



Asia-Pacific  
Economic Cooperation

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

# Research Outcomes

Summary of Research  
Projects 2019



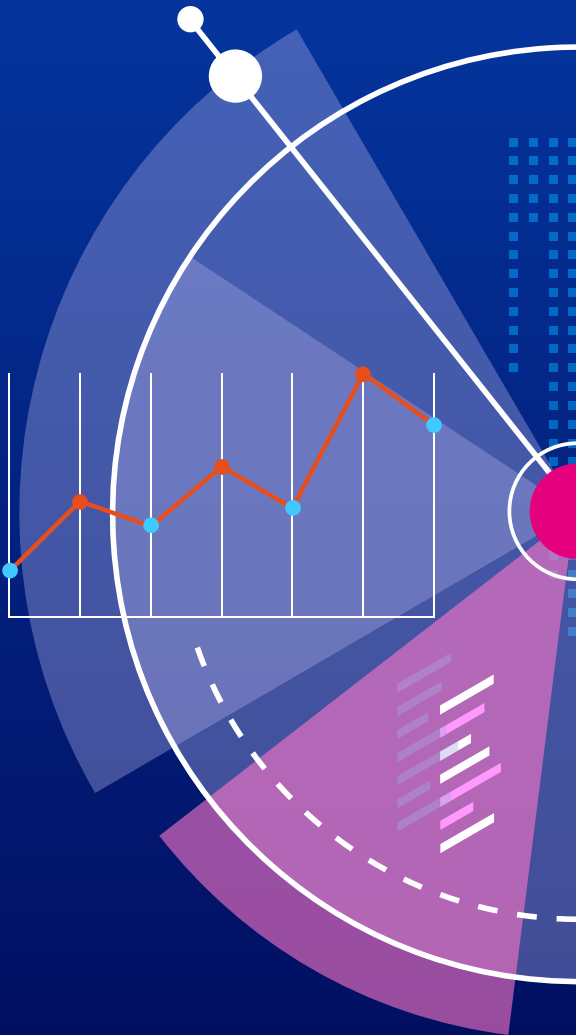
Policy Support Unit

**Asia-Pacific Economic Cooperation (APEC)**

was established in 1989. The 21 Member Economies are Australia; Brunei Darussalam; Canada; Chile; China; Hong Kong, China; Indonesia; Japan; Korea; Malaysia; Mexico; New Zealand; Papua New Guinea; Peru; the Philippines; Russia; Singapore; Chinese Taipei; Thailand; the United States; and Viet Nam.

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APEC’s Bogor Goals Dashboard 2019

Publication Number: APEC#219-SE-01.19  
Link: <https://www.apec.org/Publications/2019/12/APEC-Bogor-Goals-Dashboard>

The Dashboard tracks the advancement in areas critical to promoting greater regional economic integration through a set of harmonized indicators that show the evolution across time certain aspects of trade and investment liberalization and facilitation in quantitative terms. This Dashboard includes indicators gathered from respectable public sources for the period 2008-2019.

Findings

In terms of trade liberalization, the APEC average tariff for agricultural products remains higher than that for non-agricultural products. However, it is positive that the percentage of zero-tariff products has increased from 47.9 to 48.3% while the percentage of products with tariffs above 10% has declined from 13.3 to 12.9 percent. Efforts in trade facilitation show mixed results: while the time to trade and the cost to export have declined in recent years, the cost to import has slightly increased.

Regarding services, there is an increasing trend to include sectoral services commitments in bilateral/regional trade agreements. On investment, there is no change in the perception of experts on the prevalence of foreign ownership and the effect of business rules on foreign direct investment.

Taking Forward the Lima Declaration on the Free Trade Area of the Asia-Pacific (FTAAP) - Study on Tariffs

Publication Number: APEC#219-SE-01.12  
Link: <https://www.apec.org/Publications/2019/11/Study-on-Tariffs>

This study provides an overview of APEC economies’ progress in liberalizing tariffs and the possible impact of FTAAP pathways in the APEC region.

Findings

The study comprises three components: 1) updating the tariff analysis in the Collective Strategic Study on Issues Related to the Realization of the FTAAP; 2) conducting a literature review on previous studies analyzing the potential impact of lowering tariffs through an FTAAP; and 3) examining tariff liberalization commitments as pathways to the FTAAP. A summary of each component is as follows:

Component 1

- Average MFN tariffs in the region have been on a downward trend, but continue to be higher for agricultural products (11.4% in 2017) than non-agricultural ones (5.3% in 2017).

- Slowdown in reduction of tariffs in recent years, but average MFN tariffs for most product categories continue to fall every year.
- Proportion of duty-free tariff lines has increased for most agricultural product categories, with large increases identified in cotton. In non-agricultural sector, petroleum products and non-electrical and electrical machinery have the highest proportion of duty-free tariff lines.
- In agricultural sector, beverages and tobacco, dairy products, and cereals and preparations are among the products with highest MFN average tariffs. In non-agricultural sector, labor-intensive products such as clothing and textiles as well as those that are simultaneously intensive in capital and labor like transport equipment face the highest average tariffs.
- Tariffs affect GVCs. Almost 75% of international trade comprises both intermediate and capital goods and this proportion has been increasing over the years. In addition to increasing product costs, maintaining or increasing tariffs leads to negative protection of downstream industries, thereby further dampening the entire GVC.
- Despite the progress, APEC economies could do more to reduce trade barriers. Possible ways forward include participating actively through bilateral/regional FTAs as APEC economies’ share of trade with RTA/

FTA partners accounted for less than 50% of their total trade, and participating in multilateral or plurilateral agreements such as the Information Technology Agreement.

Component 2

Results from a review of 17 studies using CGE models to examine the impact of reducing or eliminating tariffs through potential pathways\* of achieving FTAAP on GDP/production levels, welfare, trade flows and investment in the APEC region and individual economies show the following:

(\*Potential pathways include the Trans-Pacific Partnership or TPP, Comprehensive and Progressive Agreement for Trans-Pacific Partnership or CPTPP, and the Regional Comprehensive Economic Partnership or RCEP)

- **FTAAP.** Income and welfare are expected to increase for the APEC region, its economies and relevant sub-regions. Most of the benefits would be directed toward its developing economies, driven primarily by a capital accumulation effect. Many economies would face worsening terms of trade as they may be losing the advantage of having a preferential market access due to bilateral/regional RTA/FTAs already in place. This negative effect would be offset by a positive capital accumulation effect.
- **TPP and the CPTPP.** Income gains for the region are expected to be in the range of USD 97 billion and USD 438 billion. The region is expected to benefit from a net FDI inflow due to factors such as increased GDP and reduced investment barriers within economies. In aggregate terms, a large

proportion of gains would be channeled toward the developed economies, but gains for developing economies would be significant in relative terms. APEC members that are part of TPP/CPTPP would benefit from these pathways, but those who are not would lose out.

- **RCEP.** Gains are largely positive for almost all economies in the region with most benefits directed toward developing economies. Income gains under RCEP would be in the range of USD 204 billion and USD 750 billion, more than that of TPP/CPTPP. At the individual economy level, similar to TPP/CPTPP, almost all non-RCEP economies would lose out as opposed to those that are part of RCEP.
- While there would be benefits at the regional level under any pathway, the impact on individual economies and sectors will depend on several factors such as membership in those pathways, economic structure, availability of factors of production, market size, development levels, and network of RTA/FTA partners.

Component 3

Market access commitments agreed in CPTPP can be categorized into four approaches: 1) products are duty-free immediately after CPTPP is put in force by a signatory party; 2) products are subject to longer phase-out periods up to 21 years; 3) products subject to partial liberalization only; and 4) products excluded from the tariff liberalization process.

- **Duty-free.** All CPTPP parties have made substantial progress in lifting tariffs on goods. Upon entry into force of CPTPP, 86.1% of total tariff lines from the 11 parties are immediately duty-free. While liberalization efforts have been uneven across sectors, seven parties are offering immediate duty-free entry in more than half of the sectors. All parties are also offering duty-free in ten Harmonized System chapters, with most products related to natural resources (e.g., oil, minerals), intermediate products (e.g., chemicals, steel), and capital goods (e.g., machinery, equipment).
- **Longer phase-out periods.** Longer liberalization periods apply to sensitive products. Seven CPTPP parties have tariff lines that will be fully liberalized only after 10 or more years. This is prevalent in labor-intensive manufactures (e.g., textiles and apparel, footwear), agricultural products and manufactures important for rural communities (e.g., sugars, milling products, cotton, leather), products with negative externalities (e.g., tobacco, alcoholic beverages and arms), and strategic industries for some parties (e.g. vehicles). Overall, there will be full liberalization in majority of products by year 11 for most parties.
- **Partial liberalization.** Nine CPTPP parties adopt partial tariff liberalization measures, targeting mostly agricultural products (e.g., live animals, meat, dairy produce, cereals, cocoa, sugars, vegetables, fruits and nuts).

These partial liberalization measures include keeping the non-ad-valorem tariff component, reducing partially the ad-valorem tariff rate, maintaining tariff rate quotas, and a price band system.

- **Exclusion.** Three CPTPP parties have excluded products from the tariff liberalization process by keeping MFN rates to specific or all parties. Such a scheme applies to a very limited number of tariff lines affecting the most sensitive products from each party's trade perspective (e.g., sugar, cheese, milk, poultry, beans, wheat, rice, flour, and leather and articles thereof).

The study found a positive relationship between base tariffs and the number of years to achieve full liberalization. On average, an increase of the base tariff by 10 percentage points (e.g., tariff increasing from 10% to 20%) will lead to an additional 1.8 years to full liberalization. Agricultural products tend to be more sensitive than non-agricultural products. An additional 10 percentage points in base tariff will increase the time to liberalize by 2.06 years for agricultural products and 1.64 years for non-agricultural products.

It is important to point out that the outcome obtained at the end of CPTPP negotiations involves a series of commitments on market access for both goods and services, as well as obligations related to disciplines and rules. The final agreement was a result of a balanced package, carefully negotiated through a process of exchange of concessions across different sectors and areas.

Fostering an Enabling Policy and Regulatory Environment in APEC for Data-Utilizing Businesses

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Link: <https://www.apec.org/Publications/2019/07/Fostering-an-Enabling-Policy-and-Regulatory-Environment-in-APEC-for-Data-Utilizing-Businesses>

This study contributes to better understand how firms from different sectors use data in their business models; and considering the significant increase in data-related policies and regulations enacted by governments across the world, how such policies and regulations are affecting their use of data and hence business models. The study also identifies some middle-ground approaches that would enable governments to achieve public policy objectives, and at the same time promote the growth of data-utilizing businesses.

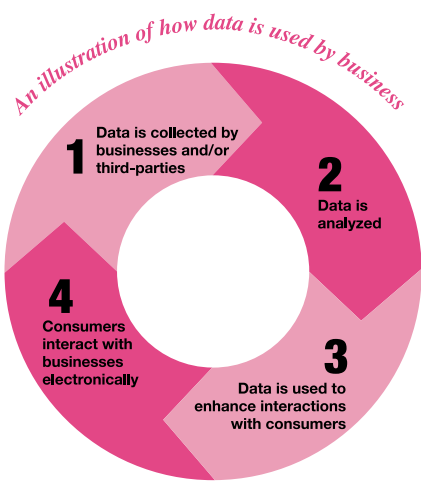
Findings

Using case study approach, the study covers 39 firms from a diverse group of industries, including aviation, logistics, shipping, payment services, encryption services, and manufacturing in 12 APEC economies. The findings and recommendations are as follows:

Data and growth

- Data plays an important role to firms in both the traditional as well as new industries.

Firms across different sectors collect and/or use significant volumes of data for a wide range of purposes. In the transport and logistics sector, for example, these include tailoring attractive loyalty schemes for their customers as well as monitoring and assessing the safety, capacity and efficiency of asset deployment. In the manufacturing sector, data are used across the various stages of the value chain from pre-production to post-production (including post-sales). For example, firms use data analytics to reduce machine downtime, track inventories and process reordering when levels fall below certain threshold among others.



- For payment services providers, data is integral in every step involved in processing a transaction, but such data is only one component of the whole spectrum of data collected and used. In fact, firms carry out data analytics to glean valuable

information coming from various and diverse sources. Specifically on electronic invoicing, data captured in electronic invoices can facilitate transparency and hence authorities' expanded use of tax, accounting as well as various data sources to ensure compliance. Other uses of data analytics include detecting anomaly, combating fraud and providing enterprise solutions.

- Firms generally recognize the important role of data in ensuring the viability of their businesses and to this end, have undertaken various activities to ensure the privacy and security of data collected and managed by them. These include ensuring that their policies, procedures and practices are consistent with international quality assurance instruments governing data security and privacy; undertaking regular and systematic review of various laws and regulations on data privacy and security to ensure compliance; and applying sophisticated and comprehensive in-house data governance framework covering areas such as hardware, cyber protection teams and encryption.

Challenges across economies

- The importance of data as a new asset has brought to the fore concerns on how firms use and protect the data that they have. These fears in a data age are not unfounded. News articles abound with hacking incidents and data leaks. Furthermore, the practices of some well-

known firms have left more to be desired.

- In support of public policy objectives such as ensuring better data protection and security, rapid access to data and benefitting more from the digital economy, governments across the world have put in place or are in the midst of enacting various regulations aimed at data such as those regulating data collection, storage, processing and transfer; and those requiring disclosure of intellectual property (including source code), building back-doors to applications and use of mandatory encryption standards.
- While these regulations have been enacted for legitimate public policy objectives, some of them may not be the best way forward. For example, as security is a function of several elements including technical, financial and personnel, the association between data localization and data security may not be a given. Furthermore, some data-related regulations including localization may have the unintentional effect of increasing the cost of doing business. Literature has also shown the limited impact of some data-related regulations on employment and investment creation as well as in enhancing innovation and productivity. Moreover, some data-related regulations may be a second-best option of addressing domestic security/concerns.
- Alternative, middle-ground approaches to data-related issues (i.e., with relatively

minimal impact on firms' access and use of data and at the same time, supportive of legitimate public policy objectives) are available. These approaches include recognizing voluntary standards, reviewing potential and existing domestic regulations against privacy guidelines/framework, complementing lighter touch regulations with effective enforcement, and enhancing cross-border data flows through various mechanisms such as adequacy status, mutual recognition system and FTAs. Specifically on enhancing domestic security, alternative mechanisms can include reforming mutual legal assistance treaties (MLAT), signing memorandums of understanding on bilateral and multilateral data sharing, and unilateral approaches which focus on mandating access to specific types of data.

Challenges across organizations

- Data-related issues, in particular data sharing are not confined only to between economies, but also between organizations. Despite being an important factor for unlocking innovation and realizing the potentials of digital economy, the practice of data sharing is not widespread for various factors including data privacy regulations, anticompetitive behavior and lack of interoperability of data formats and standards.
- Facilitating data sharing between organizations could be enhanced through approaches such as introducing open



data policies, promoting data commons, developing data sharing standards as well as guidelines.

Recommendations

APEC can build on the insights from the study and contribute to the endeavor of improving data-related regulations among its members by:

- Facilitating information and experience sharing/exchange on these middle-ground approaches. These can include how to operationalize these approaches, how to monitor and evaluate their impacts as well as how they can be further improved in terms of implementation and awareness among others.
- Organizing dialogue sessions to identify ideas and ways to overcome bottlenecks that have led to standstill or little progress in some middle-ground approaches, such as those pertaining to regulatory alignment, multilateral rules on data flow facilitation and MLAT reform.
- Developing capacity building activities to assist economies in enhancing and improving on their existing data-related and complementary regulations including those pertaining to IPR protection. These can include workshops and technical training assistance on establishment of competent data protection authorities and on enhancing cross-border enforcement among others.

