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APEC Services Competitiveness Roadmap Mid-term Review

APEC Policy Support Unit

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KEY ABBREVIATIONS

ABAC	APEC Business Advisory Council
ABTC	APEC Business Travel Card
AIDER	APEC Internet and Digital Economy Roadmap
APEC	Asia-Pacific Economic Cooperation
ARFP	Asia Region Funds Passport
ASCR	APEC Services Competitiveness Roadmap
BMG	Business Mobility Group
CBPR	Cross Border Privacy Rules
CTI	Committee on Trade and Investment
DESG	Digital Economy Steering Group
EAASR	Enhanced APEC Agenda for Structural Reform
EC	Economic Committee
ESAP	Environmental Services Action Plan
EU	European Union
EWG	Energy Working Group
FATS	Foreign affiliate trade in services statistics
FDI	Foreign direct investment
FMP	Finance Ministers' Process
FTA	Free trade agreement
GATS	General Agreement on Trade in Services
GOS	Group on Services
GVC	Global value chain
HRDWG	Human Resources Development Working Group
ICT	Information and communication technology
IEG	Investment Experts' Group
ILO	International Labour Organization
ITU	International Telecommunication Union
MRA	Mutual recognition arrangements
MSAP	Manufacturing Related Services Action Plan
MSME	Micro, small and medium enterprise
NGeTI	Next Generation Trade and Investment issue
OECD	Organisation for Economic Co-operation and Development
PPFS	Policy Partnership on Food Security
PPSTI	Policy Partnership on Science, Technology and Innovation
PPP	Public-Private Partnership
PRP	Privacy Recognition for Processors
PSU	Policy Support Unit (APEC)
RAASR	Renewed APEC Agenda for Structural Reform
RTA	Regional trade agreement
SME	Small and medium enterprise
SMEWG	Small and Medium Enterprises Working Group
STRI	Services Trade Restrictiveness Index
TELWG	Telecommunications and Information Working Group

TiVA	Trade in Value Added
TPTWG	Transportation Working Group
TVET	Technical and vocational education and training
TWG	Tourism Working Group
WTO	World Trade Organization

EXECUTIVE SUMMARY

Overview

- Services are critical for most economies as they provide the bulk of economic output and employment. They provide access to necessities like water, food, and electricity; uplift the quality of life through healthcare, education, and entertainment services; and keep the world connected – even in the midst of the COVID-19 pandemic – through vital telecommunications, transportation, and logistics links.

- APEC Leaders have long recognized the importance of services in APEC. In 2016, APEC Leaders endorsed the APEC Services Competitiveness Roadmap (ASCR) and its corresponding Implementation Plan. The Roadmap sets out three overarching targets to be achieved by 2025.

- A combination of actions at different levels are needed to progress towards these targets. APEC economies have agreed on 19 APEC-wide actions, with various fora assigned to spearhead progress in these action areas. The PSU is tasked to complete a Mid-term Review in 2021 to measure progress towards the ASCR.

- This mid-term review (MTR) serves as a barometer to measure APEC's progress; gives APEC an opportunity to reflect on the challenges and opportunities posed by the COVID-19 pandemic; and presents some learning points to recalibrate and steer ongoing work towards the ASCR.

Approach to Assessment

- This MTR leverages both quantitative indicators and qualitative information to measure progress towards implementing the ASCR in a more holistic approach.

- The quantitative assessment relies on indicators presented in the ASCR Baseline Indicators Report, welcomed by SOM in 2017. The qualitative component uses information directly provided by fora and economies in various documents such as the consolidated matrix of actions, survey questionnaire circulated as part of the review, as well as economies' individual action plans (IAPs) under the Renewed APEC Agenda for Structural Reform (RAASR).

Progress on Overarching Targets

- APEC has mixed progress in ensuring an open and predictable environment for access to services markets. Data from the OECD services trade restrictiveness index (STRI) show that progress has been uneven across sectors. Additionally, APEC underperformed compared to the OECD across all services sectors covered in the World Bank/WTO STRI.

- While APEC's commercial services exports between 2016 and 2019 increased from USD 1.95 trillion in 2016 to USD 2.31 trillion in 2019 in nominal terms, this increase was outpaced by the growth experienced by the rest of the world. Hence, APEC's share of global services exports dropped from 38.8 percent in 2016 to 38.1 percent to 2019.

- Although the compound average annual growth trade (CAGR) for services trade for 2016–2018 reached 7.4 percent, trade tensions in 2019 as well as the impact of the COVID-19 in 2020 dampened the CAGR for 2016–2020, which is projected to be lower than the historic average of 6.8 percent. Nevertheless, APEC's average GDP share of value-added in the services sector in 2019 is still higher than the global average (65.7 percent versus 65.0 percent), albeit with a smaller margin than in 2016.

- While APEC has made efforts to work towards the ASCR, APEC is lagging behind some of the overarching targets. This setback would likely be intensified by the COVID-19 pandemic, thus underscoring the need for APEC to recalibrate its targets or intensify efforts and cooperate towards these goals.

Highlights from APEC-wide Actions

- Action #1: Enhancing the critical role of trade in services in global value chains, including through increased participation of MSMEs and women, under the agreed Strategic Blueprint for Promoting Global Value Chains Development and Cooperation (Accountable fora: CTI)
    - Services such as logistics, maintenance and business services are especially critical to the functioning of global value chains (GVCs). In the context of APEC, this mission of enhancing the role of services takes on added significance of contributing to inclusive growth, especially among micro, small, and medium enterprises (MSMEs) and women, considering that many MSMEs and two-thirds of women are engaged in services activities.
    - Over the years, APEC has introduced many initiatives to support GVC development and to promote the role of services in GVCs, including the APEC Strategic Blueprint for Promoting Global Value Chains 2020–2025 (Blueprint 2.0). It has also undertaken many activities such as workshops and seminars to support the implementation of these initiatives.
    - While APEC's efforts are commendable, mixed results regarding MSMEs' engagement in GVCs showed that there is a need to focus efforts on this front.

- Action #2: Supporting cross-border mobility for professionals, building on initiatives such as the APEC Architects and Engineers Registers to facilitate mutual recognition arrangements (MRAs) (Accountable fora: HRDWG)
    - Economies could improve labor market efficiency, productivity and further stimulate trade by enhancing cross-border labor mobility. One way to do so is through the mutual recognition of professional standards.
    - APEC has undertaken many activities to inform research and policy decisions. These include studies and workshops to: improve the availability and accessibility of comparable data in specific professions; raise awareness on the

achievements and best practices in various approaches to mutually recognize skills and job qualifications; and explore the feasibility of establishing a referencing framework for regional occupational standards.
    - Although these initiatives are steps in the right direction, analysis of available indicators show that APEC can do more. Comparing the average OECD STRI scores for APEC economies between 2016 and 2020 showed that accounting sector has become more restrictive.

- Action #3: Enhancing flexibility for business visitors, building on initiatives such as the APEC Business Travel Card (ABTC) (Accountable fora: BMG)
    - Business travels could help expand a firm's global outreach and network. The APEC Business Travel Card (ABTC) facilitates short-term business travel among member economies by streamlining entry process.
    - The Business Mobility Group (BMG) is rolling out an online lodgment system for the ABTC as well as an ABTC mobile application to expedite the granting and usage of ABTCs, hence further improving on the convenience that it brings.

- Action #4: Developing a set of good practice principles on domestic regulations in the services sector (Accountable fora: CTI, EC and GOS)
    - Domestic regulations help economies achieve legitimate policy objectives and ensure the smooth and legal operations of the services sector in line with public regulations. However, excessive regulation could hamper economic growth and competitiveness. Moreover, there is often no one-size-fits-all solution to improve domestic regulations in the services sector, and a whole-of-government approach is needed to make services-related regulations more effective.
    - Recognizing the need to balance these considerations, APEC has adopted the "APEC Non-binding Principles for Domestic Regulation of the Services Sector." Various workshops had also been conducted to help economies in implementing different aspects enshrined in the Principles.
    - Data from the OECD STRI showed that regulatory transparency across the region has improved for most services sectors. However, there remains room for improvements, such as those relating to visa applications and procedures required to register a company.

- Action #5: Implementation of the Renewed APEC Agenda on Structural Reform (RAASR), including progressing the 2016 APEC Economic Policy Report (AEPR) on Structural Reform and Services (Accountable fora: CTI, EC and GOS)
    - Promoting structural reform in the services sector is a key component of RAASR in view of the significant correlations between services competitiveness and broader economic measures.
    - In response to the call by Structural Reform Ministers to implement unilateral reforms, individual APEC economies have tabled priorities and actions that have both directly and indirectly improved various services sectors. Several initiatives had also been undertaken at APEC-wide level, including the mid-term and final review of RAASR.

  - Both reviews noted that economies can do more to improve regulations affecting the services sector – while some sectors have become less restrictive, others have become more restrictive. With the culmination of RAASR, APEC has adopted the Enhanced APEC Agenda for Structural Reform (EAASR) to sustain structural reform efforts in the services sector for the period of 2021-2025.

- Action #6: Supporting liberalization, facilitation and cooperation of environmental services, by implementing and building on the agreed Environmental Services Action Plan (ESAP) (Accountable fora: CTI and GOS)
  - Sustainable development is crucial to safeguard the prosperity for all the people and future generations. One way of advancing work towards sustainable development is by promoting trade in environmental goods and services.
  - Several initiatives launched as part of ESAP include studies aimed at providing an overview of the regulatory measures currently used in various economies, as well as those focusing on specific environmental sub-sectors. Capacity building workshops and public-private dialogues were also held.
  - The interim and final reviews of the ESAP emphasized the need to define and categorize environmental services; to establish good regulatory practices and principles; and to develop the human and institutional capacity needed to support the operation of environmental services. APEC members should continue to explore ways to implement these recommendations.

- Action #7: Progressive liberalization and facilitation of manufacturing-related services, by implementing and building upon the agreed Manufacturing Related Services Action Plan (MSAP) (Accountable fora: CTI and GOS)
  - Recognizing that the ongoing "servicification" of the manufacturing sector could propel manufacturers to become more competitive and innovative, APEC laid out the MSAP as a strategy to liberalize and facilitate the operations of manufacturing-related services in the region.
  - Various research and workshops were conducted to aid in MSAP implementation. Both the interim and final reviews of MSAP focused on the importance of areas such as investment and labor-related policies for seamless access and provision of manufacturing-related services.
  - The OECD STRI showed that APEC's progress in liberalizing services assisting manufacturing-related activities is mixed. Targeted efforts to strengthen cooperation in investment and labor-related policies are warranted.

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

  - Supporting cooperation in the education sector is a key pillar of regional integration. Student exchange programs enhance intercultural awareness, while research collaborations facilitate expertise pooling.
  - APEC has undertaken various strands of work to advance progress in this area, including: assessing the demand for global talent across APEC economies; developing a set of recommended digital competencies which institutions could use to align programs with industry needs; and facilitating researcher mobility in the region.
  - The number of intra-APEC inbound students has steadily increased from 2016 to 2018. Moreover, efforts are underway to recognize educational standards and professional qualifications across borders. At the same time, challenges exacerbated by the pandemic will require innovative solutions from policymakers and the private sector.

- Action #9: Collaboration in responding to the rapid developments in internet-based technology to promote a regulatory approach that provides appropriate prudential oversight, legitimate consumer and security protections while enabling the flow of trade-related data in the context of an increasingly digitalized world (Accountable fora: DESG)
  - Despite the opportunities and benefits brought forth by the digital economy, digitalization poses a new set of challenges, such as digital inequality, data privacy, cybersecurity and online misinformation.
  - Economies have undertaken activities on multiple fronts to harness the opportunities of the digital economy while overcoming their challenges, including: organizing workshops and dialogues to enable policymakers to better understand issues related to the digital economy; and establishing the Cross Border Privacy Rules (CBPR) and Privacy Recognition for Processors (PRP) systems.
  - As of June 2021, 9 economies and 40 certified firms have joined CBPR, while 2 economies and 23 firms have participated in PRP. 20 economies have laws on electronic transactions and cybercrime, while 18 economies have laws related to consumer protection and data protection and privacy. Faster progress in CBPR and PRP could further support the effective functioning of the digital economy.

- Action #10: Supporting certain cross-border provision of financial services subject to practical needs, domestic circumstances and regulations of each economy, including by engagement by interested economies in the building on the Asia Region Funds Passport initiative (Accountable fora: FMP)
  - Cross-border provision of financial services can enhance its critical role as an engine of economic growth and inclusion.
  - One regional initiative through which APEC has worked to strengthen the competitiveness of the financial markets in the region is the Asia Region Funds Passport (ARFP). The ARFP was officially launched on 1 February 2019 and currently comprises of Australia; Japan; Korea; New Zealand; and Thailand. Participating economies are ready to receive registration

applications from prospective domestic passport funds and entry applications from foreign passport funds.
    - Despite the progress made, there have been no transactions under the ARFP to date. Moreover, comparing the average OECD STRI scores between 2016 and 2020 showed that APEC's scores for commercial banking and insurance sub-sectors only improved slightly. Restrictions include foreign entry requirements, barriers to competition, and discriminatory measures.

