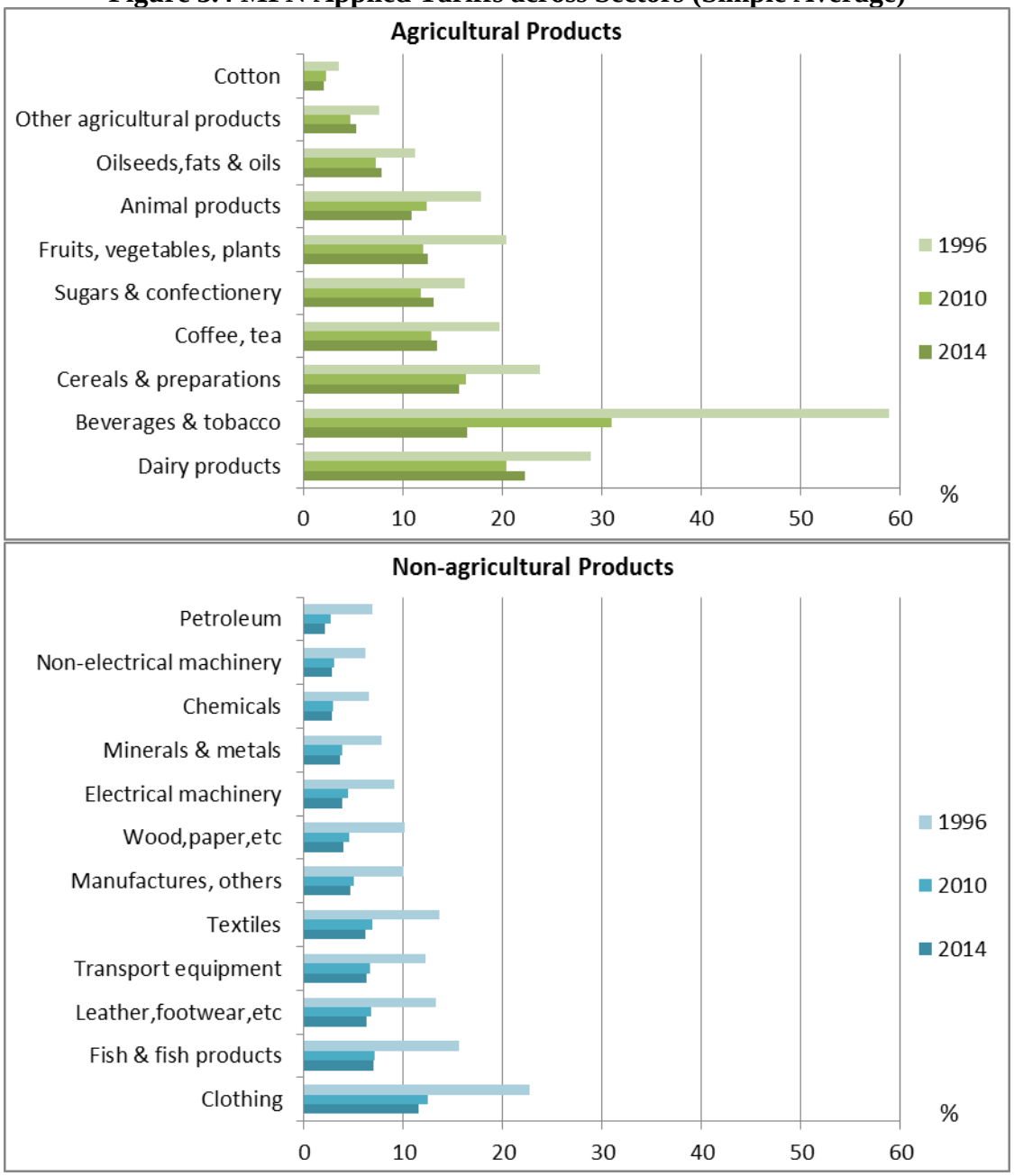
i. Sectoral Tariffs in APEC

While the extent of tariff reduction varied across different sectors in the APEC region, all sectors reported some progress in liberalizing tariff barriers between 1996 and 2014, as shown in Figure 3.4[11]. The sectors which APEC posted greatest improvements during 1996 to 2014 were as follows: beverages & tobacco (-42.4 percentage points); clothing (-11.1 percentage points); fish & fish products (-8.6 percentage points); cereal & preparations (-8.2 percentage points); fruits, vegetables, plants (-7.9 percentage points).

Despite the progress achieved so far, further efforts are still needed especially in agricultural sectors. By the end of 2014, the five sectors with the highest simple average MFN applied tariff rates were related to agriculture: dairy products (22.3%); beverage & tobacco (16.5%); cereals & preparations (15.6%); coffee, tea (13.4%) and sugar & confectionery (13.0%). On the opposite, non-agricultural sectors such as petroleum (2.1%); non-electrical machinery (2.8%); chemicals (2.9%); minerals & metals (3.6%) and electrical machinery (3.8%) reported the lowest sectoral MFN average tariffs in 2014.

[11] In 2014, simple average MFN tariffs in APEC-developing economies were higher than those for APEC-industrialized economies in all 22 sectors included in this analysis, except dairy products.

Figure 3.4 MFN Applied Tariffs across Sectors (Simple Average)



Note: Tariff data for Chile; Indonesia; Malaysia; Mexico; Papua New Guinea and Philippines in 2013 are used instead of 2014. Instead of tariff data in 1996, 1994 tariff rates are used for Viet Nam, 1995 tariff rates are used for Peru and Thailand, and 1997 tariff rates are used for Papua New Guinea. Tariff data includes AVEs for non-ad valorem rates to the extent possible.
Source: UNCTAD – Trade Analysis Information System (TRAINS) database and APEC Policy Support Unit calculations

APEC-industrialized economies slashed their simple average MFN applied tariff rates in all 22 sectors during 1996 to 2014, with the exception of other agricultural products. The tariff fall varied substantially across sectors. The average tariff for petroleum products plunged to 0.6% in 2014 – around one-tenth of its level in 1996. On the other hand, progress in reducing tariffs for cereals & preparations and dairy products were modest during the same period, going from 13.9% to 11.8% in the case of the former, and from 54.8% to 51.6% for the latter.

Table 3.1 APEC-Industrialized Economies Tariff Reduction Progress, Simple Average

Sector	Tariff in 1996	Tariff in 2010	Tariff in 2014	Reduction from 1996 to 2014 (Percentage Points)
Top 5 sectors with the most progress made during 1996-2014				
Beverages & tobacco	46.6	49.7	7.0	-39.6
Clothing	21.6	11.3	11.0	-10.6
Petroleum	6.9	1.7	0.6	-6.3
Sugar & confectionery	14.7	10.2	8.6	-6.1
Textiles	10.2	4.8	4.4	-5.7
Top 5 sectors with the least progress made during 1996-2014				
Sector	Tariff in 1996	Tariff in 2010	Tariff in 2014	Reduction from 1996 to 2014 (Percentage Points)
Other agricultural products	2.1	2.9	3.7	1.6
Cotton	1.0	0.8	0.7	-0.2
Fish & fish products	2.1	1.6	1.6	-0.6
Oilseeds, fats & oils	4.5	3.6	3.6	-0.9
Manufacturers, others	3.4	2.3	1.9	-1.6

Note: Tariff data for Chile; Indonesia; Malaysia; Mexico; Papua New Guinea and Philippines in 2013 are used instead of 2014. Instead of tariff data in 1996, 1994 tariff rates are used for Viet Nam, 1995 tariff rates are used for Peru and Thailand, and 1997 tariff rates are used for Papua New Guinea. Tariff data includes AVEs for non-ad valorem rates to the extent possible.
Source: UNCTAD – Trade Analysis Information System (TRAINS) database and APEC Policy Support Unit calculations

Similarly, APEC-developing economies also lowered their simple average MFN applied tariff rates in all the 22 sectors in 2014 compared to 1996 on average by 8.2 percentage points. Progress was significant in sectors such as beverages & tobacco; clothing; fish & fish products; cereals & preparations and fruits, vegetables, plants as shown in Table 3.2.

Table 3.2 APEC-Developing Economies Tariff Reduction Progress, Simple Average

Sector	Tariff in 1996	Tariff in 2010	Tariff in 2014	Reduction from 1996 to 2014 (Percentage Points)
Top 5 sectors with the most progress made during 1996-2014				
Beverages & tobacco	62.7	25.1	19.4	-43.3
Clothing	23.0	12.9	11.7	-11.2
Fish & fish products	19.9	8.8	8.7	-11.1
Cereals & preparations	26.9	18.1	16.8	-10.1
Fruits, vegetables, plants	24.7	14.3	14.9	-9.8
Top 5 sectors with the least progress made during 1996-2014				
Sector	Tariff in 1996	Tariff in 2010	Tariff in 2014	Reduction from 1996 to 2014 (Percentage Points)
Cotton	4.3	2.7	2.3	-2.0
Sugar & confectionery	16.7	12.2	14.4	-2.3
Other agricultural products	9.3	5.2	5.8	-3.5
Non-electrical machinery	7.0	3.5	3.2	-3.9

Oilseeds, fats & oils	13.3	8.4	9.2	-4.1

Note: Tariff data for Chile; Indonesia; Malaysia; Mexico; Papua New Guinea and Philippines in 2013 are used instead of 2014. Instead of tariff data in 1996, 1994 tariff rates are used for Viet Nam, 1995 tariff rates are used for Peru and Thailand, and 1997 tariff rates are used for Papua New Guinea. Tariff data includes AVEs for non-ad valorem rates to the extent possible.
Source: UNCTAD – Trade Analysis Information System (TRAINS) database and APEC Policy Support Unit calculations

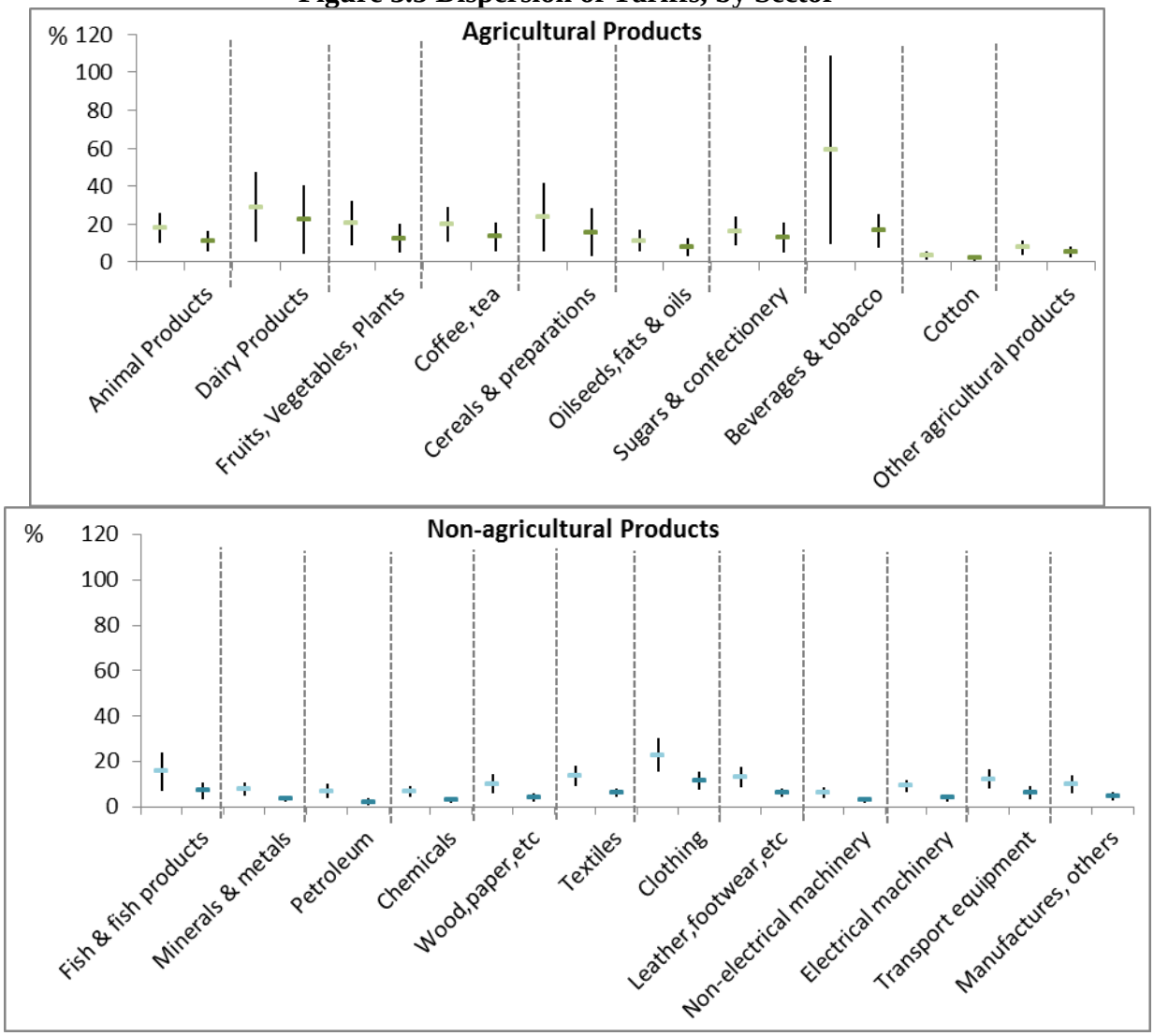
However, despite the progress in reducing tariffs in the last two decades, there are signs that tariffs in agricultural-related sectors have increased in recent years, after the Global Financial Crisis, in both APEC-industrialized and APEC-developing economies. APEC-industrialized economies increased their MFN average tariffs in sectors such as dairy products and cereals & preparations between 2010 and 2014. In turn, APEC-developing economies also raised their MFN average tariffs in sugar & confectionery; coffee, tea; oilseeds, fats & oils; and other agricultural products during the same period.

ii. Tariff Dispersion in APEC

The dispersion of tariff rates across the APEC region, measured by standard deviation, decreased between 1996 to 2014 in all sectors with the exception of sugar & confectionery. Figure 3.5 shows the simple average of MFN applied tariffs (represented by the marker) with the standard deviation (represented by the line segment) by sector for years 1996 and 2014

Overall, tariffs of non-agricultural products have decreased substantially during 1996 to 2014 and their dispersion also dropped significantly in the APEC region. However, for agricultural products, the fall in the tariff dispersion has been more modest, except for beverages & tobacco products.

Figure 3.5 Dispersion of Tariffs, by Sector

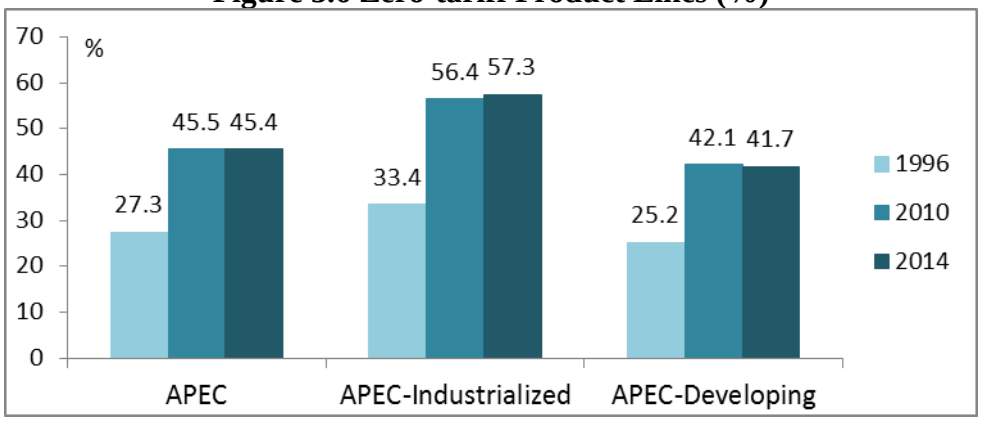


Note: In each sector, the line and marker on the left-hand side represent data from 1996, while the right-hand line and marker represents data from 2014.Tariff data for Chile; Indonesia; Malaysia; Mexico; Papua New Guinea and Philippines in 2013 are used instead of 2014. Instead of tariff data in 1996, 1994 tariff rates are used for Viet Nam, 1995 tariff rates are used for Peru and Thailand, and 1997 tariff rates are used for Papua New Guinea. Tariff data includes AVEs for non-ad valorem rates to the extent possible.
Source: UNCTAD – Trade Analysis Information System (TRAINS) database and APEC Policy Support Unit calculations

iii. Zero-Tariff Products

Most APEC economies have significantly increased their number of zero-tariff lines since 1996. The number of zero-tariff product lines in APEC region rose significantly from 27.3% to 45.4% of the total product lines between 1996 and 2014. However, since 2010, this indicator has experienced a slowdown. This is explained by the marginal increase of zero-tariff product lines in APEC-industrialized economies, and a decrease in APEC-developing economies, as six out of 16 APEC-developing economies reported a lower proportion of duty-free product lines in 2014 vis-à-vis 2010.

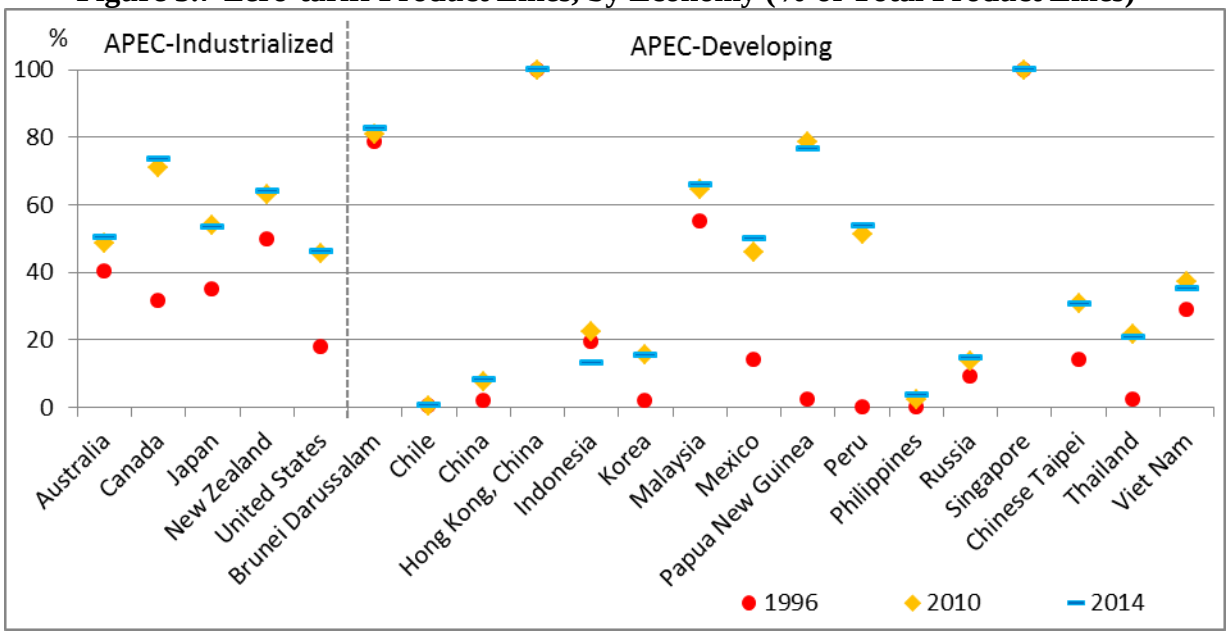
Figure 3.6 Zero-tariff Product Lines (%)



Note: Instead of tariff data in 1996, 1994 tariff rates are used for Viet Nam, 1995 tariff rates are used for Peru and Thailand, and 1997 tariff rates are used for Papua New Guinea. Tariff data includes AVEs for non-ad valorem rates to the extent possible.
Source: UNCTAD – Trade Analysis Information System (TRAINS) database, WTO *World Tariff Profiles* and APEC Policy Support Unit calculations

At the individual economy level, the percentage of zero-tariff product lines differs significantly across economies. On the one hand, three APEC economies charged zero tariffs in less than 10% of their product lines in 2014. On the other hand, three APEC economies have declared more than 80% of their product lines as duty-free.

Figure 3.7 Zero-tariff Product Lines, by Economy (% of Total Product Lines)

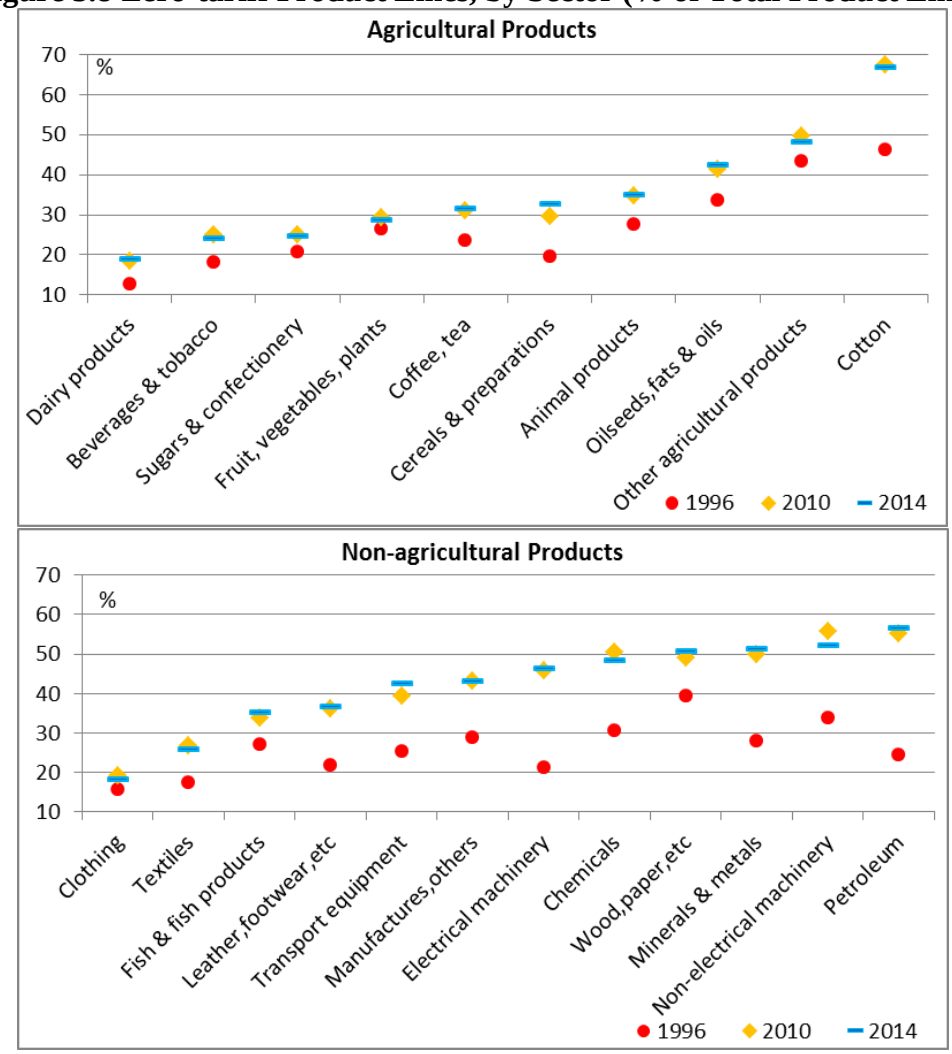


Note: Instead of tariff data in 1996, 1994 tariff rates are used for Viet Nam, 1995 tariff rates are used for Peru and Thailand, and 1997 tariff rates are used for Papua New Guinea. Tariff data includes AVEs for non-ad valorem rates to the extent possible.
Source: UNCTAD – Trade Analysis Information System (TRAINS) database, WTO *World Tariff Profiles* and APEC Policy Support Unit calculations

Within the APEC region, all sectors reported a higher proportion of zero-tariff production lines in 2014 in comparison with 1996. Most of the sectors with the greatest improvement in APEC are related to raw materials (i.e. petroleum; mineral & metals), intermediate goods (i.e. wood, paper; chemicals) and manufacturing products (i.e. non-electrical and electrical machinery). In recent years, the share of duty free product lines has increased at a slower pace. However, 11

sectors still posted a higher percentage of zero-tariff product lines in 2014 compared to 2010. Sectors with the largest increases were the following: cereals & preparations; transport equipment and wood, paper, etc.