Trade Facilitation in APEC: Progress and Impact

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Link: <https://www.apec.org/Publications/2019/01/Trade-Facilitation-in-APEC--Progress-and-Impact>

This policy brief reviews the progress of APEC economies in trade facilitation by analyzing their implementation of the WTO Trade Facilitation Agreement (TFA). It also takes a closer look at two key initiatives APEC has in place to facilitate smooth and secure trade.

Findings

TFA implementation

A unique aspect of TFA is that developing and least developed members can choose their own implementation schedules, and will be provided technical and financial assistance if needed. Developed members that have committed to implementing TFA when it enters into force, will have to ensure its full implementation by 22 February 2017. All other members can allocate their measures to the following three categories:

Category A

Developing members will implement the measure by 22/02/2017, that is, the day of enforcement, and least developed members will do the same a year later, on 22/02/2018

Category B

Members will require additional time to implement the measure

Category C

Members will require additional time and capacity building support to implement the measure

APEC economies’ implementation of TFA is as follows (data as of 8 January 2019):

- Average performance of APEC economies has been remarkably better than that of all WTO members. As of December 2018, APEC economies had an implementation rate of 96.3%.
- Six economies have fully implemented all TFA commitments; another six have notified all their measures under category A; and five of the remaining nine economies have notified at least 90% of all their measures under category A. For the remaining measures, most require additional implementation time and have been notified under category B. Only three APEC economies have notified measures under category C, out of which two have less than 3 percent of their economy’s total measures notified under this category.
- Under category B, the challenging TFA articles are notifications for enhanced controls or inspections, transit, and customs cooperation, each with three economies requiring additional time. Under category C, the two areas most economies

need capacity building assistance in are test procedures and single window.

The UN Global Survey on Trade Facilitation and Paperless Trade Implementation by ESCAP tracks the implementation of trade facilitation and paperless trade measures globally. The survey covers 47 main trade facilitation measures categorized into seven groups (namely, general trade facilitation measures; paperless trade; cross-border paperless trade; transit facilitation; trade facilitation for SMEs; trade facilitation for agricultural trade; and participation of women in trade facilitation). Measures featured in TFA are essentially included in these two groups — general trade facilitation and transit facilitation. Even though most paperless trade, in particular cross-border paperless trade measures, are not specifically featured in TFA, digital implementation of TFA measures is expected to result in the largest trade cost reductions across several APEC economies.

Based on a common set of 31 trade facilitation and paperless trade measures included in the 2017 survey, the overall implementation levels of APEC economies are:

- Regional average implementation rate of measures considered in 2017 stood at 75%, with developed economies registering an 83.5% implementation and developing economies at 72.5%.
- Australia and Singapore had the highest implementation rate (exceeding 90%). Brunei Darussalam; Papua New Guinea;

and Viet Nam had relatively low levels of implementation (52.7%, 37.6%, and 51.6%, respectively). The latter economies, falling below the global average rate of implementation of 59.6%, could stand to benefit greatly from international trade if they accelerate their efforts toward implementing TFA and facilitating paperless trade.

To assess the potential impact of implementing trade facilitation measures in the APEC region, an estimation is conducted using a trade cost model and the results show:

- If limited to implementation of TFA binding measures only, trade cost reductions of between 5% and 8%.
- If WTO TFA+ set of measures, including digital implementation of TFA measures and cross-border paperless trade, trade cost reductions of between 8% and 13%.

Two main findings emerge from this impact analysis:

- Full implementation of binding measures would result in a decrease in trade cost of about 6% on average, while full implementation of all measures would result in a more than 10% reduction.
- Paperless implementation of TFA measures, together with enabling the seamless electronic exchange of trade data and documents across borders, would result in much larger trade cost reductions,

over 20% for APEC as a whole.

APEC trade facilitation initiatives

APEC has consistently drawn on two initiatives – Single Window (SW) and Authorised Economic Operator (AEO) – to reduce trade costs and to make trade faster, cheaper and safer. The former focuses more on reducing trade costs, and the latter has an added emphasis on ensuring safe and secure trade.

The APEC region hosts some of the world-class SWs. The SWs of Hong Kong, China; Japan; Korea; and Singapore are featured in case studies conducted by ESCAP in 2018 to showcase the best practices of SW development. Key features and characteristics of modern SW identified include: single entry and submission of information; paperless environment; standardized documents and data; information sharing; centralized risk management; coordination of agencies and stakeholders; analytical capability; and electronic payment.

There are 17 APEC economies with operational AEO programs in varying stages of development. APEC economies have also concluded 37 MRAs. A variety of sectors are represented in the various AEO programs, and around 88.2% of programs are open to importers and exporters. There are also generally high levels of convergence in security and compliance requirements where APEC AEO programs have adhered to the SAFE Framework closely. On SMEs, the 2015 Boracay Action Agenda has an emphasis to

widen the base of AEO and trusted trader programs to include them to contribute to the security, integrity and resilience in supply chains.

Recommendations

APEC economies should continue their momentum in implementing TFA, and at the same time gradually move toward cross-border paperless and/or digital trade facilitation to maintain their competitiveness. For example, they could further upgrade or expand the SW facility to include financial payment functions and to improve supply chain visibility across borders.

International frameworks such as the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific could complement TFA and provide a unique platform for APEC economies to realize cross-border electronic exchange of trade-related data and documents. Participation in the agreement can support the development of domestic and sub-regional paperless trade systems and prepare them for interoperability with similar paperless trade systems being developed in other parts of the world. It may also help APEC economies promote their existing paperless trade solutions to other regions. Accordingly, APEC economies that are also ESCAP members, could become parties of the agreement and reap the benefits as early as possible.

Customs Cooperation in APEC: Strengthening Regional Cooperation

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Publication Number: APEC#219-SE-01.9  
Link: <https://www.apec.org/Publications/2019/08/Customs-Cooperation-in-APEC--Strengthening-Regional-Cooperation>

This policy brief explores APEC’s progress in implementing Article 12 of WTO TFA that contains measures on customs cooperation. It includes a survey conducted by the APEC Sub-Committee on Customs Procedures (SCCP) to collect information from each APEC economy on existing agreements concerning cooperation and mutual administrative assistance in customs matters, the kinds of information exchanged, the types of channels of communication, and scope of cooperation.

Findings

TFA Article 12 and its implementation

TFA aims to support traders in expediting the movement, release, and clearance of goods. Section I of TFA consists of 12 Articles and are further divided into 36 measures and 238 items. Article 12 is a new requirement or obligation in WTO focusing on customs cooperation.

APEC economies have performed relatively well in implementing Article 12. All except one economy have notified all measures under the article. None of the article’s measures have been listed under category C; however, three economies have notified requiring more

time for the implementation of the article’s measures, that is, category B. Of the 147 items among the three economies (49 each under Article 12), 63 items have been notified under category B while all other items are under category A. The challenging areas for two of these economies are the channel for exchange of information and the provision of requested information, which includes the procedures for responding to requests.

Survey on customs cooperation

The SCCP survey concluded that there is a need for more cooperative initiatives to smoothen out the unbalanced cooperative efforts within the region. Among the survey findings are:

- Around 51% of agreements concerning cooperation and mutual administrative assistance in customs among APEC economies are Customs Mutual Assistance Agreements or Economic Partnership Agreements, which are bilateral. Only 12 of the 280 agreements are protocol or regional agreements. There is wide disparity among the economies, with the lowest total number of agreements at two and the highest at 28. Fifteen economies have plans to conclude agreements on information exchange regarding customs matters.
- General scope within these agreements is to provide mutual assistance on information exchange, enable proper application of customs law, facilitate combat of customs offences, and ensure security of supplies within the international supply chain.
- The kind of information exchanged by

most economies (20 out of 21 economies) are about customs laws and enforcement actions to prevent offenses. Economies also exchange information on observations and findings resulting from the successful application of new enforcement aids and techniques; techniques and improved methods of processing passengers and cargo; new methods used in committing offenses; and the application of customs valuation agreement.

- Nineteen economies noted that the agreements require their customs administrations to cooperate in facilitating effective coordination between the administrations of their partner economies. Additionally, according to 16 economies, their agreements require cooperation in development and training programs for personnel, testing of new equipment and procedures, and development of mutual recognition arrangements (MRA) on AEO programs.
- A wide range of customs cooperation related rules and issues is addressed in agreements among APEC economies; however, there is still a lack of channels for ‘online’ exchange of information that may hinder cross-border transfers. Only 30% of economies have an ‘online’ exchange system in place. On the contrary, majority of the economies (51.4%) use email to facilitate information exchange between customs administrations. Economies also identified the World Customs Organization’s (WCO) Customs Enforcement network and the Pacific Transnational Crime Network as some of the platforms for exchanging information among economies or agencies.

Recommendations

Implementation of Article 12 has the potential to reduce the cost and time in trading across borders. According to the World Bank’s Doing Business report, cost and time to trade are dependent on two key factors: border and document compliance. Border compliance (which includes customs clearance and inspection) is responsible for bulk of the cost and time economies incur when trading.

In APEC economies, time spent on border compliance reaches an average of 35 hours for export and 45 hours for import. Border compliance costs traders around USD 344 for export and USD 382 for import. These figures constitute around 55-57% of the total time to trade and 81% of the cost to trade in APEC economies. Comparing with OECD average values, there is clear opportunity for improvement by speeding up the process and lowering costs for border compliance. Implementation of Article 12 could help address this issue by encouraging better customs cooperation across economies.

Some APEC economies already facilitate the exchange of information among their customs authorities regionally through electronic interfaces. For example, the Single Window interoperability among ASEAN and the Pacific Alliance grouping have mechanisms and protocols in place to allow the exchange of information about merchandise value, tariff, origin, and sanitary and phytosanitary (SPS) measures. The AEO scheme is another platform where customs could exchange information through MRA on AEO programs.

Issues pertinent to the successful

implementation of Article 12 are:

- **Trust among customs agencies.** Trust between various trade-related entities is necessary to enable the smooth implementation of Article 12 as it involves pursuing compliance in information exchange in a reciprocal manner. Cooperation in Single Window or AEO programs, while not directly addressed in Article 12, could serve as a useful foundation for stronger customs cooperation. Likewise, existing RTA/FTAs could act as useful catalysts for forging deeper cooperation across different customs administrations. Improved transparency in the process can also increase trust.
- **Confidentiality of information.** Implementation of Article 12 may involve the exchange of confidential information to help facilitate smoother verification of goods declarations. While there are measures under Article 12 to ensure protection of confidential information, participating in other privacy agreements may support the feeling of trust among the parties concerned. For example, APEC economies’ participation in the APEC Cross Border Privacy Enforcement Arrangement may facilitate stronger confidence for cross-border data sharing.
- **Understanding procedures for exchanging information.** Economies may face challenges in implementing measures related to the channel for exchanging of information and provision of requested information. Considering this information is usually time-sensitive, further clarity to



understand what happens if the requested information could not be provided in a timely manner and how to deal with delays or refusal of provision of information will be useful.

- **Regional cooperation.** APEC could strengthen cooperation with organizations that have been engaged in work on customs cooperation like the WCO and its Voluntary Compliance Framework (VCF) and Pacific Alliance and its Single Window. The SCCP has been encouraging the implementation of Article 12. Its work program includes the APEC Customs 3M Strategic Framework, which encourages ‘mutual recognition of control, mutual assistance of enforcement and mutual sharing of information’ to pursue customs cooperation. Regional cooperation with organizations would aid in implementing the article.

**Insights on the Regulatory Environment within APEC Economies and Its Impact on Trade in Services in Food Value Chains**

Publication Number: APEC#219-SE-01.10  
Link: <https://www.apec.org/Publications/2019/08/Insights-on-the-Regulatory-Environment-within-APEC-Economies-and-Its-Impact-on-Trade-in-Services>

This study examines the role of services in the food value chain, specifically the three key services – financial, logistics and distribution. It also discusses the role of ICT.

Findings

Services are a critical component of the food system. They support different stages of the food value chain and facilitate the smooth functioning of the entire system to deliver food worldwide. According to the OECD Trade in Value Added Database, the value created by foreign and domestic services ranges from 17% to 59% of the total value added in exports across 20 APEC economies in the food products industry, and from 8% to 53% in the agriculture, hunting, forestry and fishing industry.

Role of financial, logistics and distribution services

Financial services enable companies to obtain sufficient funds, manage their assets, upgrade machineries, and enhance their resilience to external shocks. Various financing tools have been developed along the food value chain such as contract farming, warehouse receipts financing, trade finance, and factoring, but their availability depends on the maturity of the market, regulatory environment, as well as capabilities of the individual food players.

Inadequate financial infrastructure, lack of credit reporting system, limited collateral management and warehousing capacity, underdeveloped financial market and limited

financial products, and strict regulatory regimes are the common barriers for food companies to access finance.

Natural disasters are common in the APEC region and they place the food system in a vulnerable position. Food producers are also experiencing other risks related to assets, market, business and regulatory environment. Insurance, as a major tool to manage risk, is of great need to protect the livelihoods of millions of food producers, help them swiftly recover after a disaster, and ensure regional food security. However, food companies, especially small businesses, usually find insurance services less accessible or affordable due to reasons such as high premium and complex and lengthy claim process.

Logistics services assist in planning, coordinating and implementing the proper storage, handling and transport of food from the point of production to the point of consumption. They include activities such as: 1) transportation, which involves moving products across various nodes in the food value chain; 2) storage, which provides warehousing, packing, manufacturing and processing services to prolong the shelf life of food products; 3) coordination and inventory management, which ensures smooth and efficient operation of the overall logistics processes; and 4) regulatory compliance, which guarantees that food traveling across the value chain meets safety and quarantine standards.

The use of new technologies are among

the emerging trends in logistics services. Automation and data analytics increase the handling capacity and efficiency of warehouses. Radio frequency identification and blockchain increase transparency in the food value chain, helping monitor sensitive processes such as cold chain transport and ensure compliance to regulatory standards. Nevertheless, diffusion of new technologies has been slow due to financial constraints and regulatory uncertainties. Moreover, the growing importance of data in coordinating logistics processes are raising issues on data standardization and security.

Strengthening the logistics sector to make the food value chain more efficient involves several aspects, including the need for better stakeholder engagement, more infrastructure investment, upgrading workforce skills and improving regulatory issues. Regulatory restrictions on foreign entry, competition and domestic operations affect the logistics sector. Similarly, the implementation of unnecessary SPS measures affecting trade could increase costs to the logistics operators.

Distribution services, including wholesale and retail services, are key to ensuring that food reaches the final consumers and the availability of a good variety of food products. Vertical and horizontal consolidation is a major trend as many distributors are acquiring or investing in either upstream suppliers or downstream outlets, or horizontal competitors to broaden their product ranges, streamline warehouse operations, and therefore gain stronger market power.

Specialization is another trend as focusing on one specific category of products gives retailers or wholesalers a unique value proposition in the competitive market. E-commerce implies both challenges and opportunities for distribution services. It drives distributors to adapt themselves to the new business model by either developing their own e-commerce strategy or cementing existing advantages.

Small farms usually find themselves at a disadvantage when working with large distribution services providers. No solid business plan or distribution strategy, limited production capacity, poor quality control, inadequate infrastructure, and disconnected location are the major reasons.

Regulatory restrictions on distribution services could impede fair competition, new retail forms and more variety of food products. Such constraints include licences to enter the market or sell specific products, restrictions on the location and size of stores of new market entrants, limitations on business operating hours, and price controls.

Role of ICT

The Food and Agriculture Organization estimated that global food production would have to increase by about 70% to feed the growing population, expected to reach 9.1 billion by 2050. Considering the falling farmland acreage per capita, advances in technology, including precision agriculture, could be a key enabler to increase yield.