- Action #11: Supporting APEC's work on developing air, sea, and land transportation in line with the APEC Connectivity Blueprint 2015–2025 (Accountable fora: TPTWG)
    - An efficient transportation network brings many advantages, including improved connectivity to international markets, reduced logistics cost, and enhanced participation in GVCs.
    - APEC has undertaken several activities to improve the efficiency of the sector, including workshops and studies aimed at helping economies to appreciate the investment decision of private investors and developers on transportation infrastructure projects; and enhancing economies' understanding of the interface between transportation and technology.
    - Improvements in OECD STRI scores serve as a testament that some of these efforts are bearing fruits. The logistics sector as well as maritime transport and courier services have become less restrictive in 2020 than in 2016. Over the same period, however, air transport, road freight transport, and rail freight transport have seen increased restrictions, such as through restrictions on foreign equity share, licensing quotas, and cross-border data flow restrictions.

- Action #12: Support APEC's work on developing the travel and tourism sector for sustainable and inclusive growth, building on the work of the APEC Tourism Strategic Plan (Accountable fora: TWG)
    - The travel and tourism sector is an important source of growth for many economies, especially in the context of APEC where it has been shown that tourism boosts GDP and employment.
    - APEC has continued to advance relevant initiatives aimed at maximizing the potentials of the sector, including identifying the challenges faced by MSMEs in the tourism sector; and piloting occupational standards framework in the travel, tourism and hospitality sector.
    - Analysis of international tourist arrivals and receipts into APEC showed that the region has seen an upward trend between 2016 and 2019. Likewise, contributions of tourism to GDP and employment has risen in the same period. However, the COVID-19 pandemic has likely masked further progress made in this area, and efforts must be taken to steer work towards the sector's recovery.

- Action #13: Development of services data and statistics to measure and support implementation of the Roadmap and improve tracking of services trade and investment more broadly (Accountable fora: CTI and GOS)

  - A clear, well-elaborated measurement framework as well as reliable, comparable and regularly-updated statistics are critical for policymakers to plan and make more informed decisions.
  - APEC has undertaken various activities to improve the statistical capabilities of the region in measuring services trade and investment such as the development of the APEC Trade in Value Added (TiVA) database and the conduct of the APEC index pilot program.
  - Despite the progress made, more efforts are needed to improve services data availability in the region. For example, many economies still do not collect data on foreign affiliate trade in services (FATS) and bilateral trade in services.

- Action #14: Progressive facilitation of services to improve the regional food system to ensure access to safe, high quality food supplies across the Asia-Pacific (Accountable fora: PPFS)
  - Services are a crucial component of the food system as they support various stages of the food value chain and ensure the smooth functioning of the entire system.
  - APEC has undertaken activities aimed at facilitating access of various actors in the food system to critical services. A 2019 report provided insights on how regulatory environment in the provision of various services could facilitate or impede the development of effective and efficient food value chains and system.
  - Data from the Food and Agriculture Organization of the United Nations (FAO) showed that while five economies have seen a decrease in the prevalence of undernourishment, four economies experienced a higher prevalence of undernourishment. The global pandemic has further stressed the importance of work in this area.

- Action #15: Strengthen domestic and regional energy security and lower the carbon intensity of energy supply and use across region (Accountable fora: EWG)
  - The success of modern economies is contingent on reliable and efficient access to energy.
  - Recognizing that APEC economies should work towards optimizing current resource use as well as developing alternative sources of energy, various activities had been completed as part of implementation of the EWG Strategic Plan 2014–2018. These include a compendium of energy efficiency policies in areas such as the building and power sectors for the region; and workshops focusing on the application of clean energy in areas like transportation and disaster resiliency. A new strategic plan for the period of 2019–2023 seeks to expand on previous work by further enhancing energy resilience and energy access.
  - While the EWG is still implementing this strategic plan, their efforts to increase uptake in renewable energy and optimize resource usage has shown progress. Data from Asia Pacific Energy Research Centre (APERC) showed that the share of renewable energy in total primary energy supply (TPES)

has increased from 6.4 percent in 2016 to 6.9 percent in 2018, while the share of renewable energy in total final energy consumption (TFEC) has increased from 8.0 to 8.6 percent over the same period.

- Action #16: Examination of the impact of the Next Generation Trade and Investment Issues on Mode 3 Trade in Services (Accountable fora: IEG)
    - Mode 3 trade in services (commercial presence) amounts to more than half of services trade in many economies. Examining the impact of Next Generation Trade and Investment Issues (NGeTIs) on mode 3 trade can provide insights to economies to craft more supportive policies.
    - As of March 2021, APEC ministers have selected five NGeTIs for further action: facilitating global supply chains; enhancing small and medium-sized enterprise (SME) participation in global production chains; promoting effective, non-discriminatory, and market-driven innovation policy; transparency in RTAs/FTAs; and manufacturing-related services in supply chains/value chains.
    - Analysis of various indicators show that APEC region remains competitive in facilitating cross-border investment. Data from the World Bank's Ease of Doing Business indicators suggests that as a whole, it is still faster and cheaper to do business in APEC in 2019 than in 2016. APEC economies also continue to expand the number of agreements that they have with one another. Nevertheless, there is more work to be done, such as harmonizing RTA/FTA provisions to make them more supportive of next generation businesses and investors.

- Action #17: Supporting the development of innovative MSMEs and their participations in the Digital Economy under the SMEWG Strategic Action Plan (Accountable fora: SMEWG)
    - Given the importance of MSMEs across various measures and the opportunities presented by the digital economy, APEC economies are making efforts to support innovative MSMEs in the digital economy.
    - The SMEWG's strategic action plan for 2017–2020 has a dedicated pillar to "entrepreneurship, innovation, and the digital economy." Under this pillar, SMEWG organized various workshops, dialogues, and public-private dialogues to, among others, foster innovation in MSMEs; and build capacities of MSMEs to participate in the digital economy. The new strategic action plan for 2021–2024 aims to build on this by focusing on issues such as access to finance and alternative financial solutions.
    - World Bank data on MSMEs' use of digital tools such as websites, e-mails, and checking/savings accounts showed that more intensified efforts are needed to bridge digital divide in the region.

- Action #18: Enhancing ICT infrastructure and services to support economic growth (Accountable fora: TELWG)
    - ICT infrastructure and services have transformed the global economy, made firms more competitive, and contributed to accelerating technological

progress. The importance of ICT in the global economy was reiterated in the ongoing COVID-19 pandemic.

- TELWG have undertaken various initiatives to drive action to enhance ICT infrastructure and services. To foster ICT innovation, TELWG held dialogues and workshops on emerging technologies like blockchain and the internet of things (IoT) to explain their potential and risks. TELWG also organized capacity building workshops on cyberthreats to encourage businesses and policymakers to improve the security and resilience of their ICT systems.
- Indicators from the International Telecommunications Union show that more people in APEC are using the internet and have improved access to telecommunication services. However, economies need to re-double efforts to address the persistent digital divide.

- Action #19: Development of an enabling environment for innovation activities including that of services to enhance their contribution to economic growth (Accountable fora: PPSTI)
  - Science, technology and innovation drives economic growth, creates new opportunities and provides a catalyst for firms to create sustained competitive advantage. This is particularly so in light of the fourth industrial revolution and new normal driven by the pandemic, where a new set of emerging knowledge, technologies, processes and industries would be needed to support and revitalize growth and trade in the region.
  - PPSTI has spearheaded work to cultivate an enabling environment for innovation in the region by organizing workshops and symposiums to promote science and technological entrepreneurship; accelerate commercialization of science and technology; and promote public-private partnerships for science and technology innovation. PPSTI also holds regular policy dialogues as a platform to connect and collaborate among STI key players from industry/private sector, academe and government to ensure that consultation is being done to ensure relevance of STI activities to meet the needs of the stakeholders in the process of formulation of STI policies.
  - APEC's average research and development (R&D) expenditure as a share of GDP has risen from 2.39 percent in 2016 to 2.44 percent in 2018. Although R&D in APEC has become more inclusive, with the percentage of female R&D personnel increasing in most APEC economies, more can be done and it is important for progress to be sustained.

Individual Economy Actions

- Analysis of individual action plans (IAPs) submitted by economies as part of the Renewed APEC Agenda for Structural Reform (RAASR) showed that economies have included priorities and actions with potentially positive implications on services sector.

- Some of these priorities and actions do not explicitly target services as their primary focus, but by virtue of the reforms would have positive spillovers on the sector. These priorities and activities are aimed at enhancing regulatory reforms, improving labor market competitiveness, enhancing MSMEs competitiveness, promoting innovation, encouraging investment, spending on infrastructure, and improving market access.

- Other priorities and actions explicitly target services as a whole or specific sub-sectors as their primary focus/beneficiary. Some of the services sectors targeted by economies include financial services, logistics, healthcare and tourism.

Impact and Implications of COVID-19 on Services Sector and Trade

- COVID-19 pandemic is different to other economic shocks the region has been subject to in the past, because it combines supply and demand aspects in a way that has particular implications for the services sector, given the importance of personal contact for some types of services trade, and the difficulty of those contacts in light of changed preferences and necessary public health measures.

- A review of high frequency trade and investment data shows that impacts are very heterogeneous at economy and sectoral levels. While the region as a whole has seen a significant decline in services trade, patterns of impact at a detailed level are much more complex. It is thus important to take a granular view in order to properly understand the situation.

- The case study approach highlights ways in which economies and businesses have responded to the challenges of the pandemic period:

    - Singapore's health sector was able to make use of its telehealth regulatory sandbox to shift activity further towards online trade in this sector, which has traditionally relied on in-person contact.
    - Chile was able to use social support measures to assist workers in its transport sector, and to work with regional partners to develop safe ways of keeping supply chains open during the pandemic.
    - Thailand's tourism sector was hard hit, but the government provided extensive support, which is important given the significant presence of women and historically vulnerable communities among potentially displaced workers. In addition, promotion of domestic tourism has helped absorb a part of the economic shock.
    - Canada's higher education sector moved to use online instruction methods, while immigration policy developed specific policy flexibilities for international students based on testing and quarantining, along with the development of institution-level response plans.
    - The Philippines' burgeoning ICT sector was well-placed to continue trading under Mode 1, albeit with a demand-side shock. At the same time, the government is investing in measures to reduce constraints stemming from relatively low

broadband penetration, with a view to supporting such technical change durably over the medium-term.

- A key determinant of economy performance in the crisis has been the ability to shift activity online. Developing digitally-enabled services trade requires substantial investments in hard and soft infrastructure. There is already a stock of good practice in the region that can be socialized and adapted to other contexts. Other approaches include exercising regulatory flexibility and instituting better health risk management.

- While the economic shocks have been major, the region has a strong framework with which to support recovery in the post-pandemic period. The ASCR is an ambitious general framework for development of the services sector in the region. Its APEC-wide actions cover many areas of services production and trade. Although the pandemic has placed great stress on the region's service providers, it would be unwise to seek to completely redesign the policy environment based on this one, historically very rare, event.

- Rather, the approach should be to fine tune an already comprehensive document so as to better enable economies and firms to respond to large shocks in the future, as well as to deal with regulatory issues that have received greater prominence in light of the shift to online activity during the pandemic.

Policy Recommendations

- APEC has made good strides in advancing ASCR at multiple levels (i.e. overarching targets, APEC-wide actions, and individual economies) since its inception in 2016, as supported by analysis of the qualitative information and quantitative indicators.

- Progress notwithstanding, more work has to be done to further support implementation of ASCR and specific APEC-wide actions. Backtracking or lack of progress has been observed for some indicators, while mixed performance has been observed for others. There are also instances where analysis of multiple indicators used to monitor the same action led to different conclusions, pointing to the need for more efforts in certain fronts to guarantee overall progress. The need to redouble efforts is indeed noted by fora and economies in their response to the survey questionnaire circulated as part of the mid-term review.

- Moving forward, APEC economies could consider the following recommendations to further advance services work in the next phase of ASCR:

    - **Accelerate implementation of specific APEC-wide actions:** Several strategies can be considered to accelerate implementation of specific APEC-wide actions. Initiatives such as "Addressing the Unfinished Business of the Bogor Goals: Final Push on Services" which identify certain APEC-wide actions as priority areas can provide more targeted efforts. Moreover, champion economies can provide clearer guidance to accountable fora and economies to deliver

significant, tangible outputs within a specified timeline. Linking APEC-wide actions with the work plan of accountable fora could ensure that they consider these APEC-wide actions more prominently in their discussions and deliberations.

- **Update set targets and outputs in each APEC-wide action and clearly associate activities with them:** Each APEC-wide action has specific targets and outputs associated with it. For better monitoring, accountable fora should consider updating set targets and outputs accordingly, as well as clearly linking activities with designated targets and outputs. Where original targets and outputs have been achieved, accountable fora should deliberate on the next steps. Where progress is lagging behind specified targets, APEC could reconsider and recalibrate their targets. The ASCR was indeed conceived to be a living document which can be updated on a regular basis to quickly respond to the changing landscape and priorities.