Figure 3.8 Zero-tariff Product Lines, by Sector (% of Total Product Lines)

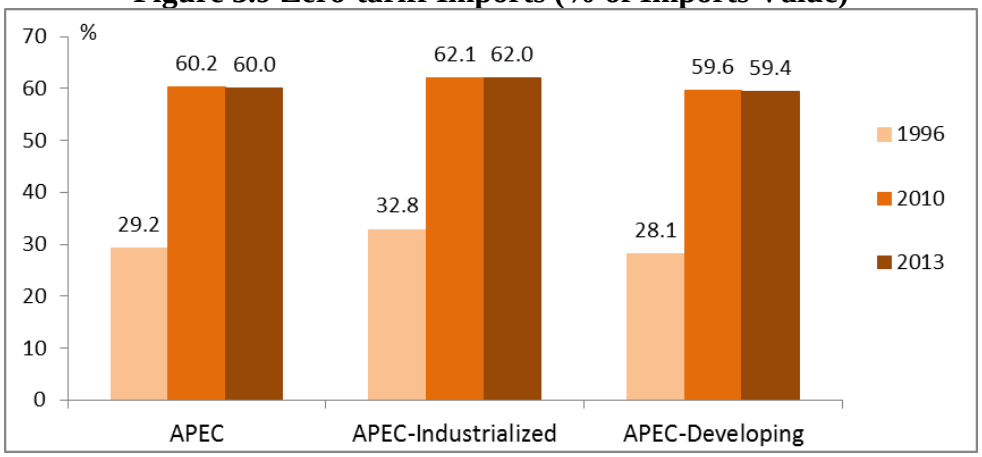


Note: Instead of tariff data in 1996, 1994 tariff rates are used for Viet Nam, 1995 tariff rates are used for Peru and Thailand, and 1997 tariff rates are used for Papua New Guinea. Tariff data includes AVEs for non-ad valorem rates to the extent possible.
Source: UNCTAD – Trade Analysis Information System (TRAINS) database, WTO *World Tariff Profiles* and APEC Policy Support Unit calculations

iv. Zero-Tariff Imports

As seen in Figure 3.9, when looking at the proportion of MFN duty-free products in APEC's total imports, the numbers show remarkable improvement in the region during the period 1996-2010. However, after 2010, the share of zero-tariff imports by APEC economies has stagnated in the APEC region. In fact, less than half of the APEC economies posted a higher percentage of zero-tariff imports in 2013 than in 2010.

Figure 3.9 Zero-tariff Imports (% of Imports Value)

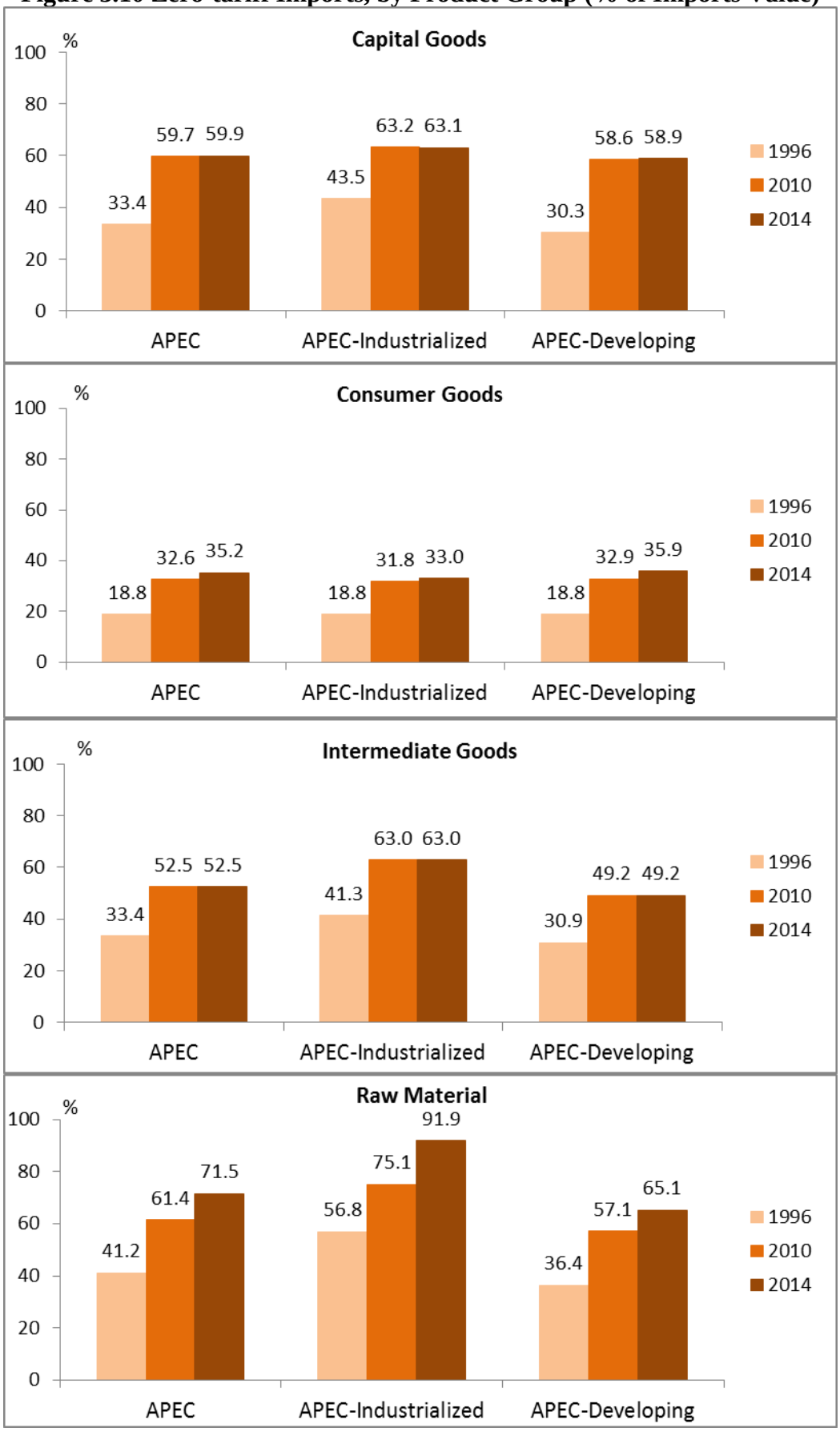


Note: Tariff data for Peru and Thailand are not available in 1996 and therefore are reported in 1995. Tariff data for Viet Nam are not available in 1996 and 1995 and therefore are reported in 1994. Tariff data for Brunei Darussalam and Papua New Guinea are not available in 2010 and therefore are reported in 2009 and 2004 respectively. Tariff data includes AVEs for non-ad valorem rates, as available.
Source: UNCTAD – Trade Analysis Information System (TRAINS) database, WTO *World Tariff Profiles*, WTO *World Trade Profiles* and APEC Policy Support Unit calculations

Figure 3.10 provides a detailed examination across four broad product sub-groups: capital goods, consumer goods, intermediate products and raw materials. The share of MFN duty-free imports in the total imports of all product sub-groups has increased substantially since 1996, but progress stalled after 2010, except for raw materials. In the case of consumer goods, the percentage of MFN duty-free imports went up at the slowest rate among all product sub-groups between 1996 and 2014.

These figures show that APEC governments are more inclined to liberalize production related goods like capital goods, intermediate goods and raw materials. Capital goods help increasing the production capacity of the economy, raw materials are essential for producing manufactures and intermediate goods are critical in the global production chain of any final product. In contrast, APEC governments seem less inclined to liberalize consumer goods in order to protect domestic industries. This is evident as consumer goods have the lowest proportion of zero-tariff imports during the period 1996-2014.

Figure 3.10 Zero-tariff Imports, by Product Group (% of Imports Value)



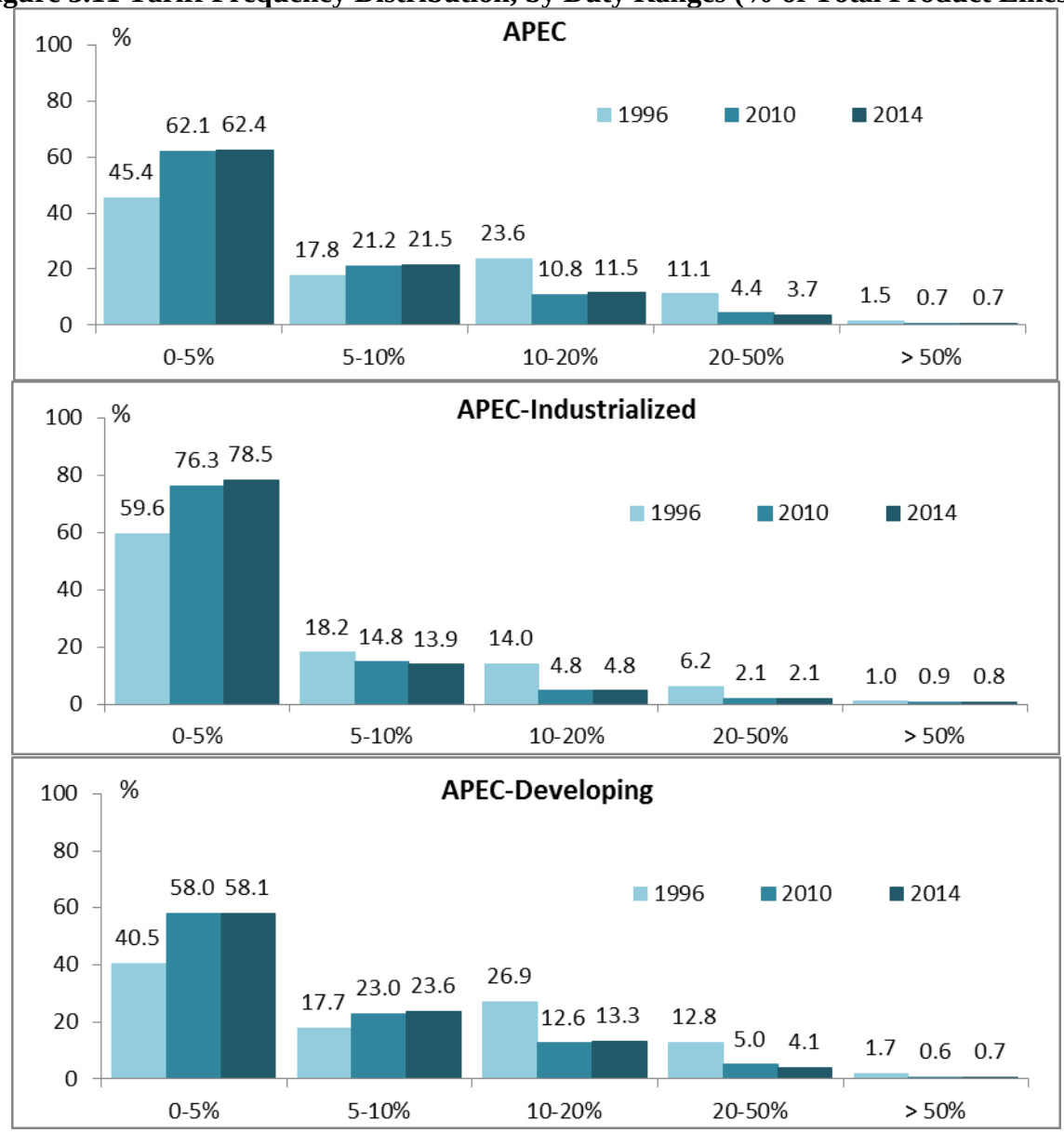
Note: Tariff data for Chile; Indonesia; Malaysia; Mexico; Papua New Guinea and Philippines in 2013 are used instead of 2014. Instead of tariff data in 1996, 1994 tariff rates are used for Viet Nam, 1995 tariff rates are used for Peru and Thailand, and 1997 tariff rates are used for Papua New Guinea. Tariff data includes AVEs for non-ad valorem rates to the extent possible.
Source: UNCTAD – Trade Analysis Information System (TRAINS) database and APEC Policy Support Unit calculations

v. Frequency Distribution of the MFN Applied Tariffs

The distribution of MFN applied tariff rates by duty ranges shows a continuous effort by APEC economies in reducing tariff duties between 1996 and 2014. Progress has been stronger in APEC-industrialized economies with 78.5% of their products subject to MFN applied tariffs lower than or equal to 5% by 2014. Moreover, from 2010 to 2014, the proportion of product lines with MFN tariffs in all other ranges above 5% has decreased, reflecting a wide-ranging tariff reduction in APEC-industrialized economies.

On the other hand, while APEC-developing economies achieved impressive progress during 1996 to 2010, the pace of tariff reduction slowed down afterwards. Between 2010 and 2014, the share of product lines with tariffs between 0% and 5% remained steady. It seems that MFN tariff rates have fallen in a very gradual manner across APEC-developing economies. For instance, many product lines with initial tariffs above 10% were lowered to levels between 5% to 10% and some products with MFN tariff rates initially above 20% went down to levels between 5 and 10%.

Figure 3.11 Tariff Frequency Distribution, by Duty Ranges (% of Total Product Lines)



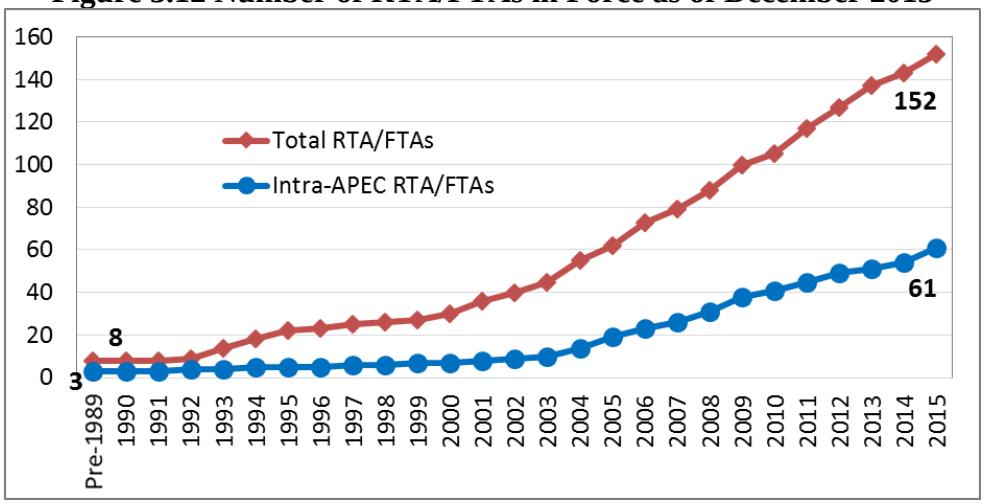
Note: Tariff data for Chile; Indonesia; Malaysia; Mexico; Papua New Guinea and Philippines in 2013 are used instead of 2014. Instead of tariff data in 1996, 1994 tariff rates are used for Viet Nam, 1995 tariff rates are used for Peru and Thailand, and 1997 tariff rates are used for Papua New Guinea. Tariff data includes AVEs for non-ad valorem rates to the extent possible.

Source: UNCTAD – Trade Analysis Information System (TRAINS) database and APEC Policy Support Unit calculations

vi. Trade Liberalization through RTA/FTAs

Another way to liberalize trade is through negotiations via the implementation of RTA/FTAs, which give preferential access in a specific market to products originating in the other partner(s). Between 1996 and 2015, the number of enforced RTA/FTAs in APEC grew exponentially from 22 to 152, with 61 of them being intra-APEC RTA/FTAs.

Figure 3.12 Number of RTA/FTAs in Force as of December 2015

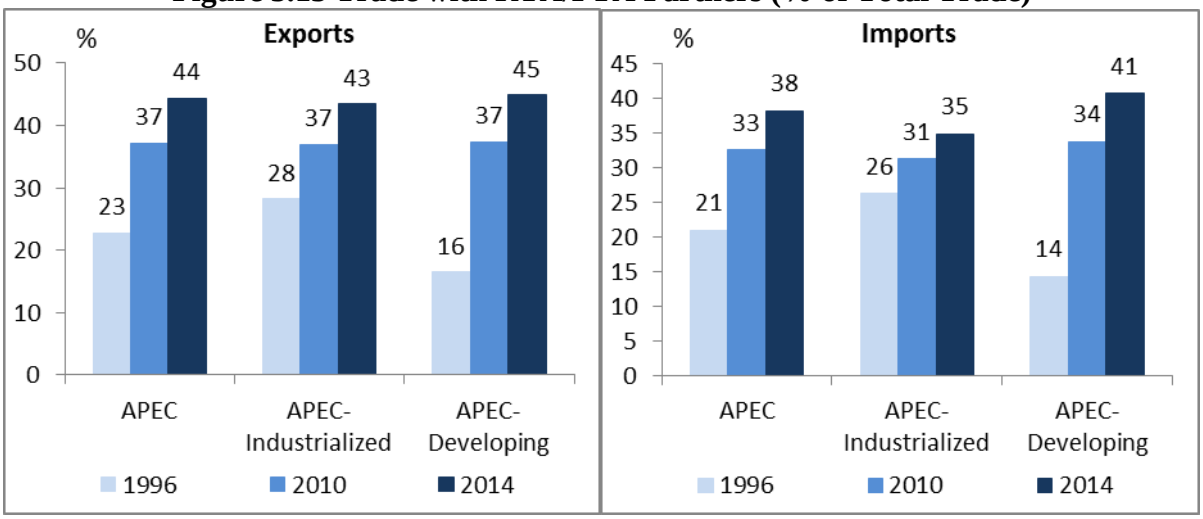


Source: APEC economies' government websites and APEC Policy Support Unit calculations

The proportion of trade with FTA partners also grew significantly among APEC economies between 1996 and 2014. On average, the share of APEC economies' exports with their FTA partners increased from 22.8% to 44.3% during 1996 to 2014. This is especially important for APEC-developing economies, whose share of exports with their FTA partners almost tripled between 1996 and 2014 from 16.5% to 44.8%.

The share of APEC imports from FTA partners also exhibited similarly robust growth between 1996 and 2014, from 21.1% to 38.3%. Again, this surge was largely driven by APEC-developing economies whose share of imports from FTA partners more than doubled within the 1996-2014 period, from 14.4% to 40.7%.

Figure 3.13 Trade with RTA/FTA Partners (% of Total Trade)



Source: IMF Direction of Trade Statistics, Bureau of Foreign Trade of Chinese Taipei and APEC Policy Support Unit calculations

Even though these figures are not an accurate reflection of the percentage of trade under preferential market access treatment, as some RTA/FTAs exclude some sensitive products, the evolution of these figures provides an indication on the increasing trade that is gaining from RTA/FTAs. Most of the RTA/FTAs signed by APEC economies follow GATT's Article XXIV, indicating that these agreements should cover "substantially all the trade", which in

practice means to cover all sectors, significant trade volume and goods, to be liberalized in a reasonable period of time.

B. NON-TARIFF MEASURES

Despite the existence of a common international NTM classification borne out of a multi-agency initiative on NTMs led by UNCTAD in 2006, determining the actual extent of NTMs implemented by APEC economies remains a challenging endeavor because of the wide range of measures which can be regarded as NTMs. Obtaining accurate information on NTMs is also not an easy task because economies often do not report all of them. Therefore, information in existing databases only include a fraction of NTMs that could be in place. Moreover, as mentioned in a report by the APEC Policy Support Unit, distinguishing whether a measure is legitimate or not is challenging in certain cases, since trade partners could have different views on the matter. One party may consider a measure a real barrier while the other may not[12]. Consequently, different perspectives make NTM databases not comparable to one another.

i. WTO i-TIP Goods Data: NTMs Implemented by APEC Economies

The WTO Integrated Trade Intelligence Portal (i-TIP) Goods has information on NTMs applied by its members, based on members' notifications and specific trade concerns brought up by them at WTO committee meetings. The database has been expanding its coverage of NTMs over time and as at January 2016, six types of NTMs provide information on the frequency of NTMs in force for the period 2010-2015, namely: antidumping, countervailing measures, safeguards, special safeguards, sanitary and phytosanitary measures (SPS), and technical barriers to trade (TBT)[13]. This report only counts measures that are in force by the end of the calendar year.

Table 3.3 shows that the number of NTMs in force implemented by APEC members has generally increased between 2010 and 2015. The top 3 NTMs that increased significantly over this period were: safeguards (104.2%); TBT-specific trade concerns (56.4%) and countervailing duties (38.5%). The most common NTMs by end of 2015 was antidumping, followed by quantitative restrictions and special safeguards.

Table 3.3 Frequency of NTMs in Force Implemented by APEC Members (End of Calendar Year)

Implemented by APEC Economies	2010	2011	2012	2013	2014	2015	Change (2010-2015)
Antidumping	607	580	601	638	667	675	11.2%
Countervailing Duties	65	70	75	82	90	90	38.5%
Safeguards	24	33	36	40	44	49	104.2%
Special Safeguards	262	277	288	292	295	296	13.0%
SPS – Specific Trade Concerns	99	110	118	106	112	115	16.2%
TBT – Specific Trade Concerns	149	173	188	210	226	233	56.4%

[12] APEC Policy Support Unit (2014), "Perceptions on the Use of Non-Tariff Measures Within the APEC Region", APEC#214-SE-01.10, p. 6.

[13] More information about these measures and how they are collected can be found in http://i-tip.wto.org/goods/Forms/Methodology.aspx.

Note: Although notifications should be annual and cover the calendar year, the numbers indicated in the table should be treated with caution since it is possible that not all measures have been reported or raised at WTO Committees. All numbers in table are determined by counting the number of measures extracted from the WTO i-TIP Goods database. In some cases, when a measure is implemented by several economies at the same time, it is only counted once. Furthermore, when the implementation of a measure affects more than one product, the measure is counted as a single one.
Source: WTO i-TIP Goods database. Latest data accessed on 28 February 2016. APEC Secretariat, Policy Support Unit calculations.

Antidumping

By the end of 2015, APEC members collectively had 675 measures in force, an 11% increase compared to 2010. Of these measures, 446 measures (66.1% of total) can be associated to specific HS sectors. The top 5 sectors affected were as follows: iron and steel (HS chapter 72; 130 cases); articles of iron or steel (HS chapter 73; 82 cases); organic chemicals (HS chapter 29; 55 cases); plastics and articles thereof (HS chapter 39; 29 cases); and inorganic chemicals (HS chapter 28; 18 cases).

16 APEC economies had antidumping measures in force by the end of 2015 and 8 of them increased their number of antidumping measures in comparison with 2010.

Table 3.4 Frequency of Antidumping Measures in Force by APEC Members (End of Calendar Year)

APEC Economies	2010	2015	Change (2010-15)
Australia	21	53	152.4%
Brunei Darussalam	0	0	N.A.
Canada	35	65	85.7%
Chile	1	0	-100.0%
China	117	97	-17.1%
Hong Kong, China	0	0	N.A.
Indonesia	12	30	150.0%
Japan	6	4	-33.3%
Korea	29	29	0.0%
Malaysia	9	17	88.9%
Mexico	38	48	26.3%
New Zealand	12	8	-33.3%
Papua New Guinea	0	0	N.A.
Peru	24	7	-70.8%
Philippines	1	1	0.0%
Russia	17	12	-29.4%
Singapore	0	0	N.A.
Chinese Taipei	5	7	40.0%
Thailand	23	36	56.5%
United States	257	257	0.0%
Viet Nam	0	4	N.A.

Source: WTO i-TIP Goods database. Latest data accessed on 28 February 2016. APEC Secretariat, Policy Support Unit calculations.

Countervailing duties

By the end of 2015, APEC economies had 90 countervailing duties imposed in force, 38.5% more than that in 2010. 59 of the 90 measures can be associated to specific HS sectors. The main affected sectors were the following: articles of iron or steel (HS chapter 73; 22 cases); iron and steel (HS chapter 72; 11 cases), followed by organic chemicals (HS chapter 29; 5 cases); inorganic chemicals (HS chapter 28; 4 cases); and miscellaneous chemical products (HS chapter 38; 4 cases).

Only six APEC economies accounted for the 90 cases of countervailing duties in force by the end of 2015.

Table 3.5 Frequency of Countervailing Duties in Force by APEC Members (End of Calendar Year)

APEC Economies	2010	2015	Change (2010-15)
Australia	2	7	250.0%
Brunei Darussalam	0	0	N.A.
Canada	9	17	88.9%
Chile	0	0	N.A.
China	2	5	150.0%
Hong Kong, China	0	0	N.A.
Indonesia	0	0	N.A.
Japan	0	0	N.A.
Korea	0	0	N.A.
Malaysia	0	0	N.A.
Mexico	0	3	N.A.
New Zealand	0	0	N.A.
Papua New Guinea	0	0	N.A.
Peru	2	1	-50.0%
Philippines	0	0	N.A.
Russia	0	0	N.A.
Singapore	0	0	N.A.
Chinese Taipei	0	0	N.A.
Thailand	0	0	N.A.
United States	50	57	14.0%
Viet Nam	0	0	N.A.

Source: WTO i-TIP Goods database. Latest data accessed on 28 February 2016. APEC Secretariat, Policy Support Unit calculations.

Safeguards

The number of safeguards implemented by APEC economies more than doubled from 24 measures in 2010 to 49 measures in 2015. 42 of the safeguards in force by the end of 2015 (85.7% of total) can be associated to specific HS sectors, the most affected sectors being: iron and steel (HS chapter 72; 9 cases); articles of iron or steel (HS chapter 73; 5 cases); products of the milling industry (HS chapter 11; 4 cases); glass and glassware (HS chapter 70; 4 cases); dairy produce; birds' eggs and natural honey (HS chapter 04; 3 cases); and ceramic products (HS chapter 69; 3 cases).

Table 3.6 Frequency of Safeguards in Force by APEC Members (End of Calendar Year)

APEC Economies	2010	2015	Change (2010-15)
Australia	0	0	N.A.
Brunei Darussalam	0	0	N.A.
Canada	0	0	N.A.
Chile	7	8	14.3%
China	0	0	N.A.
Hong Kong, China	0	0	N.A.
Indonesia	3	17	466.7%
Japan	0	0	N.A.
Korea	2	2	0.0%
Malaysia	0	1	N.A.
Mexico	0	0	N.A.
New Zealand	0	0	N.A.
Papua New Guinea	0	0	N.A.
Peru	0	0	N.A.
Philippines	6	8	33.3%
Russia	0	3	N.A.
Singapore	0	0	N.A.
Chinese Taipei	0	0	N.A.
Thailand	0	3	N.A.
United States	6	6	0.0%
Viet Nam	0	1	N.A.