Approximately one-third of the food produced for human consumption is lost or wasted globally throughout the entire value chain from production to final household consumption. Enhancing food security is therefore, not only about boosting agricultural yield, but also about promoting reduction in food loss and waste. There are many ICT-related solutions that APEC economies can explore, including connecting various parties (e.g., food establishments, NGOs, buyers and sellers) using e-commerce and other apps; improving post-harvest handling and storage through technology such as global data standards, single windows systems and blockchain; and adoption of smart manufacturing/processing technologies.

Challenges such as limited awareness and capacity, state of infrastructure and limited supportive regulations may affect the adoption of ICT. Policymakers can play an important role by: 1) providing technology grants and incentives; 2) being a trailblazer in the use of ICT to facilitate processes; 3) organizing training and information sharing sessions; 4) mobilizing both public and private sector investment in infrastructure; and 5) ensuring that regulations are responsive and relevant to the changing economic landscape.

Recommendations

The study offers some recommendations:

- Improvement of regulatory environment affecting the provision of services in the food value chain requires a ‘whole-

- of-government’ approach effort, as the formulation of services-related regulations usually entails the participation of several agencies. There is no ‘one-size-fits-all’ solution as the most urgent necessities that each APEC economy needs to address are different.
- Adoption of international standards and best practices in regulatory issues affecting the food industry and services sectors associated to it can be beneficial for the food value chain. It is important to avoid situations in which compliance costs related to new regulations are too high, affecting negatively the provision of goods and services across the food supply chain.
  - Development strategies need to be in place to upgrade existing or build new infrastructure. The returns from infrastructure investment could be high for agriculture and benefit rural areas significantly. However, the high cost involved as well as restrictions to foreign entry and competition could make it more difficult to channel resources to relevant infrastructure projects. Restrictions to foreign entry and competition affect not only the transport and telecommunications infrastructure, but also other important sectors linked to the food value chain.
  - Use of technology and modern ICT services is becoming a game changer in the food value chain. These tools are modernizing agriculture and food processing. They are also improving the provision of other

services relevant to the proper functioning of the food value chain. The optimal use of technology however, is dependent on the availability of supportive regulations. For instance, economies can remove restrictions that only allow locally registered sellers to offer their products in e-commerce platforms. Additionally, full interoperability of different ICT systems used in logistics require the development of data sharing standards.

**Facilitating Investment in APEC: Improving the Investment Climate through Good Governance**

Publication Number: APEC#219-SE-01.11  
Link: <https://www.apec.org/Publications/2019/11/Facilitating-Investment-in-APEC>

This report discusses recent investment trends in the APEC region, covering FDI inflows and outflows, as well as provides an overview of FDI determinants and its relation to trade. It also reviews APEC’s progress in investment facilitation under principles two, three and five of the Investment Facilitation Action Plan for the period 2017-2018.

Findings

FDI inflows to and outflows from APEC mirror the declining global trends experienced between 2017 and 2018. The decline in FDI

inflows into APEC however, was less severe – while the world recorded a 13% drop in FDI inflows from 2017 to 2018, APEC’s FDI inflows grew by 1% during the same period. On the other hand, APEC’s FDI outflows declined much more than the world between 2017 and 2018, by 45% and 29%, respectively.

Current literature shows the multi-dimensional and multi-faceted nature of FDI determinants and flows, hence making it difficult to get a clear and conclusive picture regarding the key factors that could attract and facilitate foreign investments.

APEC economies have implemented investment facilitation actions to improve the investment climate in several key policy areas, which will complement and strengthen existing FDI determining factors. Such actions would help stabilize FDI flows and sustainability in the long run by strengthening investors’ confidence in the region. A summary of the key investment facilitation measures is as follows:

- **Principle 2: Enhance stability of investment environments, security of property and protection of investors.** Economies have implemented measures to improve the establishment of dispute resolution mechanisms and their facilitation. These include to financially support the development of an online dispute resolution platform, and developing a special procedure to provide technical and legal support to reduce the time and costs involved in arbitration.

- **Principle 3: Enhance predictability and consistency in investment-related policies.** The measures within this principle focus on the simplification of legislations by improving clarity and reducing inconsistency. These include reforming business license regulations to be quicker, cheaper and more accurate; simplifying processes by allowing fulfillment of legal procedures over the internet; and enabling standard interpretation of investment regulations to allow for non-discriminatory bureaucratic discretion.
- **Principle 5: Build constructive stakeholder relationships.** Some economies have implemented measures to ensure high standards of corporate governance. They achieve this by providing a uniform and corruption free business environment, especially in the issuance of business permits, and by disseminating information and facilitating dialogues between international enterprises and civil society representatives to ensure mutual understanding.

In general, there is an overlap between all three principles in the area of governance. While good governance ensures adherence to laws and quality of contract enforcement hence contributing to principles 2 and 3, it is also dependent on clear communication, transparency and responsiveness to market and stakeholders’ needs, hence mirroring principle 5.

In assessing governance quality, based on the

World Bank’s World Governance Indicators covering 2000 to 2017, APEC made significant improvements in almost all indicators measuring the quality of governance. However, APEC scores were generally lower than the OECD, thus signalling room for improvement in this area.

**ISDS as an Instrument for Investment Promotion and Facilitation**

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Link: <https://www.apec.org/Publications/2019/11/ISDS-as-an-Instrument-for-Investment-Promotion-and-Facilitation>

This policy brief discusses investor-state dispute settlement (ISDS) as an instrument of investment protection and promotion, the current ISDS reform process and the way forward.

Findings & Recommendations

Investment treaties and ISDS

Investment protection is among the principles included under the 1994 APEC Non-Binding Investment Principles (NBIP) and the 2009 APEC Investment Facilitation Action Plan (IFAP) developed by APEC. Both the NBIP and IFAP include references to international arbitration as well as domestic judicial and other dispute settlement processes as part

of a broad approach to resolving investment-related disputes. The international arbitration component is often referred to today as ISDS.

International investment agreements (IIAs), including bilateral investment treaties (BITs) between two economies, regional investment treaties, and investment chapters in broader trade and economic agreements, are the major vehicles for introducing ISDS processes. Investment contracts between governments and foreign investors are a further vehicle for introducing ISDS. In some cases, governments also allow for ISDS in their domestic laws.

Most IIAs include a special provision known as the ISDS clause, main purpose of which is to provide a remedy to foreign investors for alleged breaches of their legal protection in the treaty (or contract when that is the case) that is independent of local courts.

It is important to separate the legal protection clauses and ISDS clauses. Some treaties may contain substantive clauses, but no ISDS provisions; this is now, for example, the negotiating instructions for the Regional Comprehensive Economic Partnership, or RCEP. Other treaties may exclude some of their substantive clauses from the scope of ISDS. Indeed, as the reform of early generation IIAs takes hold, there are multiple variations as to what is covered by the two types of clauses.

When ISDS is included in IIAs, there are two broad approaches to doing so. The initial generations were largely ‘minimalist’, with few procedural specifications, leaving most



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procedural matters to the applicable arbitration rules and the arbitrators' discretion. The more modern 'detailed' approach features a more sophisticated procedural regulation that adds to or modifies the applicable arbitration rules to set out clearer conditions for investors' access to ISDS and limitations on such access, and specifies which treaty provisions are covered.

## Global trends

In recent years, the domestic regulatory environment globally has been overwhelmingly friendly to FDI, with some 80% of the changes in domestic investment policies from 2000 to 2013 involving liberalization or promotion of foreign investment. However, at the same time, there have been more efforts by host economies to regulate the conditions for admission and operation of FDI, as governments move away from assuming that FDI has net benefits, and toward putting in place legislation that seeks to ensure this result. This has included many new environmental measures, as well as tax, community protection, employment and other measures aimed at ensuring equitable distribution of the benefits of FDI.

These measures, or other public policy measures taken by governments, have led to over 980 known ISDS cases since the first one in 1987. Most of these cases have occurred under older style first- and second-generation treaties rather than the newer generation, more refined treaty text. There is no data available as to how many have been

filed under investment contracts with ISDS provisions, as most of these take place with no public knowledge. The first ISDS case was filed only in 1987 and fewer than 50 cases had been filed before the year 2000, hinting that the increase in cases is a recent phenomenon. One possible reason is the proliferation of investment agreements, currently reaching almost 3,000 BITs, with approximately 96% of the 2,352 BITs currently in force still including ISDS provisions. In 2015, the number of ISDS cases being initiated reached a high of 83 cases, and governments in all parts of the world are being named as defendants in such actions. Increased awareness of the availability of ISDS procedures has most certainly led to greater use of the mechanism.

This growing global trend related to investor-state disputes increases a government's exposure (in terms of its public finance obligation) and is becoming a serious concern. ISDS claims could be triggered by a variety of policy measures, which raises the costs of regulation for governments. The International Institute for Sustainable Development (IISD) notes that until the late 1990s, the protection provisions under investment treaties were seldom invoked by investors; but in the last few decades, investors have increasingly used the investor-state arbitration process included in those treaties, arguing for violations of fair and equitable treatment, for instance.

The proliferation of ISDS cases is understood to have raised some unwanted side-effects in the form of expansive, and sometimes contradictory, interpretations of the

investment treaties, interpretations that have often shrunk the regulatory and policy space of the government. As a result, there has been a recent trend to review and recalibrate IIA and ISDS norms to strike the right balance between adequate protection for foreign investors and the host economy's need to maintain sufficient regulatory space in crafting public policy. In the APEC region, no less than eight economies have either announced their intention to reduce or eliminate their exposure to ISDS in the last two to three years, or to sign IIAs that in fact reduce or eliminate this exposure. As noted above, the RCEP, a treaty negotiation involving 12 APEC economies, is now proceeding with a commitment to not include ISDS provisions.

Within UNCTAD, there has been a series of IIA reform assessments and proposals. The UN Commission on International Trade Law (UNCITRAL) and the International Centre for Settlement of Investment Disputes (ICSID) are both looking at reform, in various degrees, of ISDS rules and processes. In short, ISDS reform is in full swing, and the final results are far from clear.

## Reforming ISDS

There are several options to reform ISDS: 1) limiting investor access to ISDS; 2) promoting negotiation and alternative dispute resolution (such as mediation and conciliation); and 3) preventing disputes. A recent report from IISD (2019) puts forward the pros and cons for several potential outcomes from the UNCITRAL Working Group III on ISDS

reform. The middle-ground outcome, the more likely outcome, would be to have procedural improvements in investor-state arbitration whereby economies agree on adopting a set of changes that would apply to how investor-state arbitration operates in practice. The appendix of the IISD report lays out the pros and cons of the middle-ground outcome.

Whatever the outcome from ISDS reform, domestic rule of law will always remain important for investors and the broader investment climate. Thus, ISDS reforms should consider the best solutions to be those that will also strengthen and complement the domestic rule of law.

## Possible way forward

ISDS reform could have an influential impact on investment protection and facilitation in the wider context of the policy arena. The outcome of the ISDS reform process, often portrayed as a balancing act between 'private sector rights' and 'public sector obligations', will affect at least two important dynamics: 1) impact on government policy space and domestic regulations; and 2) domestic judicial reform.

ISDS clauses were originally seen as both an investment protection and investment promotion measure, to provide assurance to foreign investors that their rights would receive adequate legal protection by providing access to international arbitration should investors have doubts about the domestic legal system. But the fact that some economies are

abandoning the ISDS clause altogether may lead to speculation that the sovereignty costs of signing BITs could be much lower if treaties do not provide investor-state arbitration. Aisbett et al. (2016) has found that while BITs stimulate bilateral FDI flows from partner economies, this relationship fails once a claim has been put forward. Once a claim is made, entry into force of new BITs no longer brings increased FDI flows.

As economies develop, the quality of their society and institutions also improves, and there is a trend toward greater awareness of the environment, health and sustainability issues, among others. Governments, as policymakers and regulators, need to address these public concerns in their respective domestic policies, including policies that govern investor conduct and responsibilities for existing and new investments. Indeed, the extent to which investor obligations might be considered is perhaps largely at the discretion of any given tribunal.

Based on an UNCTAD (2018) report on the outcomes of ISDS cases, the substantive issues being brought forward by claimants include government regulatory changes or modifications that resulted in tariff and financial incentive implications. Firms claimed that regulatory changes in the energy, transportation, telecommunications, pharmaceutical and water sectors affected their profitability and breached their respective international investment treaties. In addition, a few cases involved expropriation of investments.

In the context of growing regional investment initiatives and GVCs, patterns of FDI will shape global trade flows and economic growth quality at the domestic level with impacts on sustainable development, employment generation and technology transfer. The innovative and 'disruption' effect of e-commerce may further escalate the process, requiring host economies to carefully think about the kind of investment regime that they would like to foster in the coming years. Matching ISDS reform to new business realities as well as to the need for investment to respond domestically and internationally to climate change and other sustainability requirements, will be an important part of the reform process; and the design of new IIAs may reflect this.



APEC Economic Policy Report 2019: Structural Reform and the Digital Economy

Publication Number: APEC#219-EC-01.4  
Link: <https://www.apec.org/Publications/2019/11/2019-APEC-Economic-Policy-Report>

A flagship product of APEC Economic Committee (EC), the 2019 APEC Economic Policy Report represents the continued collaboration between EC and the Finance Ministers’ Process. The report contributes to some of the key focus areas of the APEC Internet and Digital Economy Roadmap (AIDER), and lays the foundation for APEC’s future digital economy work. It highlights key concepts, opportunities and challenges, including the need to accurately measure the digital economy.

Findings

Opportunities and challenges in the digital economy

APEC economies have different interests and priorities with regard to the digital economy. Due to its complex and multifaceted nature, it is challenging for APEC economies to agree on a single overarching definition of the digital economy. However, the present lack of consensus on a clear and specific definition should not prevent APEC from moving forward with work on the digital economy. Indeed, APEC fora are already devising workplans

to address digital economy challenges, and developing strategies to measure various aspects of the digital economy, based on AIDER.

In terms of opportunities, digital technology and tools are enabling the development of many new business models that disrupt traditional practices. Besides creating entirely new businesses and industries, digital technology and tools have brought benefits to traditional firms and individuals alike. For example, e-commerce has created an additional channel for firms of all sizes to market their products. While data analytics is arguably not a new phenomenon, advances in ICT have lowered the price of broadband subscriptions in many economies, as well as the cost of collecting and using data on a large scale. Firms now have greater connectivity and access to new ways of handling and deriving insights from data, turning it into yet another determinant of a firm’s competitiveness.

Just as the digital economy provides numerous opportunities, it presents significant challenges for policymakers, businesses and individuals. While data drive innovation and provide more opportunities, some fear that the increasing dependence of businesses and economies on data can result in data protection issues with potentially massive damage to the economy and consumer trust. The digital economy has made IPR protection more pertinent, but also more challenging.

Universal, reliable and affordable access to ICT is essential to participate in the digital

economy. Although more people can now access the internet and related technologies, there remain variation in access between and within economies. Furthermore, despite transactions being increasingly digitally-enabled, a significant proportion of products especially goods are yet to be digitally delivered. Access to reliable and resilient infrastructure such as roads are equally important to ICT, yet economies have often underinvested in them.

The digital economy has also led to the creation of new kinds of employment but these jobs require individuals to have the right skills. While some digital economy jobs do not require advanced ICT skills and provide more flexibility, there is a risk that such employment is creating a precarious class of on-demand or independent workers.

Maximizing the opportunities of the digital economy while overcoming its challenges require economies to take critical steps both in terms of measurement and structural reforms.

Measuring the digital economy

Statistics and indicators play an important role in evidence-based policymaking. Clear measurement frameworks, coupled with regularly updated and comparable data across economies and time can provide policymakers with a good overview of different areas relevant to the digital economy. However, measurement of various aspects of the digital economy is still a work in progress for many reasons.