- **Respond to COVID-19 decisively and concretely:** COVID-19 and its implications on services should stimulate efforts to ensure that existing actions are fine-tuned, new actions introduced and targets and outputs duly updated. Steps and updates which economies and fora should consider include:

  - **Rationalization of policies affecting digital trade**: The ability to substitute towards Mode 1 trade in services (cross-border trade) was a key determinant of business success during the pandemic. APEC has initiatives on digital trade and data flows, and can build on the synergies between the ASCR and these initiatives. Clearly recognizing the links between these two areas and developing a joint work stream will help in the development of concrete initiatives in the future.
  - **Further de jure and de facto market opening**: There is a case for a broader approach to liberalization of services policies on the basis of concerted unilateralism, which has a long and successful history in APEC. The sectoral approach of the ASCR is appropriate and helpful for highlighting particular priorities identified by economies, but a broader approach to liberalization would help lay the groundwork for keeping trade flowing in a wide range of sectors when crises hit. At the same time, it is important to leverage the COVID-19 experience to support the use of sensible regulatory flexibility and forbearance to facilitate trade while not sacrificing other social objectives, such as public health. Convening regional regulators both through existing channels and potentially through new ones could help share experiences in this area, and convene a broader constituency in favor of reform.
  - **Dealing with regulatory heterogeneity**: Part of increased openness to Mode 1 trade is finding creative ways of dealing with regulatory heterogeneity in a way that preserves important social objectives, but also facilitates trade. APEC has procedures and fora for cooperation at the regulatory level, and they provide a strong basis for building on successful

programs that encourage trade even in heavily regulated sectors; APEC Architects and APEC Engineers are examples. Broadening this kind of approach beyond professional qualifications could bring important benefits to the region. As a first step, economies could identify candidate sectors, in the knowledge that modalities may well differ from sector to sector.

- **Attenuating social costs**: Economists have long recognized the case for supporting vulnerable people in times of economic change brought about by increased trade. But the pandemic makes clear the need for social safety nets on a broader basis. It also highlights the importance of addressing the social benefits and costs of technological change, in particular as more activity shifts towards Mode 1 trade. Convening a specific dialogue mechanism within APEC on social protections to deal with the challenges of digitalization, trade, and automation would help build the stock of regional best practice and share experience more widely.

- **Leverage cross-fora collaboration and capture all relevant activities:** Assigning each APEC-wide action to accountable fora helps in strengthening ownership. However, the cross-cutting nature of APEC-wide actions means that assigning ownership may lead certain activities outside the purview of the accountable fora to be left out as contributions. Although some APEC-wide actions were allocated to multiple fora to reflect the APEC-wide actions' cross-cutting nature, more should be done to ensure that all relevant activities are captured accordingly. There are also opportunities to leverage cross-fora collaboration, in particular when some of the deliverables have wide applications beyond the purview of the accountable fora.

- **Ensure better synergy between ASCR and other APEC initiatives:** It is critical that ASCR be realigned to help realize the APEC Putrajaya Vision 2040, a new vision proclaimed by APEC Leaders in 2020 to chart the future of the region over the next two decades. There is also a need to ensure better synergy between the ASCR and other APEC initiatives such as APEC Internet and Digital Economy Roadmap (AIDER), the La Serena Roadmap for Women and Inclusive Growth and the Enhanced APEC Agenda for Structural Reform (EAASR). Many of these cross-cutting initiatives have common elements of interest across them. While the ASCR recognizes and has made reference to some of these initiatives, the fast evolving landscape and the fact that APEC has introduced additional initiatives since ASCR's inception means that there is wider room to improve synergy.

- **Enhance engagement with the private sector:** The private sector is a critical stakeholder of the ASCR. They are after all the main beneficiaries, the providers, and the users of services. While many private entities have provided their views on the progress of ASCR implementation, further and deeper engagement with the private sector to partake in deliberating, calibrating, and executing the ASCR should be continued. For instance, GOS and other accountable fora can include a standing agenda item in their meetings, wherein the private sector can share their perspectives and experiences on the ASCR implementation. There is also a

case for economies to work with the private sector to develop other modes of engagement in particular sectors of interest, focusing in particular on the value chain dimensions of modern services trade. In the first instance, economies could identify one value chain as a pilot, so that this approach could be tested at scale with the participation of all relevant stakeholders.

- **Continue to improve services data and statistics:** Despite their limitations, the indicators used in this MTR show if various activities undertaken by fora and economies have led to tangible improvements. While some indicators have seen progress, other indicators remain far from ideal. Improving the state of services data and statistics in the region would assist in monitoring the roadmap implementation, and also in better equipping policymakers to plan and make more evidence-based decisions.

- **Undertake complementary, measurable, concrete activities:** By their nature, activities such as information-sharing workshops do not automatically lead to improvement in the indicators used to monitor particular APEC-wide actions. This suggests that in addition to the activities taken by the accountable fora, there needs to supplementary follow-up through concrete activities. These activities can support economies in undertaking tangible, measurable reforms that can eventually be reflected as improvements in the indicators. The need for these follow-up activities if further underscored by the observation that while many activities aim to advance work on APEC-wide actions, there continues to be a wide range of gaps among individual economies for specific indicators.

1. INTRODUCTION

Services are ubiquitous in our daily lives: services provide necessities such as access to potable water, food, and electricity. Healthcare, education, and entertainment services uplift our quality of life. Likewise, telecommunications, transportation, and logistics services keep the global economy running, even in the midst of the COVID-19 pandemic. Services are critical for most economies as they provide the bulk of economic activities and employment. In a majority of APEC member economies, services make up more than half of their GDP; collectively, services comprise about two-thirds of APEC's GDP. Employment in services has consistently made up more than half of total employment in 15 APEC economies in the last 10 years.[1] Moreover, commercial services exports originating from APEC economies have generally increased over the last decade, providing opportunities for economic growth.

Recognizing the importance of services, APEC throughout the years has advanced services-related work through various approaches such as commissioning studies/reports, organizing seminars/workshops, and developing guidelines. An assessment conducted by PSU in 2015 on the APEC project database showed that 53 percent of the projects were relevant to the services sector.[2] Some of these services-related projects, such as the APEC Business Travel Card, have become emblematic of APEC's achievements.

Despite the growing importance of services and the extensive services-related work undertaken by APEC over the years, not everyone nor every relevant forum are cognizant of their critical roles in contributing to services sector development. Giving APEC fora a macroscopic and holistic view on services can improve information flow, raise awareness, streamline resources, and avoid redundant initiatives. These in turn can enhance Senior Officials' coordinating role in services-related work.

Against this backdrop, APEC Leaders endorsed the APEC Services Cooperation Framework in 2015, which committed member economies to develop their services sector as an enabler of economic growth and inclusion.[3] Leaders then instructed officials to develop a strategic and long-term Services Competitiveness Roadmap. In 2016, the Roadmap and its accompanying Implementation Plan were endorsed. The Roadmap's objective is to facilitate services trade and investment and enhance the competitiveness of service sector in the region by 2025. It sets out three overarching targets:

- Ensuring an open and predictable environment for access to services markets by progressively reducing restrictions to services trade and investment;
- Increasing the share (%) of services exports from APEC economies in the total world services exports so that it exceeds the current share in world services exports by 2025; and
- Increasing trade in services in the APEC region so that by 2025, the compound average annual growth rate exceeds the historic average of 6.8 percent and the share (%) of

[1] World Bank, "World Development Indicators," accessed April 1, 2021, http://datatopics.worldbank.org/world-development-indicators/.
[2] Gloria O. Pasadilla, Andre Wirjo, and Ruijin Luo, "Report on APEC Work on Services and Baseline Indicators: For the Proposed APEC Services Cooperation Framework" (APEC - Policy Support Unit, November 2015), https://www.apec.org/Publications/2015/11/Report-on-APEC-Work-on-Services-and-Baseline-Indicators.
[3] "2015 Leaders' Declaration" (2015 Economic Leaders' Week, Manila, Philippines: APEC, 2015), https://www.apec.org/Meeting-Papers/Leaders-Declarations/2015/2015_aelm.

value-added of the services sector in the total GDP of the APEC region exceeds the global average level by 2025.

The Roadmap recognized that achieving these targets is not an automatic process. It requires economies to minimize constraining factors such as domestic and discriminatory regulations, without prejudice to the possibility that certain regulations may be required to fulfil legitimate public policy objectives. At the same time, the Roadmap calls for economies to augment enabling factors such as implementing good regulatory practices; developing a competent workforce; fostering dynamic, competitive and effective innovation and ICT policies; facilitating effective financial markets; and improving people-to-people, physical, and institutional connectivity.

The Roadmap noted that a combination of actions at different levels are needed to minimize the constraining factors while strengthening the enabling factors. These include encouraging economies to undertake actions unilaterally as well as cooperate closely at the regional level in the form of identified APEC-wide actions. To date, 19 APEC-wide actions have been identified:

1. Enhancing the critical role of trade in services in global value chains, including through increased participation of MSMEs and women, under the agreed Strategic Blueprint for Promoting Global Value Chains Development and Cooperation.
2. Supporting cross-border mobility for professionals, building on initiatives such as the APEC Architects and Engineers Registers to facilitate mutual recognition arrangements (MRAs).
3. Enhancing flexibility for business visitors, building on initiatives such as the APEC Business Travel Card (ABTC).
4. Developing a set of good practice principles on domestic regulations in the services sector.
5. Implementation of the Renewed APEC Agenda for Structural Reform (RAASR), including progressing the 2016 APEC Economic Policy Report (AEPR) on Structural Reform and Services.
6. Supporting liberalization, facilitation and cooperation of environmental services, by implementing and building on the agreed Environmental Services Action Plan (ESAP).
7. Progressive liberalization and facilitation of manufacturing-related services, by implementing and building upon the agreed Manufacturing Related Services Action Plan (MSAP).
8. Supporting cooperation in the education sector including promoting internship schemes, overseas student exchange programs, and collaborative policy studies, as well as, in accordance with domestic education systems, information sharing pertinent to economies' education standards, qualifications and credit systems and measures to explore mutual recognition (learning from measures such as the ASEAN Qualifications Reference Framework).
9. Collaboration in responding to the rapid developments in internet-based technology to promote a regulatory approach that provides appropriate prudential oversight, legitimate consumer and security protections while enabling the flow of trade-related data in the context of an increasingly digitalized world.
10. Supporting certain cross-border provision of financial services subject to practical needs, domestic circumstances and regulations of each economy, including by

engagement by interested economies in the building on the Asia Region Funds Passport initiative.

11. Supporting APEC's work on developing air, sea and land transportation in line with the APEC Connectivity Blueprint 2015 – 2025.
12. Support APEC's work on developing the travel and tourism sector for sustainable and inclusive growth, building on the work of the APEC Tourism Strategic Plan.
13. Development of services data and statistics to measure and support implementation of the Roadmap and improve tracking of services trade and investment more broadly.
14. Progressive facilitation of services to improve the regional food system to ensure access to safe, high quality food supplies across the Asia-Pacific.
15. Strengthen domestic and regional energy security and lower the carbon intensity of energy supply and use across region.
16. Examination of the impact of the Next Generation Trade and Investment Issues on Mode 3 Trade in Services.
17. Supporting the development of innovative MSMEs and their participations in the Digital Economy under the SMEWG Strategic Action Plan.
18. Enhancing ICT infrastructure and services to support economic growth.
19. Development of an enabling environment for innovation activities including that of services to enhance their contribution to economic growth.

In 2019, a paper entitled "Addressing the Unfinished Business of the Bogor Goals: Final Push in Services" identified five priority areas that build on the above APEC-wide actions and which member economies could advance before the Bogor Goals deadline of 2020.[4] The paper also commended champion economies leading work in the priority areas. These are summarized in Table 1.1.

Table 1.1: Five Priority Areas and the Champion Economies from "Addressing the Unfinished Business of the Bogor Goals"

Priority Area	APEC-wide Action Number	Champion Economy
Domestic Regulations on Services	4	The United States
Developing an APEC Index to Measure the Regulatory Environment in Services Trade of APEC	13	Korea
Mutual Recognition of Qualification and Licensing	2	Australia
Environmental Services	6	New Zealand
Manufacturing-related Services	7	Malaysia

Source: Compilations by APEC-PSU.

CONTEXT OF THE MID-TERM REVIEW OF THE ASCR

As part of the ASCR, Leaders agreed that a mid-term review (MTR) of the Roadmap would be carried out in 2021 "with a view to assessing what individual and APEC-wide actions will be required to complete the objectives by 2025." APEC Leaders also tasked Senior Officials with the overall responsibility of monitoring and evaluating progress of the ASCR and to report

[4] Chile, "Addressing the Unfinished Business of the Bogor Goals: A Final Push in Services" (Second Senior Officials' Meeting, Viña del Mar, Chile, 2019), http://mddb.apec.org/Documents/2019/SOM/SOM2/19_som2_007.pdf.

periodically to Ministers.[5] Senior Officials subsequently agreed that the APEC Group on Services (GOS) will support them in monitoring and encouraging action to implement the ASCR. GOS, with agreement by Senior Officials, has requested the assistance of the PSU in undertaking the MTR.