Source: WTO i-TIP Goods database. Latest data accessed on 2 January 2016. APEC Secretariat, Policy Support Unit calculations.

Special Safeguards

Special safeguards are related to the agricultural sector, and have experienced an increase between 2010 and 2015. By the end of 2015, 296 measures were in place, an increase of 13.0% relative to 2010, with only five APEC economies having in force this type of measure.

The most affected products by special safeguards were the following: dairy produce; birds' eggs; natural honey; products of the milling industry; malt; starches; inulin; wheat gluten; sugars and sugar confectionary; cocoa and cocoa preparations; preparations of cereals, flour, starch or milk; and miscellaneous edible preparations.

Table 3.7 Frequency of Special Safeguards in Force by APEC Members (End of Calendar Year)

APEC Economies	2010	2015	Change (2010-15)
Australia	0	0	N.A.
Brunei Darussalam	0	0	N.A.
Canada	0	0	N.A.
Chile	0	0	N.A.
China	0	0	N.A.
Hong Kong, China	0	0	N.A.
Indonesia	0	0	N.A.

Japan	40	57	42.5%
Korea	37	39	5.4%
Malaysia	0	0	N.A.
Mexico	0	0	N.A.
New Zealand	0	0	N.A.
Papua New Guinea	0	0	N.A.
Peru	0	0	N.A.
Philippines	7	7	0.0%
Russia	0	0	N.A.
Singapore	0	0	N.A.
Chinese Taipei	18	20	11.1%
Thailand	0	0	N.A.
United States	160	173	8.1%
Viet Nam	0	0	N.A.

Source: WTO i-TIP Goods database. Latest data accessed on 28 February 2016. APEC Secretariat, Policy Support Unit calculations.

Sanitary and Phytosanitary Measures (SPS) – Specific Trade Concerns

Collectively, a total of 115 SPS-related measures in force by at least one APEC economy were reported as specific trade concerns in WTO by the end of 2015. This is an increase of 16.2% in relation to 2010. 72 of these measures (62.6%) can be associated to specific HS sectors. Some of the mostly affected sectors were the following: meat and edible meat offal (HS chapter 02; 32 cases); edible fruit and nuts; peel of citrus fruit or melons (HS chapter 08; 17 cases); edible vegetables and certain roots and tubers (HS chapter 07; 8 cases); live animals (HS chapter 01; 7 cases); dairy produce; birds' eggs and natural honey (HS chapter 04; 7 cases).

Table 3.8 Frequency of SPS-Specific Trade Concerns in Force by APEC Members (End of Calendar Year)

APEC Economies	2010	2015	Change (2010-15)
Australia	7	7	0.0%
Brunei Darussalam	0	0	N.A.
Canada	6	5	-16.7%
Chile	1	1	0.0%
China	11	16	45.5%
Hong Kong, China	0	1	N.A.
Indonesia	9	9	0.0%
Japan	20	18	-10.0%
Korea	9	6	-33.3%
Malaysia	2	3	50.0%
Mexico	7	6	-14.3%
New Zealand	1	1	0.0%
Papua New Guinea	0	0	N.A.
Peru	0	0	N.A.
Philippines	1	2	100.0%
Russia	0	9	N.A.
Singapore	0	0	N.A.
Chinese Taipei	4	6	50.0%

Thailand	2	3	50.0%
United States	28	30	7.1%
Viet Nam	0	1	N.A.

Source: WTO i-TIP Goods database. Latest data accessed on 2 January 2016. APEC Secretariat, Policy Support Unit calculations.

Technical Barriers to Trade (TBT) – Specific Trade Concerns

The number of TBT-related measures implemented by at least one APEC economy, but raised as a specific trade concern in WTO, increased from 149 measures in 2010 to 233 measures in 2015. However, identifying the specific HS sectors associated with these measures is challenging because only 29 of the 233 measures in 2015 allowed for such identification.

Anecdotal evidence shows that some of the affected sectors were as follows: beverages, spirits and vinegar (HS chapter 22); nuclear reactors, boilers, machinery and mechanical appliances (HS chapter 84); electrical machinery and equipment and parts thereof (HS chapter 85); bedding, mattresses and similar furniture (HS chapter 94); and meat and edible meat offal (HS chapter 02).

Table 3.9 Frequency of TBT-Specific Trade Concerns In Force by APEC Members (End of Calendar Year)

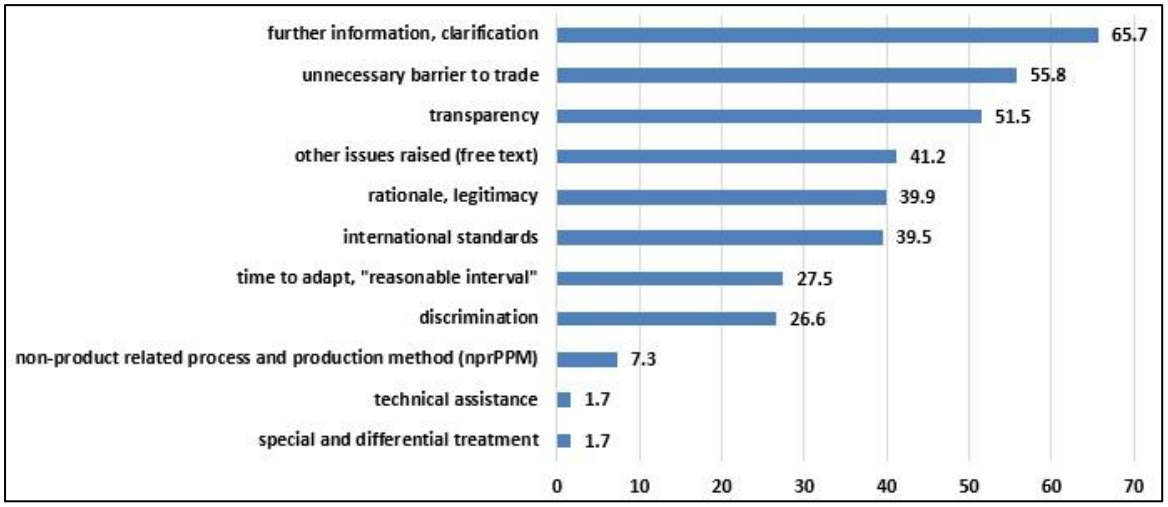
APEC Economies	2010	2015	Change (2010-15)
Australia	0	2	N.A.
Brunei Darussalam	0	0	N.A.
Canada	9	11	22.2%
Chile	2	4	100.0%
China	34	51	50.0%
Hong Kong, China	2	2	0.0%
Indonesia	9	18	100.0%
Japan	11	12	9.1%
Korea	20	30	50.0%
Malaysia	2	3	50.0%
Mexico	8	14	75.0%
New Zealand	2	3	50.0%
Papua New Guinea	0	0	N.A.
Peru	3	6	100.0%
Philippines	1	1	0.0%
Russia	0	11	N.A.
Singapore	0	0	N.A.
Chinese Taipei	5	5	0.0%
Thailand	6	9	50.0%
United States	34	47	38.2%
Viet Nam	1	4	300.0%

Source: WTO i-TIP Goods database. Latest data accessed on 2 January 2016. APEC Secretariat, Policy Support Unit calculations.

The main type of specific trade concern raised in WTO against any APEC member on measures related to technical standards was about the lack of further information and the need for clarification (65.7% of the total measures). Other concerns commonly raised were about

measures considered as unnecessary barriers to trade (55.8%); and lack of transparency (51.5%).

Figure 3.14 Issues Raised by Members Concerned for Reporting the TBT-Specific Trade Concerns



Note: Sum of shares do not add up to 100% since some measures are associated with more than one type of concern.
Source: WTO TBT Information Management System Database. Latest data accessed on 14 January 2016. APEC Secretariat, Policy Support Unit calculations.

Import Licensing

Due to differences in reporting style, it is difficult to determine the number of licenses in force each year. Some APEC economies make one notification per product or HS chapter affected, while others include all products affected in one notification. Many of those sectors included in a single notification could correspond to a different import licenses in substance.

However, assuming that each HS chapter that appears in a notification corresponds to a separate import license, it is possible to estimate the extent that these licenses have disseminated within the APEC region. Most of the import licenses are currently non-automatic, which also grew at a faster pace than automatic import licenses (4.2% vs. 4.0%) between 2010 and 2015. However, in percentage terms, the greatest increase was in the use of other schemes such as tariff-rate quotas (13.3%).

Table 3.10 Estimated Number of Import Licensing Schemes in the APEC Region (By Type of Scheme)

Type of Import License	2010	2015	Change (2010-15)
Automatic	174	181	4.0%
Non-Automatic	456	475	4.2%
Prohibition	26	26	0.0%
Others (i.e. Tariff-Rate Quotas)	75	85	13.3%

Source: WTO i-TIP Goods database. Latest data accessed on 2 January 2016. APEC Secretariat, Policy Support Unit calculations.

Quantitative Restrictions

The notification of quantitative restrictions in WTO experienced some changes in recent years. Before 2012, notifications by WTO members did not necessarily include all measures in place. After 2012, WTO members are obligated to notify their quantitative restrictions every two years, and every notification must include all measures that are still in place, regardless of when they were implemented. This change in reporting mechanism, and the fact that economies do not necessarily report on their measures on time, add a layer of difficulty in comparing the WTO statistical data on quantitative restrictions throughout the years.

Nevertheless, the information available from WTO allows us to sum the number of notifications for the most recent year with data available (2015). Subsequently, the types of quantitative restriction most notified in the APEC region can be determined. In general, quantitative restrictions are more prevalent for imports than for exports. Non-automatic import licenses are the most prevalent quantitative restriction (30.0% of the total) in the APEC region, followed by import prohibitions (18.7%) and non-automatic export licenses (18.5%).

Table 3.11 Notifications on Quantitative Restrictions in Force by APEC Members (By Type of Restriction)

Type of Quantitative Restriction	2015	Share
Non-automatic licensing (Imports)	169	30.0%
Prohibition (Imports)	105	18.7%
Non-automatic licensing (Exports)	104	18.5%
Prohibition (Exports)	55	9.8%
Prohibition except under defined conditions (Imports)	50	8.9%
Prohibition except under defined conditions (Exports)	44	7.8%
Not available (Imports)	18	3.2%
Not available (Exports)	6	1.1%
Global quota (Imports)	5	0.9%
Global quota allocated by economy (Imports)	4	0.7%
Voluntary export restraint (Exports)	1	0.2%
Quantitative restrictions made through state trading (Imports)	1	0.2%
Global quota (Exports)	1	0.2%

Source: WTO i-TIP Goods database. Latest data accessed on 28 February 2016. APEC Secretariat, Policy Support Unit calculations.

Transparency in the Notification of NTMs Implemented by APEC Economies

Information from WTO's i-TIP database can identify if a measure has been notified by an implementing economy, allowing the level of transparency with respect to SPS and TBT-related NTMs in the APEC region to be determined.

It is worrying to note that while the number of specific trade concerns increased over the years, the share of notified measures moved in the opposite direction instead. Within APEC, between 2010 and 2015, the percentage of SPS-specific trade concerns that were previously notified by the APEC economy imposing the measure at WTO went down from 43.4% to 31.3%.

Similarly, the percentage of TBT-specific trade concerns notified by the imposing APEC economy fell from 65.1% to 48.1%.

Table 3.12 Specific Trade Concerns Notified By APEC Economies

	SPS			TBT		
Year	**STC**	**Notified measures**	**% STC notified**	**STC**	**Notified measures**	**% STC notified**
2010	99	43	43.43	149	97	65.10
2011	110	44	40.00	173	110	63.58
2012	118	44	37.29	188	112	59.57
2013	106	37	34.91	210	112	53.33
2014	112	36	32.14	226	112	49.56
2015	115	36	31.30	233	112	48.07

Source: WTO i-TIP Goods database. Latest data accessed on 2 January 2016. APEC Secretariat, Policy Support Unit calculations.

ii. Global Trade Alert Data: NTMs Implemented by APEC Economies

The Global Trade Alert (GTA) database collects information which allows discriminatory or likely to be discriminatory policies to be identified. These policies may have been reported by policymakers, government officials, exporters, media and third parties including members of the public. Policies are categorized according to different criteria such that it is possible to search by implementing economy, affected economy, affected sectors and type of measure, amongst others.

It should be noted that a single policy in the GTA database could be associated with more than one type of NTM, cover more than one sector and affect more than one economy. Therefore, the total number of policies reported in the database is unlikely to be the same as the total number of NTMs at any one time[14].

As of November 2015, the GTA database shows that APEC economies collectively announced or implemented a total of 1,959 NTMs that are or are likely to be discriminatory. Two types of NTMs, specifically trade defence measure and bail out/state aid measure explained nearly half of them. Other types of NTMs with significant participation include sub-national government measures (8.4%); localisation requirements (7.0%); trade finance (5.5%); and public procurement (5.2%).

[14] For example, the extension and expansion of a single program to support the creative sector in Brazil by the Brazilian Development Bank was categorized in the GTA database under two different NTM categories, namely: a) bail out/state aid measure; and b) localization requirement. This measure affected six sectors under the Provisional Central Product Classification: a) knitted or crocheted fabrics; wearing apparel; b) leather and leather products; footwear; c) pulp, paper and paper products; printed matter and related articles; d) rubber and plastics products; e) glass and glass products and other non-metallic products; and f) furniture; other transportable goods; and 43 economies were affected by this measure. See http://www.globaltradealert.org/measure/brazil-bndes-extends-and-increases-prodesign-program-usd-159-million.

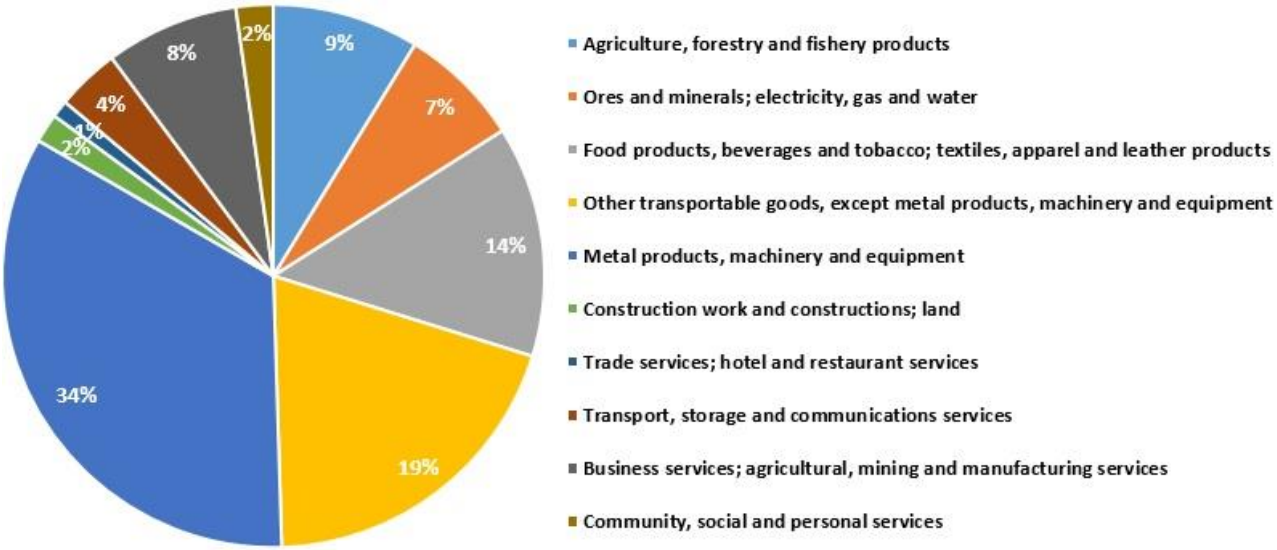
Table 3.13 Types of NTMs Implemented by APEC Economies

Measure	Number	Share	Measure	Number	Share
Bail out / state aid measure	456	23.3%	**Migration measure**	77	3.9%
Competitive devaluation	2	0.1%	**Non-tariff barrier (not otherwise specified)**	76	3.9%
Consumption subsidy	5	0.3%	**Other service sector measure**	29	1.5%
Export incentive	54	2.8%	**Public procurement**	102	5.2%
Export taxes or restriction	82	4.2%	**Sanitary and Phytosanitary Measure**	9	0.5%
Import ban	25	1.3%	**State trading enterprise**	10	0.5%
Import quota	21	1.1%	**State-controlled company**	25	1.3%
Import subsidy	3	0.2%	**Sub-national government measure**	164	8.4%
Intellectual property protection	4	0.2%	**Technical Barrier to Trade**	6	0.3%
Investment measure	96	4.9%	**Trade defence measure (AD, CVD, safeguard)**	468	23.9%
Localisation requirement	138	7.0%	**Trade finance**	107	5.5%

Source: Global Trade Alert (GTA) database. Latest data accessed on 17 November 2015. APEC Secretariat, Policy Support Unit calculations.

The top three sectors affected by NTMs implemented by APEC economies are: a) metal products, machinery and equipment; b) other transportable goods, except metal products, machinery and equipment; and c) food products, beverages and tobacco; textiles, apparel and leather products. Altogether, they accounted for more than two-thirds of the cases.

Figure 3.15 Sectors Affected by NTMs Implemented by APEC Economies



Source: Global Trade Alert (GTA) database. Latest data accessed on 17 November 2015. APEC Secretariat, Policy Support Unit calculations.

According to the GTA database, two APEC economies explained nearly half of the NTMs within the APEC region and five member economies accounted for nearly three-quarters of the NTMs in force in the region.

Table 3.14 NTMs Implemented in the APEC Region – By Economy

Economy	Number	Economy	Number	Economy	Number
Australia	94	Japan	138	Philippines	7
Brunei Darussalam	0	Korea	55	Russia	364
Canada	114	Malaysia	31	Singapore	25
Chile	10	Mexico	75	Chinese Taipei	8
China	167	New Zealand	9	Thailand	28
Hong Kong, China	2	Papua New Guinea	1	United States	585
Indonesia	186	Peru	11	Viet Nam	49

Source: Global Trade Alert (GTA) database. Latest data accessed on 17 November 2015. APEC Secretariat, Policy Support Unit calculations.

iii. European Commission's Market Access Database: NTMs Implemented by APEC Economies

The European Commission's Market Access Database serves as a repository of trade barriers reported by companies, which have been previously verified by the Commission. The total number of NTMs implemented by APEC as of November 2015 was 142, indicating that member economies have reduced them by about 22 percent since 2010, when APEC Policy Support Unit reported the existence of 183 NTMs in its Bogor Goals Assessment 2010 report. As of November 2015, a great percentage of NTMs by APEC economies reported in this database were related to sanitary and phytosanitary measures; standards and other technical requirements; and customs procedures. These measures accounted for 68% of the total NTMs implemented by APEC economies.

Table 3.15 NTMs by Type of Measure

Measures	Bogor Goals Assessment 2010	Latest Data 2015	Changes (2010 – 15)
Competition Issues	4	4	0.0%
Government Procurement	15	16	6.7%
Other Non-Tariff Measures	15	11	-26.7%
Quantitative Restrictions and Related Measures	8	8	0.0%
Registration, Documentation, Customs Procedures	31	18	-41.9%
Sanitary and Phytosanitary Measures	59	56	-5.1%
Standards and Other Technical Requirements	35	23	-34.3%
Subsidies	16	6	-62.5%
Overall (Total)	183	142	-22.4%

Source: European Commission's Market Access Database (MADB). Latest data accessed on 16 November 2015. APEC Secretariat, Policy Support Unit calculations.

It is also noticeable that NTM reports to the European Commission have fallen significantly in areas such as customs procedures and subsidies. In contrast, there has been little or no change in the number of NTMs relating to competition issues; government procurement; quantitative restrictions and related measures; as well as sanitary and phytosanitary measures.

Agriculture and fisheries is the sector most affected by NTMs; close to half of NTMs implemented by APEC economies affect this sector. The share of horizontal NTMs (i.e. those affecting all sectors) is also significant, making up 23% of total NTMs implemented. In contrast, the elimination of NTMs in the construction sector; textiles and leather; and wood, paper and pulp is remarkable.

Table 3.16 NTMs by Affected Sectors

Affected Sectors	Bogor Goals Assessment 2010	Latest Data 2015	Changes (2010 – 15)
Agriculture and Fisheries	75	66	-12.0%
Aircraft	2	1	-50.0%
Automotive	7	5	-28.6%
Chemicals	3	2	-33.3%
Cosmetics	5	1	-80.0%
Electronics	3	1	-66.7%
Horizontal	31	33	6.5%
Iron, Steel and Non-Ferrous Metals	2	1	-50.0%
Machinery	1	1	0.0%
Other Industries	7	8	14.3%
Pharmaceuticals	14	8	-42.9%
Services - Communication, incl. postal services	2	1	-50.0%
Services - Construction	1	0	-100.0%
Services - Energy	0	1	N.A.
Services - Financial	4	4	0.0%
Services - Transport	6	2	-66.7%
Shipbuilding	2	1	-50.0%
Telecommunications Equipment	2	1	-50.0%
Textiles and Leather	11	0	-100.0%
Wines and Spirits	4	5	25.0%
Wood, Paper and Pulp	1	0	-100.0%
Overall (Total)	183	142	-22.4%

Source: European Commission's Market Access Database (MADB). Latest data accessed on 16 November 2015. APEC Secretariat, Policy Support Unit calculations.

The information in the database also allows for identification of the most common types of NTMs affecting main economic sectors (i.e. primary, manufacturing, services and horizontal). The majority of the NTMs affecting the primary sector are those pertaining to sanitary and phytosanitary measures. The most common NTMs affecting the manufacturing sector are those relating to standards and other technical requirements. Other non-tariff measures as well as standards and other technical requirements are the main NTMs affecting the services sector.

The most common NTMs affecting horizontally to all sectors are those relating to government procurement and customs procedures.

Table 3.17 NTMs by Type of Sector

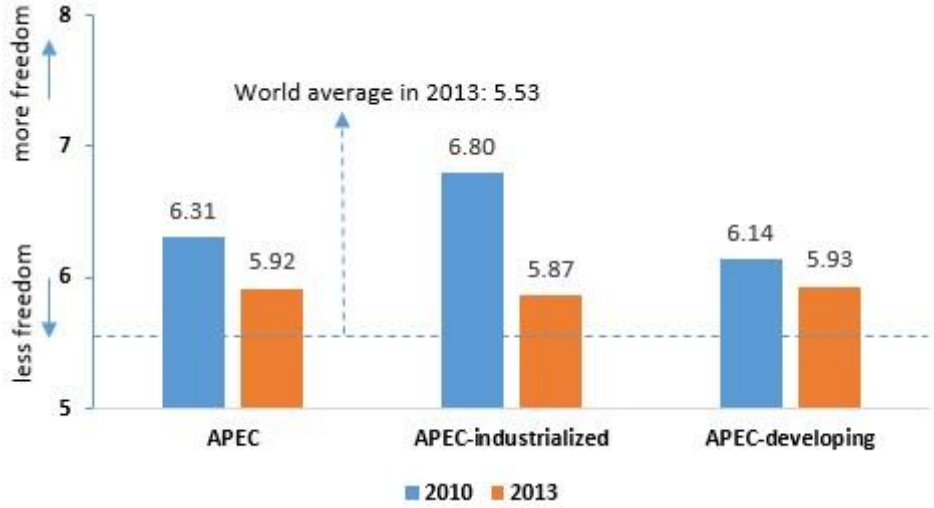
APEC Total Measures	Primary	Manufacturing	Services	Horizontal
Competition Issues	1	2	0	1
Government Procurement	1	1	0	14
Other Non-Tariff Measures	1	5	4	1
Quantitative Restrictions and Related Measures	2	4	1	1
Registration, Documentation, Customs Procedures	1	6	0	11
Sanitary and Phytosanitary Measures	56	0	0	0
Standards and Other Technical Requirements	2	13	3	5
Subsidies	3	3	0	0
Overall (Total)	67	34	8	33

Source: European Commission's Market Access Database (MADB). Latest data accessed on 16 November 2015. APEC Secretariat, Policy Support Unit calculations.

iv. Fraser Institute's Economic Freedom of the World Index – Non-Tariff Trade Barriers

The Economic Freedom of the World dataset released annually since 1997 by the Fraser Institute also provides some indication about the presence of NTMs. In this specific case, it includes an index which measures the perception among experts whether trade barriers are reducing the ability to import[15].

Figure 3.16 Fraser Institute's Economic Freedom of the World Index – Non-Tariff Trade Barriers



Note: APEC includes all 21 member economies except Papua New Guinea. APEC-industrialized comprises of Australia; Canada; Japan; New Zealand; and United States. APEC-developing comprises of Brunei Darussalam;

[15] Due to the nature of the survey, the perceptions on trade barriers are related to both tariffs and NTMs. Given that most of trade barriers are NTMs, the value of the index over the years provides a good perspective on the views by experts whether their economies are getting more or less restrictive through the use of NTMs.