Definition and measurement go hand-in-hand. Definition provides the scope of coverage and allows statisticians to come up with a corresponding measurement framework, but reaching consensus among different stakeholders is not an easy endeavor. Lack of an agreed definition leads to different measurement frameworks, and affects the comparability of statistics between economies and across years.

Definition aside, there are various challenges related to the technicalities of measurement itself that further complicate the process of establishing a feasible measurement framework. These include the lack of congruence between the System of National Accounts framework and emerging features of the digital economy, and correspondingly, inadequacies with existing measures such as GDP; difficulties in measuring services; barriers related to the sharing of available data; and the varying capacity of economies at different stages of development to collect data.

Although it is important to accurately measure digital and digitally-facilitated flows, it is equally important to measure digital transformation because it allows policymakers to better understand how digitalization is changing the economy and society as a whole and devise appropriate policy responses. On this front, gaps and challenges remain despite efforts by economies and various organizations in collecting and analyzing indicators to monitor the digital transformation.

The advent of the digital economy has brought with it new business models that have fundamentally changed the way that business is conducted and the products and services that are being traded. It is important that policies and regulations with implications for the digital economy are monitored.

Core structural reforms in the digital economy

Broadly understood, structural reforms remove structural barriers to improving access to economic opportunity. Core structural reforms undertaken by EC include those pertaining to competition policy and law, regulatory reform, ease of doing business and public sector governance. Each of these reforms can be applied to the digital economy opportunities and challenges.

Competition policy is one of the most critical of the structural reform areas for the digital economy. For instance, in the telecommunications sector, which represents the backbone infrastructure for delivering digital economy products and services, increased competition could lead to reduced prices and improved regional coverage. Up-to-date competition policies could also facilitate new market entrants and the uptake of new business models, while helping to ensure that digital technologies and tools are not exploited to the detriment of competition.

While technologies and business models are evolving rapidly, policies have had difficulty keeping up with the pace of change.

Complicating the situation is the different rates at which governments from around the world have been responding to the digital economy as well as the distinct approaches they have taken on similar issues. This suggests that APEC economies may wish to redouble their regulatory reform efforts to minimize the burdens on digital participants to the extent possible and increase international regulatory cooperation to ensure greater standardization and alignment of digital economy policies.

Efforts to promote ease of doing business are also important for businesses and entrepreneurs to reap the benefits of the digital economy. Despite laudable efforts by economies, more can be done to ensure that the business environment evolves together with the changing economy. Furthermore, although digital technology and tools have facilitated (i.e., digitally-enabled) transactions, a significant share of products are not digitally delivered. In fact, the digital economy has led to a boom in e-commerce and the consequent movement of small parcels across borders. While e-commerce is only one example, this shows that for the digital economy to operate efficiently, it is also important to address issues related to cross-border trade.

Governments can play an important role in charting the direction of the digital economy by applying digital technology and tools to improve public sector governance in various areas. They can also use them to enhance policy design, experimentation, implementation, monitoring and evaluation. In addition to harnessing technology and tools



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to improve their own services, governments can act as an agent of change by encouraging their increased use among the private sector and society as a whole. However, even as governments increasingly employ a range of technologies and tools, it is important that policymakers do not underestimate the risks and become over-reliant on them.

### Supplementing structural reforms

While advancements in new technologies and business models have led to more opportunities, industrialized and developing APEC economies have seen a downward trend in welfare to labor over time (in terms of growth in labor productivity and share of labor compensation in GDP). This indicates that inequality is increasing in the region.

The digital economy can have a range of impacts on inclusion, such as: 1) reduction in job and employment opportunities due to automation; 2) lack of skills for the new digital economy jobs among the population; 3) lack of access to infrastructure such as broadband internet to take advantage of the opportunities in the digital economy; 4) lack of technological diffusion to a larger number of firms; and 5) lack of access to social protection in the new gig/sharing economy jobs.

Recognizing that core structural reforms constitute only one aspect of structural-reform related work and should be complemented with other policies, EC produced a document in 2018 proposing three approaches that economies may take to better harness

structural reform to tackle complex challenges such as inclusive growth. This can entail: 1) making core structural reforms pro-inclusive; 2) undertaking structural reforms in specific areas to generate positive externalities such as human capital development, infrastructure and social security; and 3) ensuring that core structural reforms are aligned with other types of reforms and supporting policies.

These approaches are applied in the seven areas that are at the intersection between the digital economy and inclusion, namely, human capital development; social protection; infrastructure; fiscal policy; innovation; micro, small and medium enterprises (MSMEs); and gender.

### Optimizing structural reforms

Structural reforms need to be optimized to ensure their continued relevance. Prior to embarking on structural reform efforts, it is critical for economies to establish a baseline and identify their plans moving forward. Economies may wish to conduct a stocktake of those of their policies that are relevant to the digital economy to better understand the current gaps and challenges.

It is important for economies to recognize that implementing structural reforms is a process and not a one-off activity. Therefore, economies should ensure that policies and regulations are regularly reviewed and updated, particularly in light of the ever-shifting challenges posed by the digital economy.

When implementing policies, policymakers need to ensure that they are well-coordinated, coherent and complementary to one another. This necessitates that policymakers reach across traditional policy silos as well as across different ministries and levels of government to develop an integrated, whole-of-government approach to policymaking.

Although policies may be well-intended and targeted, achieving the desired outcome is not a given and could be affected by issues such as delivery mechanisms and resource availability. Communication is key to ensuring that all stakeholders understand how proposed policies and regulations will affect them and that they can access relevant information. Economies would also need to build monitoring and evaluation activities into the policymaking process.

### Recommendations

Based on the report’s analysis and bearing in mind their differing circumstances and levels of development, APEC economies can consider to:

- **Progress toward agreed definition(s) and clear measurement frameworks for the digital economy.** Definitions delineate the scope of coverage and allow statisticians to develop a corresponding measurement framework. Having baseline measures and data that can be tracked will allow policymakers to determine if policy objectives have been met or if adjustments should be made.

- **Develop and agree on policy-relevant indicators.** Besides measuring digital flows, it is important to monitor the pace of digital transformation. This will allow policymakers to better understand how digitalization is changing the economy and to devise appropriate policy responses. It is also important to monitor policies and regulations that have implications on the digital economy.

- **Get core structural reforms right with respect to the digital economy.** Core structural reforms in areas such as competition policy and law; regulatory reform; ease of doing business; and public sector governance can be applied to the digital economy’s opportunities and challenges.

- **Supplement core structural reforms.** The digital economy can impact inclusion across different areas, including destroying jobs and disrupting entire sectors of the economy. To promote inclusive growth, this report recommends two approaches from EC’s document on Structural Reforms for Inclusive Growth: Three Approaches, namely: 1) make structural reforms pro-inclusive by targeting areas such as education and skills, infrastructure and social security (approach II); and 2) implement supporting policies alongside core structural reforms (approach III).

- **Adopt a holistic approach to structural reforms for the digital economy.** When implementing structural reforms and

supporting policies, policymakers need to ensure they are well-coordinated, coherent and that they complement one another. For the digital economy to work seamlessly, it is important for economies to approach policy issues and objectives in a holistic rather than in a piecemeal manner. There is thus potential for greater cooperation on digital economy issues between APEC fora and the APEC Business Advisory Council.

- **Monitor trends and developments in the digital economy, including policy reforms, and adapt accordingly.** The digital economy is relatively new and in constant flux. Structural reforms and supporting policies that work today may no longer be appropriate in one to two years. Therefore, they should be continuously reviewed along with the trends and developments in the digital economy.

- **Leverage and contribute to regional cooperation.** Regional organizations such as APEC and their component fora can play an important role in facilitating discussion and knowledge sharing on best practices and innovative regulatory approaches to the emerging technologies and business models. APEC is well-placed to serve as a platform for identifying opportunities presented by the digital economy and advance progress on particular initiatives for cross-border collaboration. To avoid duplication and reinventing the wheel, APEC’s regional cooperation efforts should refer to relevant digital economy work of international organizations.

## Structural Reform Measures to Improve Women’s Access to Labor Markets, Finance, and Capital

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Link: <https://www.apec.org/Publications/2019/10/Structural-Reform-Measures-to-Improve-Womens-Access-to-Labor-Markets-Finance-and-Capital>

This report examines structural reform processes throughout the APEC economies to remove barriers to women’s access to labor markets, finance, and capital. It highlights the importance of sex-disaggregated data to inform policy change and evaluate policy effectiveness. Two case studies provide detailed information on the process to reform and adopt new policies. The report also provides recommendations to advance inclusive, transparent and efficient reform processes across APEC economies.

### Findings

**Access to labor markets.** Across the APEC region, discrimination against women in the labor market is rampant and causes women to forgo employment or promotions. Many economies have enacted legislation to prohibit discrimination in hiring, promotion, employment, and dismissal.

In several APEC economies, regulatory restrictions on the types of work women may perform restrict women’s ability to



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pursue employment in certain sectors. Such restrictions limit women’s opportunities to participate in and contribute to the economy; they also reduce the pool of qualified job seekers for employers to hire. Nonetheless, several APEC economies have removed labor restrictions for women. Economies have looked to international standards and comparative economies to develop regulations that protect female workers during pregnancy or following childbirth.

Several APEC economies have recently reformed existing equal pay policies, shifting from a focus on guaranteeing equal pay for men and women doing the same work, to specifying that pay equity means equal pay for work in a female-dominated profession with a comparable male-dominated profession. Several economies have formed task forces or special commissions to engage key labor market stakeholders as an integral part of developing equal pay legislation.

Access to affordable, quality childcare is crucial for enabling parents to remain in the workforce and for mothers in particular to return to work following childbirth. Governments take different policy approaches to make childcare more affordable, including tax write-offs or direct funding for childcare, while others partner with the private sector to increase the supply of childcare services.

Flexible work arrangements increase women’s labor force participation by allowing women to remain in the workforce while meeting family responsibilities. Several APEC economies have

laws permitting flexible work arrangements, which include teleworking, flexible work time, and job sharing. Several economies have organized stakeholder consultations or invited representatives from the private sector and employees to develop flexible work arrangement policies.

**Access to finance and capital.** Policy, practical, or cultural barriers impede women’s access to financial services. Limited access to finance restricts women’s participation in the economy and broadbased economic development. APEC economies have adopted financial inclusion policies to advance access to financial education and financial products and services. Several economies have conducted large-scale financial inclusion surveys and stakeholder consultations to inform the development of their financial inclusion policies.

Women have more limited access to assets across APEC economies due to regulations or practices, as well as men’s and women’s differences in earnings. Assets are used as leverage to access credit and make investments; thus, because the assets that women own are limited, their access to finance is curtailed. Most APEC economies have longstanding regulations and policies in place promoting equal access to assets and capital.

Because women own less immovable property, which financial institutions traditionally require as collateral, women have more limited access to finance. To improve the willingness of financial institutions to lend to borrowers

with limited traditional collateral, APEC economies have reformed and modernized the reliability and accessibility of movable collateral registries, as well as the depth and breadth of credit bureaus.

Women business owners largely operate small, sometimes informal enterprises, which are often too risky and costly for financial institutions to serve. APEC economies have enacted policies to support women’s entrepreneurship through credit facilities, set-asides in public procurement for women owned businesses, and entrepreneurship training programs.

Recommendations

Recommendations to advance inclusive, transparent, and efficient reform processes across APEC economies are:

- Seek high-level government support to sustain the structural reform process. Leadership is critical.
- Identify champions across the government to drive the reform.
- Form an interagency committee to coordinate reform efforts across the government.
- Establish a clear structure and mandate for the actors involved in the reform effort.
- Engage with the ministry of women (or a similar domestic agency) at an early stage of the reform.

- Establish a system to share progress on the reform with the general public.
- Collect and analyze sex-disaggregated data to inform the policy reform process.
- Engage with a wide range of stakeholders at different stages of the reform process.
- Include key stakeholders in negotiating and designing policy change.
- Enable the private sector to develop pilot programs and test out new policy ideas.
- Engage with peer economies in international meetings, study visits, and knowledge exchange.

**APEC’s Ease of Doing Business: Final Assessment 2015-2018**

Publication Number: APEC#219-SE-01.7  
Link: <https://www.apec.org/Publications/2019/08/APEC-Ease-of-Doing-Business-Final-Assessment-2015-2018>

The final assessment of APEC’s Ease of Doing Business (EoDB) Second Action Plan 2016-2018 takes into account indicators released by World Bank in the five priority areas of: 1) Starting a Business; 2) Dealing with Construction Permits; 3) Getting Credit; 4) Trading Across Borders; and 5) Enforcing Contracts. It compares the figures obtained

by APEC in 2018 to those registered in the baseline year 2015 to determine if APEC’s combined performance achieves the overall target of 10% improvement across all priority areas for the period 2016–2018.

Findings

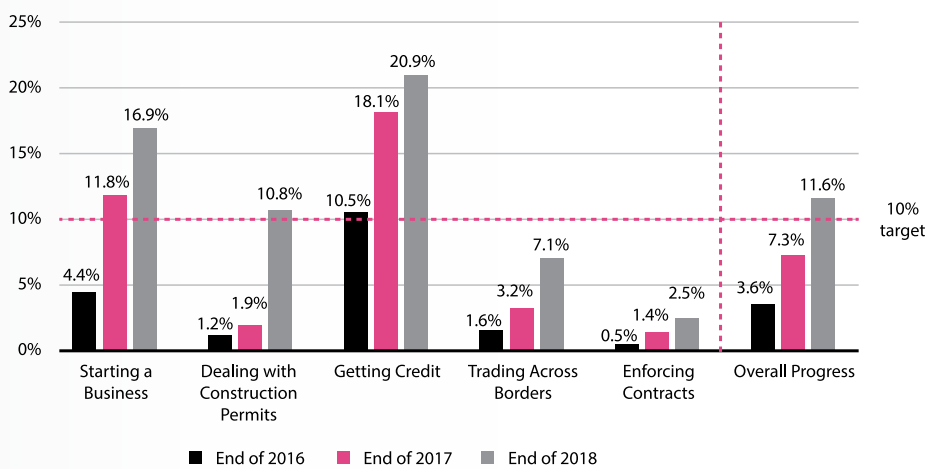
Based on **average values**, APEC achieved its 10% improvement target with a combined progress equal to 11.6%. Progress was made in all priority areas year by year, but only three achieved the target of 10%, namely: Getting Credit (20.9%), Starting a Business (16.9%), and Dealing with Construction Permits (10.8%).

Falling short of target were Trading Across Borders and Enforcing Contracts. Notwithstanding, the former showed substantial progress at 7.1%; and while the latter made the least progress, the APEC region advanced much more in this area in the three years of EoDB Second Action Plan (2.5%; years 2016–2018) than in the seven years of the First Action Plan (0.4%; years 2009–2015).

There was remarkable progress in several indicators under each priority area:

- **Starting a Business.** Average time to start a business went down by more than five days (from 16.1 to 10.9 days). Only one APEC economy still required a paid-in minimum capital as a condition to start a business.

APEC - Accumulated Overall Progress in the Ease of Doing Business Initiative (Average Values: Years 2016–2018)



Source: APEC PSU calculations using data from the World Bank, Doing Business 2017, 2018 and 2019 databases.