To operationalize the ASCR and its Implementation Plan, the following documents have been produced: 1) ASCR Baseline Indicators Report (by PSU);[6] and 2) ASCR Consolidated Matrix of APEC-Wide Actions (by GOS). A key element of the MTR will therefore be to review, update, and analyze various documents, including the above, to determine APEC's progress with regards to ASCR implementation both quantitatively and qualitatively. This is covered in Chapter 2 of the report.

Halfway through the ASCR implementation, the COVID-19 pandemic struck and caused an unprecedented health and economic crisis. Therefore, the MTR also provides an opportunity for APEC to better understand the impact and implications of COVID-19 on services. Chapter 3 discusses COVID-19's impact on the services sector and trade, and consequently explores how the region's services sector can respond and adapt to the post-COVID environment. This is important because as economies around the world moved aggressively to contain the spread of the virus through various measures (e.g., mobility restrictions, social distancing measures), services have arguably been among the hardest hit sectors. Moreover, the impact of such measures vary across different services sub-sectors and modes of supply. Insights from this component can provide policymakers with useful information on how to support the recovery of the services sector.

Finally, Chapter 4 provides policy recommendations for advancing services work in the next phase of the ASCR implementation.

[5] "2016 APEC Leaders' Declaration, Annex B: APEC Services Competitiveness Roadmap (2016-2025)" (2015 Economic Leaders' Week, Lima, Peru: APEC, 2016), https://www.apec.org/Meeting-Papers/Leaders-Declarations/2016/2016_aelm/2016_Annex-B.

[6] Gloria O. Pasadilla, Andre Wirjo, and Kathrina G. Gonzales, "APEC Services Competitiveness Roadmap (ASCR) Baseline Indicators" (APEC - Policy Support Unit, November 2017), https://www.apec.org/-/media/APEC/Publications/2017/11/APEC-Services-Competitiveness-Roadmap-Baseline-Indicators/TOC/217_PSU_ASCR-Baseline-Indicators.pdf.

2. ASCR IMPLEMENTATION: PROGRESS TO DATE

As part of the ASCR, Leaders agreed that a mid-term review (MTR) of the Roadmap would be carried out in 2021 "with a view to assessing what individual and APEC-wide actions will be required to complete the objectives by 2025." APEC Leaders also tasked Senior Officials with the overall responsibility of overseeing progress on the ASCR and of reporting periodically to Ministers.[7] Senior Officials subsequently agreed that the Group on Services (GOS) will support them in monitoring and encouraging action to implement the ASCR. GOS, with agreement by Senior Officials, has requested the assistance of the PSU in undertaking the MTR.

PSU's approach to the assessment has relied on 4 main sources of inputs, namely: 1) baseline indicators, 2) consolidated matrix of actions, 3) economies' RAASR IAPs, and 4) survey questionnaire. Please refer to Annex A for more information pertaining to these inputs. This Chapter has been organized as follows. Section 2.1 provides general caveats associated with the assessment. Section 2.2 analyzes APEC's progress in achieving the ASCR overarching targets. Section 2.3 discusses actions taken by APEC fora to progress on each of the 19 APEC-wide actions. Finally, Section 2.4 examines the priorities and actions undertaken by individual economies, as reported in their RAASR IAP submissions and subsequent updates.

2.1. GENERAL CAVEATS

For a more holistic approach, the assessment has attempted to determine progress both qualitatively and quantitatively. However, it is worthwhile for readers to look at them as separate but complementary and correlated strands. They should note the following general caveats associated with these insights.

First is causation. Where quantitative indicators are discussed, it should be recognized that these indicators may have been affected by factors other than qualitative information provided by fora and economies (e.g., activities reported in the matrix of actions). Even in instances where activities have impact on an indicator, it may take time for the outcome of these actions to be reflected by the indicators.

Analysis of these indicators generally provides a regional perspective, which may be different from those of an individual economy. Indeed, there are instances when APEC as a whole showed improvements in its aggregate score, but economies showed the opposite in their individual scores. Such instances of divergence will be indicated where relevant. Related is the issue of coverage. It should be noted that changes in score may not be reflective of APEC as a whole as some indicators only have data for certain APEC economies. Where data availability makes it challenging to provide a regional perspective, analyses at individual economy level are provided.

Last but not the least, while the indicators provide a good snapshot of progress in certain overarching targets and APEC-wide actions, and can encourage deeper policy discussions; they are not exhaustive and therefore do not cover all aspects of the said targets and actions. For example, on services trade restrictions, although the OECD and World Bank STRI cover a good set of services sub-sectors, they do not cover all services sub-sectors. However, their

[7] "2016 APEC Leaders' Declaration, Annex B: APEC Services Competitiveness Roadmap (2016-2025)."

available data can still point to areas of improvements for the consideration of economies. It is with this perspective that the indicators should be complemented with qualitative information as gleaned from the consolidated matrix of actions and survey questionnaire.

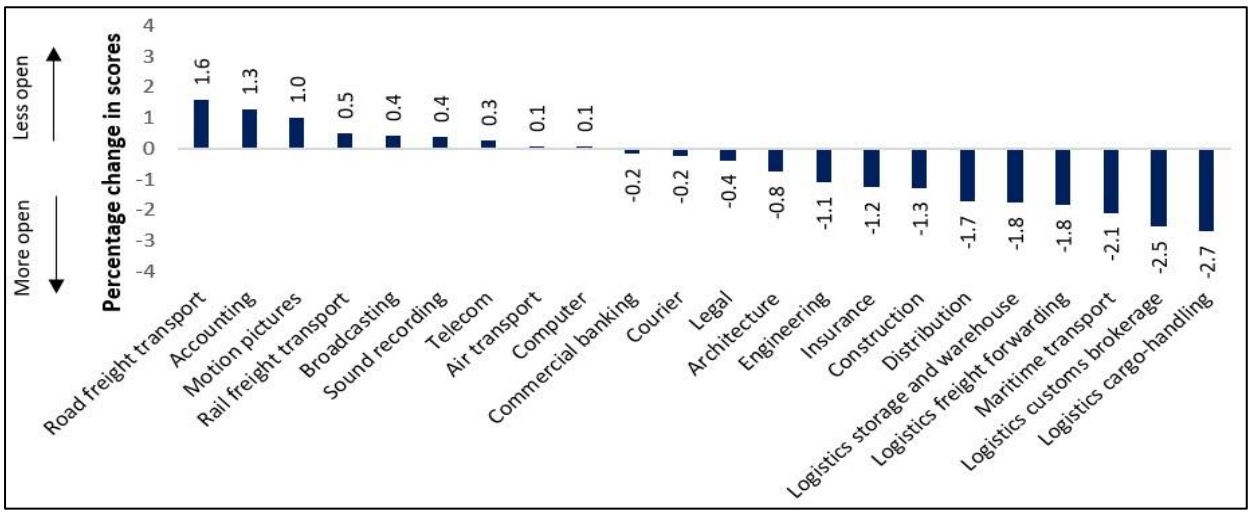
2.2 OVERARCHING TARGETS

2.2.1 Ensuring an open and predictable environment for access to services markets by progressively reducing restrictions to services trade and investment

The OECD Services Trade Restrictiveness Index (STRI) identifies the regulatory policies that may act as barriers to trade in services.[8] It currently covers 22 services sub-sectors and 14 out of 21 APEC economies. For each of the sectors assessed, a value of between 0 (least restrictive) and 1 (most restrictive) is assigned to indicate the level of restrictiveness in policies. Five types of restrictions are assessed, namely 1) restrictions on foreign entry; 2) restrictions on movement of people; 3) barriers to competition; 4) regulatory transparency; and 5) other discriminatory measures such as treatment of foreign suppliers regarding taxes and subsidies.

Comparing the STRI scores for the years 2016 and 2020 showed that while some sectors have become more open, others have become more restrictive (Figure 2.1). This indicates mixed progress in efforts to make the region more open in supporting services trade and investment. For sub-sectors that have become more open, drops in OECD scores ranged from 0.2 percent (commercial banking and courier) to 2.7 percent (logistics cargo handling). On the other hand, among sub-sectors which have become more restrictive, road freight transport registered the largest increase in OECD STRI score at 1.6 percent, followed by accounting (1.3 percent) and motion pictures (1.0 percent).

Figure 2.1: Change in OECD STRI scores in APEC between 2016 and 2020



Source: APEC-PSU calculations using data from OECD. Accessed 22 April 2021.
Note: A higher score indicates higher levels of restriction. Calculations comprise of data from 14 APEC economies (AUS; CDA; CHL; PRC; INA; JPN; ROK; MAS; MEX; NZ; PE; RUS; THA; and USA).

Breaking down 2020 data indicates that the main restrictions affecting services trade vary between sub-sectors. For example, the main contributing restrictions for some sectors (e.g., accounting, broadcasting and air transport) were foreign equity, while for others (e.g.,

[8] OECD, "Services Trade Restrictiveness Index Regulatory Database," February 17, 2021, https://stats.oecd.org/Index.aspx?DataSetCode=STRI#.

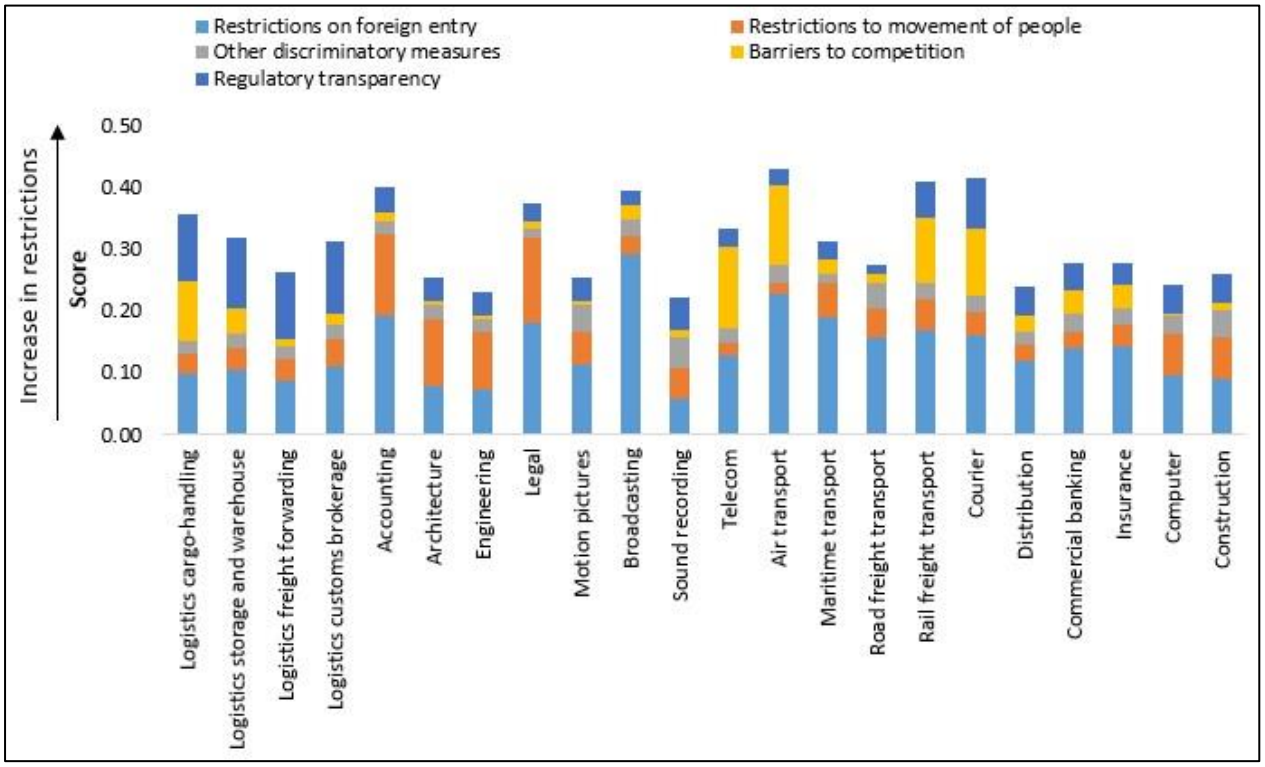
architecture and engineering), they were regulations affecting the movement of people (Figure 2.2). Air transport, courier and rail freight transport were among the most restrictive sub-sectors in 2020, which remained the same as the situation in 2016 when the ASCR was launched. As these logistics and transport-related sub-sectors impact other economic activities such as through supply chain performance, enhancing access and provision of these logistics and transport-related services will have spillover benefits to other sectors. Sound recording, engineering and distribution were the least restrictive sub-sectors in 2020. While APEC average scores differ across sub-sectors, it should also be noted that the scores across sub-sectors vary widely among individual APEC economies. For example, the score for engineering services in 2020 ranged between 0.12 and 0.36, while that for telecommunication services ranged between 0.16 and 0.70.