Chile; China; Hong Kong, China; Indonesia; Korea; Malaysia; Mexico; Peru; Philippines; Russia; Singapore; Chinese Taipei; Thailand; and Viet Nam.
Source: Fraser Institute Economic Freedom of the World 2015 Dataset. Latest data accessed on 15 January 2016. APEC Secretariat, Policy Support Unit calculations.

On a scale of 0 to 10, with 10 indicating the perception that there is a low incidence of non-tariff trade barriers, the APEC average has fallen from 6.31 in 2010 to 5.92 in 2013, pointing to an increasing perception of non-tariff barriers in the region. This negative perception has been present in across the APEC region, but it has intensified more in APEC-industrialized economies than in APEC-developing economies.

C. SERVICES

The services sector constitutes a high proportion of the world economy, around 62.5% of the global GDP in 2014[16], and is increasing its presence in the global trade. Between 2004 and 2014, world trade in services increased from just above USD 2 trillion to almost USD 5 trillion, and now explains more than 20% of the global trade[17]. However, measuring the depth of liberalization in services trade in any economy is not straightforward, as it requires the analysis of the regulatory framework in each sector[18].

Data analyzing the degree of services liberalization is limited. Nevertheless, some indices have been created to quantify the willingness to give concessions at the multilateral level (i.e. WTO) and bilateral/regional level (i.e. FTAs). In addition, some restrictiveness indices also measure the degree of openness of unilateral policies, as they have been created to measure the impediments in domestic regulations affecting services trade. This section aims to show the level of services trade liberalization based on these indices.

i. WTO Commitments and Revised Offers on Trade in Services

As mentioned in the Assessment of the Bogor Goals prepared by the Policy Support Unit in 2010, *"a conservative way to measure the depth of the liberalization of trade in services in the APEC region is by analyzing the level of commitments made by APEC economies in the negotiating context in WTO. The level of WTO commitments reflects (…) the minimum level of openness that WTO members are willing to implement"*[19].

To calculate the level of commitments made by APEC economies in WTO, the methodology used is the GATS Commitment Index developed by Hoekman (1995), which gives a score to the commitments made by an economy in its GATS Schedule of Commitments. The level of commitments is declared by each WTO member in 155 services subsectors, in the four modes

[16] CIA, "The World Factbook", https://www.cia.gov/library/publications/the-world-factbook/fields/2012.html
[17] UNCTAD (2015), "Key Statistics and Trends in International Trade 2015: The Global Slowdown", p. 11.
[18] As opposed to goods trade, in which many of the restrictions as quantifiable (e.g. the implementation of a X% tariff), the restrictions in services trade are related to qualitative factors (e.g. market access to provide a service; treatment of foreign investors in comparison to domestic investors; requirements for the board of directors; among others.)
[19] APEC Policy Support Unit (2010), "Progressing towards the APEC Bogor Goals: Perspectives of the APEC Policy Support Unit", p. 39. It is important to note that the depth in GATS/WTO Commitments does not reflect existing services liberalization levels, since these commitments only reflect a minimum level of openness that economies are willing to provide. A more accurate measure reflecting the degree of services liberalization in any economy is by examining their current services regimes, as explained in this chapter's section C, sub-section iii (Unilateral Liberalization through Domestic Measures).

of services supply and in their declared obligations to open "market access" and providing "national treatment" to foreign services suppliers[20].

The schedule of commitments in the APEC region shows that APEC industrialized economies offered more commitments in services trade liberalization in comparison with APEC developing economies, as a result of the successful conclusion of the Uruguay Round in 1994. However, those APEC developing economies that concluded their WTO accession after the Uruguay Round, offered a depth of services commitments that were similar or even more comprehensive than those offered by APEC industrialized economies at the Uruguay Round.

For most economies, the level of services commitments agreed in 1994 was low, and it does not necessarily reflect the current level of openness in services sectors in the economy. Services commitments only establish the minimum levels of openness at which governments can keep their domestic regulations in terms of market access and national treatment. It only refers to the minimum level of binding concessions in exchange at the multilateral negotiations. However, it is noted that APEC economies are willing to raise the bar and make deeper commitments at the multilateral level. Eight APEC economies have released their public revised offers in the context of the Doha Round negotiations and all of them are offering an improvement in their current services commitments.

Table 3.18 GATS Commitments Index (Schedule of Commitments and Public Revised Offers)

	Schedule of Commitments (1994)	Public Revised Offers (2005)
Australia	34.3%	46.0%
Brunei Darussalam	7.8%	n.a.
Canada	36.2%	41.7%
Chile	6.7%	16.0%
China	36.2%	n.a.
Hong Kong, China	10.1%	n.a.
Indonesia	10.6%	n.a.
Japan	34.9%	48.7%
Korea	27.3%	40.4%
Malaysia	24.6%	n.a.
Mexico	19.1%	n.a.
New Zealand	35.0%	44.4%
Papua New Guinea	9.0%	n.a.
Peru	5.0%	28.1%
Philippines	13.5%	n.a.
Russia	49.6%	n.a.

[20] Hoekman, Bernard (1995), "Tentative First Steps: An Assessment of the Uruguay Round Agreement on Services", World Bank Policy Research Working Paper, World Bank WPS 1455. The index assigns a score on each of the commitments on market access and national treatment for each of the 155 subsectors in each mode of services supply. A full commitment or no restriction (which is declared as "None" in the Schedule of Commitments) gets a score of 1. If the economy has not made any commitment (declared as "Unbound", which means any restriction can be put in place), it gets a score of 0. Any commitment in between gets a score of 0.5. The sum of scores is the overall score for an economy. The maximum attainable score reflecting full liberalization is 1240 = 155 subsectors x 4 modes of supply x 2 disciplines (on market access and national treatment). The GATS Commitment Index is presented in this report in percentage format, by dividing the overall score by 1240.

Singapore	20.8%	n.a.
Chinese Taipei	48.9%	n.a.
Thailand	21.2%	n.a.
United States	46.1%	52.5%
Viet Nam	36.7%	n.a.
APEC	**25.4%**	**n.a.**
APEC-Industrialized	**37.3%**	**46.7%**
APEC-Developing	**21.7%**	**n.a.**
APEC Economies with Public Revised Offers in 2005	**28.2%**	**39.7%**

Source: PSU calculations based on the WTO Schedule of Commitments from APEC member economies published in 1994 and those 2005 revised offers made public. For China and Chinese Taipei, the Schedule was made in 2002. For Russia, the Schedule was made in 2012. For Viet Nam, the Schedule was made in 2007.

The depth of services commitments also differs across sectors. On the one hand, construction and related engineering services, financial services and tourism and travel-related services were the sectors with the most comprehensive commitments in both APEC industrialized and developing economies. On the other hand, health-related and social services and education services were the sectors with the lowest binding commitments within the APEC region, as some commitments were only offered by six and nine APEC economies, respectively.

Table 3.19 GATS Commitments Index by Services Sector (Schedule of Commitments 1994)

Sector	APEC	APEC-Industrialized	APEC-Developing
1. Business Services	29%	46%	24%
2. Communication Services	28%	36%	25%
3. Construction and Related Engineering Services	37%	60%	30%
4. Distribution Services	24%	47%	17%
5. Education Services	15%	22%	13%
6. Environmental Services	27%	48%	20%
7. Financial Services	39%	51%	35%
8. Health Related and Social Services	7%	9%	6%
9. Tourism and Travel Related Services	40%	59%	35%
10.Recreational, Cultural and Sporting Services	12%	29%	7%
11.Transportation Services	12%	20%	10%

Source: PSU calculations based on the WTO Schedule of Commitments from APEC member economies published in 1994. For China and Chinese Taipei, the Schedule was made in 2002. For Russia, the Schedule was made in 2012. For Viet Nam, the Schedule was made in 2007.

Based on the information from the eight APEC economies that have publicly released their revised offers (Australia; Canada; Chile; Japan; Korea; New Zealand; Peru; and the United States), there is a willingness to give further concessions in liberalizing services sectors. In particular, the business sector, including several professional services subsectors, and the communication sector are those in which APEC member economies are showing an inclination to deepen their services commitments in WTO in about 20% with respect to the initially committed levels.

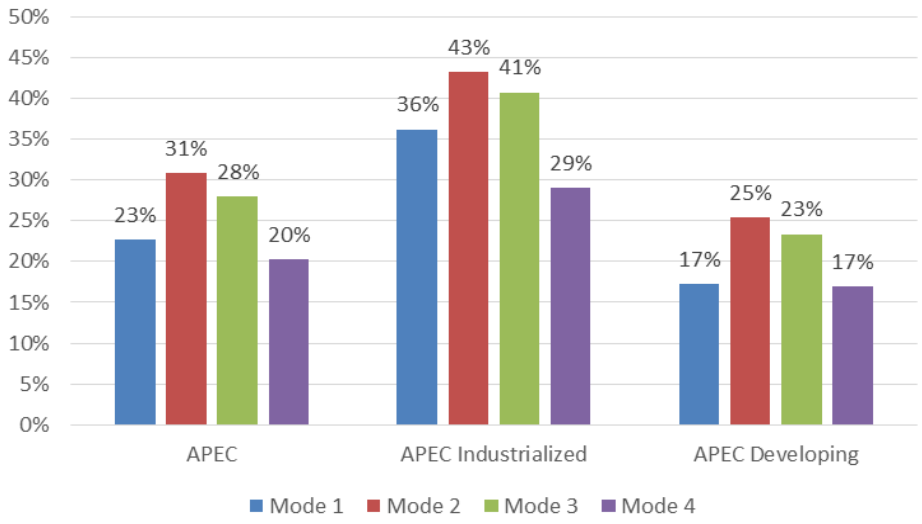
Figure 3.17 APEC Economies with Public Revised Offers: Schedule of Services Commitments vis-à-vis Revised Offers by Sector

Source: PSU calculations based on the WTO Schedule of Commitments from APEC member economies published in 1994 and those 2005 revised offers made public. For China and Chinese Taipei, the Schedule was made in 2002. For Russia, the Schedule was made in 2012. For Viet Nam, the Schedule was made in 2007.

Binding commitments are higher in APEC industrialized economies for all modes of services supply[21]. For both APEC industrialized and developing economies, commitments in mode 2 (consumption abroad) are the most comprehensive ones, followed by those regarding commercial presence (mode 3), which is closely related with the level of openness towards FDI. Conversely, it is not surprising that mode 4 (presence of natural persons) enjoys the lowest degree of liberalization among all modes of supply.

[21] As mentioned in the APEC PSU Assessment of the Bogor Goals in 2010, in accordance to GATS, there are four modes of services provision. Cross-border supply (mode 1) is defined to cover services flows from the territory of one Member into the territory of another Member (e.g. banking or architectural services transmitted via telecommunications or mail); consumption abroad (mode 2) refers to situations where a service consumer (e.g. tourist or patient) moves into another Member's territory to obtain a service; commercial presence (mode 3) implies that a service supplier of one Member establishes a territorial presence, including through ownership or lease of premises, in another Member's territory to provide a service (e.g. domestic subsidiaries of foreign insurance companies or hotel chains); and presence of natural persons (mode 4) consists of persons of one Member entering the territory of another Member to supply a service (e.g. accountants, doctors or teachers).

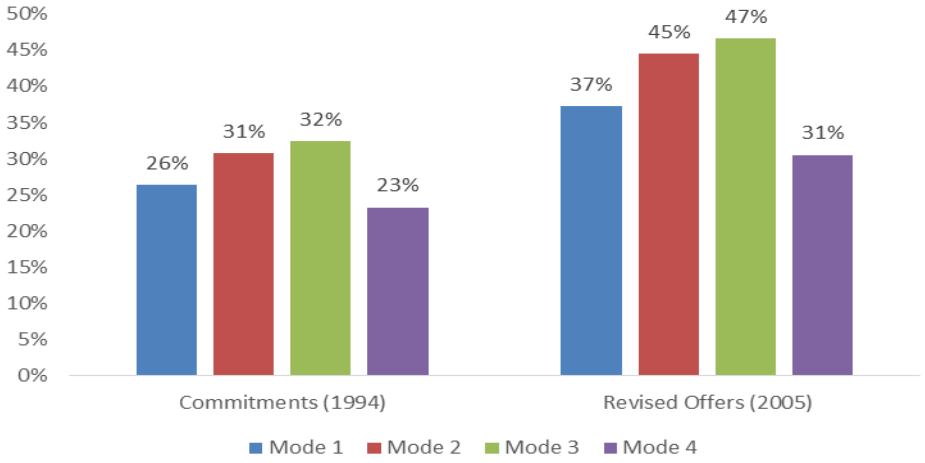
Figure 3.18 GATS Commitments Index by Mode of Services Supply



Source: PSU calculations based on the WTO Schedule of Commitments from APEC member economies published in 1994. For China and Chinese Taipei, the Schedule was made in 2002. For Russia, the Schedule was made in 2012. For Viet Nam, the Schedule was made in 2007.

When looking at the public revised offers, it is noticeable that APEC economies, in general, are willing to give further concessions in all modes of services supply. Particularly, commercial presence (mode 3) and consumption abroad (mode 2) are the services provisions where existing services commitments would be increased the most. For both cases, those APEC economies with public revised offers are offering an average of 15% of further liberalization in those two modes of services supply.

Figure 3.19 APEC Economies with Public Revised Offers: Schedule of Services Commitments vis-à-vis Revised Offers by Mode of Services Supply



Source: PSU calculations based on the WTO Schedule of Commitments from APEC member economies published in 1994 and those 2005 revised offers made public. For China and Chinese Taipei, the Schedule was made in 2002. For Russia, the Schedule was made in 2012. For Viet Nam, the Schedule was made in 2007.

ii. RTA/FTA Commitments on Trade in Services

APEC members have also used RTA/FTAs to guarantee a minimum degree of openness to their counterparts in services sectors. The commitments agreed in RTA/FTAs are usually deeper than those agreed in WTO/GATS, as corroborated by a number of studies in this area. For example, Roy (2011) used a dataset with information from 53 WTO members and 67 RTA/FTAs to calculate the additional commitments given by WTO members in terms of cross-border services supply (mode 1) and commercial presence (mode 3) in their bilateral or regional trade agreements, vis-à-vis their deepest services commitments in either their existing GATS commitments or their public revised offers in the context of the Doha Round[22]. Roy's dataset shows that all WTO members offered GATS plus commitments in their bilateral RTA/FTAs.

Based on the information available in this database, APEC economies have been offering more comprehensive commitments in their RTA/FTAs in comparison to those offered at the multilateral level. In fact, when the best services commitments in an APEC economy across all its RTA/FTAs are compared with its GATS commitments or offers, it is clear that RTA/FTA commitments are on average 23% deeper than those at WTO. Whilst APEC industrialized economies tend to offer more services commitments in their RTA/FTAs in absolute terms, it is the APEC developing economies that are offering greater RTA/FTA services commitments in comparison with their existing GATS commitments/revised offers.

Table 3.20 Best RTA/FTA Commitments in Mode 1 and Mode 3 by Economy

	GATS Commitments or Revised Offers	Best RTA/FTA Commitments	Difference
Australia	56.9%	82.5%	25.6%
Brunei Darussalam	8.0%	31.4%	23.4%
Canada	42.6%	59.1%	16.5%
Chile	19.8%	73.3%	53.5%
China	39.3%	49.9%	10.6%
Indonesia	17.3%	46.0%	28.7%
Japan	52.6%	69.6%	17.0%
Korea	48.6%	70.5%	21.9%
Malaysia	27.4%	46.8%	19.4%
Mexico	40.3%	57.6%	17.3%
New Zealand	54.3%	63.5%	9.2%
Peru	30.8%	85.5%	54.6%
Philippines	16.3%	39.6%	23.4%
Singapore	37.5%	81.5%	44.0%
Chinese Taipei	61.6%	71.5%	9.9%
Thailand	19.1%	39.7%	20.6%
United States	55.4%	68.8%	13.4%
Viet Nam	34.1%	38.4%	4.3%
APEC	**36.8%**	**59.7%**	**23.0%**

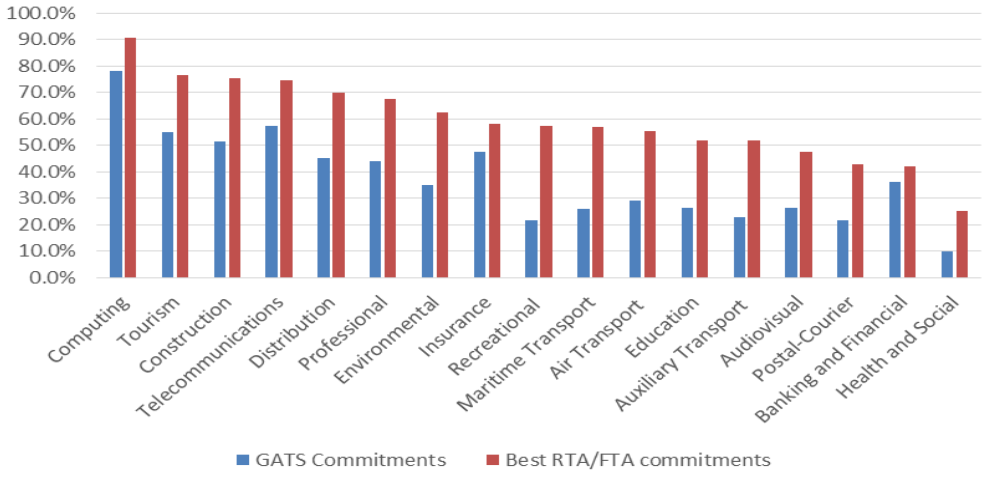
[22] The methodology used by Roy (2011) is based on the GATS Commitments Index developed by Hoekman (1995). The only difference between both methodologies resides in the scoring of partial commitments. While Hoekman's methodology gives a score of 0.5 for any partial commitment, Roy's gives an incremental bonus to the score for each improvement in the RTA/FTA partial commitments.

APEC-Industrialized	**52.4%**	**68.7%**	**16.3%**
APEC-Developing	**30.8%**	**56.3%**	**25.5%**

Source: PSU calculations based on the dataset used by Roy (2011), "Services Commitments in Preferential Trade Agreements: An Expanded Dataset", WTO Staff Working Paper ERSD-2011-18. Data from Hong Kong, China; Papua New Guinea; and Russia are not available.

Roy's dataset also allows comparing the level of openness in RTA/FTAs by some services subsectors. APEC economies offer better services commitments in mode 1 and 3 in all subsectors. Usually those subsectors with greatest GATS commitments are those that experience better services commitments in RTA/FTAs, such as computing, telecommunications, distribution, tourism and construction services. Recreational services and transportation services subsectors are those in which APEC economies are willing to increase their RTA/FTA services commitments the most –by around 26% to 35% of further liberalization– in comparison with their GATS commitments.

Figure 3.20 Best RTA/FTA Commitments in Mode 1 and Mode 3 in APEC by Subsector

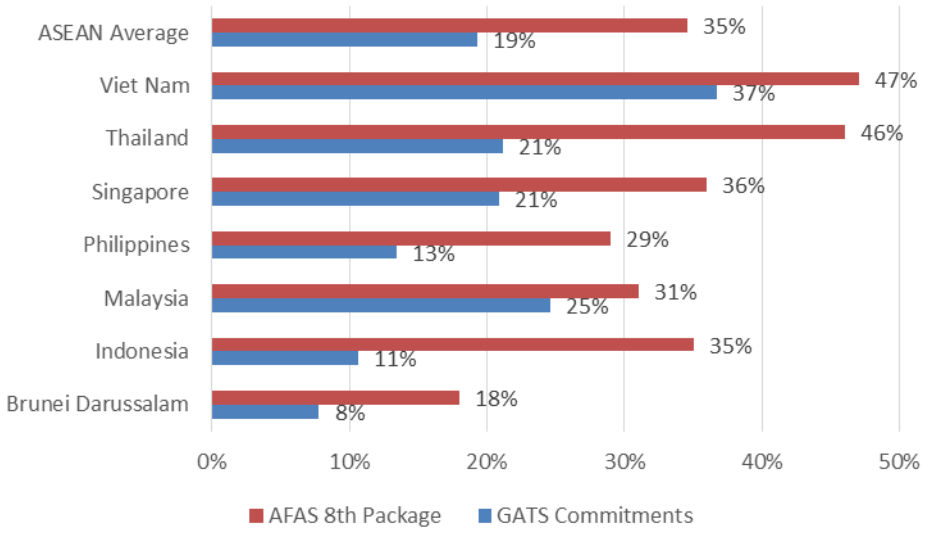


Source: PSU calculations based on the dataset used by Roy (2011), "Services Commitments in Preferential Trade Agreements: An Expanded Dataset", WTO Staff Working Paper ERSD-2011-18. Data from Hong Kong, China; Papua New Guinea; and Russia are not available.

Ishido (2012) also used the same methodology described in Hoekman (1995) to estimate the depth of services commitments in the ASEAN Framework Agreement on Services (AFAS 8th package) in the four modes of services supply[23]. Using Ishido's calculations, all ASEAN economies that are also part of APEC offered more comprehensive commitments in AFAS than in GATS. The average level of services liberalization among those APEC members is 16% greater in AFAS than in GATS.

[23] Ishido, Hikari (2012), "Liberalization of Trade in Services under ASEAN+n FTAs: A Mapping Exercise", Journal of East Asian Economic Integration, Vol. 16, No. 2, pp. 155-204.

Figure 3.21 Comparison of Commitments at GATS and the ASEAN Framework Agreement on Services (8th Package)



Source: PSU calculations based on the WTO Schedule of Commitments from APEC member economies published in 1994, Viet Nam's 2007 WTO Schedule of Commitments and the dataset used by Ishido (2011), "Liberalization of Trade in Services under ASEAN+n FTAs: A Mapping Exercise", Journal of East Asian Economic Integration, Vol. 16, No. 2. The ASEAN Average refers to APEC members that are also ASEAN members (i.e. Brunei Darussalam; Indonesia; Malaysia; Philippines; Singapore; Thailand; and Viet Nam).

iii. Unilateral Liberalization through Domestic Measures

As mentioned by the APEC Policy Support Unit (2010), APEC economies have been making efforts to liberalize cross-border trade in services in many different ways. Besides the services commitments made through multilateral trade negotiations at WTO/GATS and bilateral/regional free trade agreements, APEC economies have also pursued unilateral domestic reforms to liberalize services sectors[24].

Quantifying the extent of domestic liberalization or existing restrictions in services is not an easy task, since measures affecting services trade could be of different nature across economies. A common approach is to create a services restrictiveness index by classifying and coding a group of regulations dealing with market access issues and administrative burdens to companies. These regulations are given a score depending on their degree of restrictiveness.

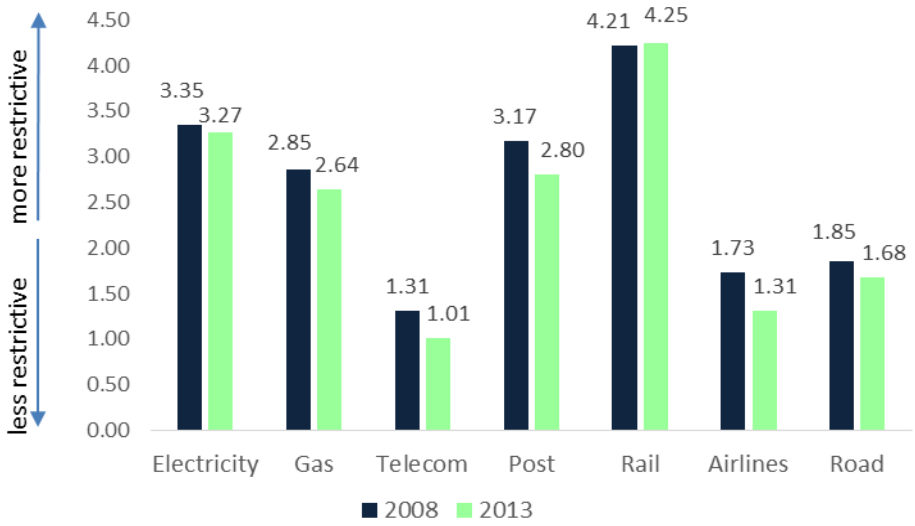
To analyze how the degree of liberalization in services sectors has changed in the APEC region, it is important to have access to services restrictiveness indices for a number of years. The most comprehensive database for these matters has been developed by the OECD, which covers indicators measuring regulatory provisions at the sectoral level (e.g. Product Market Regulation (PMR) indicators, such as the Energy, Transport and Communication Regulation index (ETCR), and the indices covering professional services and retail trade distribution). These indices have data across time for some APEC economies, measuring how competition-friendly domestic regulations are and how they affect the productivity growth of firms (both local and foreign ones).

Based on these indicators, it is possible to see that APEC economies have reduced their restrictions in most subsectors related to energy, telecommunications and transportation.

[24] APEC Policy Support Unit (2010), Op.Cit., p. 51

Among these subsectors, telecommunications appears to be have the least restrictive regulations in the APEC region. In contrast, domestic regulations in the rail subsector seem to be the most restrictive one. It is also the only one experiencing more restrictive regulations between 2008 and 2013.