Structural Reform

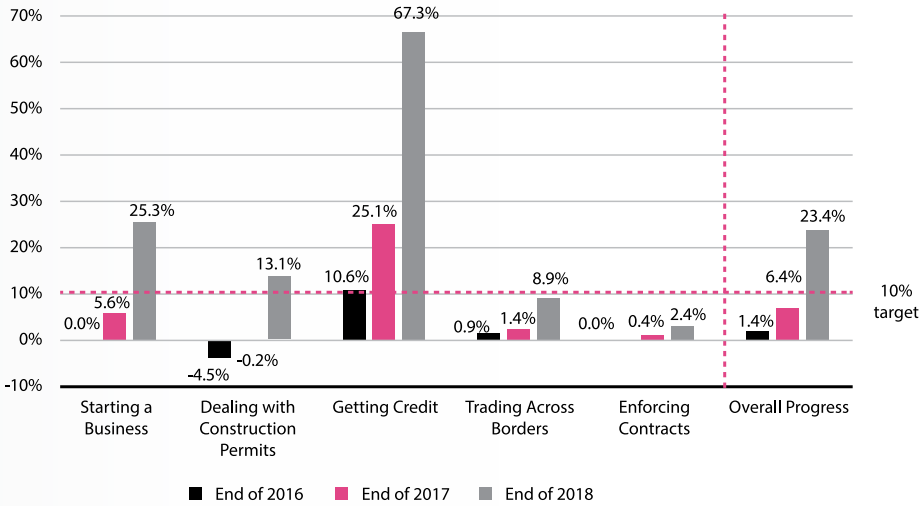
- **Dealing with Construction Permits.** Significant improvements in all indicators – average time to obtain a permit reduced by almost 10 days (from 139 to 129.2 days), and building quality control features enhanced.
- **Getting Credit.** Stronger legal rights and deeper credit information systems – coverage of adult population with their credit information available in public registries or private bureaus increased on average from 73.7% to 78.2% in three years.
- **Trading Across Borders.** Both average time and cost needed to export and import improved – almost 7 days faster to export and 8 days faster to import than in 2015; and average cost to import to and export from the APEC region declined by 5.4% and 4.0%, respectively in the last three years.
- **Enforcing Contracts.** More than a third of APEC economies experienced an improvement in the perceived quality of their judicial processes.

Based on **median values**, APEC’s combined overall improvement was 23.4%, exceeding both the EoDB initiative’s improvement target of 10% and APEC’s overall average improvement of 11.6%.

Progress in APEC’s median performance was mostly a result of improvements in the indicators of Getting Credit (67.3%) and Starting a Business (25.3%). Those of Dealing

with Construction Permits also surpassed the 10% improvement goal at 13.1%. Similar to APEC’s average performance in Trading Across Borders and Enforcing Contracts which did not meet the target, collective median performance in the indicators of the former reported a 8.9% progress; as for the latter, the 2.4% progress was nonetheless impressive given that only a 1.1% improvement was registered during the First Action Plan.

APEC - Accumulated Overall Progress in the Ease of Doing Business Initiative (Median Values: Years 2016–2018)



Source: APEC PSU calculations using data from the World Bank, Doing Business 2017, 2018 and 2019 databases.

It was evident from the average and median values of APEC’s progress that most of the incremental change took place in 2018. The fact that there was more progress in median values than average values in all priority areas, except Enforcing Contracts, also suggested that improvements were likely due to collective efforts of several APEC economies. Had median values been much lower than average values, much of the progress would probably be due to positive changes in just a few APEC economies.

Recommendations

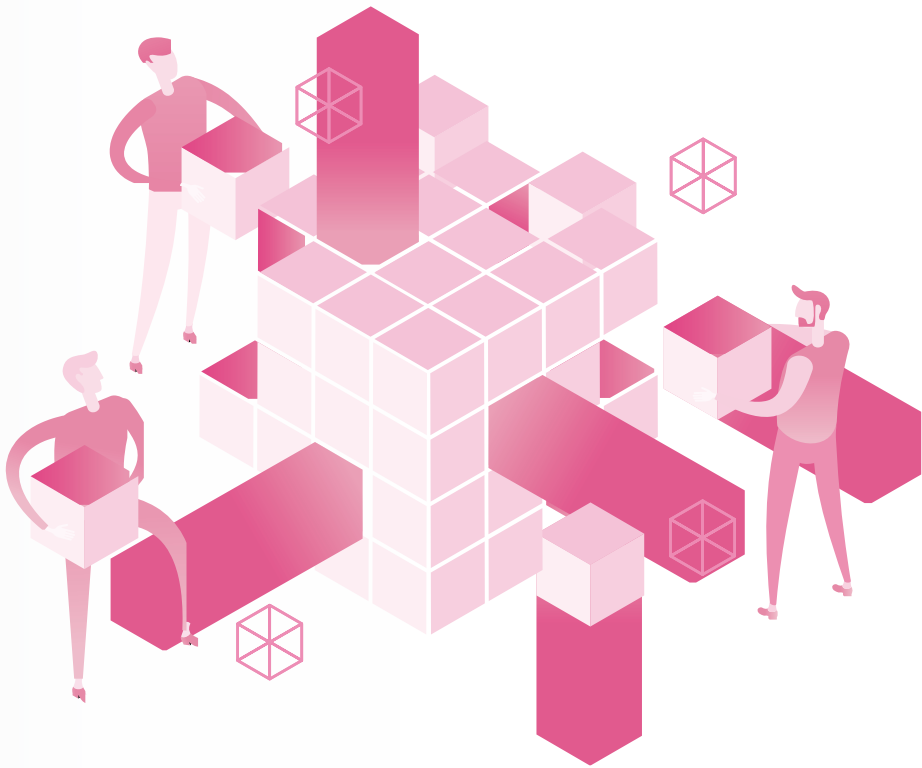
APEC achieved the 10% improvement target of the EoDB Second Action Plan by the end of 2018, but there is more that APEC economies can do to facilitate business conditions since progress

was uneven across all priority areas. There is room for improvement even in areas that achieved the target. For instance, in Starting a Business, the time to start a business within the APEC region ranges from 0.5 day to 24.5 days, and in Dealing with Construction Permits, the minimum number of documents required to obtain a construction permit in an APEC economy is 10, higher than the seven documents required by the Marshall Islands. Likewise, in Getting Credit, only 10 out of 21 APEC economies have public registries or private bureaus with credit information available on their entire adult populations.

It is important that APEC economies continue implementing reforms and policies to improve their performance in several Ease of Doing Business areas. Considering the difference in situation and characteristics of each economy, it will be challenging to provide ‘one-size-fits-all’ recommendations. Notwithstanding, it is worthwhile for APEC economies to examine measures of economies that have been successful in advancing toward making it more efficient to do business. Some examples include facilitating information exchange between business registry and tax authorities; increasing transparency of relevant fee schedules and requirements for construction permits; guaranteeing borrowers’ right to inspect personal data; developing electronic document processing systems to streamline export and import documentary compliance; and providing tax exemptions for arbitrators and mediators.

Capacity building activities will be useful in closing the gap across economies. Such pursuits are very relevant to APEC since they will complement economies’ efforts in implementing the Renewed APEC Agenda for Structural Reform (RAASR) aiming to strengthen economic resilience.

Given the admirable progress achieved between 2015 and 2018, APEC should keep the momentum going by discussing what can be done to further improve the business environment. Some possibilities are for APEC to extend an initiative similar to the Second Action Plan and/or work on selected former and new priority areas. Other options include a new initiative complementing and going beyond Doing Business indicators by focusing on sustainability of regulatory reforms, better regulation and implementation of reforms.



# Connectivity Including Supply Chain Connectivity & Global Supply Chains

## APEC Supply-Chain Connectivity Framework Action Plan (SCFAP) 2017-2020: Interim Review of External Indicators

Publication Number: APEC#219-SE-01.20  
Link: <https://www.apec.org/Publications/2019/10/APEC-Supply-Chain-Connectivity-Framework-Action-Plan-2017-2020>

The interim review looks at APEC’s progress in addressing the five chokepoints of the second phase of SCFAP-II by tracking changes in external indicators assigned to each chokepoint since the last update in 2017. The five chokepoints are: 1) lack of coordinated border management and underdeveloped border clearance and procedures; 2) inadequate quality and lack of access to transportation infrastructure and services; 3) unreliable logistics services and high logistical costs; 4) limited regulatory cooperation and best practices; and 5) underdeveloped policy and regulatory infrastructure for e-commerce.

### Findings

APEC’s overall performance was relatively mixed – promising results for chokepoints 1 and 2, rather mixed results for chokepoints 3 and 5, and less favorable results for chokepoint 4.

- **Chokepoint 1.** Improvement in all external indicators for this chokepoint except the amount of physical and multiple inspections.
- **Chokepoint 2.** Positive change in all relevant indicators.
- **Chokepoint 3.** Some APEC averages concerning efficiency have improved, while others measuring timeliness of shipments, ease of arranging competitively priced shipments, and tracking of consignments have worsened albeit minimal.
- **Chokepoint 4.** Deteriorating performance in three out of the four indicators for this chokepoint with one of them dropping by 23%.
- **Chokepoint 5.** Significant progress in UNCTAD B2C e-commerce index, but declining performance in UPU postal index.

Review of APEC’s progress in SCFAP-II has identified a number of key policy issues and challenges to improving supply chain connectivity, among them are:

- **Adoption of automation.** Automating customs and other border management processes can improve supply chain visibility and efficiency. The World Bank data shows that full-time automated processing systems for customs agencies have shorter border compliance time to

export – at less than 50 hours, compared to almost 100 hours when there is no such system. Notwithstanding, digitizing of procedures across the supply chain brings its own set of challenges.

- **Harmonization of regulations, standards and legislation.** Harmonization of regulations and standards reduces the amount of time spent on checks at the border. Lack of harmonization of procedures not only increases the time spent at the border, but also prevents economies from implementing an interoperable single window system. Harmonization of e-commerce legislation in certain key areas such as cybercrime and electronic signature will also strengthen the regional economic integration process.
- **Logistics skills.** Lack of qualified logistics staff is a key challenge faced by businesses along the supply chain. Being a relatively labor-intensive industry, the performance of logistics staff is important to maintaining the quality of service.
- **Financial constraints.** Lack of funds to develop the necessary infrastructure and train logistics-related labor pose constraints to achieving smooth supply chain functions. While public-private partnership to fund infrastructural development is one recommendation, some projects may be less easy to finance or implement depending on the monetary,

social or political risks involved. Retaining workers after training can also be difficult given the low status and earnings of logistics-related jobs.

- **Resilience of supply chains.** Domestic and global supply chains have been hindered by natural disasters and cyberattacks. Damages caused to physical infrastructure by such calamities and to digital infrastructure through cybercrime have become an increasing concern among respondents to the Logistics Performance Index survey. Firms have a lot to do in improving their cybersecurity and making their supply chains more resilient to such threats.

## Peer Review and Capacity Building on APEC Infrastructure Development and Investment: Indonesia

Publication Number: APEC#219-SE-01.14  
Link: <https://www.apec.org/Publications/2019/11/Peer-Review-and-Capacity-Building-on-APEC-Infrastructure-Development-and-Investment-Indonesia>

This report captures the results of a peer view conducted on the institutional set-up, policies and practices (including relevant laws, regulations and guidelines) related to infrastructure development and investment,

specifically in the toll road and clean water sectors in Indonesia. It also suggests capacity building activities based on the needs identified from the peer review.

### Findings

#### Development and investment of infrastructure in Indonesia

- **Private participation.** Investment needs for infrastructure development for the period 2020–2024 is estimated to reach USD 425 billion, with 59% of investment value financed by SOEs and private sector. Private sector involvement accounts for only 21% of infrastructure investment realized from 2015 to 2018. Private entities participating in infrastructure projects are mainly SOEs.
- **PPP schemes.** Private sector currently participates in infrastructure development and investment through KPBU or B-to-B scheme. Between 2015 and 2018, there were 73 KPBU projects with a total value of USD 30.2 billion. (KPBU, referring to cooperation between government and business entities in infrastructure provision, can be solicited and unsolicited and may include projects with/without government support and/or guarantee. B-to-B, referring to partnership between a private entity and SOE, does not enjoy any government support or guarantee and is seen mainly in the water and electricity sectors.)

- **PPP regulations.** Notable improvements, mainly through Presidential Regulation no. 38 of 2015, include: 1) inclusion of social infrastructure; 2) stronger government support through mechanisms such as the viability gap fund (VGF), project development facility (PDF) and availability payment; and 3) government’s provision of funds for land acquisition for infrastructure projects. The regulation further supports unsolicited projects through the ‘right-to-match to the best bidder’ incentive.
- **Government financing initiatives.** Currently depends on fiscal financing and loans for infrastructure projects; other financing instruments used include asset-backed securities, limited equity funds, perpetuity notes and infrastructure investment fund; two SOEs established for infrastructure project financing and advisory services; and Non-Government Budget Investment Financing program launched in 2016.
- **Government support on financial feasibility.** Improvement of financial feasibility of PPP infrastructure projects through mechanisms such as PDF, VGF and availability payment; provision of regulatory support in procurement and land acquisition; and establishment of Indonesia Infrastructure Guarantee Fund in 2009 to mitigate government-related financial risks.
- **Progressive in PPP.** Indonesia ranks third and second in the number and value of PPP



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projects, respectively in the region. Notable progressive action in land acquisition financing – State Asset Management Agency established and mandated to provide land funds for infrastructure construction in National Strategic Projects (PSN), and risk-sharing arrangements increasingly improved to match those provided by others in the region.

### Toll road development

- **Lagging toll road development opens up PPP opportunities.** Total toll road length in Indonesia is approximately 1,600 km, and proportion of toll road length to total area stands at only 0.08%. There is need for infrastructure development in provinces with low toll road coverage to improve accessibility and connectivity.
- **Improved governance may further support PPP implementation.** Law no. 38 of 2004, separating the role of regulator and operator in road projects, helps lessen the complexity of bureaucracy in toll road projects that could lead to regulatory disputes between stakeholders in the central- and regency-level road development.
- **High private participation, mostly SOEs.** Solicited PPP scheme remains the most frequently used, and only two projects involve the direct assignment method. Unlike water projects that use VGF and PDF, toll road projects under PPP agreements are

facilitated by financing guarantees from the Indonesia Infrastructure Guarantee Fund.

### Clean water development

- **High demand for PPP clean water projects.** Demand for clean water is projected to increase to 11.15 billion cubic metres in 2035. B-to-B is the most common partnership contract in the clean water provision sector.
- **More challenges dealing with regional governments.** PPP in the water sector deals with PDAM in the case of a district-level project or its regional counterpart, PDAB, in the case of a project at the regional or provincial level. Project approval may take a long time if local legislative bodies are not involved right from the preparation stage.
- **Government support and additional schemes.** Most KPBU clean water projects receive government support in addition to government guarantees. Two PPP schemes are also used in the sector: build–operate–transfer (BOT) and BOT plus.

### Quality of infrastructure standards in PPP regulation and implementation

- **Strong alignment with existing rules, but can be improved.** There is room for improvement in the misalignment between VGF criteria and the initiative

on implementing the best value method and two-stage bidding process. To date, a project’s winning bid is determined only by a detailed service requirement or output specification and a minimum price or minimum government support (VGF), hence an urgency to incorporate VfM measurement in determining a project’s life cycle cost.

- **Safety is yet to be enforced and supervised well.** There is no clear and comprehensive description that PPP regulations need to consider safety and resilience issues beyond the requirement that the preparation stage must consider risk management when preparing the outline business case; also a need for enforcement of safety rules and better supervision of operation and maintenance by the government contracting agency (GCA).
- **GCAs lack expertise in VfM principles.** PPP project selection should be based on VfM principles but GCAs often lack knowledge and skill in employing public sector comparator and VfM analyses, hence an urgency of capacity building in this area.
- **Improve environmental impact assessment and disaster risk management.** Relevant PPP regulation requires pre-feasibility study and preparation of outline business case to include environmental and social assessments. To achieve better quality standards, there is a need to improve

environmental impact assessments and disaster risk management, and for a clear plan for force majeure mitigation.