The World Bank/WTO STRI also monitors policies affecting services trade, but differs in methodology and covers more APEC economies relative to the OECD STRI (19 vs. 14 economies). Under the World Bank/WTO STRI, services covered can generally be grouped into five categories, namely 1) professional services, 2) telecommunication services, 3) distribution services, 4) financial services, and 5) transport services.[9] However, since the inception of ASCR, only one data point is available (2016). Comparing APEC's performance in the World Bank/WTO STRI with that of the OECD bloc showed that, on average, APEC is more restrictive than OECD across all services sub-sectors covered (Figure 2.3).[10] Similar to the OECD STRI, there is also a wide variation in scores across sub-sectors among individual APEC economies. For example, the score for individual APEC economies in professional services ranged from 31.9 to 88.2, while scores in distribution services ranged from 16.8 to 71.1.

[9] Professional services comprise of legal services; accounting services; and auditing services. Telecommunication services comprise of fixed-line telecommunication services; mobile telecommunication services; and internet services. Distribution services comprise of wholesale trade services; and retailing services. Financial services comprise of life insurance; non-life insurance; reinsurance and retrocession; and commercial banking. Transport services comprise of maritime freight transportation; maritime cargo-handling, storage, warehousing and container station depot services; maritime intermediation auxiliary services; air passenger (domestic and international); air freight (domestic and international); rail freight transportation; and road freight transportation.

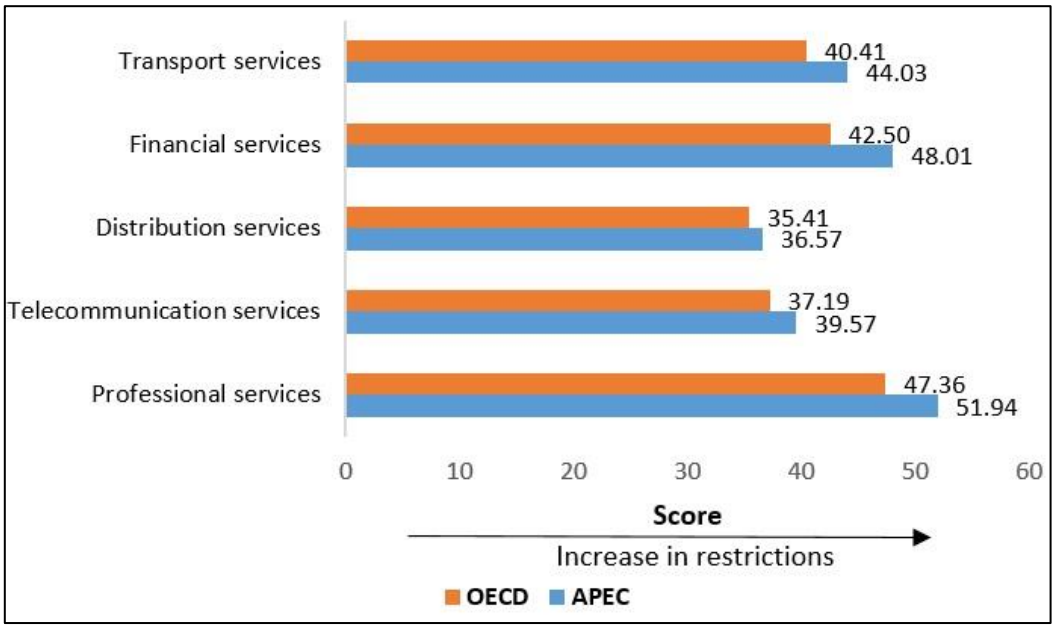
[10] The World Bank/WTO STRI ranges from 0 to 100, where 0 indicates that none of the restrictions underlying the index is applied, and 100 means that the subsector/mode is completely closed to foreign services and service suppliers.

Figure 2.2: Average STRI Scores for APEC (2020)



Source: APEC-PSU calculations using data from OECD. Accessed 22 April 2021.
Note: A higher score indicates higher levels of restriction. Calculations comprise of data from 14 APEC economies (AUS; CDA; CHL; PRC; INA; JPN; ROK; MAS; MEX; NZ; PE; RUS; THA; and USA).

Figure 2.3: Comparison of World Bank/WTO STRI in selected services sub-sectors for APEC and OECD (2016)

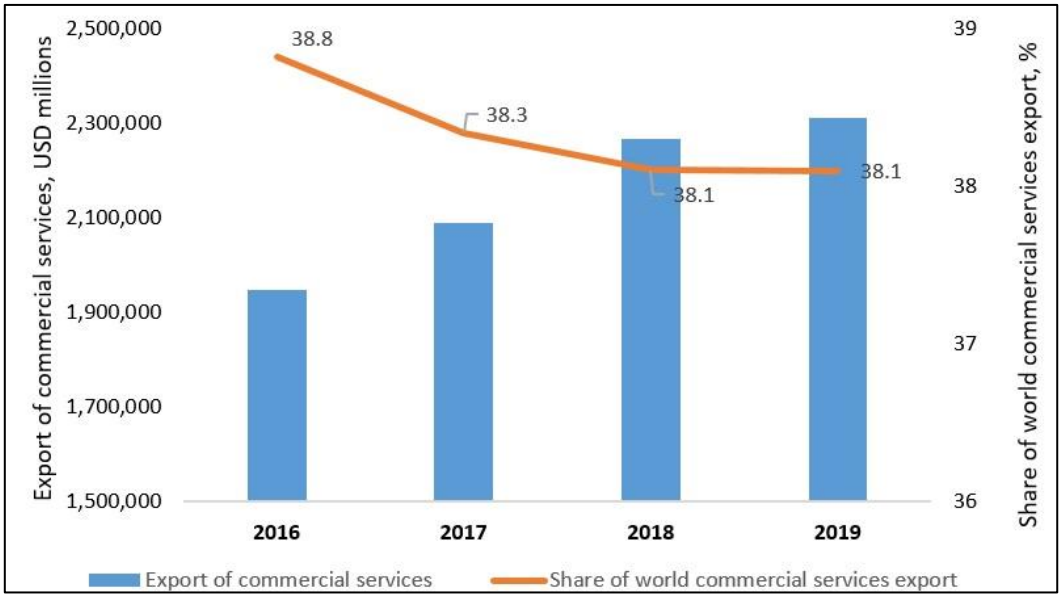


Source: APEC-PSU calculations using data from World Bank/WTO. Accessed 21 January 2021.

2.2.2 Increasing the share (%) of services exports from APEC economies in the total world services exports so that it exceeds the current share in world services exports by 2025

Export of commercial services can be indicative of the region's services competitiveness. Data from the WTO showed that export of commercial services by APEC economies has increased from USD 1.95 trillion in 2016 to USD 2.31 trillion in 2019 (Figure 2.4).[11] The top three contributors in 2019 are the United States (USD 853 billion), China (USD 282 billion), and Singapore (USD 205 billion). Despite the year-to-year increase between 2016 and 2019 of APEC's commercial services exports, APEC's share of total world services exports have declined slightly over the same period, from 38.8 percent in 2016 to 38.1 percent in 2019. This means that although APEC has increased its commercial services exports between 2016 and 2019 in nominal terms, the increase in commercial services export by the rest of the world has outpaced that of APEC for the same period.

Figure 2.4: Export of commercial services by APEC economies and its global share



Source: APEC-PSU calculations using data from WTO. Accessed 15 January 2021.

2.2.3 Increasing trade in services in the APEC region so that by 2025, the compound average annual growth rate exceeds the historic average of 6.8 percent and the share (%) of value-added of the services sector in the total GDP of the APEC region exceeds the global average level by 2025

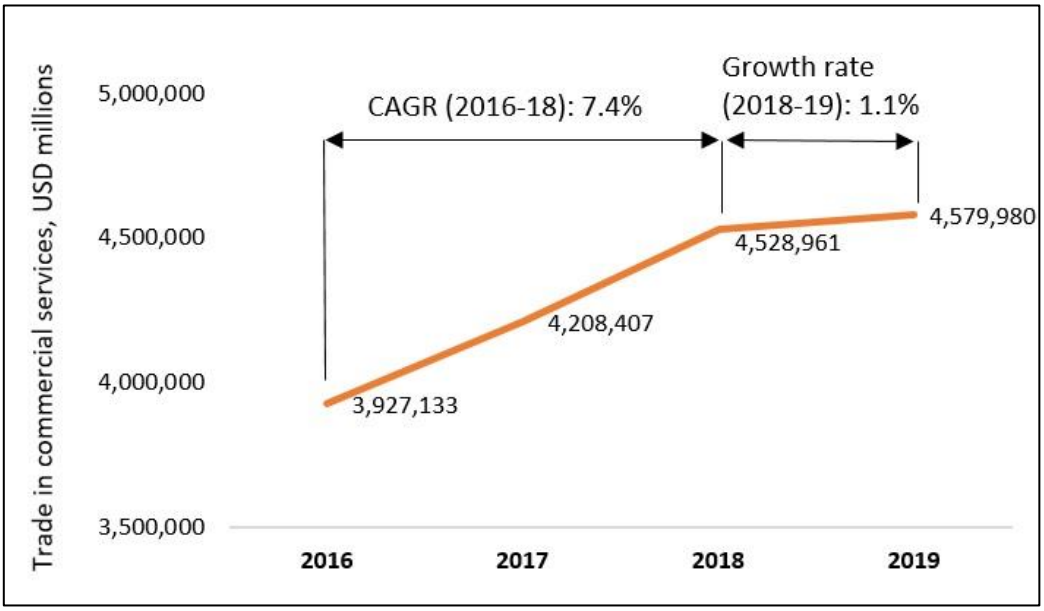
Trade in commercial services and share of services value-added in its GDP are also indicative of the region's services competitiveness. On trade in commercial services, WTO data showed that APEC registered an increase from USD 3.93 trillion in 2016 to USD 4.58 trillion in 2019 (Figure 2.5), reflecting a compound annual growth rate (CAGR) of 5.3 percent, which is lower than the historic 6.8 percent.[12] Deeper analysis showed that this lower CAGR has been due to the value of commercial services trade in 2019 increasing by only 1.1 percent relative to that in 2018. In fact, a third of APEC economies reported lower value of commercial services trade

[11] World Trade Organization (WTO), "WTO Data," January 15, 2021, https://data.wto.org/.
[12] World Trade Organization (WTO).

in 2019 as compared to 2018. Indeed, CAGR for the period 2016-2018 was 7.4 percent, which is higher than 6.8 percent.

The containment measures put in place by economies in response to COVID-19 pandemic had led to a significant drop in the value of trade, including that of commercial services. For the first three quarters (Q1-Q3) of 2020, the value of trade in commercial services by APEC economies was only approximately 76.3 percent of the same period in 2019. Unless there is a significant increase in the 2020's Q4 value, it is highly likely that the value for the whole of 2020 would be lower than that of 2019. Therefore, CAGR between 2016 and 2020 would likely be lower than 5.3 percent.

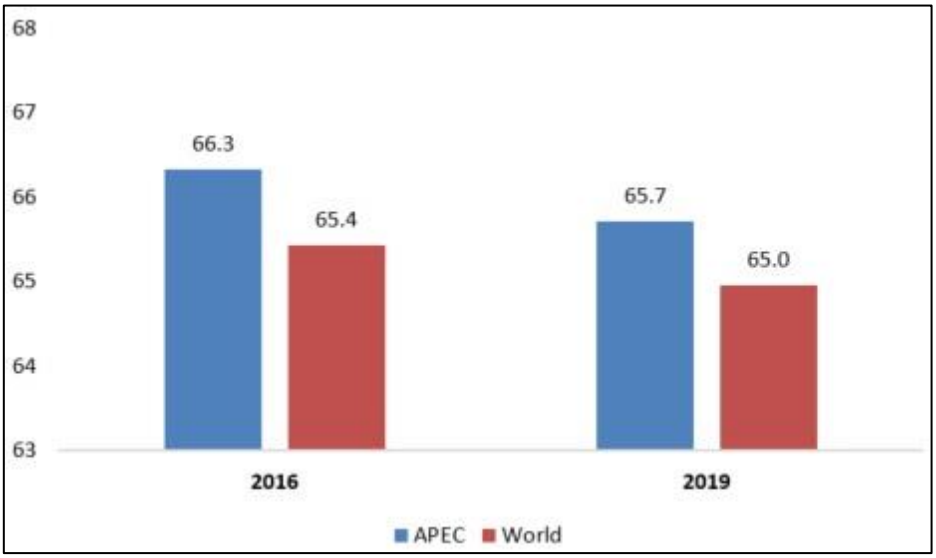
Figure 2.5: Trade in commercial services by APEC economies



Source: APEC-PSU calculations using data from WTO. Accessed 15 January 2021.