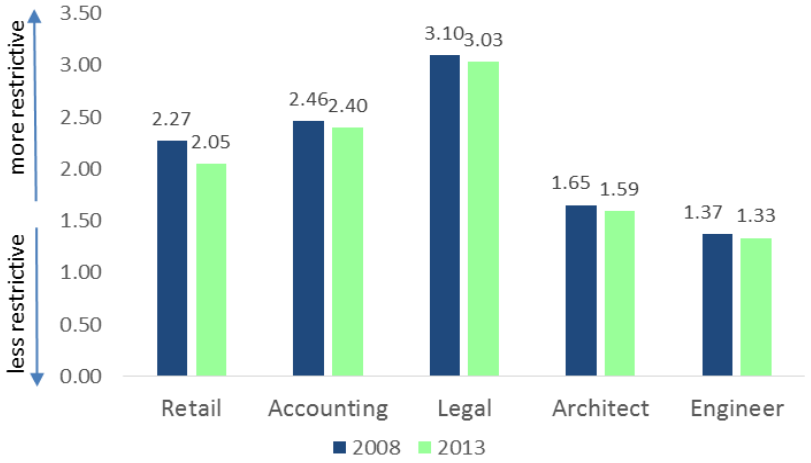
Figure 3.22 Product Market Regulation Indices in Energy, Telecommunications and Transportation Sectors in the APEC Region



Source: PSU calculations based on OECD, Indicators of Product Market Indicators Homepage, Sector Regulation, http://www.oecd.org/eco/growth/indicatorsofproductmarketregulationhomepage.htm
Note: The Product Market Regulation indices ranges between 0 and 6, taking a lower value when the economy faces a more competition-friendly regulatory stance. The values in this figures are the sectoral simple averages of the scores obtained by the APEC economies with data available. Data is available for Australia, Canada, Chile, China, Indonesia, Japan, Korea, Mexico, New Zealand and United States. Due to the absence of data for Indonesia and the United States for year 2013, their values for year 2008 were carried forward in order to compute comparable APEC averages across time.

The PMR indices are also available for the retail sector and a limited number of professional services. On average, for all subsectors with data available, the APEC region also experienced a more competition-friendly regulatory stance in 2013 relative to 2008. Among the professional services, those related to engineering and architecture services enjoy fewer restrictions than those related to legal and accounting services.

Figure 3.23 Product Market Regulation Indices in Retail and Professional Services Sectors in the APEC Region



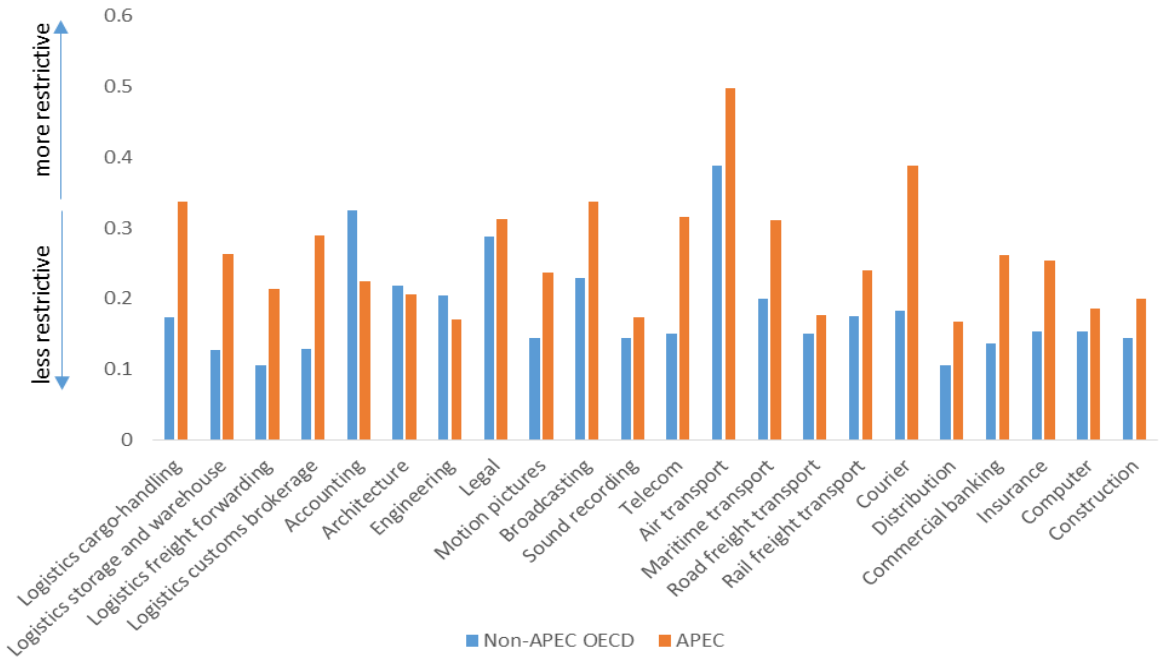
Source: PSU calculations based on OECD, Indicators of Product Market Indicators Homepage, Sector Regulation, http://www.oecd.org/eco/growth/indicatorsofproductmarketregulationhomepage.htm
Note: The Product Market Regulation indices ranges between 0 and 6, taking a lower value when the economy faces a more competition-friendly regulatory stance. The values in this figures are the sectoral simple averages of the scores obtained by the APEC economies with data available. For retail services, data is available for Australia, Canada, Chile, China, Indonesia, Japan, Korea, Mexico, New Zealand, Russia and United States. For accounting, legal and engineering services, data is available for Australia, Canada, Chile, China, Japan, Korea, Mexico, New Zealand and United States. For architecture services, data is available for Australia, Canada, Chile, Japan, Korea, Mexico, New Zealand and United States Due to the absence of data for the United States for year 2013, its values for year 2008 were carried forward in order to compute comparable APEC averages across time.

Despite progress in the APEC region, there is still more work that APEC can do to advance liberalization. In fact, restrictions for trade in services are generally higher in APEC than in non-APEC OECD members. In 2015, according to the OECD Services Trade Restrictiveness Index (STRI), the average level of services trade restrictions affecting foreign firms in 11 APEC economies were higher than those in non-APEC OECD members for most of the services subsectors with data available[25].

The STRI shows that non-APEC OECD members offer a less restrictive regulatory framework than APEC on services trade in the logistics sector, telecommunications, courier services, commercial banking, air and maritime transport, broadcasting and insurance. In contrast, APEC tends to offer less restrictive regulations affecting services trade in accounting, architecture and engineering.

[25] The 11 APEC economies with STRI data are as follows: Australia, Canada, Chile, China, Indonesia, Japan, Korea, Mexico, New Zealand, Russia and United States. In comparison to the PMR indicators, the STRI indicators only take into account the restrictions applicable to foreign firms. The STRI indicators range between 0 and 1, taking the value of 0 when no restrictions to services trade have been found and 1 when full restrictions apply. Unfortunately, it is not possible to conduct a comprehensive analysis of the evolution of the restrictiveness levels in services trade over time, as the STRI data are only available for years 2014 and 2015.

Figure 3.24 Services Trade Restrictiveness Indices by Services Subsectors. Year 2015



Source: PSU calculations based on OECD, StatOECD.
Note: Data is available for Australia, Canada, Chile, China, Indonesia, Japan, Korea, Mexico, New Zealand, Russia and United States.

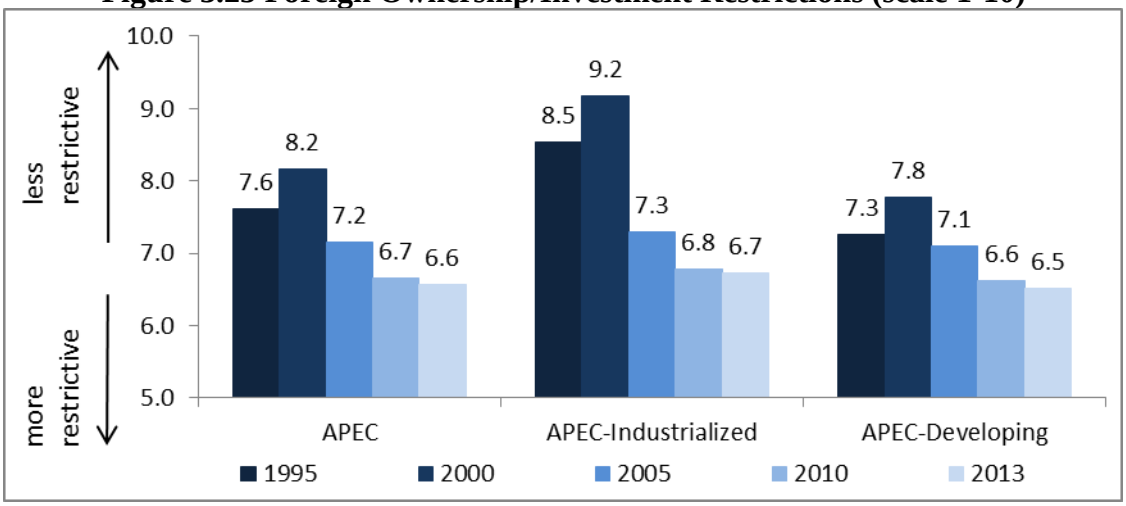
D. INVESTMENT

APEC member economies have been making efforts to pursue free and open trade and investment in terms of easing business regulations and improving the investment environment. This section reviews the APEC's progress in supporting economic freedom for investors to go across borders, based on several measures ranging from external sources such as indices compiled from qualitative information, to investment-related measures implemented by APEC economies over the years.

i. Quantitative Measures – Indices

Figure 3.25 shows an index developed by the Fraser Institute which captures the business community's opinion on two aspects: 1) the prevalence of foreign ownership; and 2) the restrictiveness of regulations relating to international capital flows. The results of this survey show that APEC economies' policies on foreign ownership and capital movement have become more restrictive during 1995 to 2013. According to the data, it is perceived that restriction eased in the beginning of the 2000s, but tightened substantially afterwards, especially among APEC-industrialized economies.

Figure 3.25 Foreign Ownership/Investment Restrictions (scale 1-10)

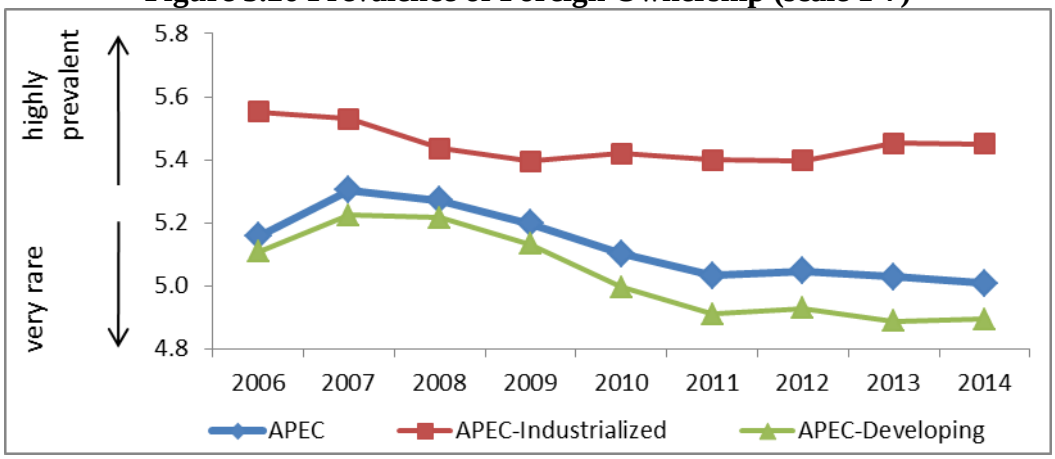


Source: Fraser Institute, Economic Freedom of the World 2015 Annual Report and APEC Policy Support Unit calculations

Note: Data is not available for Papua New Guinea. Brunei Darussalam and Viet Nam's data are only available since 2010 and 2003 respectively

This perception regarding the business environment in the APEC region in recent years has also been corroborated by other indices developed by the World Economic Forum. A closer examination of the index focusing exclusively on prevalence of foreign ownership in recent years shows that the mild deterioration in APEC was largely led by less favourable opinions from foreigners on investing in APEC-developing economies. Only three out of 16 APEC-developing economies posted a higher perception on the prevalence of foreign ownership in 2014 compared to 2006: Brunei Darussalam; Philippines and Viet Nam.

Figure 3.26 Prevalence of Foreign Ownership (scale 1-7)

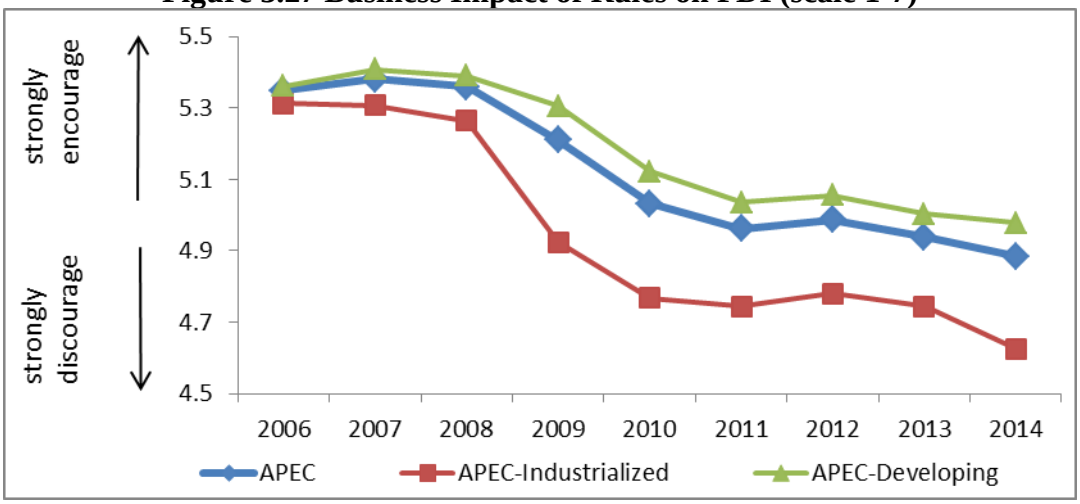


Source: World Economic Forum, The Global Competitiveness Report 2014-2015 and APEC Policy Support Unit calculations

Note: Data is not available for Papua New Guinea. Brunei Darussalam's data are only available from 2008 to 2013.

In addition, it seems that rules on FDI are restricting the arrival of foreign investment. A World Economic Forum index measuring the perception of regulations encouraging or discouraging FDI shows an increasing perception of rules discouraging FDI in APEC. This trend was evident among all APEC economies, in particular in APEC-industrialized economies.

Figure 3.27 Business Impact of Rules on FDI (scale 1-7)

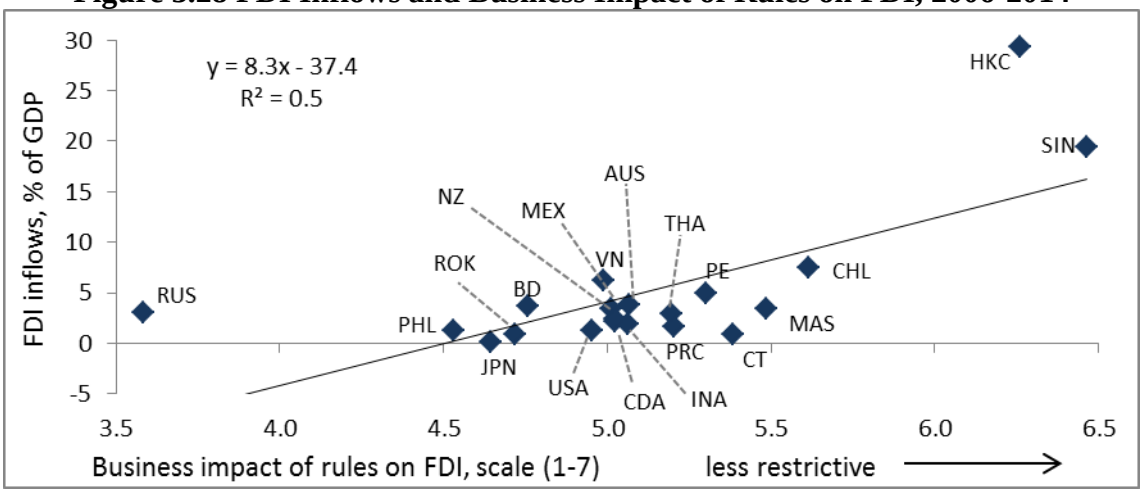


Source: World Economic Forum, The Global Competitiveness Report 2014-2015 and APEC Policy Support Unit calculations
Note: Data is not available for Papua New Guinea. Brunei Darussalam's data are only available from 2008 to 2013.

When comparing the information from Figure 3.26 and Figure 3.27, it is noticeable that the perceptions on the types of restrictions against FDI are different in APEC-industrialized and developing economies. In the case of APEC-developing economies, the perception about restrictions in foreign ownership has been more widespread. For APEC-industrialized economies, it has been perceived that the regulatory burden affecting FDI were the main concern for foreign businesses.

A simple regression using average data during 2006 to 2014 shows that FDI inflows are indeed positively correlated with more business-friendly rules.[26]

Figure 3.28 FDI Inflows and Business Impact of Rules on FDI, 2006-2014



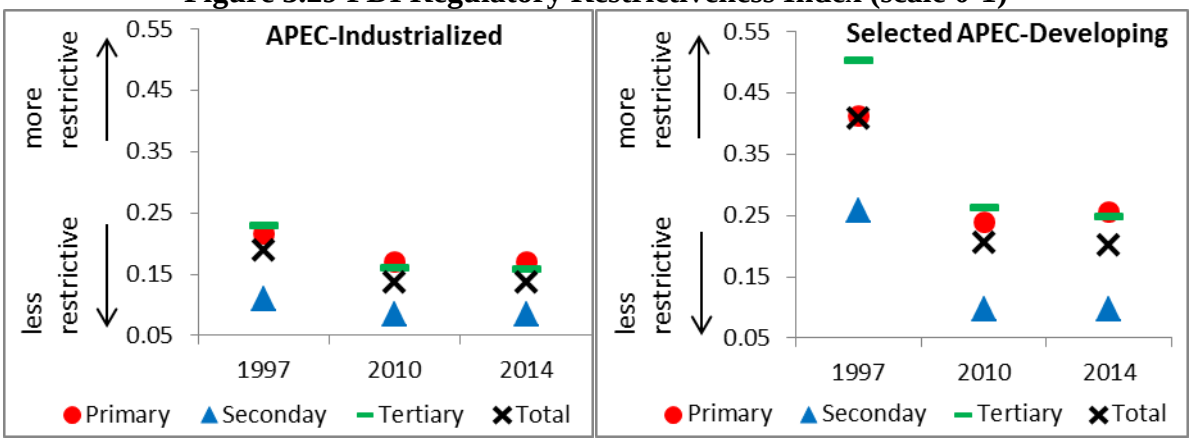
Source: UNCTAD FDI database, World Bank, World Economic Forum, The Global Competitiveness Report 2014-2015 and APEC Policy Support Unit calculations
Note: Data is not available for Papua New Guinea. Brunei Darussalam's data are only available from 2008 to 2013.

[26] The fitted trendline does not reveal a causality linkage between the two variables, the positive correlation (0.71) supports the fact that they are positively related.

All the aforementioned indices are based on opinions of business leaders and therefore to a larger extent reflect the *de facto* state of regulations or perceptions of the investment climate.

Other indicators based on measures of statutory restrictions, in other words, the *de jure* state of regulations show a different picture. For example, the restrictiveness on FDI in APEC-industrialized economies has loosened over the years across primary, secondary and tertiary sectors, according to the FDI Regulatory Restrictiveness Index developed by OECD. The progress of liberalization of FDI was even more pronounced in selected APEC-developing economies across all major sectors.

Figure 3.29 FDI Regulatory Restrictiveness Index (scale 0-1)

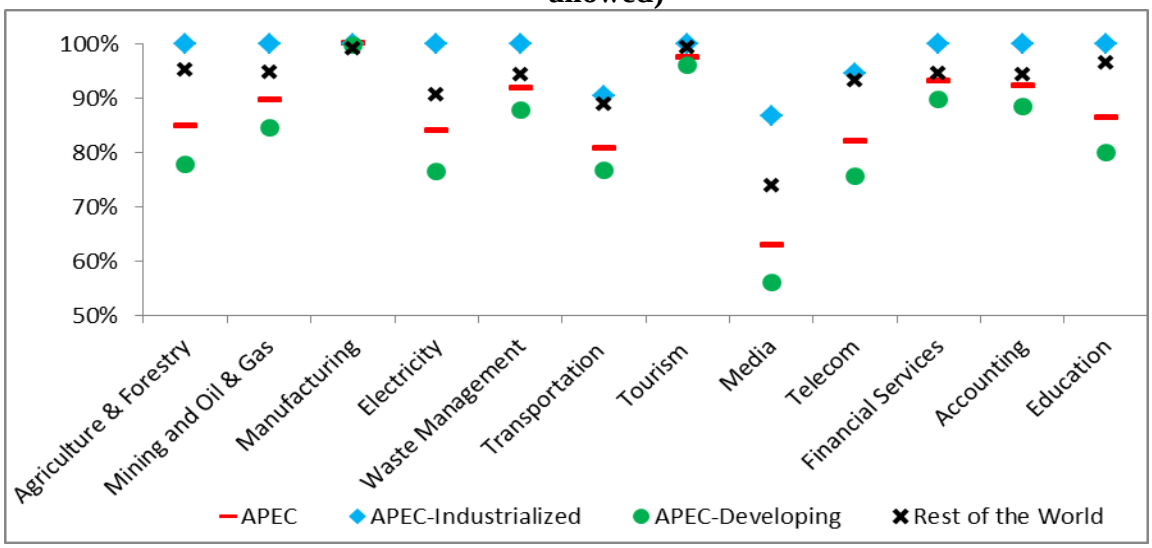


Source: OECD and APEC Policy Support Unit calculations; Due to limited data availability, selected APEC-developing economies include Chile; China; Indonesia; Korea; Malaysia; Mexico; Peru and Russia.

In terms of the types of restriction, screening and prior approval mechanisms were identified as the main constraints of FDI inflows to APEC-industrialized economies. For APEC-developing economies, foreign equity limitations were the main obstacle of FDIs. Both groups of economies indicated that restrictions on foreign key personnel and operational activities of foreign-controlled entities were relatively minor according to OECD FDI Regulatory Restrictiveness Index.

However, more detailed data on the restriction of foreign ownership at the sectoral level showed that despite APEC's liberalization efforts, foreign businesses still faced tighter statutory restrictions in most of the industries in terms of business ownership. This was particularly the case for APEC-developing economies, which on average reported less foreign ownership allowed than the rest of the world in all but one industry (i.e. manufacturing) as shown in Figure 3.30.

Figure 3.30 Foreign Equity Ownership Index in 2012 (100 = full foreign ownership allowed)

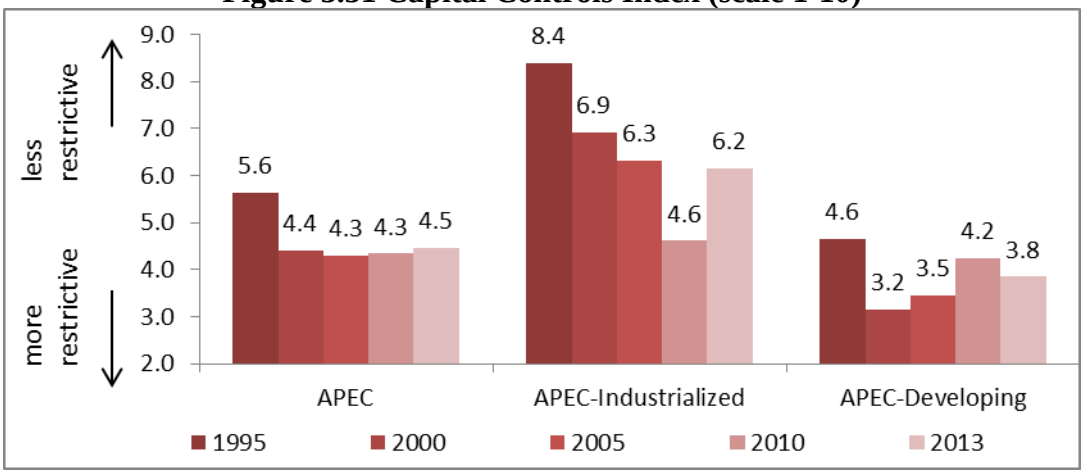


Source: World Bank, Investing Across Borders and APEC Policy Support Unit calculations

The absence of obstacles to move capital across borders is essential to facilitate investments. Literature has found various channels where capital control policies might affect foreign investments. For instance, Elo (2007) found that more capital controls reduce the quality of FDI in terms of volume.[27] Asiedu et al (2004) also found that capital controls deter FDI.[28]

The Fraser Institute has calculated a Capital Controls Index based on policies on 13 types of transactions related to capital market securities, such as money market instruments, real estate transactions and financial credits. Figure 3.31 shows that APEC economies in general increased capital controls since between 1995 until prior to the Great Financial Crisis. After the crisis, APEC economies eased controls on capital transactions slightly led by APEC-industrialized economies. On the other hand, APEC-developing economies have stepping up their capital controls during the same period.