- **Improve consideration of local resources and ownership and responsibility.** Existing PPP regulations do not clearly state the consideration of local resources and ownership and responsibility. There is a need to recognize that in project planning, there should be more balance between local and private sector involvement and ownership, and to assess and address social impacts.
- **Develop institutional environment to further support private participation.** Current PPP regulations focus more on the early stage of a partnership (preparation and transaction of PPP projects), and tend to overlook issues that might arise during contract implementation or project completion (e.g., no dispute resolution mechanism in PPP regulations).

### Major issues to consider in increasing private participation

Six major issues to address in creating more incentives for private participation in infrastructure development and investment in Indonesia: 1) lack of PPP awareness in the government (executive and legislative branches, and among law enforcement officers); 2) proclivity of the government to change regulations that affect PPP

agreements; 3) delays in land acquisition due to land disputes and incomplete land documents; 4) public distrust over private sector involvement in operating and managing public services, especially in the water sector; 5) partiality shown by local banks toward SOEs by offering preferential interest rate; and 6) lack of interest among foreign investors in greenfield PPP that require expensive funding and carry connectivity and land acquisition risks.

### Main challenges to PPP implementation

Challenges include: difficulties associated with the need to seek approval for a PPP project at the provincial/district level due to decentralization policy in Indonesia; inefficiencies in reimbursement process for land acquired for PPP projects; unfair risk sharing when there is a delay in land acquisition reimbursement with the private sector bearing the risk; and use of minimum price (after satisfying the output specification) in procurement rather than the best value method due to GCAs lack of understanding of public sector comparator (PSC) or VfM.

### Recommendations

To accelerate PPP implementation in Indonesia, the suggested recommendations are:

- **Improve efficiency in bureaucracy and regulation.** Improve PPP awareness in

the government by promoting capacity building, in particular on the concept of VfM, and lessen complex bureaucracy due to decentralization in water projects by addressing inefficiencies in the institutional processes related to infrastructure project development.

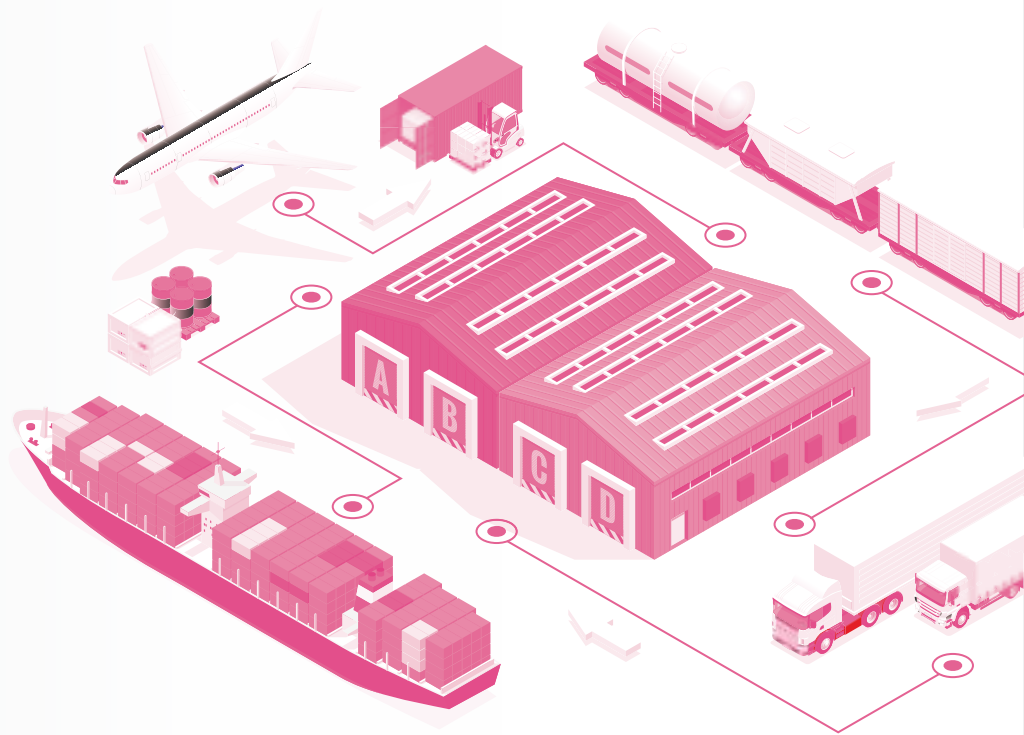
- **Accelerate government support and facilities.** Further increase infrastructure development by enhancing implementation of hybrid or blended financing; also need for more government guarantees to increase investors’ appetite for Indonesia’s PSN in the long run.
- **More efficient land acquisition process.** Address administrative issues that delay reimbursing private investors for land acquired by them, and develop an integrated online system for land acquisition as well as strengthen the role of the Commitment-Making Officer in providing better administration service.
- **Strengthen PPP contract.** Consider these issues when developing a PPP contract or agreement to encourage higher private sector participation: 1) vulnerability of contract to political changes; 2) need to incentivize private entities by allowing them to internalize any gains made through their own efficiency efforts after the signing of contract; and 3) enforcement of contract.
- **Improve risk mitigation strategy.** Address

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high potential uncertainty during project implementation by re-evaluating current risk mitigation strategy, and implement relational contracts that allow internal or non-court renegotiation when unforeseen risks happen.

Proposed capacity building areas are:

- **VfM.** Technical capacity building in the development of quality infrastructure with an underlying focus on VfM and life cycle cost, particularly to build a common understanding on VfM and PSC; also to address how to go beyond minimum standards and toward higher quality to achieve optimal life cycle cost.
- **GcAs especially for regional governments.** Need for a PPP node or center (simpul KPBU) particularly in the municipal government to oversee and coordinate strategic regional government initiatives; also for more institutions in charge of PDF to help GCAs increase their effectiveness in preparing and implementing PPP project transactions. The PPP Joint Office should provide training facilities for capacity building.



# Economic & Financial Analysis

## APEC Regional Trends Analysis

This biannual report provides an overview of the APEC region’s economic prospects through an in-depth analysis on recent macroeconomic and financial developments and also trade and investment trends and measures recently implemented by APEC economies. Each report also carries a theme chapter which looks at current pertinent issues facing the region.

### May 2019 – APEC at 30: A Region in Constant Change

Publication Number: APEC#219-SE-01.5  
Link: <https://www.apec.org/Publications/2019/05/APEC-Regional-Trends-Analysis---APEC-at-30>

### Findings

#### APEC at 30: A Region in Constant Change

- APEC was formed in 1989 to develop ‘a capacity for analysis and consultation on economic and social issues, not as an academic exercise but to help inform policy development’. It was also meant to serve as a platform to voice out future trade issues rather than engaging in harmful forms of retaliation.
- The first APEC Ministerial Meeting (AMM) held in November 1989 was attended by the 12 founding member economies: Australia; Brunei Darussalam; Canada; Indonesia; Japan; Korea; Malaysia; New Zealand; the Philippines; Singapore; Thailand; and the United States. Seven

projects were endorsed during the second AMM in 1990, covering areas such as trade and investment, technology transfer, telecommunications, marine resource conservation, and human resource and skills development.

- Since APEC’s founding, the region has experienced massive changes.

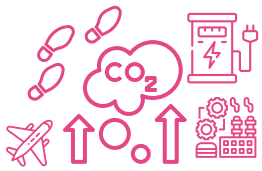
Since APEC was formed, the region’s economy has expanded by leaps and bounds	Real GDP in the APEC Region	1990	2018
		\$23.5 trillion	\$66.2 trillion
Trade has been a key driver of growth, while new technologies have pushed the boundaries of the global economy	Current Value of APEC Trade	1989	2018
		\$3.1 trillion	\$24.0 trillion
This led to growing average incomes, vast reductions in poverty and a growing middle class	Real Per Capita GDP in the APEC Region	1990	2018
		\$10,300	\$22,000

- But this growth has not been shared equally.

#### Long-term trends are towards widening income gaps



Between 1990 and 2015, average real monthly income per person among the poorest 5% of the population increased by \$50, while it increased by almost \$3,000 among the richest 5%.



Despite the use of more environment-friendly technologies, the region’s carbon footprint continues to grow.

# Economic & Financial Analysis

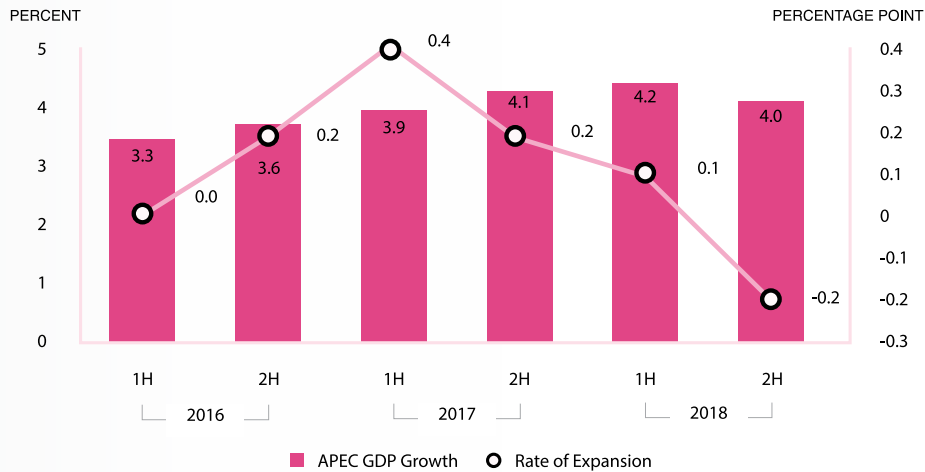
- APEC declarations have reflected the region's focus as well as its changing priorities over the last three decades: the thrust toward globalization and economic liberalization in the 1990s, concerns about human security and terrorism in the 2000s, the drive toward environmental sustainability and inclusion in the 2010s, and addressing the impacts of a digital economy in more recent years.
- Thirty years ago, APEC stood on the cusp of a changing world, one that was about to be more globally integrated and connected than ever before. It took a holistic approach to economic policy cooperation that addressed both cross-border and behind-the-border issues, meeting these challenges through regional cooperation, multilateralism and the incubation of new ideas.
- The region faces unprecedented challenges in the coming decades with rising inequality, unabated damage to the environment, and digital disruptions. APEC will need to strengthen the spirit of 1989—cooperative, holistic and innovative—if it is to step up to the challenges of the next 30 years.

## Sustaining APEC Growth: A Delicate Balancing Act

- The global economy grappled with heightened policy uncertainty in 2018, marked by trade tensions that translated into the imposition of tariffs and counter-measures. The adverse impact of trade

tensions is reflected in the uneven growth across APEC economies in 2018, even as the region posted a modest GDP growth of 4.1% in 2018 from 4.0% in 2017.

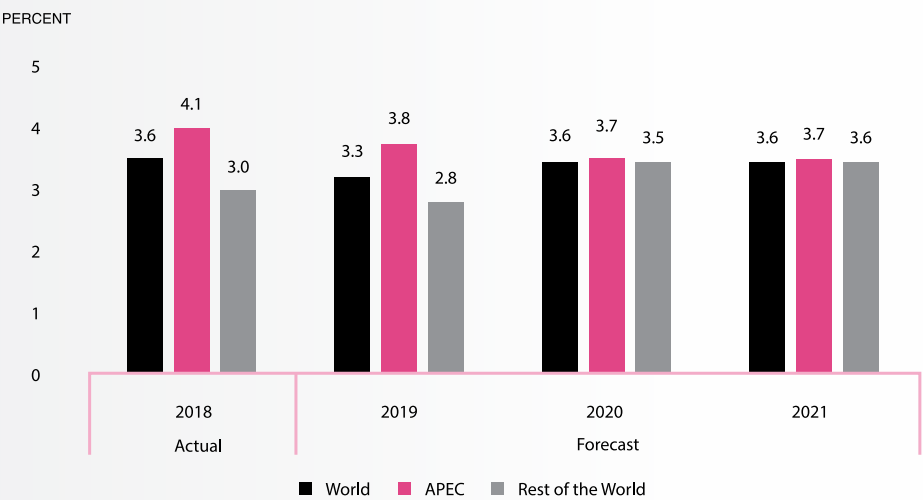
### APEC GDP growth continues to moderate as uncertainty intensifies



Source: Economy sources; APEC PSU calculations.

- However, the rate of economic expansion has slowed in APEC. The steady deceleration in GDP growth starting in the second half of 2017 coincided with the announcement of trade-restrictive measures in the third quarter of 2017, escalating into the imposition of tariffs and counter-measures in 2018.
- Trade performance in the APEC region was also negatively affected, with growth in the value and volume of merchandise trade declining in 2018 compared to 2017. In particular, the volume of merchandise exports was significantly down to 4.1% in 2018 after a strong recovery to 6.2% in 2017 from the level in 2016.
- Accompanying weaker trade growth is an increase in the number of trade-restrictive measures implemented by APEC economies during the period mid-October 2017 to mid-October 2018 compared to previous periods, equivalent to 59.7% of total trade and trade-related measures.
- In the short term, over the period 2019-2021, the APEC region is expected to grow at a slower pace, in line with global trends. In 2019, APEC is projected to grow by 3.8%, notably lower than the 4.1% GDP growth in 2018, with the rest of the world (non-APEC economies) slowing down to 2.8%.

### APEC GDP growth is expected to slow down in the short-term in tandem with global growth



Source: IMF WEO database (April 2019); APEC PSU calculations.

- Risks remain tilted toward the downside, largely emanating from trade tensions that could undermine further global trade, investment and output; and policy uncertainty, including trade policies and prolonged Brexit negotiations that could negatively affect investor confidence. A greater-than-expected economic slowdown in China could also impact on global growth and APEC growth in particular, with repercussions to its partner economies via channels such as trade, investment and tourism. The upside potential for growth could come from the quick and positive resolution of trade tensions that should significantly reduce uncertainty.
- For the APEC region, sustaining economic growth amid trade tensions and policy uncertainty while having to contend with idiosyncratic factors is a delicate balancing act that requires implementing measures to support continued expansion while ensuring that growth remains sustainable and inclusive.
- Thus, it is timely to revisit the APEC Strategy for Strengthening Quality Growth 2015-2020. APEC has the unique advantage of being comprised of members from different income groupings and in various stages of economic, financial and technological development. This affords APEC a deeper understanding of the appropriate and feasible initiatives and policy reforms that need to be implemented to ensure that growth is not only sustained at a higher level but also that economic gains are widely shared, with social programs for the marginalized and vulnerable.





November 2019 –  
Counting What Counts

Publication Number: APEC#219-SE-01.17  
Link: [https://www.apec.org/  
Publications/2019/11/APEC-Regional-Trends-  
Analysis-Counting-What-Counts](https://www.apec.org/Publications/2019/11/APEC-Regional-Trends-Analysis-Counting-What-Counts)

Findings

Counting What Counts

- Gross domestic product (GDP) is an estimate of the value of all goods and services produced within an economy. GDP and its related concepts, such as economic growth and productivity, dominate policy discussions and are often used as a proxy of a government’s performance.
- Like any source of data, GDP has its blind spots and limitations. It is an incomplete measure of the economy, and falls short on many aspects of economic production and interaction. It does not tell us anything about the quality of goods and services produced, the distribution of economic benefits, the environmental costs of economic activity, or the increasing importance of data in the digital economy. GDP does not provide much insight into human wellbeing.
- GDP represents one important aspect of economic success, but it is not the only one. Reducing all economic policy discussions to their impact on GDP growth is an oversimplification of complex economic interactions and impacts. It renders all

other attributes of the economy – such as distribution, inclusion and sustainability – as secondary considerations to maximizing output.