On the GDP share of services value-added, data for APEC showed that the region continued to outperform the world on average in 2019 (65.7 percent vs. 65.0 percent) (Figure 2.6). This was also the case in 2016, where the share for APEC and the world was 66.3 percent and 65.4 percent, respectively. However, it is worthwhile to note that the share for APEC was lower in 2019 relative to 2016. In addition, the gap between APEC and the world has become smaller in 2019 compared to 2016 (0.75 vs. 0.89 percentage point).

Figure 2.6: Services value-added as percentage of GDP



Source: APEC-PSU calculations using data from World Bank and Chinese Taipei Directorate General of Budget, Accounting and Statistics. Accessed 15 January 2021.
Note: APEC average excludes CDA. For 2019 APEC average, 2017 data is used for NZ and 2018 data is used for HKC; JPN; and USA. For 2019 World average, 2018 data is used.

2.3 APEC-WIDE ACTIONS

The discussions on each APEC-wide action begin with an overview of the importance/value of the action. This is followed by an elaboration of the activities that APEC fora and economies have undertaken to support the implementation of the action. Baseline indicators are then analysed to determine progress in implementing the action. Due to the amount of information captured by the various sources mentioned in section 2.1, PSU seeks fora and economies' understanding that not all can be accommodated in this MTR report.

2.3.1 Action #1: Enhancing the critical role of trade in services in global value chains, including through increased participation of MSMEs and women, under the agreed Strategic Blueprint for Promoting Global Value Chains Development and Cooperation (Accountable fora: CTI)

Services are especially critical to the functioning of global value chains (GVCs). Logistics and supply chain management services enable intermediate inputs to be sourced from almost anywhere. R&D and design services are needed in the development of new products as well as in fine-tuning existing ones. Telecommunications services allow different teams working on a single product and yet separated by distance to communicate with one another, while data analytics and engineering services optimize manufacturing processes. Indeed, studies conducted by PSU show that there are positive correlations between services inputs, productivity and manufacturing outputs.[13]

While the critical role of services by itself should give strong impetus to promote its wider use in GVCs, in the context of APEC, this mission takes on added significance of potentially contributing to inclusive growth, especially when seen from the perspective of micro, small,

[13] Gloria O. Pasadilla and Andre Wirjo, "Services, Manufacturing and Productivity," January 2015, https://www.apec.org/Publications/2015/01/Services-Manufacturing-and-Productivity.

and medium enterprises (MSMEs). After all, MSMEs make up over 98 percent of enterprises in most APEC economies[14] and many MSMEs are engaged in services activities such as wholesale and retail trade, business services, maintenance, logistics, construction, and ICT-related activities.[15] Collectively, MSMEs also employ between 50 to 80 percent of the workforce in individual member economies.[16] Increased servicification of GVCs could benefit women as well considering that two-thirds of them are engaged in services activities (significantly higher compared to the agriculture and manufacturing sector).[17]

Recognizing the need to further support GVC development and to promote the role of services in GVCs, APEC Leaders endorsed the APEC Strategic Blueprint for Promoting Global Value Chains Development and Cooperation in 2014.[18] To support the Blueprint implementation, PSU conducted case studies in 2016 to examine the effect of market-opening services development on the economy and GVCs, where case studies such as telecommunications in Papua New Guinea, transport in Chile, and health and medical services in Malaysia were covered. [19] In these case studies, it was shown that liberalizing the specific services sector led to various positive impacts such as on GDP, competitiveness and cost savings by businesses.

Specifically on increasing MSMEs' participation in GVCs, one initiative launched is "SMEs' Integration into Global Value Chains in Services Industries," which sought to empower policymakers with better understanding of GVCs in service industries and present strategies and policy recommendations to facilitate SME's integration into the GVCs.[20] The initiative commissioned multiple activities (in the form of policy study, workshop, and/or seminar) across different services sectors such as software, tourism, logistics, and fashion design. The report on the logistics sector published in 2017 recommended efforts to promote a favorable regulatory and business environment, focusing on transport and border clearance.[21] In addition, it called on APEC to provide capacity building support to member economies in the form of skills standards, skill certification programs, and assist with access to market, finance, and customers.

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[14] Bernadine Yuhua Zhang, "SMEs in the APEC Region," December 2013, https://www.apec.org/Publications/2013/12/SMEs-in-the-APEC-Region; Tammy L. Hredzak, "Overview of the SME Sector in the APEC Region: Key Issues on Market Access and Internationalization," April 2020, https://www.apec.org/Publications/2020/04/Overview-of-the-SME-Sector-in-the-APEC-Region.

[15] Bernard Hoekman, Robert Schuman, and Gloria O. Pasadilla, "2016 APEC Economic Policy Report," November 2016, http://publications.apec.org/Publications/2016/11/2016-APEC-Economic-Policy-Report.

[16] Zhang, "SMEs in the APEC Region."

[17] Hoekman, Schuman, and Pasadilla, "2016 APEC Economic Policy Report."

[18] "2016 AMM Joint Statement" (2016 APEC Ministerial Meeting, Lima, Peru, 2016), https://www.apec.org/Meeting-Papers/Annual-Ministerial-Meetings/2016/2016_amm.

[19] Jon Berry, "Case Study on the Role of Services Trade in Global Value Chains Telecommunications in Papua New Guinea" (APEC - Policy Support Unit, September 2016), https://www.apec.org/Publications/2016/10/Case-Study-on-the-Role-of-Services-Trade-in-Global-Value-Chains-Telecommunications-in-Papua-New-Guin; Ben Shepherd and Erik Van Der Marel, "Case Study on the Role of Services Trade in Global Value Chains: Transport Services in Chile" (APEC - Policy Support Unit, October 2016), https://www.apec.org/Publications/2016/10/Case-Study-on-the-Role-of-Services-Trade-in-Global-Value-Chains-Transport-Services-in-Chile; Shandre Mugan Thangavelu and Sothea Oum, "Case Study on the Role of Services Trade in Global Value Chains: Health and Medical Services in Malaysia" (APEC - Policy Support Unit, February 2017), https://www.apec.org/Publications/2017/02/Case-Study-on-the-Role-of-Services-Trade-in-Global-Value-Chains-Health-and-Medical-Services-in-Malay.

[20] CTI Chair, "SMEs' Integration into Global Value Chains in Services Industries" (Ministers Responsible for Trade Meeting, Arequipa, Peru, 2016), http://mddb.apec.org/Documents/2016/MM/MRT/16_mrt_013.pdf.

[21] Committee on Trade and Investment, "Summary Report: APEC Workshop on Promoting SMEs' Integration into Global Value Chains in Services - Logistics" (Ho Chi Minh City, Viet Nam, 2017), https://www.apec.org/Publications/2018/04/APEC-Workshop-on-Promoting-SMEs-Integration-into-Global-Value-Chains-in-Services---Logistics.

The CTI report on the tourism sector published in 2019 noted the employment opportunities in the tourism sector, where women make up a majority of the workforce in developed economies and almost half of the workforce in developing economies.[22] In addressing the challenges faced by women, governments and the private sector were recommended to provide safe work environment and establish career pathways for employment, provide equal education and scholarship opportunities, and improve access to credit and loans for women entrepreneurs.

Another initiative is the establishment of the APEC Global Value Chain Partnership Platform. Led by China and Indonesia, the platform aims to enhance the participation of developing economies and MSMEs in GVCs by providing: 1) information on papers, seminars, reports and capacity building programs in relation to the 2014 Strategic Blueprint; and 2) opportunities to share policies, successful experiences, and best practices among member economies, international organizations, academics and the private sector.[23] Other initiatives which have been undertaken to enhance MSMEs' integration into GVCs include: 1) Promoting SMEs' Integration into Global Value Chains in Major Industries;[24] and 2) Study on Enhancement of Integration of Regional Value Chains in Asia and Latin America and the Caribbean.[25]

To further promote trade in services by SMEs and women entrepreneurs, CTI undertook a project titled "Research on Promoting Trade in Services by SMEs and Women Entrepreneurs." The study looked at several services sub-sectors in greater detail (e.g., education services, environmental services and real estate services) and made several recommendations, including: 1) facilitating effective business networking opportunities; 2) promoting the use of inclusive financing mechanisms to widen the options available; and 3) identifying and promoting e-commerce platforms and innovative business models. [26] This project complemented activities conducted by other fora to enhance capacities of MSMEs in exporting services. [27]

To facilitate accurate measurement of APEC economies' engagement in GVCs, the United States led a capacity building program aimed at developing the APEC Trade in Value Added (TiVA) database.[28] The program focused on: 1) examining the role of GVCs in the APEC region in terms of competitiveness, economic growth, and economic integration; 2) facilitating

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[22] Committee on Trade and Investment, "SMEs' Integration into Global Value Chains in Services Industries: Tourism Sector," August 2019, https://www.apec.org/Publications/2019/09/SMEs-Integration-into-Global-Value-Chains-in-Services-Industries.

[23] APEC, "APEC Global Value Chain Partnership Platform: Better Participation, Greater Value Added, Upward Mobility of Developing Economies and SMEs in GVCs," July 26, 2017, http://www.apecgvc.org/a/SERVICE/ABOUNT_US/2017/0726/33.html.

[24] CTI Chair, "SMEs' Integration into Global Value Chains in Services Industries."

[25] APEC Committee on Trade and Investment, "Study on Enhancement of Integration of Regional Value Chains in Asia and Latin America and the Caribbean," April 2017, https://www.apec.org/Publications/2017/04/Study-on-Enhancement-of-Integration-of-Regional-Value-Chains-in-Asia-and-Latin-America-and-the-Carib.

[26] Yuki Tashiro and Hikari Ishido, "Research on Promoting Trade in Services by SMEs and Women Entrepreneurs" (APEC Committee on Trade and Investment, May 2020), https://www.apec.org/Publications/2020/05/Research-on-Promoting-Trade-in-Services-by-SMEs-and-Women-Entrepreneurs.

[27] APEC Small and Medium Enterprises Working Group, "APEC Public-Private Dialogue on Enhancing Capacities of MSMEs in Exporting Services," April 2018, https://www.apec.org/Publications/2018/04/APEC-Public-Private-Dialogue-on-Enhancing-Capacities-of-MSMEs-in-Exporting-Services.

[28] Committee on Trade and Investment, "Proposals - Capacity Building Workshop on Strategic Framework on Measurement of APEC TiVA under GVCs and Its Action Plan," 2018, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2292.

access to and use of the APEC TiVA database; and 3) applying the TiVA approach and APEC TiVA database for trade and foreign direct investment (FDI) policy analysis.[29]

In 2019, APEC economies agreed to develop a new comprehensive and enhanced Blueprint, "The APEC Strategic Blueprint for Promoting Global Value Chains 2020–2025 (Blueprint 2.0)", to further advance GVC-related works. The Blueprint 2.0 takes into consideration new elements such as the role of the digital economy and aims to deepen the synergies between different efforts and stakeholders.[30] Of the seven workstreams, workstream 2 (Realize the critical role of the digital economy within GVCs) sought to encourage policies that foster access and avoid barriers to the digital economy, thus facilitating e-commerce and digital trade, while workstream 4 (Strengthening the role of services within GVC) sought to reduce barriers (both at the border and behind the border) that can negatively affect trade in services and hinder economic growth and development. Specifically on workstream 2, Chile and Korea undertook a project titled "The APEC GVCs Blueprint 2020–2025: Realizing the Role of the Digital Economy within GVCs."[31] The project aims to: 1) enhance the understanding of developing economies regarding changes in GVCs caused by digital technologies; 2) provide references and best practices for developing economies to formulate effective policies that maximize the benefits of the digital economy within GVCs while identifying and mitigating potential drawbacks; and 3) facilitate cooperation to develop further capacity building activities within APEC.

Chile also hosted a workshop in 2019 entitled: "Trade and Investment Interdependencies in GVCs: Are Policy Frameworks for Trade and Investment Keeping Apace?" to discuss the perception of insufficient comprehensiveness or inter-linkages between trade and investment rules and the reality of production models.[32] A key outcome of the workshop was the development of a checklist for GVCs-friendly provisions in trade and investment policy, which takes into consideration the widely prevalent interdependency of trade and investment (particularly in services) and could serve as a guide for policymaking as well as public consultations.

Customs-related services are critical to ensure the smooth functioning of GVCs. In this regard, APEC has introduced several initiatives, including: the "Supply Chain Integration 4.0 through APEC Single Window Interoperability Action Plan"; and the "Customs Strategic Framework on Building Connectivity: 3S Plus 3M." The former aims to better position economies in reaping the benefits of access to international markets and supply chains by improving processing time and decreasing cost of foreign trade operation,[33] while the latter look at how

[29] The APEC TiVA Technical Group and Lin Jones, "Methodologies of Constructing the APEC TiVA Database for Better Understanding Global Value Chains in the APEC Region" (APEC Committee on Trade and Investment, 2019), https://www.apec.org/-/media/APEC/Publications/2019/12/2019-CTI-Report-to-Ministers/TOC/Appendix-3---APEC-TiVA-Initiative-Report-One.pdf; The APEC TiVA Core Technical Task Force and Lin Jones, "APEC TiVA Initiative Report Two: Better Understanding Global Value Chains in the APEC Region," 2021, https://www.apec.org/Publications/2021/02/APEC-TiVA-Initiative-Report-Two---Better-Understanding-Global-Value-Chains-in-the-APEC-Region.