Figure 3.31 Capital Controls Index (scale 1-10)



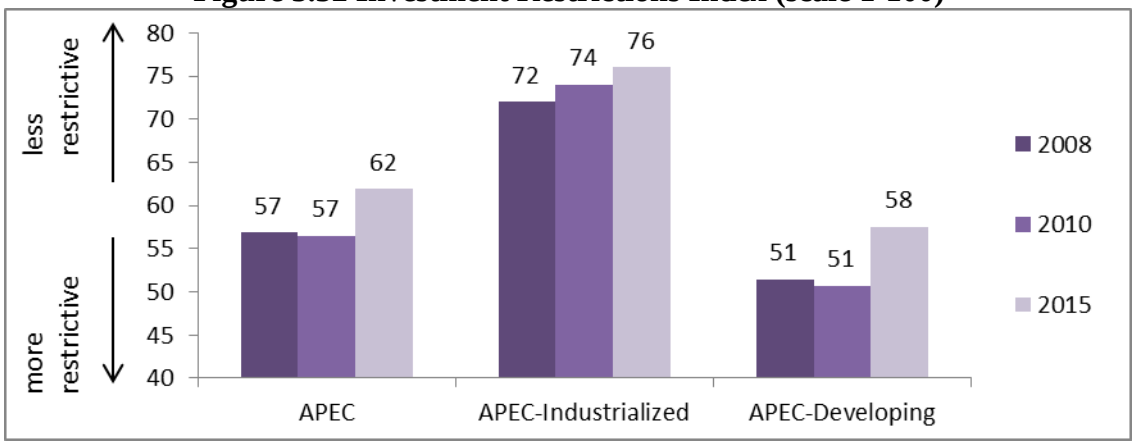
[27] Elo (2007). The Effect of Capital Controls on Foreign Direct Investment Decisions under Country Risk with Intangible Assets, IMF Working Paper WP/07/79

[28] Asiedu, E and D. Lien (2004). Capital Controls and Foreign Direct Investment, *World Development* Vol.32, No.3, pp.479-490

Source: Fraser Institute, Economic Freedom of the World 2015 Annual Report and APEC Policy Support Unit calculations
Note: Due to limitations on data availability, the calculation of APEC figures did not include Brunei Darussalam and Chinese Taipei.

Figure 3.32 exhibits an investment restrictions index recently developed by the Heritage Foundation, aiming to evaluate a variety of regulatory restrictions on investment. For instance, this data includes information on the national treatment of foreign investment, restrictions on land ownership, foreign exchange controls and sectoral investment restrictions. According to this index, APEC economies have seen investment restrictions relaxed since 2010, especially among APEC-developing economies.

Figure 3.32 Investment Restrictions Index (scale 1-100)



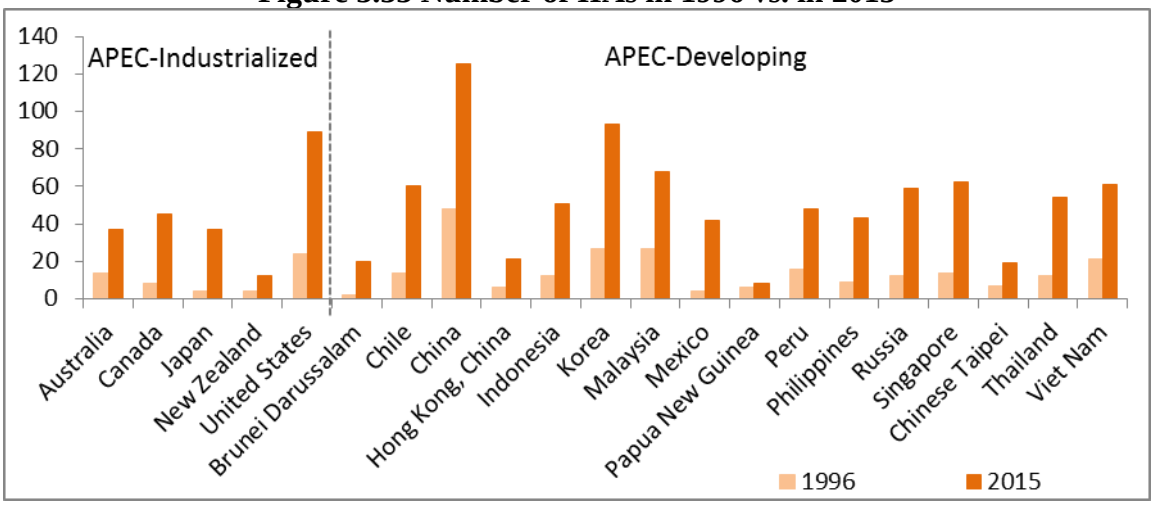
Source: The Heritage Foundation, Index of Economic Freedom and APEC Policy Support Unit calculations
Note: Data is not available for Brunei Darussalam for 2008 and 2010. Data is not available for Papua New Guinea for 2010

ii. Qualitative Measures

Since APEC Leaders' endorsed the Bogor Goals, APEC economies have continued to expand their network of international investment agreements (IIAs) and other investment instrument agreements with APEC-developing economies taking the lead. The total number of IIAs that came in force in APEC between 1996 and 2015 has increased substantially as shown in Figure 3.33[29].

[29] For the purpose of this section, any reference to IIAs is understood as bilateral investment treaties, as well as other investment-related agreements, such as investment chapters with sectoral commitments in RTA/FTAs

Figure 3.33 Number of IIAs in 1996 vs. in 2015



Source: UNCTAD and APEC Policy Support Unit calculations

As shown in Table 3.21, APEC economies have introduced various measures affecting their policy frameworks for foreign investment. These include investment-specific measures such as easing the entry condition for foreign investors; and investment-related measures such as improving the general business climate. Overall, the majority of the APEC economies have adopted more favourable measures in recent years.

Table 3.21 Domestic Investment Policy Measures Adopted between December 2009 and September 2015

Number of positive or neutral measures (Number of negative measures)	Entry	Operational Treatment	Promotion / Facilitation	General Business Climate	**Total**
APEC-Industrialized Economics					
Australia	2 (2)	NA	NA	1 (0)	**3 (2)**
Canada	7 (3)	1 (0)	NA	2 (0)	**10 (3)**
Japan	NA	1 (0)	NA	1 (0)	**2 (0)**
New Zealand	0 (1)	1 (0)	NA	NA	**1 (1)**
United States	0 (2)	1 (0)	1 (0)	NA	**2 (2)**
Total	**9 (8)**	**4 (0)**	**1 (0)**	**4 (0)**	**18 (8)**
APEC-Developing Economics					
Brunei Darussalam	NA	NA	NA	NA	**NA**
Chile	NA	1 (0)	2 (0)	0 (1)	**3 (1)**
China	9 (2)	5 (2)	7 (1)	1 (0)	**22 (5)**
Hong Kong, China	NA	NA	NA	NA	**NA**
Indonesia	3 (1)	0 (1)	4 (0)	1 (0)	**8 (2)**
Korea	2 (0)	1 (0)	6 (0)	1 (0)	**10 (0)**
Malaysia	1 (0)	NA	1 (0)	NA	**2 (0)**
Mexico	5 (0)	2 (0)	1 (0)	2 (1)	**10 (1)**
Papua New Guinea	NA	NA	NA	NA	**NA**
Peru	1 (1)	NA	1 (0)	1 (1)	**3 (2)**
Philippines	1 (1)	NA	3 (0)	NA	**4 (1)**
Russia	2 (2)	3 (0)	6 (0)	1 (2)	**12 (4)**

Singapore	NA	NA	NA	1 (0)	**1 (0)**
Chinese Taipei	1 (0)	NA	1 (0)	1 (0)	**3 (0)**
Thailand	NA	1 (0)	1 (0)	1 (0)	**3 (0)**
Viet Nam	2 (1)	2 (0)	5 (0)	1 (2)	**10 (3)**
Total	**27 (8)**	**15 (3)**	**38 (1)**	**11 (7)**	**91 (19)**

Source: UNCTAD Investment Policy Monitor series and APEC Policy Support Unit calculations

Based on information mostly from UNCTAD Investment Policy Monitor series and WTO Trade Policy Review series, this section reviews some of the measures implemented by APEC economies in recent years based on four categories.

Entry of investment

Regulating the entry conditions for foreign investors has been one of four categories that have the most number of measures implemented by APEC economies. Both APEC-industrialized and developing economies have eased conditions to attract foreign investors. For APEC-industrialized economies, most of the new restrictions came from cases where governments rejected the proposed acquisition by foreign companies in strategic industries.

Australia increased its ownership ceilings for foreign firms to invest in domestic companies in air transportation sector in 2010.[30] It further relaxed foreign ownership restrictions on its flag carrier Qantas in 2014.[31] However, Australia tightened its rules on foreign investment in the residential real estate sector under its Foreign Acquisitions and Takeovers Amendments Regulations in 2010.[32]

Canada, in respect of the *Investment Canada Act*, eliminated the application of lower review thresholds to specific sectors, including transportation services, financial services and uranium production sectors in 2009; revised the SOE guidelines to clarify that free enterprise principles and industrial efficiency are considered in net benefit reviews where the investor is owned, controlled or influenced- directly or indirectly- by a foreign state in 2013; and in 2015, Canada increased the net benefit review threshold for WTO private sector investors to $600 million (increasing to $800 million in April 2017 and $1 billion in April 2019) and changed the basis of its calculation from asset value to enterprise value (the net benefit threshold for WTO SOEs remained unchanged and is $375 million in asset value for 2016, adjusted annually according to the formula in the Act).[33] [34]

China has liberalized several industries over the course of time to allow more foreign investment. For instance, foreign investors are allowed to fully own hospitals, e-commerce businesses and the ceiling for foreign investors in domestic joint-venture securities firms was lifted to 49 percent in 2012.[35] China's Ministry of Commerce has delegated some of the procedures of foreign investment such as examination, approval and administration to provincial-level authorities to streamline the processes.[36] Furthermore, China updated its

[30] UNCTAD, Investment Policy Monitor No.2, 20 April 2010
[31] UNCTAD, Investment Policy Monitor No.13, January 2015
[32] UNCTAD, Investment Policy Monitor No.3, October 2010
[33] For more information, see https://www.ic.gc.ca/eic/site/ica-lic.nsf/eng/h_lk00050.html
[34] For more information, see http://news.gc.ca/web/article-en.do?nid=711489
[35] UNCTAD, Investment Policy Monitor No.4, 28 January 2013; UNCTAD, Investment Policy Monitor No.8, 28 November 2012; UNCTAD, Investment Policy Monitor No.14, October 2015
[36] UNCTAD, Investment Policy Monitor No.5, 5 May 2011

foreign investment guidelines with an expanded list of industries in which foreign investors are encouraged to participate.[37] The list includes emerging industries like energy-saving and environment protection. China established Pilot Free Trade Zone in Shanghai in 2013 to attract foreign investment with six newly opened service sectors to foreign investors – finance, transport, commerce and trade, professional services, cultural services and public services.[38] However, China also set up a committee in 2011 to review potential threats to national security among foreign acquisitions.[39] Last year, China passed the National Security Law, which enables the government to conduct security reviews on foreign commercial investment.[40]

Mexico designed a new contracting model in 2011, which allows private companies to operate in oil fields, as part of gradual liberalization of the oil sector.[41] Nevertheless, issuing this new contract is still not equivalent to granting private investor ownership on oil resources. Further reform efforts through amendments of the Mexican Constitution have been made in 2013.[42] The amendments lifted the restriction on private capital in the oil industry alongside allowing profit-sharing plans between the government and private enterprises. The Mexican government also opened up telecommunications sector for foreign investors by lifting the threshold for foreign investment from 49 percent to 100 percent in all areas, except radio.[43]

Chinese Taipei opened a larger part of its high-technology business, such as semiconductor manufacturing, to Chinese investors in 2011. Regarding China-bound investments, Chinese Taipei amended regulations on local display panel makers to facilitate outward FDIs.[44]

In September 2015, **Viet Nam** lifted the foreign ownership cap on public companies in a number of business sectors, although restrictions in some sectors still apply.[45] Since 2014, foreign-invested enterprises are also allowed to provide logistics services in Viet Nam subject to obtaining a proper license.[46]

Operational treatment of investment

This category covers policy measures related to the treatment of foreign investors after establishing operations in the host economy.

Chile introduced the new Single Fund Act for Foreign Investment in 2013. This law standardized the regulatory framework and therefore allows foreigners to invest directly into products like mutual funds and private investment funds in the same way as Chileans.[47]

Korea relaxed the restriction on personnel working in small-sized foreign firms in 2015. These foreign companies are now allowed to hire non-Korean employees beyond the required limit – 20 percent of the company's workforce during the first two years of their operations.[48] At the

[37] UNCTAD, Investment Policy Monitor No.7, 16 February 2012
[38] UNCTAD, Investment Policy Monitor No.11, November 2013
[39] UNCTAD, Investment Policy Monitor No.5, 5 May 2011
[40] UNCTAD, Investment Policy Monitor No.14, October 2015
[41] UNCTAD, Investment Policy Monitor No.4, January 2011
[42] UNCTAD, Investment Policy Monitor No.13, March 2014
[43] UNCTAD, Investment Policy Monitor No.11, November 2013
[44] UNCTAD, Investment Policy Monitor No.5, 5 May 2011
[45] UNCTAD, Investment Policy Monitor No.14, October 2015
[46] UNCTAD, Investment Policy Monitor No.12, March 2014
[47] UNCTAD, Investment Policy Monitor No.12, March 2014
[48] UNCTAD, Investment Policy Monitor No.14, October 2015

same time, Korea also started to issue working visas to highly-specialized professionals in areas such as design and programming.

In 2014, **Mexico** passed legislation to revamp its banking sector. The legislation includes reforms on various aspects, for instance, streamlining collection of guarantees on unpaid debt, facilitating growth of small banks in order to encourage competition and establishing a universal credit bureau.[49]

New Zealand eased regulations on foreign personnel by amending its immigration policies for certain category of foreign investors in 2011.[50] Under the new investor migration policy, the number of days which foreign investors have to stay in New Zealand was shortened from 73 to 44 days on an annual basis.

Thailand started to allow foreign banks to convert their operating branches into subsidiaries since 2011. The subsidiary status allows the foreign banks to have a maximum of 20 branches and 20 off-premise automated teller machines.[51]

Promotion and facilitation of investment

This category recorded the most number of measures among APEC-developing economies according to the UNCTAD's Investment Policy Monitor series, reflecting an intensification of developing economies' efforts to attract more foreign capitals.

Chile issued new rules to give more flexibility to foreign banks, by making it easier for foreign representative offices to advertise their credit policies.[52] Chile also set up a Foreign Investment Promotion Agency alongside a new Framework Law for Foreign Investment in 2015.[53] The new framework provides foreign investors with protection against arbitrary discrimination, as well as exemptions of capital goods imports from sales and service tax when they comply with certain requirements.

Indonesia expanded the number of industries eligible for tax holidays, including basic metal, petroleum, natural gas, machinery and some others in 2011.[54] Recently, Indonesia issued regulation to further revise tax incentive rules to cover a larger number of industries such as forestry and fisheries, marine transport, and agriculture-related manufacturing.[55]

Japan enacted the Act for Promotion of Japan as an Asian Business Center in 2012 that addresses issues related to FDI directly.[56] The Act aims to encourage research and development activities and to attract international businesses to establish headquarters in Japan. The incentives include income tax breaks, fund raising assistance, reduction of patent fees and shortened investment procedures. Furthermore, the Council for Promotion of Foreign Direct Investment was established in 2014 with the mandate to lead initiatives from various government ministries to attract foreign investments.[57] The Council adopted the "Five

[49] UNCTAD, Investment Policy Monitor No.12, March 2014
[50] UNCTAD, Investment Policy Monitor No.6, 11 October 2011
[51] UNCTAD, Investment Policy Monitor No.7, 12 February 2012
[52] UNCTAD, Investment Policy Monitor No.4, 28 January 2011
[53] UNCTAD, Investment Policy Monitor No.14, October 2015
[54] UNCTAD, Investment Policy Monitor No.6, 11 October 2011
[55] UNCTAD, Investment Policy Monitor No.14, October 2015
[56] WTO, Trade Policy Review – Japan, 19 January 2015
[57] WTO, Trade Policy Review – Japan, 19 January 2015

Promises for Attracting Foreign Businesses to Japan" in 2015 to improve what have been requested by foreign companies to enhance the convenience of business and life in Japan.

Korea has been very active in facilitating investment evidenced by its large number of measures undertaken. In 2011, Korea eased restrictions on foreign personnel by granting a residency visa to foreigners who are currently holding a corporate investment visa as long as they have spent three continuous years in Korea.[58] More recently, Korea also lowered the minimum investment amount requirement and the factory construction area ratio applicable to foreign investors.[59]

Malaysia launched its National Automotive Policy 2014 to develop a competitive automotive industry.[60] The government intends to disburse soft loans and grants for automotive infrastructure and human capital development; to liberalize the automotive market with more new car models at more competitive prices; and to provide tax exemptions for hybrid and electric vehicles assembled in Malaysia.

In 2010, **Philippines's** Board of Investment strengthened its National Economic Research and Business Action Center – an institution which provides foreign investors with information to assist their investment decision-makings.[61] The intention is to facilitate foreign investment by reducing cost of doing business and streamlining procedures. In 2011, foreign air carriers were allowed to fly into specific destinations in the Philippines in a bid to further liberalize its aviation industry.[62]

In 2015, **Russia** signed a federal law to transform an old port and 15 other municipalities into a free port zone.[63] In this customs-free zone, tax-incentives would be provided alongside eased visa restrictions on foreign visitors. Previously, it has also established a Special Economic Zone in the Samar Region aiming to attract investors, especially from the car-making and related industries.[64] Russia has relaxed the requirements for foreign acquisitions, from 10 to 25% of the shares, for companies developing federal subsoil resources.[65] In terms of professional staff, it simplified the rules to hire highly qualified foreign specialists in 2010.[66]

In the **United States**, an initiative called "SelectUSA" was launched in 2011 as the first initiative coordinated at the federal level in order to attract foreign investment as well as to encourage US investors who are currently based abroad to relocate their business operations back to the United States.[67]

[58] UNCTAD, Investment Policy Monitor No.7, 16 February 2012
[59] UNCTAD, Investment Policy Monitor No.13, January 2015
[60] UNCTAD, Investment Policy Monitor No.12, March 2014; Malaysian Automotive Association, "National Automotive Policy 2014", January 2014
[61] UNCTAD, Investment Policy Monitor No.3, 7 October 2010
[62] UNCTAD, Investment Policy Monitor No.5, May 2011
[63] UNCTAD, Investment Policy Monitor No.14, October 2015
[64] UNCTAD, Investment Policy Monitor No.3, 7 October 2010
[65] UNCTAD, Investment Policy Monitor No.7, 16 February 2012
[66] UNCTAD, Investment Policy Monitor No.3, 7 October 2010
[67] UNCTAD, Investment Policy Monitor No.6, 11 October 2011

General business environment

This section highlights measures affecting the general business climate, which will also have an indirect impact on foreign investment.

Japan cut the corporate tax rate from 34.62% to 32.11% for the 2015 Fiscal Year in a bid to bolster business investment and wage increase. Furthermore, the government lowered the effective corporate tax rate to 29.97% for the 2016 Fiscal Year.

Mexico reformed its labour laws in 2012 to make work contracts more flexible by setting new forms of individual labour contracts and clarifying new outsourcing requirements.[68]

Peru enacted its Framework Law on Public-Private Partnerships in 2013, which aims to promote private-sector participation in the infrastructure development, focusing on sectors such as transport, energy and other technology-intensive industries.[69] However, Peru also raised taxes on mining companies in 2012 in order to boost tax revenue.[70]

Russia exempted the education and healthcare services sectors from the corporate profit tax in 2011.[71] On the other hand, in 2010 the Russian government raised the rate of mandatory insurance payments by employers, which essentially represent a tax proportional to the overall amount of wages paid by a firm.[72] In the same year, the government also tightened rules for automobile producers who wish to use the duty-free importation of components.[73] These rules included a minimum required volume of production and certain local content requirements in order to enjoy the duty-free imports.

Singapore has since 2000, through the Pro-Enterprise Panel (PEP), actively solicited feedback on rules and regulations that hinder businesses and impede entrepreneurship and engaged agencies to review rules and regulations. The PEP is chaired by the Head of Civil Service and comprises of mainly business representatives from the private sector. To date, the PEP has received over 1,800 suggestions and more than half of these have resulted in regulatory or rules changes.[74]

All the aforementioned examples illustrated that APEC economies have made every effort to liberalize investment and worked towards achieving the Bogor Goals. Nevertheless, there is room for further improvement, evidenced by the quantitative indices –restrictions in foreign ownerships and FDIs, for instance, still remain**.**

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[68] UNCTAD, Investment Policy Monitor No.9, March 2013
[69] WTO, Trade Policy Review – Peru, 9 October 2013
[70] UNCTAD, Investment Policy Monitor No.7, 16 February 2012; Financial Times, "Peru to impose extra tax on mining groups", 25 August 2011
[71] UNCTAD, Investment Policy Monitor No.7, 16 February 2012
[72] UNCTAD, Investment Policy Monitor No.4, 28 January 2011
[73] UNCTAD, Investment Policy Monitor No.5, 5 May 2011
[74] Information regarding the Pro-Enterprise Panel (PEP) is available at the following Singapore's Ministry of Trade and Industry website: https://www.mti.gov.sg/ProEnterprisePanel/Pages/About-Pro-Enterprise-Panel.aspx?cat=Pro-Enterprise%20Panel

4. TRADE AND INVESTMENT FACILITATION

Among the main objectives of the Bogor Goals declaration are the facilitation of trade and investment in the APEC region. While attention has been focused on removing restrictions on trade (e.g., tariffs and quotas) and investments (e.g., market access), equally important are the operational efforts to make it easier to trade and invest across the region. Challenges in day to day operations of the firm can add substantial costs and influence trade and investment decisions.

A. TRADE FACILITATION

In general, APEC developing economies have achieved success in reducing time to trade across borders. Based on data from World Bank's Doing Business studies, on average, developing economies have reduced time to export a 20-foot container by 18.9 percent between 2006 and 2013 (Table 4.1). Likewise, developing APEC economies reduced time to import a container by 18.3 percent. However, it is still faster to export or import a container in industrialized APEC economies than in developing economies. On average, it takes about six days less to trade across borders in industrialized economies than in developing economies.

Table 4.1 Time to Trade Across Borders (days), 2006-2013

	Exporting			Importing		
	2006	**2013**	**% change**	**2006**	**2013**	**% change**
Australia	9	9	0.0	8	8	0.0
Brunei Darussalam	27	19	-29.6	19	15	-21.1
Canada	8	8	0.0	10	10	0.0
Chile	17	15	-11.8	16	12	-25.0
China	21	21	0.0	24	24	0.0
Hong Kong, China	7	6	-14.3	5	5	0.0
Indonesia	22	17	-22.7	27	23	-14.8
Japan	11	11	0.0	11	11	0.0
Korea	13	8	-38.5	12	7	-41.7
Malaysia	13	11	-15.4	10	8	-20.0
Mexico	13	11	-15.4	17	11	-35.3
New Zealand	10	10	0.0	9	9	0.0
Papua New Guinea	23	23	0.0	29	32	10.3
Peru	22	12	-45.5	29	17	-41.4
The Philippines	17	15	-11.8	18	14	-22.2
Russia	24	22	-8.3	23	21	-8.7
Singapore	6	6	0.0	4	4	0.0
Chinese Taipei	12	10	-16.7	12	10	-16.7
Thailand	24	14	-41.7	22	13	-40.9
United States	6	6	0.0	5	5	0.0
Viet Nam	24	21	-12.5	23	21	-8.7
APEC Industrialized	8.8	8.8	0.0	8.6	8.6	0.0
APEC Developing	17.8	14.4	-18.9	18.1	14.8	-18.3
APEC	15.7	13.1	-16.4	15.9	13.3	-15.9

Notes: Industrialized economies are Australia; Canada; Japan; New Zealand; and the United States. Developing economies are the remaining APEC member economies not classified as industrialized. Figures show time to

transport a 20-foot container of merchandise goods across borders. Group scores are simple averages. Time to export and import covers the number of days it takes to accomplish documentation, inland logistics, customs inspection and clearance, and port handling.
Source: World Bank's Doing Business database and APEC PSU staff calculations.

On the other hand, the cost to trade across borders has been generally increasing in APEC economies. Between 2006 and 2013, costs to export a 20-foot container from industrialized economies increased by 15.6 percent while that for developing economies increased by 17.6 percent (Table 4.2). Meanwhile, costs for importing a container increased by 8.9 percent in industrialized economies and 13.6 percent in developing economies. On average, costs to export and import in APEC increased by 17.0 percent and 12.2 percent, respectively, between 2006 and 2013. In comparison, the consumer price index (CPI) increased by 30.0 percent in APEC economies during the period. In other words, this increase in trade costs has generally been more benign than overall inflation.