- Alternatives to GDP have been proposed, and some are in use by economy and sub-economy jurisdictions. However, none of them approach the importance given to GDP in shaping economic decisions and policy discussions.

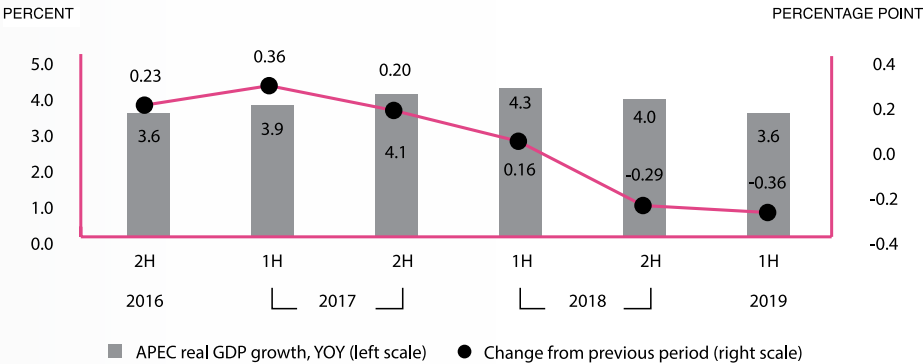
- APEC Leaders have been calling for balanced, inclusive, sustainable, innovative and secure growth since 2010, and alternative measurements are needed to track progress and inform policy. Discussions on improving current data and developing new ones are already happening in various APEC fora.

- Regional cooperation was crucial in turning GDP from a research institution’s concept to the global standard of empirical economics today. As an incubator of ideas, APEC can contribute to this conversation on developing measures of wellbeing beyond GDP and in line with Leaders’ priorities beyond 2020.

Slower Growth, Bigger Challenges

- Tensions in trade and technology along with Brexit-related issues have fueled uncertainty, which in turn, has dampened confidence resulting in a pullback in investment and consumption spending, thereby slowing down global economic activity.
- In APEC, the uncertainty on the external front has translated into a general moderation in growth.

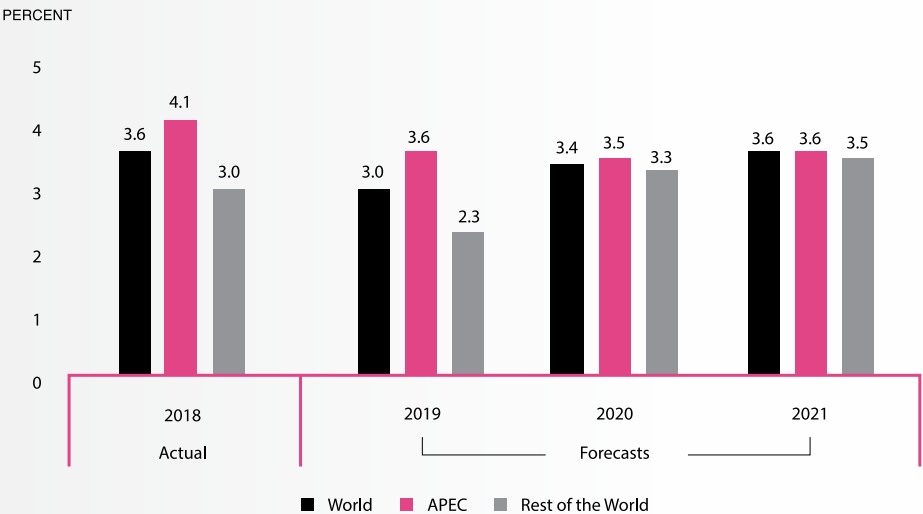
GDP growth for January-June 2019 was 3.6%, down from January-June 2018 GDP growth of 4.3%. APEC has been growing at a decelerated pace since the second half of 2017, coinciding with the onset of trade tensions



Source: Economy sources; APEC PSU calculations.

- APEC economies continued to rely on household spending as the main driver of growth, but this slowed down in the first half of 2019, while investment growth was flat and most APEC economies recorded negative net exports.
- Given conditions of elevated uncertainty, the APEC region is expected to continue to grow but at a moderated pace in the period 2019–2021, in tandem with the global economy. Risks of a further escalation in trade and technology tensions remain, which could further weaken the global economy.

APEC GDP growth is expected to moderate in 2019-2021, in tandem with the global economy



Source: IMF WEO database (October 2019); APEC PSU calculations.

- Downside risks could also come from a build-up in financial vulnerabilities as investors increase their risk-taking activities amid prolonged low levels of interest rates. Other contributing factors include the possible deterioration in business and consumer sentiments, the continued downward trend in inflation, and concerns about the medium- to long-term repercussions of climate change.

- For too long, economies have depended on domestic consumption and trade to propel growth. These past few years, APEC and the global economy have learned that these sources of growth could prove unreliable amid a situation of heightened uncertainty.
- Policymakers need to balance between supporting economic growth on the one hand and managing financial conditions on the other amid the prevailing environment of uncertainty. In the short term, addressing uncertainty means resolving trade and technology disputes by going back to the negotiating table to find immediate solutions. In the medium to long term, economies should look at other sources of growth beyond domestic consumption and global trade.
- If there is one lesson to be learned from the current global economic situation, it is that economies need to channel their efforts toward structural reform measures that improve individual lives by facilitating access to economic opportunities for a wider segment of society, including women and vulnerable groups, so that economic growth benefits all in the long term.

**APEC Financial Inclusion Capacity Building Package – Synthesis Report**

Publication Number: APEC#219-SE-01.22  
Link: <https://www.apec.org/Publications/2019/10/APEC-Financial-Inclusion-Capacity-Building-Package---Synthesis-Report>

This report provides a background on financial inclusion in APEC economies as well as the opportunities and risks of fintech. It distils inputs from APEC economies on their challenges, responses, and capacity building needs with respect to financial inclusion and consumer protection. It also discusses the role of regional cooperation and APEC in promoting financial inclusion through fintech around the region.

Findings & Recommendations

- Among the key challenges and priorities identified by economies in using financial innovation to promote financial inclusion are in the areas of:
  - Regulatory and institutional reform and balance
  - Ensuring access to financial services
  - Improving financial literacy and skills
  - Consumer protection and law enforcement.
- Economies have tested various approaches to address their challenges and achieve their policy priorities. These approaches

- include:
- Policy strategies at the economy and sectoral levels
  - Regulatory sandboxes and incubators
  - Promoting the use of digital payments
  - Promoting financial literacy
  - Enacting competition and consumer protection policies.
- Some key areas identified by economies that may benefit from capacity building are:
    - Finding the right policy approach and regulatory balance, including ways to address trade-offs and mitigate risks in a fast-changing digital economy
    - Upgrading skills for financial regulators specifically:
      1. Regulation in a digital financial ecosystem
      2. Software programming and code analysis
      3. Big data analytics and management
      4. Regtech and suptech
      5. Use and application of distributed ledger technologies
      6. Rigorous policy analysis
    - Bridging the digital divide and ensuring a holistic approach to financial inclusion.
  - Regional cooperation has a strong role to play in financial inclusion through:
    - Sharing of experiences and best practices by economies
    - Leveraging on the work of international organizations
    - Working with other APEC fora for knowledge creation, data and policy harmonization, and finding joint

- solutions to regional challenges.
- Financial inclusion initiatives today need to keep up with the changes that technology brings, which have dramatically and automatically transformed businesses and people’s lives. Technology can open opportunities for greater financial inclusion by enabling financial institutions to provide services to a wider geographical area at a lower cost, not only complementing efforts at financial literacy but also contributing to the expansion of financial services in rural and remote areas.
  - Technology-based financial innovations are here to stay. Economies need to know what to adopt, when to adopt, and how to adopt innovative financial technologies. Although different economies would have varying approaches to financial inclusion, having an evidence-based and regional capacity building package could help them to develop appropriate financial inclusion strategies that consider economic conditions and development priorities.



**The APEC Women and the Economy Dashboard 2019**

Publication Number: APEC#219-SE-01.15  
Link: <https://www.apec.org/Publications/2019/10/The-APEC-Women-and-the-Economy-Dashboard-2019>

The Dashboard provides a snapshot of the status of women in the APEC region. It measures the progress of women’s economic engagement and women’s inclusion in systems, institutions and markets by tracking the movement of a set of indicators in recent years. The indicators are classified into five priority areas, namely: 1) access to capital and assets; 2) access to markets; 3) skills, capacity building and health; 4) leadership, voice and agency; and 5) innovation and technology. Twenty-two dashboards were prepared – one for each of APEC economy and another for the APEC region as a whole – covering data available during the period 2008-2018.

Findings

Information collected for the 2019 Dashboard shows general improvements, both significant and incremental, particularly in women’s access to capital, assets, technology, institutions and markets over a period spanning at least 10 years. There remain a need to address structural barriers and policy gaps to encourage greater economic participation of women.

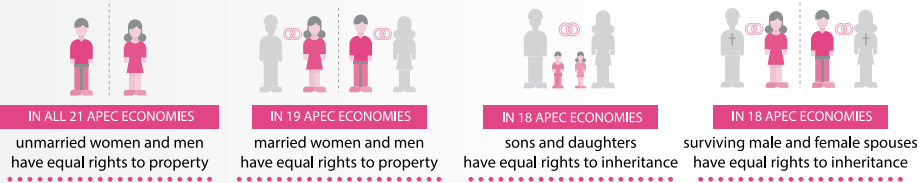
In particular, measures implemented by APEC

- economies have resulted in either consistently strong performance or marked improvements in these areas:
- Property and inheritance rights for women have remained high and at par with men in majority of APEC economies.
  - Most APEC economies have put in place laws prohibiting discrimination in the hiring process based on gender, penalizing the dismissal of pregnant women, and providing maternity leave. In addition, since 2013, women in all APEC economies are allowed to work the same night hours as men.
  - Unemployment rate for women has declined over the years, albeit incrementally.
  - In terms of trade inclusiveness, access of domestic companies to international markets is on an upward trend, which is beneficial for women business owners and entrepreneurs.
  - Women are increasingly closing the gap with men in terms of educational attainment.
  - In most APEC economies, women are protected by laws against domestic violence, reinforced by the existence of specialized courts and/or procedures for such cases.
  - Women’s participation in both agency and courts systems is consistently high across

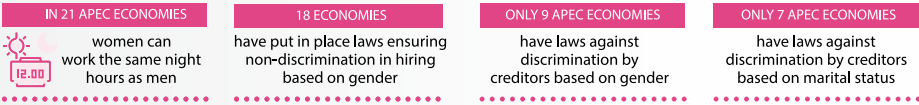
- the APEC region.
- Women’s use of the internet for transaction purposes has been going up in tandem with men’s internet usage, supported by increased affordability and efficiency of online services.
- There are still policy gaps and structural barriers that serve to limit women’s economic engagement:
- APEC women’s access to credit is constrained by creditors’ discrimination based on gender and marital status.
  - Prevailing inadequacy in reporting mechanisms covering micro and retail loans translate into insufficient information on credit profiles and borrowers’ creditworthiness, which could adversely affect women’s access to credit and SME operations.
  - Conditions for career advancement in the region have remained weak and unchanged over the years. Less than half of APEC economies have enacted laws that guarantee a woman’s return to an equivalent position after maternity leave; mandate equal pay for men and women doing work of equal value; and grant paid or unpaid parental leave and tax deductions for childcare payments.
  - Prevalence of anemia among women of reproductive age (15-49 years old) has steadily worsened over the years.

# Sustainable Economic Development

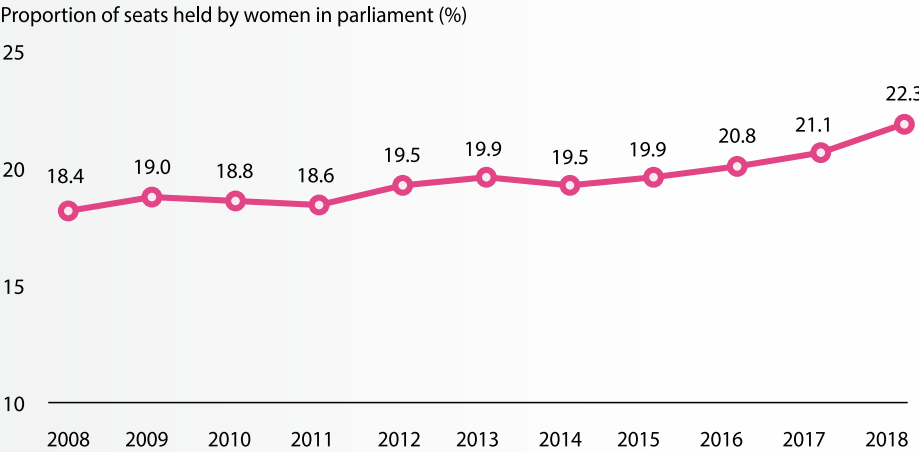
## Women’s property and inheritance rights remain high...



## Women’s access to labor markets has improved in the APEC region...



## In terms of political participation, there is a continued dearth of women in leadership roles



- Participation of women in political leadership has been low over the years, with both the proportion of seats held by women in parliaments and the measure on the parity with men at the highest levels of political decision-making peaking at 20-22% for the period 2008-2018.

## Recommendations

Some recommendations are:

- Initiate more cross-fora collaboration within APEC. Implementing reforms in areas aforementioned not only relies on the institutions in charge of women’s issues, but also on others such as those dealing with labor and education, finance and health.
- Capacity building initiatives targeting statistical institutes and women-related government institutions to produce sex-disaggregated data in different areas. While the availability of statistics on gender issues has improved significantly in recent years, data gaps still exist such as the lack of updated data in the areas of skills, capacity building and health, and innovation and technology. For instance, only few APEC economies reported on the percentage of female graduates in STEM fields, thereby limiting the Dashboard’s potential to provide an informed picture of the status of women in the region and restricting policymakers’ ability to design effective policies.

- Continue reviewing the list of indicators to ensure the Dashboard is adjusting to the times and covering relevant areas to measure women’s participation in the economy and society. APEC could review indicators on the physical infrastructure situation in rural and urban areas such as improved water resource facilities. While there were steady progress in these indicators from 2008 up to the latest available data in 2015, there have been no dataset since then.

- Monitor pertinent digital-related data to come up with broad trends on the level of digital adoption across the region and its effect on women’s opportunities. APEC economies could consider collecting data on the state of digital infrastructure in their economies: speed and reliability of internet connections, number of men and women accessing online banking or financial accounts, and reasons for using the internet.

- Continue efforts to pursue effective change to benefit women’s economic opportunities. This means going beyond the data and enacting not just new regulations, but also enforcing them properly. In some cases, the situation de jure may differ from what is de facto happening. There is a need to do more to change cultural and social misconceptions on the role of women in society, and to conduct more campaigns to raise awareness of the problems brought about by gender stereotyping.





**Recognizing Sustainability in Tourism**

Series: Policy Brief No. 26  
Publication Number: APEC#219-SE-01.2  
Link: <https://www.apec.org/Publications/2019/02/Recognising-Sustainability-in-Tourism>

This policy brief addresses the issue of greenwashing by examining the use of environmental certifications and of accreditation in regulating these certifications. It also looks at the possible role APEC can play in this.