[30] SOM Chair, "APEC Strategic Blueprint for Promoting Global Value Chains 2020-2025" (Ministers Responsible for Trade Meeting, Viña del Mar, Chile, 2019), http://mddb.apec.org/Documents/2019/MM/MRT/19_mrt_009.pdf.

[31] Committee on Trade and Investment, "Proposals - The APEC GVCs Blueprint 2020-2025: Realising the Role of the Digital Economy within GVCs," 2020, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2638.

[32] Viviana Araneda, "Workshop on Trade and Investment Inter-Dependencies in Global Value Chains (GVCs): Are Policy Frameworks for Trade and Investment, Such as Trade and Investment Agreements Keeping Apace?" (APEC Committee on Trade and Investment, November 2019), https://www.apec.org/Publications/2019/11/Workshop-on-Trade-and-Investment-Inter-dependencies-in-Global-Value-Chains.

[33] Committee on Trade and Investment, "2019 CTI Annual Report to Ministers," December 2019, https://www.apec.org/Publications/2019/12/2019-CTI-Annual-Report-to-Ministers.

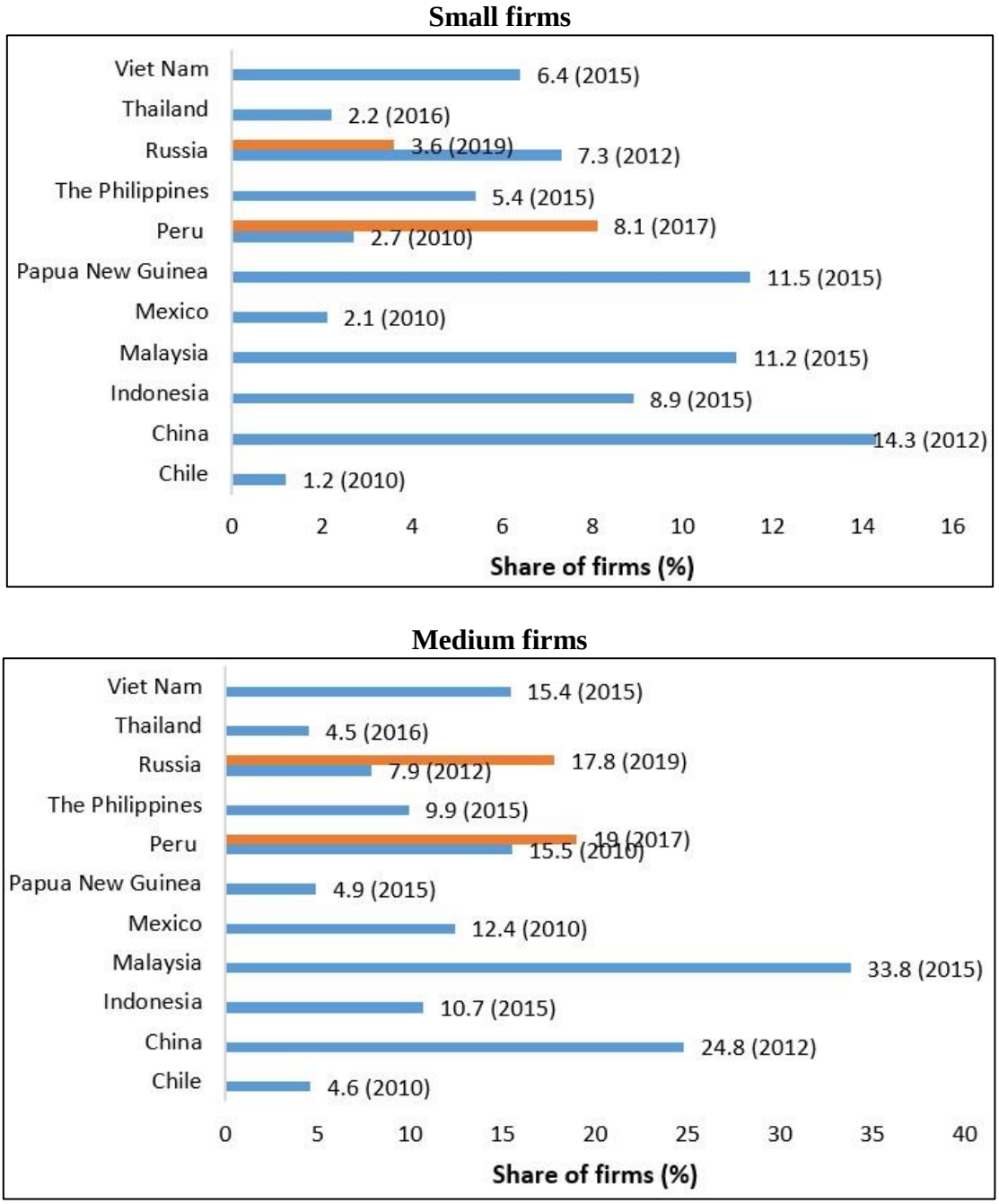
trade facilitation and security can be enhanced in a systematic approach through the use of smart borders and logistics as well as through mutual enforcement and sharing of information.[34]

Recognizing the critical role of services in contributing to supply chain resilience amid the COVID-19 pandemic and that many MSMEs are primarily engaged in services provision, Australia led a project titled "Building Resilient Supply Chains 2020: Survey and Analysis" to better understand the state of play and what could be done to further support MSMEs on this front.[35] Recommendations include: 1) assisting MSMEs to participate in e-commerce and global supply chains made possible by new opportunities created by the digital economy; 2) promoting access to information regarding trade opportunities and regulatory requirements via helpdesks, workshops and peer-to-peer introductions; 3) developing common standards for AEO programs across APEC so as to harmonize regulations and procedures; and 4) supporting SMEs' access to finance, technology and training to facilitate export.

One indicator used to indirectly monitor MSMEs' participation in GVCs is the share of small and medium firms exporting directly or indirectly collected as part of the World Bank Enterprise Survey.[36] Eleven APEC economies have data for the year 2010 or later. Since the last update reflected in the PSU Baseline Indicators report in 2017, only two economies have had data updates, namely Peru (2017) and Russia (2019). On small firms exporting directly or indirectly, Peru's share increased from 2.7 percent in 2010 to 8.1 percent in 2017, while Russia's share decreased from 7.3 percent in 2012 to 3.6 percent in 2019 (Figure 2.7). With regards to medium firms exporting directly or indirectly, Russia's share increased from 7.9 percent in 2012 to 17.8 percent in 2019, while Peru's share increased from 15.5 percent in 2010 to 19 percent in 2017.

[34] Committee on Trade and Investment.
[35] Committee on Trade and Investment, "Proposals - Building Resilient Supply Chains 2020: Survey and Analysis," accessed June 18, 2021, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2595.
[36] World Bank, "Enterprise Surveys - World Bank Group," accessed April 19, 2021, https://www.enterprisesurveys.org/en/data.

Figure 2.7: Share of small and medium firms exporting directly or indirectly



Source: APEC-PSU calculations using data from World Bank. Accessed 20 April 2021.
Note: Surveyed firms are considered exporters only if at least 10 percent of its sales are exported.

Moving forward, economies and fora indicated the need to continue developing initiatives which are in line with Blueprint 2.0. For example, a Workshop on "Effective Domestic Policymaking for Stimulating Economic Upgrading through GVCs" is expected to be held in August 2021. They also noted the importance of focusing efforts to enhance women's and MSMEs' participation in GVCs. Given the cross-cutting nature of the work, economies noted the value of referencing other relevant APEC initiatives such as La Serena Roadmap for Women and Inclusive Growth, and the usefulness of exploring possible areas of symmetry/collaboration with other fora such as SMEWG.

2.3.2 Action #2: Supporting cross-border mobility for professionals, building on initiatives such as the APEC Architects and Engineers Registers to facilitate mutual recognition arrangements (MRAs) (Accountable fora: HRDWG)

The movement of natural persons is one of the four modes through which services can be supplied internationally. By enhancing cross-border labor mobility, economies could improve labor market efficiency, productivity and further stimulate trade. One way to enhance cross-border labor mobility is through the mutual recognition of professional standards – when various professional standards are recognized to a different extent by different economies, it would be harder for services professionals to work in their field in other economies.[37]

The collection and sharing of data on cross-border mobility informs research and policy decisions. While most APEC economies collect labor market and mobility data, they may be incomplete, incomparable, and not widely available. As such, the project titled "Sharing and Reporting Labor Market Information in the APEC Region" was initiated by Australia to improve the availability and accessibility of comparable data. The project included a baseline study by the International Labour Organization, which investigated labor mobility and labor market data collection practices gaps; and future prospects for improving data harmonization and sharing.[38]

Recognizing the value of recognition of qualifications and skills in enhancing cross-border mobility, APEC too has undertaken efforts in this area. Between 2016 and 2017, Japan initiated the project entitled "Enhancing Mutual Recognition and Regional Cooperation for Skills and Job Qualifications in the APEC Region." The project seeks to raise awareness on the achievements and best practices in existing initiatives to mutually recognize skills and job qualifications and build human resource development capacity among APEC economies.[39] The cross-cutting nature of this action means that activities aimed at supporting cross-border mobility of professionals are also taken by GOS despite HRDWG being the accountable fora. For example, Australia is currently undertaking a project entitled "APEC Mutual Recognition Online Workshops – Digital Credentialing of Professional and Skilled Services Providers" to explore both current and best practices in the use of digital credentials to support cross-border

[37] For example, in the case of the EU, the harmonization of standards in the accounting and auditing professionals was found to have strong positive effect on cross-border migration. Specifically, it was found to increase the movement of accountants by 17–24 percent relative to other comparable professions (e.g., legal). (Matthew Bloomfield et al., "Improving Cross-Border Mobility: Evidence from Accountancy," VoxEU.org, December 17, 2015, https://voxeu.org/article/improving-cross-border-mobility-evidence-accountancy); Consequently, by having access to competent labor force, firms are more competitive and have higher chance of success internationally. A study on 30,000 Swedish firms over the period of 1998–2007 found that recently arrived migrants have assisted firms and their customers in overcoming informal and informational barriers to trade. In addition, skilled migrants were found to be important in boosting export, possibly due to their market specific knowledge and network links. Emilie Anér, Anna Graneli, and Magnus Lodefalk, "Cross-Border Movement of Persons Stimulates Trade," VoxEU.org, October 14, 2015, https://voxeu.org/article/cross-border-movement-persons-stimulates-trade.

[38] The baseline report can be found here: International Labour Organization, "Labour Mobility and Labour Market Data: A Baseline Study of APEC Economies" (APEC Labour Mobility Statistics Forum, Viña del Mar, Chile, 2019), http://mddb.apec.org/Documents/2019/HRDWG/FOR/19_hrdwg_for1_010.pdf.

[39] Human Resource Development Working Group, "Proposals - Enhancing Mutual Recognition and Regional Cooperation for Skills and Job Qualifications in the APEC Region," 2016, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=1922; Washington CORE, L.L.C., "Enhancing Mutual Recognition and Regional Cooperation for Skills and Job Qualifications in the APEC Region" (APEC Human Resources Development Working Group, October 2017), https://www.apec.org/Publications/2017/12/Enhancing-Mutual-Recognition-and-Regional-Cooperation-for-Skills-and-Job-Qualifications.

recognition of professional service practitioners.[40] When fully launched in the second half of 2021, the APEC Professional and Skilled Services Gateway will provide an online inventory of mutual recognition agreements on licensing, qualifications and accreditation of professionals and skilled services providers in APEC economies. [41]

The APEC Integrated Referencing Framework for Skills Recognition and Mobility (IRF) aims to enable comparisons of skills held by workers across the region.[42] The Professional Licensure Project led by Australia comprised of case studies, which provided volunteer economies with an assessment of their regulatory practices, licensing procedures, and other behind-the-border barriers.[43] It was followed by a workshop where the findings of the case studies and the various approaches to professional mobility in the volunteer economies and Australia were discussed. The use of OECD STRI as an analytical tool, as well as the impact of digitalization on professional services and mobility were also shared.[44]

Focusing on the engineering profession, Chinese Taipei implemented a project entitled: "Strengthening Mobility and Promoting Regional Integration of Professional Engineers in APEC Economies."[45] Moreover, the Human Resources Development Working Group (HRDWG) collaborated with the Institution of Engineers Singapore on the development of the APEC Engineer Databank which sought to reduce search costs and time by improving the accessibility and availability of information on skills and credentials of qualified engineers.[46] As of March 2019, the databank listed 17,421 APEC Engineers and saw 170 registered users.[47] This experience outlined several recommendations, such as improving the coverage of existing MRAs to include APEC engineers; promoting the use of the register among governments and the private sector; harmonizing the registers with individual economies' professional engineering services practices; and encouraging the participation of six remaining APEC economies in the APEC Engineer MRA.