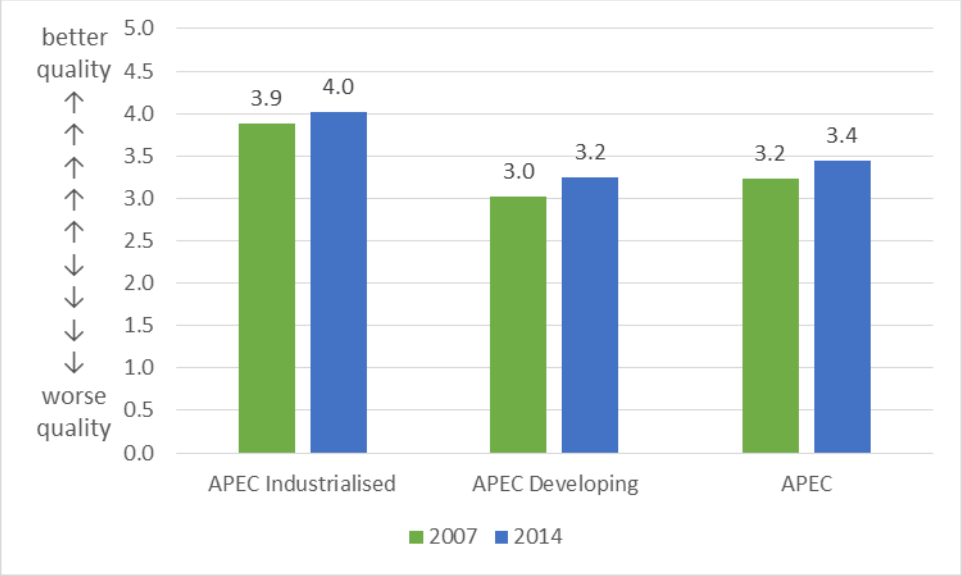
Table 4.2 Cost to Trade Across Borders (USD), 2006-2013

	Exporting			Importing			CPI
	2006	2013	% change	2006	2013	% change	% change
Australia	930	1,150	23.7	1,120	1,170	4.5	20.4
Brunei Darussalam	515	705	36.9	590	770	30.5	7.5
Canada	1,435	1,680	17.1	1,425	1,680	17.9	12.6
Chile	645	980	51.9	600	930	55.0	24.8
China	390	620	59.0	430	615	43.0	26.3
Hong Kong, China	525	590	12.4	525	565	7.6	25.1
Indonesia	486	615	26.5	675	660	-2.2	50.5
Japan	884	915	3.5	1,094	1,107	1.2	-0.6
Korea	780	670	-14.1	1,040	695	-33.2	22.3
Malaysia	432	450	4.2	385	485	26.0	17.9
Mexico	1,302	1,450	11.4	1,761	1,740	-1.2	34.0
New Zealand	725	870	20.0	800	825	3.1	18.7
Papua New Guinea	984	1,149	16.8	1,048	1,250	19.3	45.2
Peru	575	890	54.8	670	1,010	50.7	24.0
Philippines	755	585	-22.5	800	660	-17.5	34.0
Russian	1,725	2,615	51.6	1,685	2,810	66.8	80.5
Singapore	416	460	10.6	367	440	19.9	26.7
Chinese Taipei	747	655	-12.3	747	720	-3.6	9.9
Thailand	848	595	-29.8	1,042	760	-27.1	20.7
United States	960	1,090	13.5	1,160	1,315	13.4	15.6
Viet Nam	468	610	30.3	586	600	2.4	114.5
APEC Industrialized	987	1,141	15.6	1,120	1,219	8.9	13.3
APEC Developing	725	852	17.6	809	919	13.6	35.2
APEC	787	921	17.0	883	991	12.2	30.0

Notes: CPI = consumer price index. Industrialized economies are Australia; Canada; Japan; New Zealand; and the United States. Developing economies are the remaining APEC member economies not classified as industrialized. Figures show costs of transporting a 20-foot container of merchandise goods across borders. Group scores are simple averages. Cost to trade across borders only covers official payments for documentation, inland logistics, customs clearance, and port handling
Source: World Bank's Doing Business database and APEC PSU staff calculations.

Logistics plays an important part in facilitating trade by ensuring that products arrive on time for producers and consumers and in good quality. To get a clearer picture of the quality of logistics, we analyse two sub-indices of World Bank's Logistics Performance Index (LPI); namely, quality of infrastructure and tracking and tracing. Overall, perceptions on the quality of infrastructure in APEC economies has improved between 2007 and 2014. APEC industrialized and developing economies both saw an improvement in their infrastructure score (Figure 4.1). That said, a significant gap still exists between developing and industrialized economies, and there is space for further infrastructure improvements in developing APEC economies.

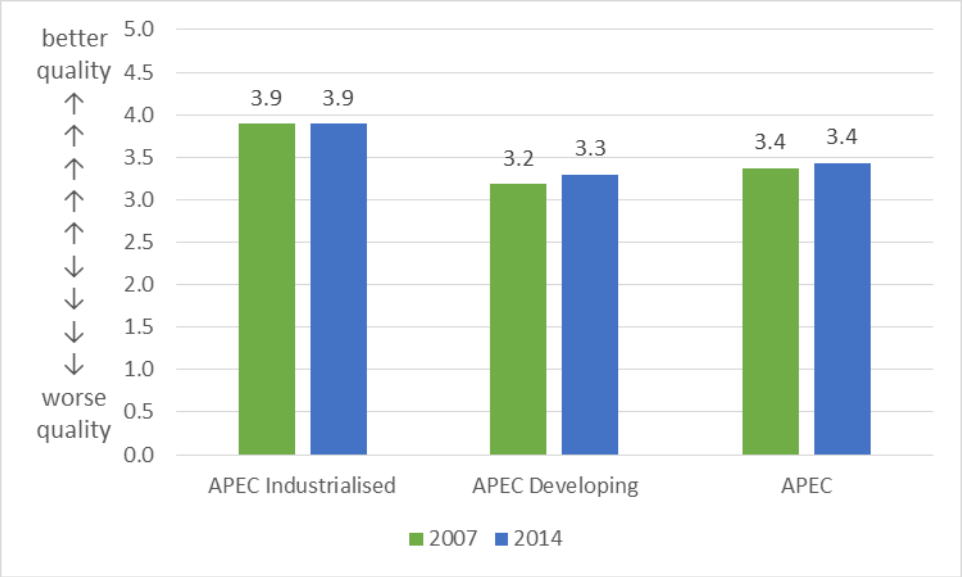
Figure 4.1 LPI Quality of Infrastructure Scores, 2007-2014



Notes: Industrialized economies are Australia; Canada; Japan; New Zealand; and the United States. Developing economies are the remaining APEC member economies not classified as industrialized. Group scores are simple averages.
Source: LPI databank and APEC PSU staff calculations.

The ability to track and trace shipments is a necessary capability to ensure that traded goods have verifiable origins, maintain their quality during shipment, and arrive on time. Between 2007 and 2014, there has been very little overall improvement in the scores for tracking and tracing in APEC economies, with the only measurable improvement seen in developing APEC economies (Figure 4.2). There is also little progress in closing the tracking and tracing capability gap between industrialized and developing economies.

Figure 4.2 LPI tracking and tracing scores, 2007-2014



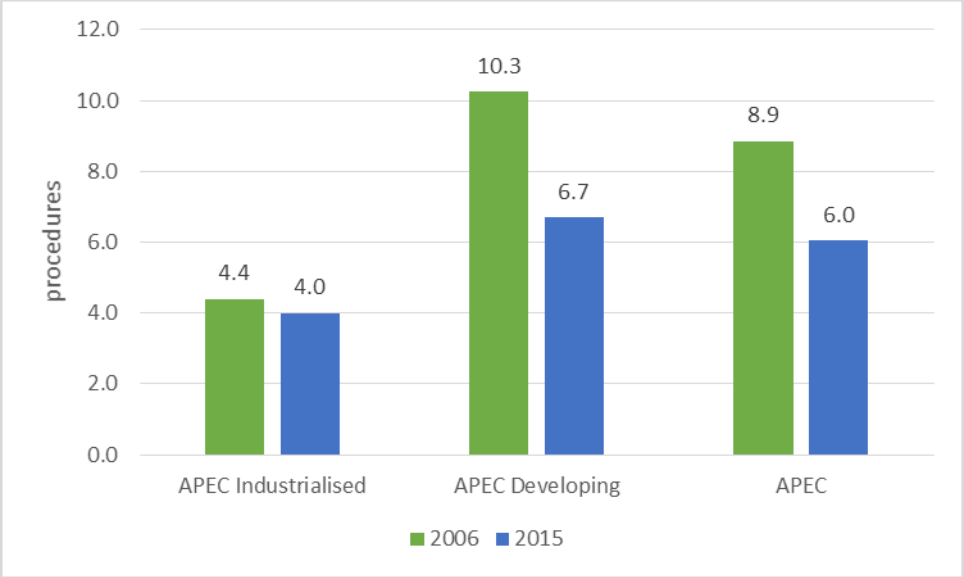
Notes: Industrialized economies are Australia; Canada; Japan; New Zealand; and the United States. Developing economies are the remaining APEC member economies not classified as industrialized. Group scores are simple averages.
Source: LPI databank and APEC PSU staff calculations.

B. INVESTMENT FACILITATION

Ease in starting a business not only facilitates investment, it also encourages firms to operate in the formal sector. Investors face varied challenges in APEC economies, even when no laws prevent them outright from operating a business. While it is very quick to start a new business in some economies, taking less than one day in certain instances; it could take more than a month in other economies to accomplish bureaucratic requirements.

Based on data from World Bank's Doing Business data, there has been a downward trend in the number of procedures needed to start a business. On average, APEC economies have eliminated 2.9 steps in starting a business between 2006 and 2015, with developing economies reducing 3.6 steps during the period (Figure 4.3). However, new firms still have to accomplish three additional procedures in developing economies compared to industrialized economies.

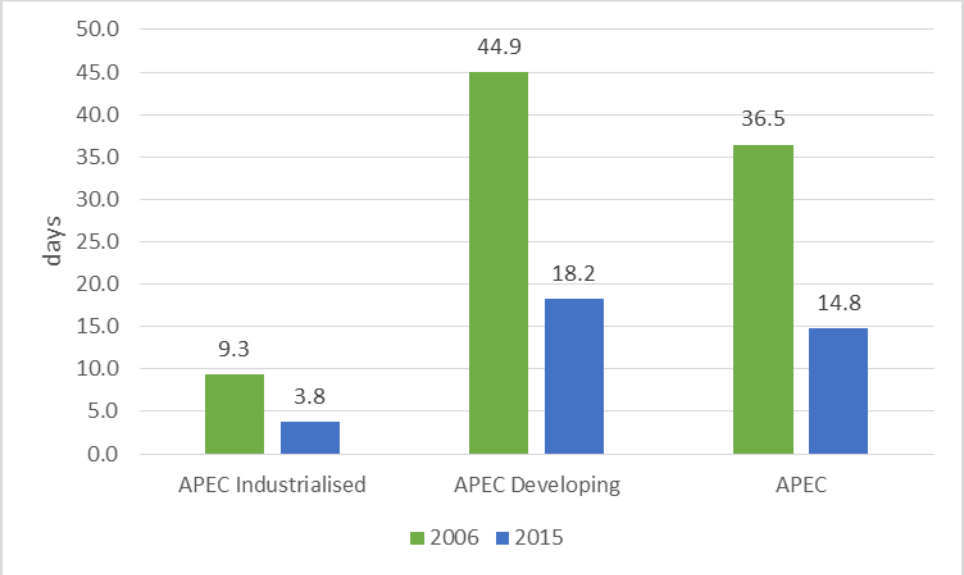
Figure 4.3 Procedures to Start a Business, 2006-2015



Notes: Industrialized economies are Australia; Canada; Japan; New Zealand; and the United States. Developing economies are the remaining APEC member economies not classified as industrialized. Group scores are simple averages.
Source: World Bank's Doing Business database and APEC PSU staff calculations.

APEC economies have also improved their processing efficiency, taking three weeks less time to start a new business in 2015 compared to 2006 (Figure 4.4). During this period, developing APEC economies managed to cut almost 27 days in the time to start a new business, while industrialized economies reduced 5.5 days. That said, it still takes almost five times longer to start a business in developing economies compared to industrialized economies.

Figure 4.4 Time to Start a Business, 2006-2015

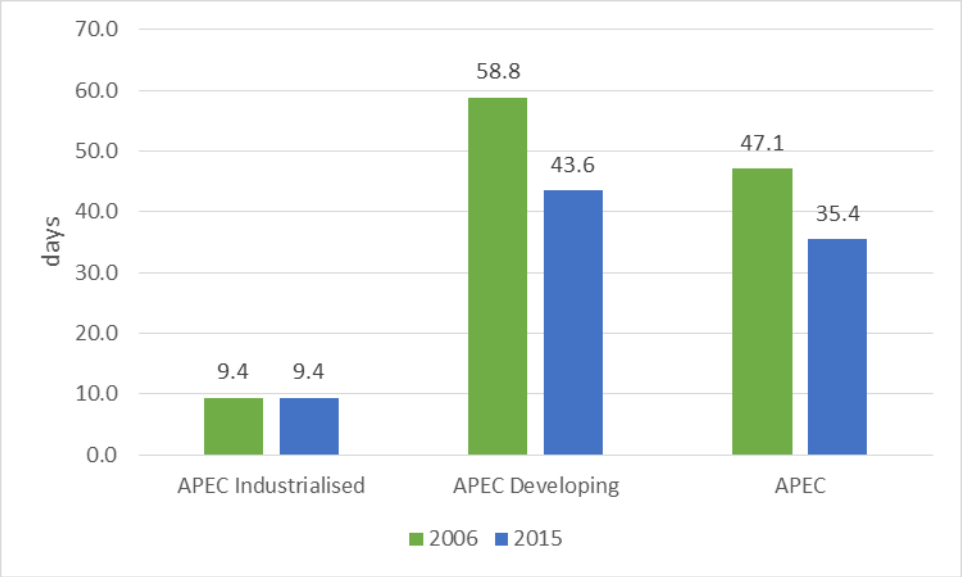


Notes: Industrialized economies are Australia; Canada; Japan; New Zealand; and the United States. Developing economies are the remaining APEC member economies not classified as industrialized. Group scores are simple averages.
Source: World Bank's Doing Business database and APEC PSU staff calculations.

Another important issue for investors is the need to register property. Registering real property is a necessary step to start operations and investment (e.g., building facilities) and registered property can be used as collateral for investment loans, giving firms access to credit. While it

takes 9.4 days to register property in industrialized APEC economies, it can take on average 43.6 days—almost five times longer—to do so in developing economies (Figure 4.5). The good news is that over the past nine years developing economies have been able to eliminate more than two weeks in the time it takes to register property.

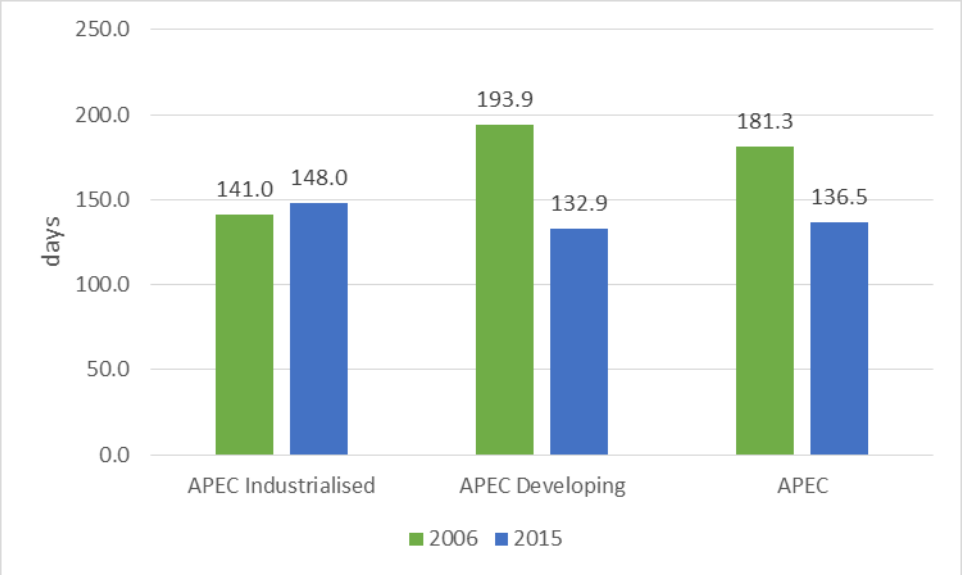
Figure 4.5 Time to Register Property, 2006-2015



Notes: Industrialized economies are Australia; Canada; Japan; New Zealand; and the United States. Developing economies are the remaining APEC member economies not classified as industrialized. Group scores are simple averages.
Source: World Bank's Doing Business database and APEC PSU staff calculations.

Firms also need to be able to develop property as part of their capital investments, and the quicker they can begin construction, the earlier they can start productive operations. On average, it takes four and a half months (136.5 calendar days) to obtain construction permits in APEC economies in 2015, down from about half a year in 2006 (Figure 4.6). Interestingly, time to obtain construction permits has been on an upward trend in industrialized APEC economies, but has been going down in developing economies.

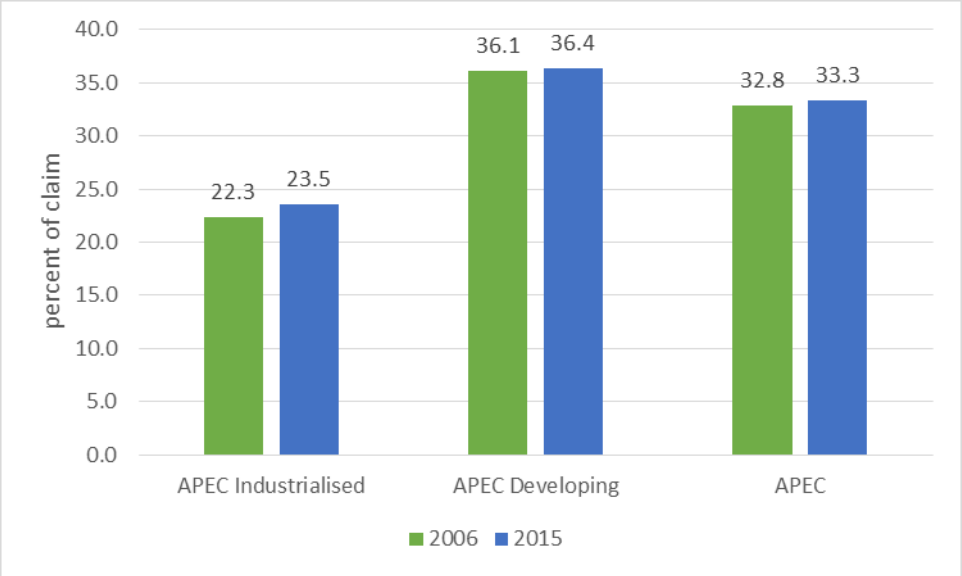
Figure 4.6 Time to Obtain Construction Permits, 2006-2015



Notes: Industrialized economies are Australia; Canada; Japan; New Zealand; and the United States. Developing economies are the remaining APEC member economies not classified as industrialized. Group scores are simple averages.
Source: World Bank's Doing Business database and APEC PSU staff calculations.

Enforcing contracts is a crucial factor determining a firm's transactions costs in its operations and the institutional efficiency in an economy. Based on *Doing Business 2016* data, the relative costs of enforcing a contract—covering court fees, enforcement fees, and attorney's fees—can range from 23.5 percent of claim in industrialized APEC economies to 36.4 percent of claim in developing APEC economies (Figure 4.7). It should be noted that the relative cost of enforcing contracts has been increasing between 2006 and 2015 in around one percentage point of the cost of the claim.

Figure 4.7 Cost of Enforcing Contracts, 2006-2015



Notes: The size of claim is assumed to be 200 percent of per capita GNI or USD 5,000, whichever is greater. Industrialized economies are Australia; Canada; Japan; New Zealand; and the United States. Developing economies are the remaining APEC member economies not classified as industrialized. Group scores are simple averages.
Source: World Bank's Doing Business database and APEC PSU staff calculations.

Firms' perceptions regarding major obstacles to business operations can give indications on what economies need to improve to promote investments. Between 2009 and 2012, the World Bank conducted Enterprise Surveys in eight APEC economies[75], asking firms about major obstacles to their business operations.

Table 4.3 shows some of the aggregated results for these eight APEC economies by firm size level. The two factors that were most likely to be cited by all firms as obstacles were the provision of electricity and corruption. There is a slight difference in the obstacles perceived by SMEs (defined as firms with less than 100 employees) and larger firms. SMEs, which mostly invest in domestic markets, are more likely to point to tax rates, the actions of informal sector competitors, crime, and access to finance as major obstacles to operations. On the other hand, larger firms, many of which invest across borders, are more likely to identify telecommunications, customs and trade regulations, labour regulations, and inadequate workforce skills as obstacles to operations.

[75] These economies are Chile; China; Indonesia; Mexico; Peru; the Philippines; Russia; and Viet Nam.

Table 4.3 Major obstacles to operations by firm size, 2009-2012
(in % of firms identifying the item is a major or severe obstacle)

Firm size by number of employees:	**Small** (less than 20)	**Medium** (20 to 99)	**Large** (100 or more)
Infrastructure			
Electricity	21.7	23.4	23.2
Telecommunications	14.9	17.0	17.8
Transportation	13.2	15.0	15.9
Regulations and Bureaucracy			
Customs and Trade	4.6	7.2	9.3
Tax rates	16.4	19.8	18.3
Tax administration	11.3	13.4	12.5
Labour regulations	7.1	10.6	11.7
Business permits	10.0	10.8	11.6
Institutions			
Informal sector competitors	23.3	20.3	14.6
Courts	12.0	13.5	13.3
Crime	16.3	13.7	11.6
Political instability	15.5	16.2	16.3
Corruption	21.7	23.0	22.0
Access to inputs			
Access to land	12.1	12.3	11.9
Access to finance	16.2	16.0	11.8
Inadequate skills	14.5	20.0	20.6

Notes: Figures are unweighted and should only be interpreted as indicative and not representative across APEC. N = 11,040; the error margin for column percentages is ± 1.6% at the 95% confidence level.
Source: World Bank Enterprise Survey data and APEC PSU staff calculations.

5. GROWTH AND DEVELOPMENT

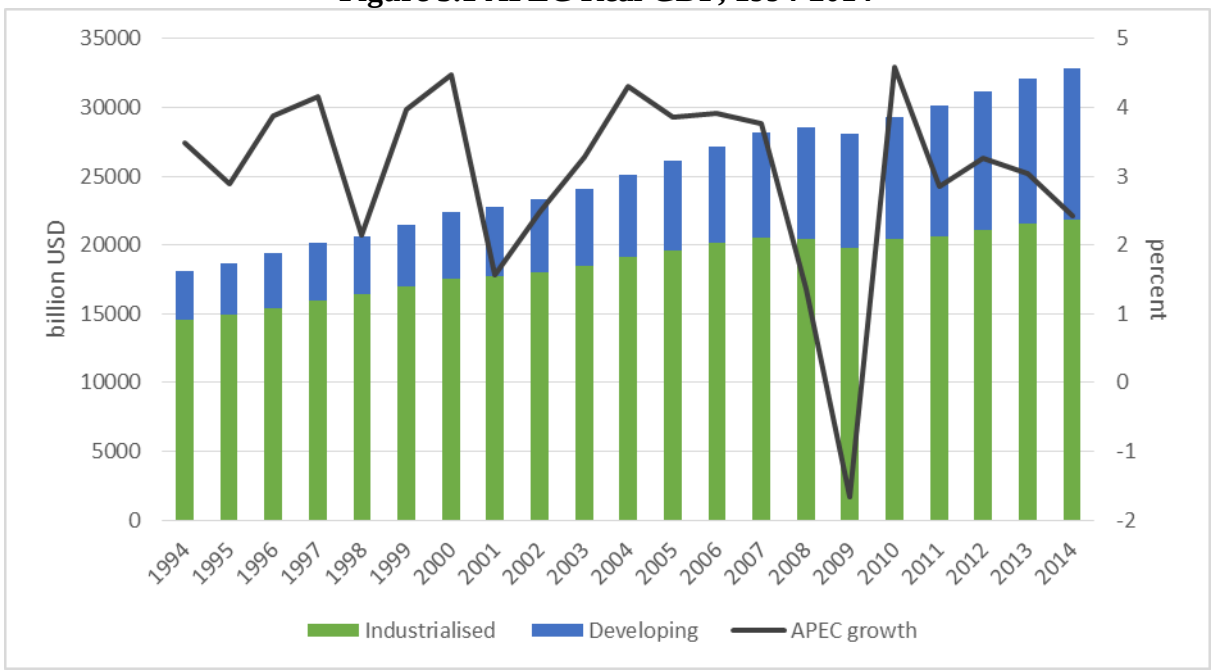
Although the actions underlined in the Bogor Goals focus mainly on facilitating and reducing restrictions to trade and cross-border investment, the overall vision emphasizes the importance of sharing the benefits of economic growth. Trade and investment are not ends in themselves; rather, economic growth and regional integration should lead to improvements in employment, health, education, and access to basic services, as well as environmentally sustainable growth.

"We have issued a vision statement in which we pledged… to ensure that our people share the benefits of economic growth, improve education and training, link our economies through advances in telecommunications and transportation, and use our resources sustainably."
– APEC Economic Leaders, Bogor Declaration, 1994

A. GROWTH AND EMPLOYMENT

Between 1994 and 2014, APEC's real GDP (in constant 2005 dollars) increased from USD 18.1 trillion to USD 32.9 trillion, growing at an average annual rate of 3.0 percent (Figure 5.1). In comparison, the rest of the world grew at an average annual rate of 2.5 percent during the same period. Developing APEC economies outpaced industrialized APEC economies in terms of average annual growth, with the former growing at 5.7 percent annually and the latter at 2.1 percent.