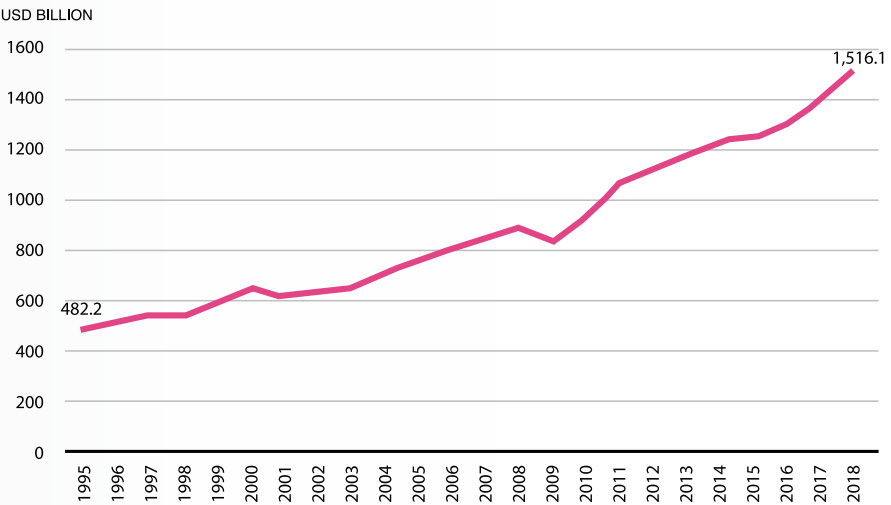
Findings & Recommendations

Growing demand for sustainable tourism

The vast improvements in connectivity and globalization as well as greater prosperity have led to tremendous growth in the tourism industry during the last two decades. Between 1995 and 2018, direct contributions of tourism to GDP increased by 214% from USD 482.2 billion to USD 1,516 billion. Moreover, the tourism sector created 18.8 million new jobs in the region during the same period, which is an increase of 50%.

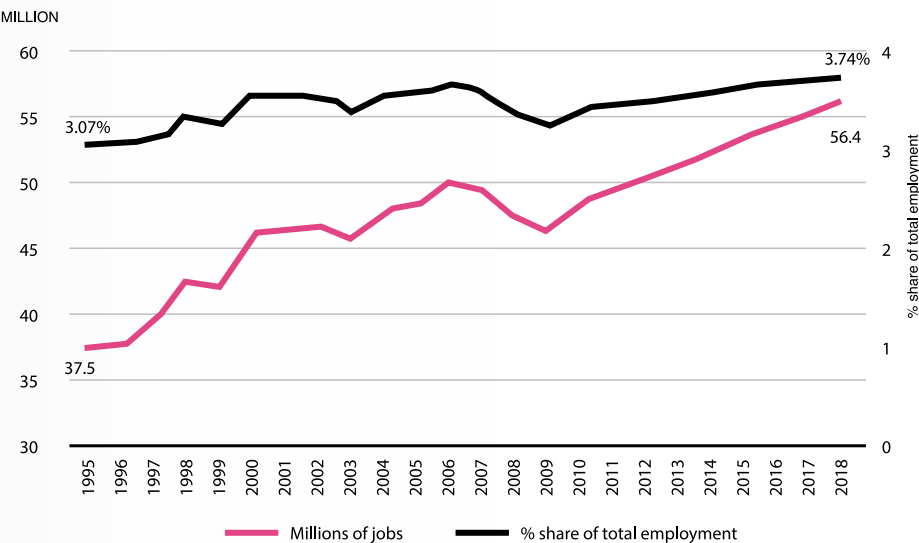
Sustainable tourism in particular has gained popularity in recent years. According to a survey done by Mandala Research (2016), 60% of travellers have taken at least one sustainable holiday between 2013 and 2015. Moreover, a 2016 GlobalData consumer

Tourism’s direct contribution to GDP in APEC



Source: World Travel and Tourism Council

Tourism’s direct contribution to employment in APEC



Source: World Travel and Tourism Council

survey found that 35% of travellers were likely to book sustainable holidays.

The rising demand for sustainability is not specific to the tourism industry but part of a larger movement toward a greener economy. The percentage of consumers willing to pay more for sustainable options had increased by 11 percentage points between 2014 and 2015 and stood at 66% in 2015. These trends suggest that the high demand for sustainable options in the tourism industry may continue.

Misleading environmental claims: the problem of greenwashing

The increased demand for sustainable goods and services has been met with the rise of greenwashing, that is, unjustified or exaggerated claims of sustainability by businesses to gain greater market share. According to Dahl (2010), greenwashing has existed since the late 1980s but has worsened recently due to increasing demand for sustainable alternatives. In 2009, TerraChoice, an environmental marketing firm, noted that more than 90% of sustainability claims in product advertisements were false. The tourism industry similarly suffers from misleading advertisement.

The problem of greenwashing also arises to some extent out of the difficulty of regulating the green and tourism industries. According to Font (2002), there are three reasons for this. The first is that there is little agreement on what constitutes sustainable tourism, which hinders policy formation. Secondly, the tourism

industry’s cross-border nature obstructs effective regulation since rules cannot be applied beyond government boundaries and, as a result, environmental advertising regulations vary across economies. Thirdly, most environmental regulations tend to be inadequate or casually enforced.

Solution to greenwashing

Environmental certificates or ecolabels can be used to assess, monitor and provide written assurance of the business, its products, processes and management systems once specific requirements have been met. However, environmental certificates that are used as a measure to promote sustainable production and consumption by policymakers have grown to an unmanageable number. According to Yeo and Piper (2011), 40 out of the 340 international environmental certificates recognized by the World Resources Institute in 2010 were specific to the travel industry. This number has now increased to over 150. These certifications vary in quality, contents, criteria and scope, thus causing great confusion among consumers and businesses.

Accreditation plays a crucial role in sorting this confusion by ensuring competency of certification schemes and credibility of standards by certifying the certifiers. It is a process carried out by an authoritative body to certify that a business can conduct its tasks competently. Green Globe was one of the first international organizations to develop sustainability certification for tourism in 1993 in efforts to attain greater harmonization.

The Green Globe Accreditation was then established in 2002 to ensure consistency in the assessment services of certification bodies.

Building on the original developments of Green Globe, the Global Sustainable Tourism Council (GSTC) was founded in 2007 by the UN World Tourism Organization, UN Environment Programme, Rainforest Alliance and UN Foundation. As an independent NGO, the GSTC plays the role of a global accreditation body for sustainable tourism certification programs based on the GSTC Criteria and is recognized as a global authority in managing standards for sustainable tourism. While an accreditation body like the GSTC can create a basis for international standards and provide clarity and comparability in the sea of environmental certificates, there are some downsides of getting drawn into the process.

Role for APEC

Given the significant contribution of tourism to APEC’s GDP and employment, there are considerable benefits of investing in a more sustainable industry. While the APEC Tourism Working Group (TWG) has been conducting substantial work to support the transformation of the industry into a more inclusive and sustainable one, there was not much work on sustainability standards specific to the tourism industry and more could be done toward filling this gap. APEC could look at the undertakings of other international and regional organizations. For instance, ASEAN has developed seven tourism-based standards as of 2018, including

# Sustainable Economic Development

the ASEAN Green Hotel Standard and ASEAN Clean Tourist City Standard. To encourage compliance to these standards, ASEAN also introduced the Tourism Standard Awards to recognize outstanding tourism destinations and businesses.

A starting point could be to facilitate knowledge sharing and cross-fora collaboration between TWG and the APEC Sub-Committee on Standards and Conformance to gather information on the practices of APEC economies in formulating and managing standards in the tourism industry. Having these standards can facilitate the development of appropriate solutions to greenwashing and promote sustainable tourism in the region.

### Compendium of Policies and Preventive Measures to Reduce Land-based Marine Debris in APEC Economies

Publication Number: APEC#219-SE-01.21  
Link: <https://www.apec.org/Publications/2019/12/Compendium-of-Policies-and-Preventive-Measures-to-Reduce-Land-based-Marine-Debris-in-APEC-Economies>

This compendium provides a snapshot of policies and preventive measures currently in place in APEC economies to reduce the entry of plastic waste into the sea.

**Findings**

Marine debris (or marine litter) can be defined simply as ‘litter that ends up in oceans, seas, and other large bodies of water’. It is estimated that 80% of all marine debris is made up of plastics, a non-biodegradable, synthetic organic polymer. Additionally, about 80% of plastic waste in the oceans comes from land-based sources. Marine debris has been recognized as a growing concern globally with impacts on economies, the environment, and potentially, human health.

Preventive measures in this context are those that aim to reduce the amount of marine debris and contributing materials. Areas covered include waste management measures, land-based and sea-based marine debris preventive measures, marine debris monitoring, and current measures for plastic waste.

Overall, APEC economies have implemented a wide range of measures, including both regulatory and non-regulatory instruments, to manage marine debris pollution. The main findings are:

- [Summary of measures, policies and initiatives implemented by APEC economies](#)
- Most economies have established general management of domestic and industrial waste. They have regulations on proper waste management, anti-littering, and prevention of dumping of waste on land (especially beaches) and/or at sea from any ship or vessel.

- With legislation in place, several economies have implemented enforcement regimes that are essential to preventing marine debris pollution. Enforcement efforts target sources of pollution, including industries such as fishery and aquaculture, and even landfill sites near rivers.
- Many economies have implemented economy-wide policies to prevent marine debris pollution through the 3Rs (reduce, reuse and recycle) and reduction of plastic usage.
- Many economies have developed waste management services or infrastructure at strategic locations (such as harbors, ports or villages) and they provide transportation of waste from remote islands to the mainland for disposal and treatment.
- Many economies encourage collaboration and partnerships between the public and private sectors to promote clean-ups, education campaigns, and innovation in alternatives to plastic.
- Most economies provide funding for academia to conduct research on marine debris, including monitoring and clean-up. In some cases, subsidies are provided to local governments to set up waste management infrastructure (recycling stations).
- Research conducted by most economies focus on the impact of marine debris, typically microplastics, its distribution, its

impact on biodiversity and health, as well as monitoring methods.

- Many economies conduct beach clean-up activities as a remedial measure, and some economies clean up marine debris floating on the sea or even those on the seabed (underwater). These activities are targeted at polluted areas and require collaboration among local governments, voluntary groups and public institutions.

### Gaps in marine debris prevention

- **Regulatory framework.** There is a need for stricter enforcement, especially aimed at the source of the marine debris (e.g., fisheries or illegal dumping). More has to be done to develop laws specific to the management of plastic waste and recycling.
- **Institutional framework.** There is no clear institutional framework for creating a detailed economy-wide action plan to implement new policies, infrastructure (municipal or recycling facilities), education, research, funding and communication across various relevant stakeholders.
- **Collaboration.** New policies and measures on marine debris may suffer from a lack of engagement by and constructive feedback from stakeholders during the design and implementation stages.
- **Innovation.** Despite the gradual restriction and ban of plastics in many economies,

there is a lack of innovation on alternative materials.

- **Awareness.** There is an absence of targeted awareness-raising across known marine debris sources, such as industry sectors (e.g., fisheries, aquaculture or tourism) or community groups (e.g., in rural or coastal areas).
- **Remedial measures.** There is still a lack of coordinated efforts and planning for marine debris clean-up activities, including clean-up protocols, guidance on methodologies and centralization of marine debris data.
- **Monitoring.** Many economies employ manual counting during beach clean-ups, which suggests the need for more effective and efficient monitoring systems and wider adoption of current technologies.

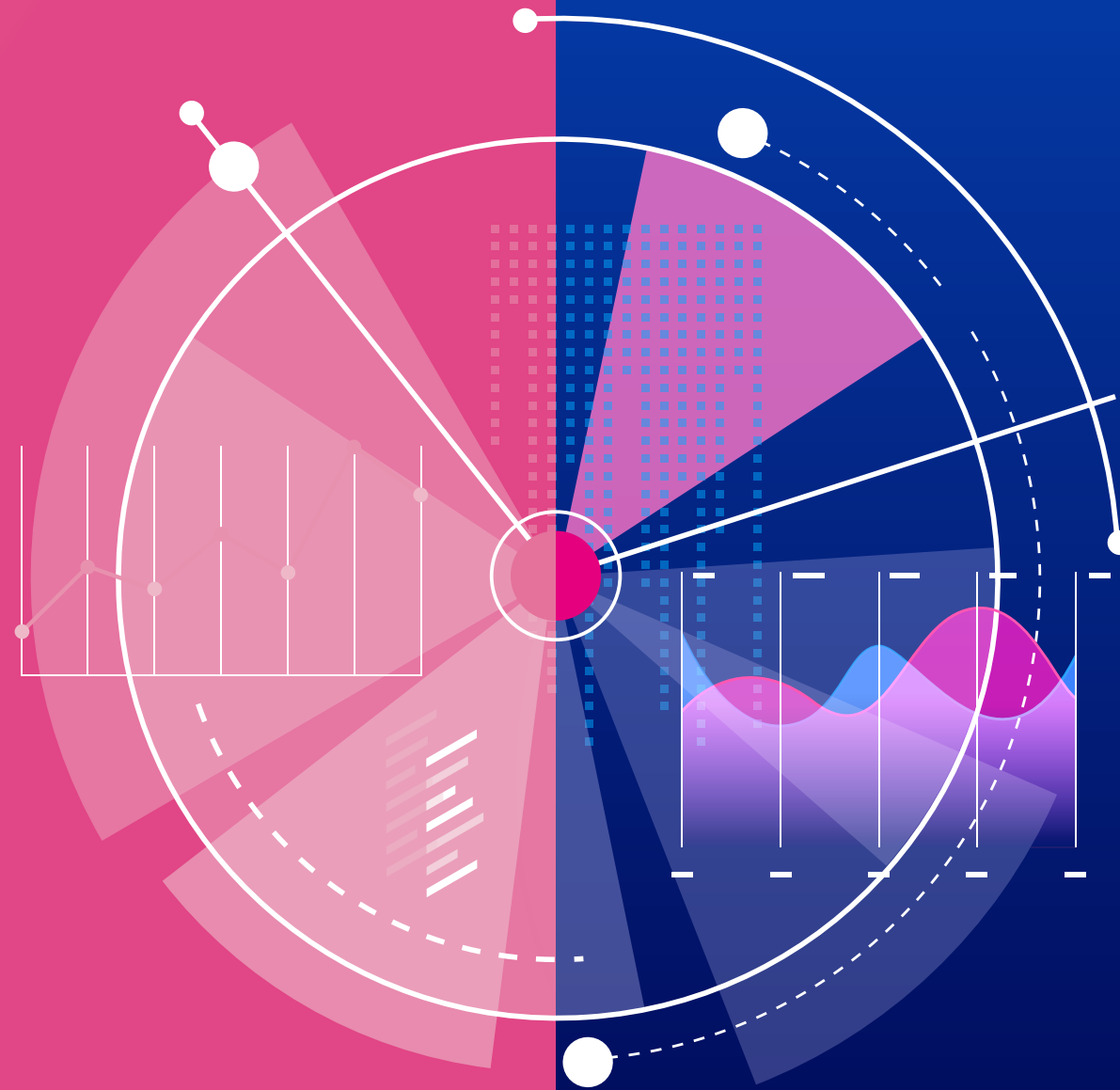
**Recommendations**

There exists substantial room for improvement among APEC economies. Stronger enforcement of legislation is necessary with greater collaboration across different levels of governments, agencies, organizations and experts. Several economies have imposed restrictions on the use of plastics, but there is a lack of innovation on alternative plastics; similarly, improved waste segregation systems are in place but there is a lack of awareness or incentives to practise recycling. There is also a need to explore and adopt new technologies for marine debris monitoring to improve data and enable development of informed policies.



**StatsAPEC** is APEC's statistics portal with data dating back to APEC's inception in 1989. It consists of the Key Indicators Database and Bilateral Linkages Database. The Key Indicators Database includes over 120 GDP, trade, financial and socio-economic indicators, allowing for an analysis of trends across a number of topics. The Bilateral Linkages Database facilitates detailed analysis of trade flows between APEC economies and within APEC. APEC aggregates are available for most indicators in StatsAPEC, making it easy to examine the region as a whole.

StatsAPEC is available at [statistics.apec.org](https://statistics.apec.org) and is optimized for use on mobile devices.







**Asia-Pacific  
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