Figure 5.1 APEC Real GDP, 1994-2014



Notes: Industrialized economies are Australia; Canada; Japan; New Zealand; and the United States. Developing economies are the remaining APEC member economies not classified as industrialized.
Source: WDI, DGBAS (Chinese Taipei), and APEC PSU staff calculations.

Despite the economic crises that hit the region between 1994 and 2014, all economies in APEC have maintained positive average annual real economic growth during the period (Table 5.1). All APEC member economies experienced an expansion in their economic output between 1994 and 2014, and all economies, with the exception of Russia, registered an annual increase in their populations during the period. In general, real economic growth outpaced population

growth in APEC economies (except in Brunei Darussalam), leading to positive per capita income growth in the APEC region.

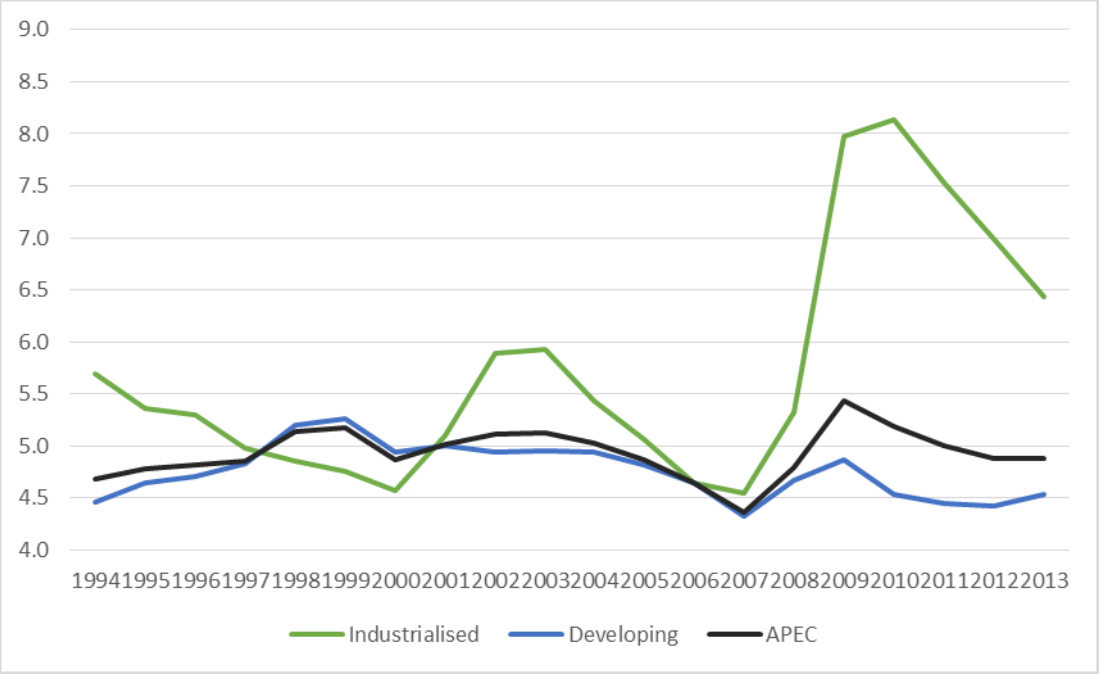
Table 5.1 Average Annual Growth Rates, 1994-2014
(in percent)

	GDP	Population	per capita GDP
Australia	3.3	1.4	1.9
Brunei Darussalam	1.6	1.9	-0.3
Canada	2.6	1.0	1.5
Chile	4.4	1.2	3.1
China	9.6	0.7	8.8
Hong Kong, China	3.4	0.9	2.5
Indonesia	4.3	1.4	2.9
Japan	0.8	0.1	0.7
Korea	4.6	0.6	3.9
Malaysia	5.1	2.0	3.0
Mexico	2.4	1.5	0.9
New Zealand	2.7	1.1	1.6
Papua New Guinea	3.1	2.5	0.6
Peru	4.8	1.4	3.4
The Philippines	4.7	1.9	2.8
Russia	3.1	-0.2	3.1
Singapore	5.5	2.4	3.1
Chinese Taipei	4.5	0.5	3.9
Thailand	3.2	0.7	2.5
United States	2.5	1.0	1.5
Viet Nam	6.7	1.2	5.3
APEC Industrialized	2.1	0.8	1.3
APEC Developing	5.7	0.8	4.9
APEC	3.0	0.8	2.2

Note: Figures show compound annual growth rates. Figures may not add up due to rounding.
Source: WDI, DGBAS (Chinese Taipei), and APEC PSU staff calculations.

On the other hand, unemployment seems to be on an upward trend in the APEC region over 1994-2013. In 1994, the unemployment rate in the region stood at 4.7 percent; in 2013 the unemployment rate was 4.9 percent (Figure 5.2). This increase was mainly due to the increase in unemployment in industrialized APEC economies in the aftermath of the 2008 global financial crisis, with unemployment rates remaining above pre-crisis levels as of 2013.

Figure 5.2 Unemployment Rate in APEC, 1994-2013



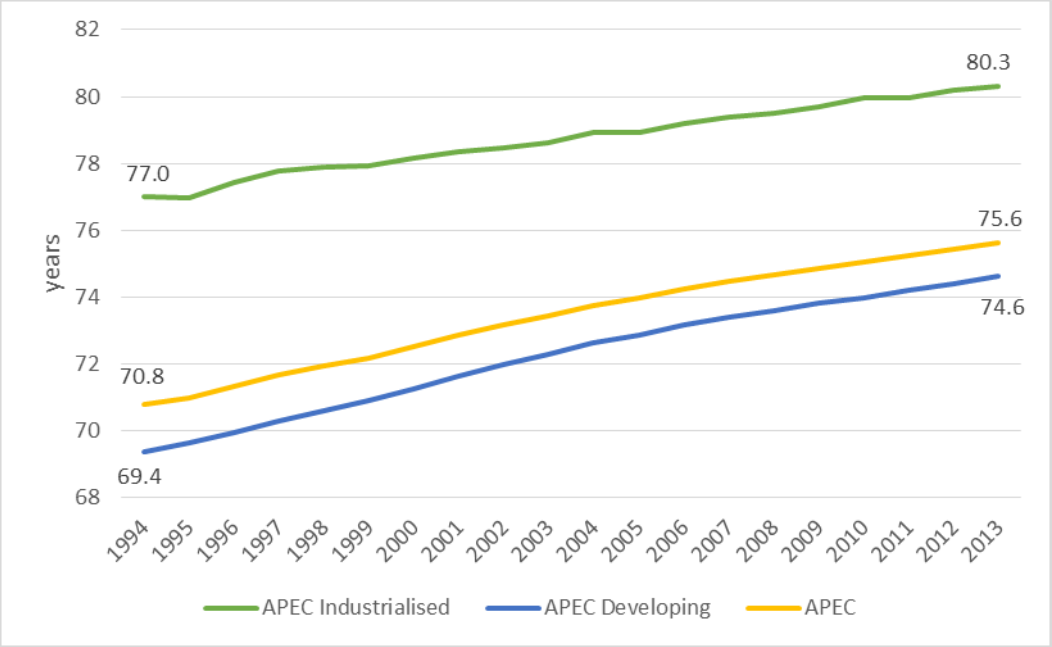
Source: WDI, DGBAS (Chinese Taipei), and APEC PSU staff calculations.

B. SOCIAL INDICATORS

Over the past two decades, living standards have improved in all APEC economies. For example, between 1994 and 2013, all APEC economies have seen improvements in life expectancy, access to electricity and water, and enrolment in tertiary education, particularly in developing APEC economies where there is significant room for improvement.

As of 2013, life expectancy in APEC industrialized economies stood at 80.3 years while that in developing economies was at 74.6 years (Figure 5.3). Although there is still a gap between industrialized and developing economies, life expectancy has been increasing in developing economies (0.38 percent per annum) at a faster rate than in industrialized economies (0.22 percent per annum).

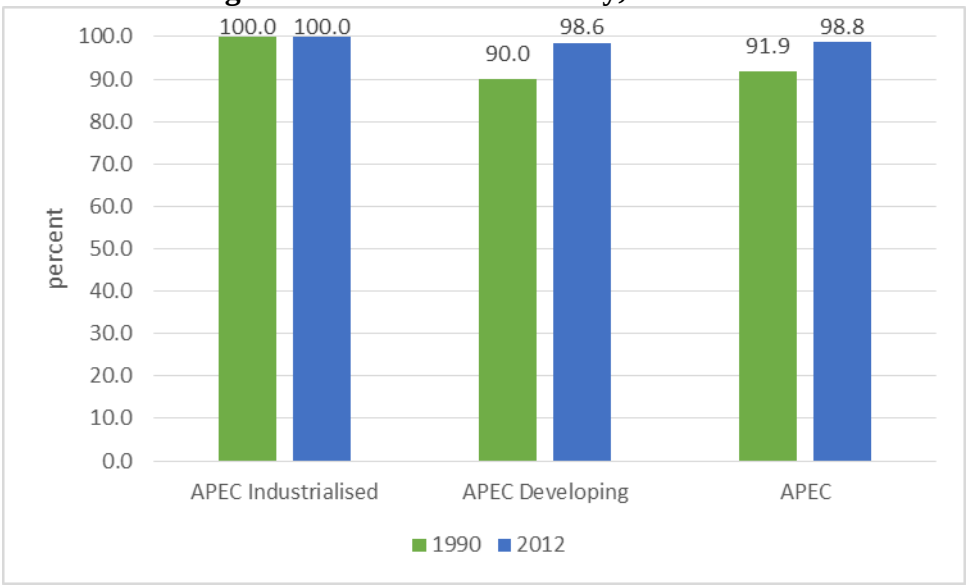
Figure 5.3 Life Expectancy at Birth, 1994-2013



Note: Industrialized economies are Australia; Canada; Japan; New Zealand; and the United States. Developing economies are the remaining APEC member economies not classified as industrialized. Aggregate figures are population-weighted averages.
Sources: WDI, Ministry of the Interior (Chinese Taipei), and APEC PSU staff calculations.

Developing APEC economies have also posted achievements in expanding access to electricity between 1990 and 2012. In 1990, 90.0 percent of people in developing economies had access to electricity in developing economies, but by 2012 this increased to 98.6 percent—i.e., almost universal access to electricity (Figure 5.4). Meanwhile, industrialized economies have maintained 100 percent access to electricity throughout the period.

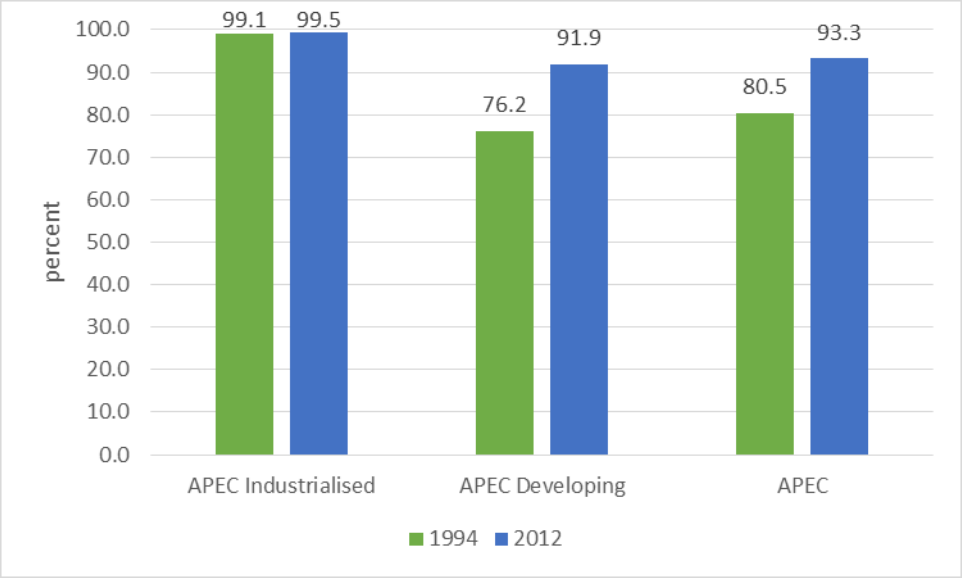
Figure 5.4 Access to Electricity, 1990-2012



Note: Industrialized economies are Australia; Canada; Japan; New Zealand; and the United States. Developing economies are the remaining APEC member economies not classified as industrialized. Aggregate figures are population-weighted averages.
Sources: WDI and APEC PSU staff calculations.

Likewise, developing APEC economies have achieved great strides in expanding access to clean water. In 1994, 76.2 percent of people in developing economies had access to improved water sources; by 2012 this increased to 91.9 percent of the population (Figure 5.5)—that translates to an additional 605.6 million people with access to clean water in developing APEC economies. Meanwhile, access to improved water source in industrialized APEC economies is universal, even slightly increasing from 99.1 percent in 1994 to 99.5 percent in 2012.

Figure 5.5 Access to Improved Water Source, 1994-2012

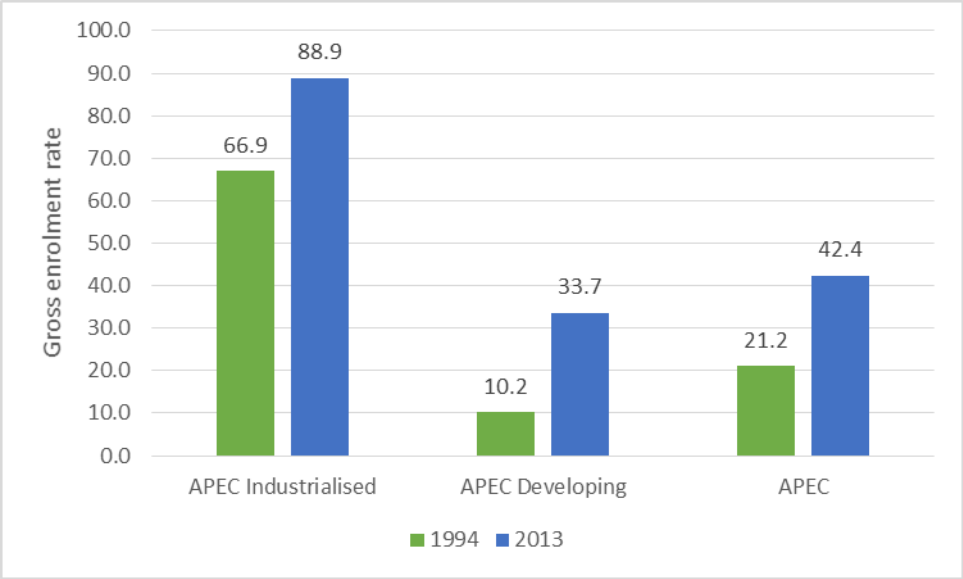


Note: Industrialized economies are Australia; Canada; Japan; New Zealand; and the United States. Developing economies are the remaining APEC member economies not classified as industrialized. Aggregate figures are population-weighted averages.
Source: WDI and APEC PSU staff calculations.

APEC economies have achieved success in expanding access to tertiary education[76],which is key to improving the skills and productivity of the workforce. Tertiary enrolment rates more than doubled in APEC economies—from 21.2 percent to 42.4 percent—between 1994 and 2013 (Figure 5.6). In fact, the tertiary gross enrolment rate (GER) in developing APEC economies tripled during the period, from 10.2 percent in 1994 to 33.7 percent in 2013. Likewise, the tertiary GER in industrialized economies increased from 66.9 percent to 88.9 percent during the period.

[76] Tertiary enrolment rates are also an indicator of improvements in basic education as students need to complete basic schooling and attain skills before entering tertiary school. As such, increasing tertiary enrolment rates are indicative of improving completion rates in primary and secondary school.

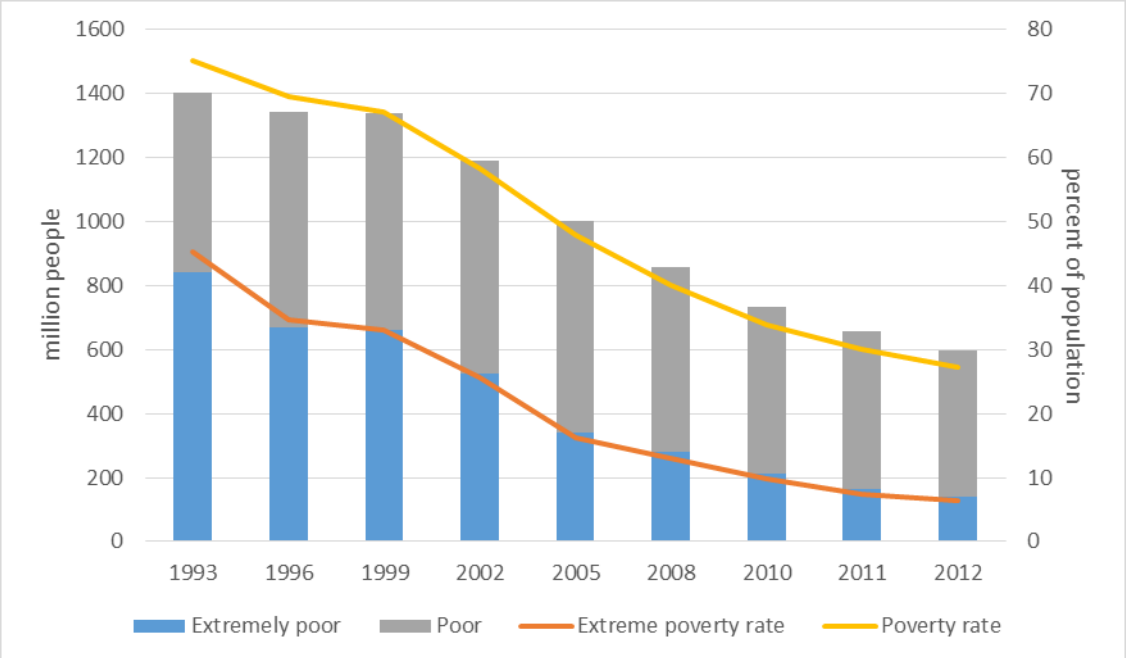
Figure 5.6 Enrolment in Tertiary Education, 1994-2013



Note: Industrialized economies are Australia; Canada; Japan; New Zealand; and the United States. Developing economies are the remaining APEC member economies not classified as industrialized. Aggregate figures are population-weighted averages.
Sources: WDI, Ministry of Education (Chinese Taipei), and APEC PSU staff calculations.

The APEC region has also made significant strides in poverty reduction: between 1993 and 2012, the number of people living in poverty—defined as expenditure of USD 3.80 per person per day or less (in 2011 PPP dollars)—was halved from 1.4 billion people to 598 million people (Figure 5.7). At the same time, the number of people living in extreme poverty (i.e., USD 1.90 per person per day) fell by 83.5 percent, from 842 million in 1993 to 139 million in 2012.

Figure 5.7 Poverty Indicators, 1993-2012

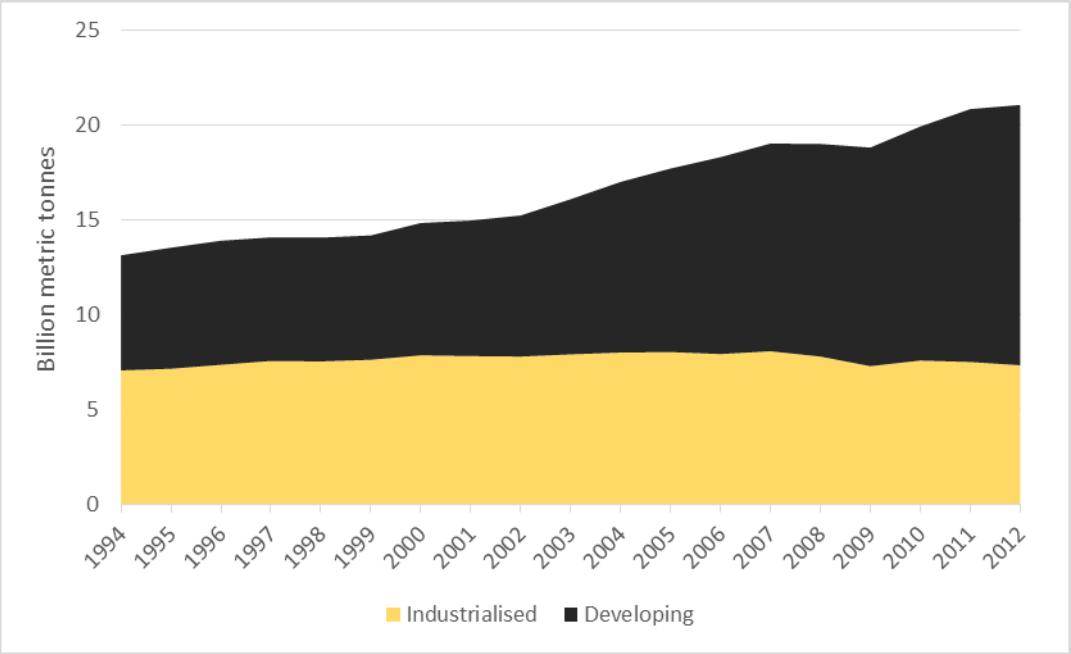


Notes: Data cover Chile; China; Indonesia; Malaysia; Mexico; Papua New Guinea; Peru; the Philippines; Russia; Thailand; and Viet Nam. Extremely poor are those living on USD 1.90 per person per day (in 2011 PPP dollars) or less; poor are those living on USD 3.80 per person per day or less.
Sources: Povcalnet and APEC PSU staff calculations.

C. ENVIRONMENTAL INDICATORS

Along with rising economic growth and living standards, the APEC region's carbon footprint has increased over the past two decades. Carbon dioxide emissions[77] in the region increased from 13.1 billion metric tonnes in 1994 to 21.1 billion metric tonnes in 2012, growing at an average annual rate of 2.7 percent (Figure 5.8).

Figure 5.8 Carbon Dioxide Emissions in APEC, 1994-2012

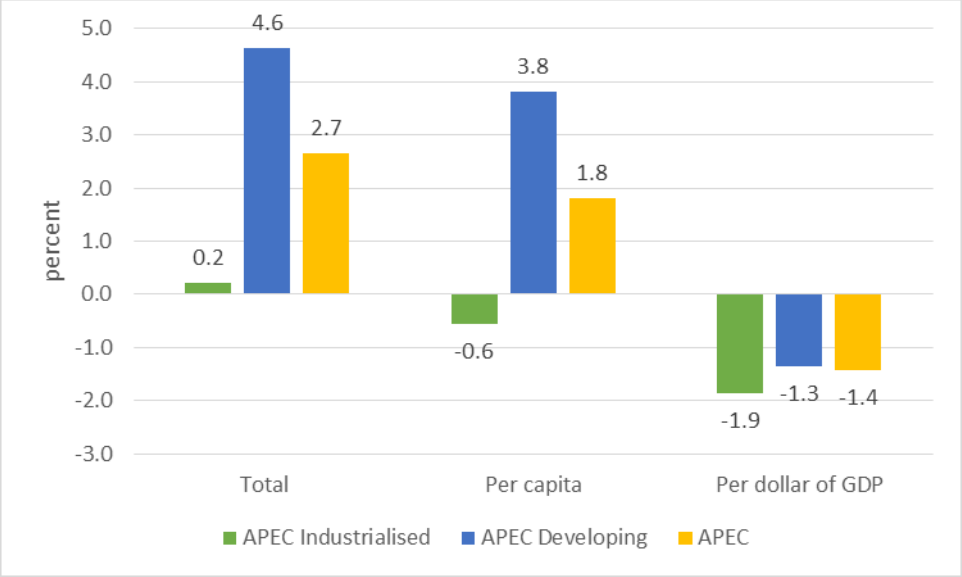


Source: WDI and APEC PSU staff calculations.

Between 1994 and 2012, carbon emissions have been increasing in all APEC economies, although the rate of increase is significantly faster in developing economies (4.6 percent per year) than industrialized economies (0.2 percent per year) (Figure 5.9). On the other hand, per capita carbon emissions are on a downward trend in industrialized economies but are still going up in developing economies. Nonetheless, there is some good news in terms of sustainable growth: the carbon intensity of production has been going down in the APEC region, with carbon emissions per dollar of GDP falling by 1.4 percent per year between 1994 and 2012.

[77] Carbon dioxide emissions from the burning of fossil fuels and the manufacture of cement are used as indicators of an economy's carbon footprint.

Figure 5.9 Annual Average Growth in Carbon Emissions, 1994-2012



Source: WDI and APEC PSU staff calculations.

One of the reasons for an increasing carbon footprint could be the choice of technology used for energy and production as well as associated inefficiencies and waste. In fact, there is still room for policy and choice to affect carbon emissions without necessarily affecting GDP growth; e.g., the use of more energy efficient products and cleaner combustion engines; or emphasis on renewable energy production. Indeed, as seen previously, carbon emissions have increased, but each additional dollar of GDP is requiring less additional carbon emissions over time, so progress has been made in terms of making production technology more sustainable and energy-efficient.