Digitalization has facilitated the utilization of cross-border talent. Yet, it has also raised issues such as how social security would apply to them. In this regard, Chinese Taipei has undertaken a project entitled "The Impact of Regional Integration in the Digital Age on Social Security

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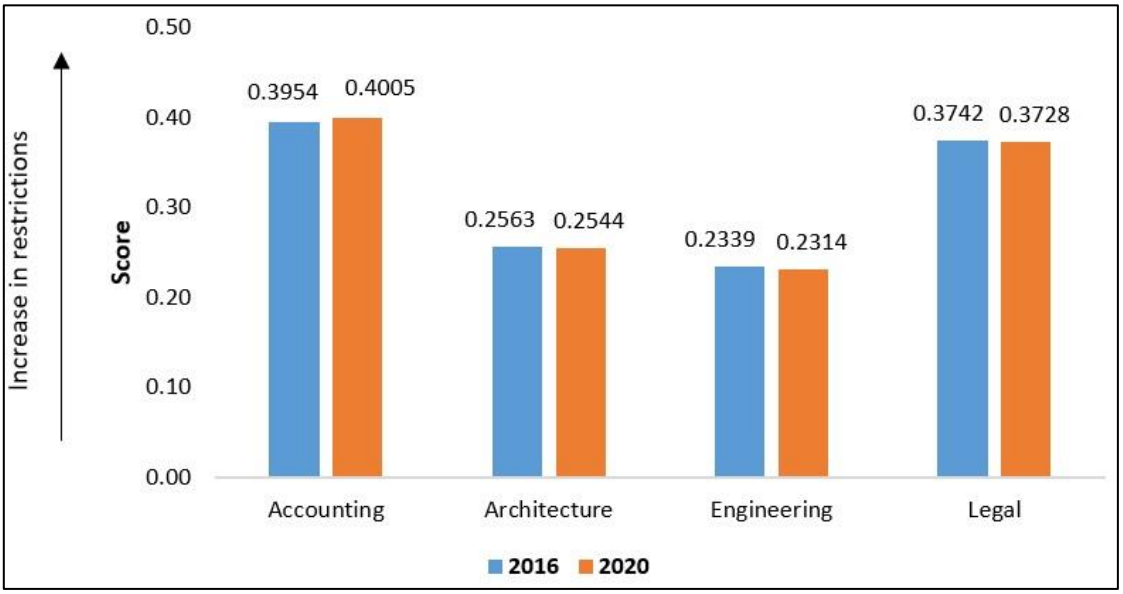
[40] Group on Services, "Proposals - APEC Mutual Recognition Online Workshops - Digital Credentialing of Professional and Skilled Services Providers," 2020, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2649.
[41] Group on Services, "Proposals - APEC Professional and Skilled Services Gateway - An Inventory on Mutual Recognition Agreements," 2020, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2648.
[42] Human Resource Development Working Group, "Proposals - Integrated Referencing Framework for Skills Recognition and Mobility," 2015, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=1703; Andrea Bateman and Mike Coles, "APEC Integrated Referencing Framework for Skills Recognition and Mobility," January 2016, https://aimp2.apec.org/sites/PDB/Supporting%20Docs/2722/Proposal%20Attachments%20(if%20any)/HRD%2005%202015S%20IRF%20Final%20report_Draft_Jan2016.pdf; Human Resource Development Working Group, "Proposals - APEC Integrated Referencing Framework for Skills Recognition and Mobility Phase II - Socialisation and Consultation," 2017, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2066.
[43] Human Resource Development Working Group, "Proposals - Improving Professional Licensure: Member Economy Case Studies and Workshops," 2018, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2209.
[44] Australia, "Report on APEC Workshop on 'Improving Professional Licensure in APEC,'" March 1, 2019, https://static.wixstatic.com/ugd/ab46bb_bec62cd7f9df497d87ee95c30900e079.pdf.
[45] Human Resource Development Working Group, "Proposals - Strengthening Mobility and Promoting Regional Integration of Professional Engineers in APEC Economies," 2014, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=1570.
[46] The Institution of Engineers, Singapore, "Promoting Regional Connectivity of Professionally Qualified Engineers in APEC" (APEC Human Resources Development Working Group, June 2019), https://www.apec.org/Publications/2019/07/Promoting-Regional-Connectivity-of-Professionally-Qualified-Engineers-in-APEC.
[47] Human Resource Development Working Group, "Proposals - Promoting Regional Connectivity of Professionally Qualified Engineers in APEC," 2017, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2099.

Protection for Cross-Border Workforce in APEC Economies and Related Responses" to review the social security protection systems and practices for cross-border workforce in APEC economies and identify best practices.[48]

The OECD STRI is one of the indicators used to monitor progress with regards to implementation of this APEC-wide action. More specifically, STRI scores for the professional sub-sectors (i.e., accounting, architecture, engineering and legal) are analyzed. Comparing the average scores for APEC economies between 2016 and 2020 in these sub-sectors showed that three sectors have registered improvements – the scores for the architecture and engineering sub-sectors improved slightly by 0.002 and 0.003, respectively, while that for the legal sub-sector improved by 0.001 (Figure 2.8). On the other hand, the accounting sub-sector has become more restrictive by 0.005. It is worthwhile to note that there is a wide variation in scores across these sub-sectors among individual economies covered. For example, the spread of the score among APEC economies for the engineering sub-sector in 2020 ranged between 0.12 and 0.36, while that for the legal sector ranged between 0.15 and 0.89

Figure 2.8*:* Average OECD STRI scores in professional sectors for APEC (2016 and 2020)



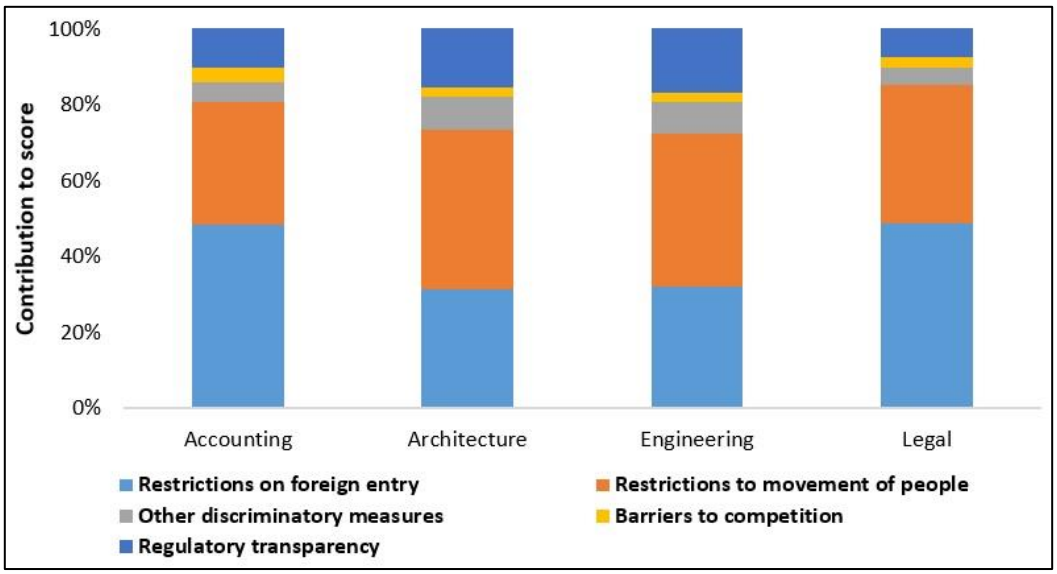
Source: APEC-PSU calculations using data from OECD. Accessed 22 April 2021.
Note: A higher score indicates higher levels of restriction. Calculations comprise of data from 14 APEC economies (AUS; CDA; CHL; PRC; INA; JPN; ROK; MAS; MEX; NZ; PE; RUS; THA; and USA). Accounting covers accounting, auditing and book-keeping services.

As seen in Figure 2.9, the two main contributing restrictions in these subsectors are those affecting foreign entry and movement of people. Examples of restrictions affecting foreign entry include those limiting the legal form of establishment of foreign firms (e.g., corporation, partnership, joint venture, sole proprietorship), requiring board of directors to be nationals or residents, and/or requiring local presence for cross-border supply. Examples of restrictions affecting movement of people include requiring labor market tests for intra-corporate transferees; contractual services suppliers and independent services suppliers; not having laws or regulations which establish process for recognizing qualifications gained abroad; requiring

[48] Human Resource Development Working Group, "Proposals - Joint Research Project with APEC Economies on 'The Impact of Regional Integration in the Digital Age on Social Security Protection for Cross-Border Workforce in APEC Economies and Related Responses,'" 2019, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2470.

foreign professionals to take a local examination; and/or to practice locally for at least one year. Some of these restrictions are what this APEC-wide action hopes to overcome.

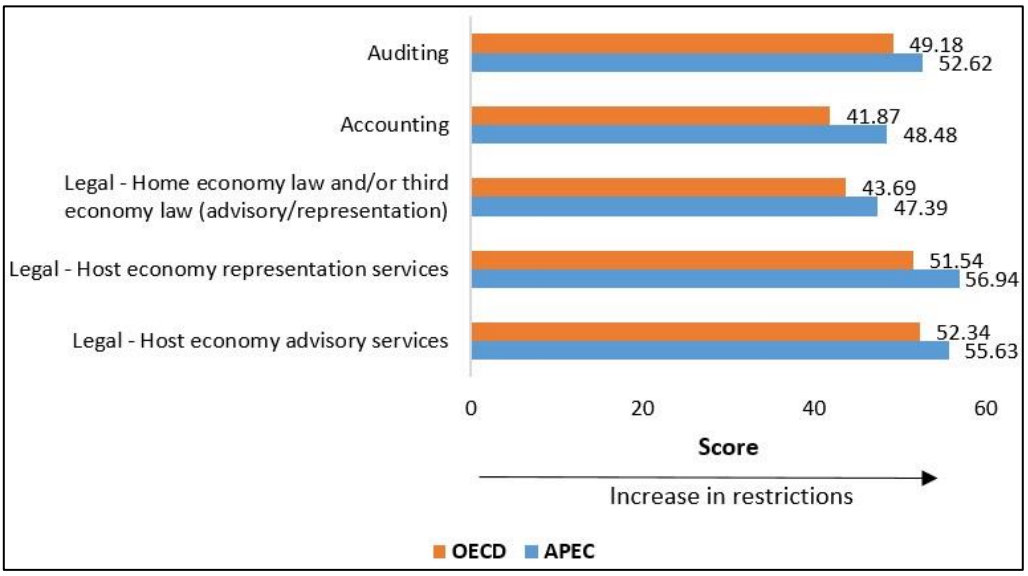
Figure 2.9: Breakdown of average OECD STRI scores in professional sectors for APEC in 2020 (by type of restrictions)



Source: APEC-PSU calculations using data from OECD. Accessed 22 April 2021.
Note: Accounting covers accounting, auditing and book-keeping services.

Another indicator used to monitor progress is the World Bank/WTO STRI which differs in methodology and covers more APEC economies relative to the OECD STRI (19 vs. 14 economies). However, only one data point is available (2016) since the inception of ASCR. In addition, only the following professional services are covered in the database: legal services (comprising host economy advisory services, host economy representation services, home economy law and/or third economy law [advisory/representation]), accounting, and auditing services. Comparing APEC's performance with that of OECD economies showed that on average, APEC underperformed OECD across all services sub-sectors covered (Figure 2.10). This observation is consistent with that of OECD STRI – OECD outperformed APEC in both accounting and legal sub-sectors in both 2016 and 2019. Similar to OECD STRI, there is also a wide variation in scores across sub-sectors among individual APEC economies. For example, the scores for both accounting and auditing services ranged from 25.7 to 100.

Figure 2.10: Comparison of World Bank/WTO STRI in professional sectors for APEC and OECD (2016)



Source: APEC-PSU calculations using data from World Bank/WTO. Accessed 21 January 2021.

The presence of MRAs that APEC economies have with one another is yet another indicator used to monitor the progress in advancing this APEC-wide action. Non-exhaustive information from multiple sources, including economies' response to survey questionnaire circulated as part of this review showed that with the exception of one economy, APEC economies have MRAs with their partners. Each MRA usually covers a single sub-sector (e.g., accounting, actuarial science, architecture, education, engineering, nursing, tourism) and can be bilateral or multilateral.[49]

Economies opined that more activities can be done to advance work in this area. These include enhancing the understanding about how MRAs work in practice, documenting best practices in the development and operationalization of MRAs, undertaking more MRA-related projects, and engaging with peak bodies from different professions on the use of MRAs.

2.3.3 Action #3: Enhancing flexibility for business visitors, building on initiatives such as the APEC Business Travel Card (ABTC) (Accountable fora: BMG)

Business travels could help to expand a firm's global outreach and network. The APEC Business Travel Card (ABTC), in operation since 1997, facilitates short-term business travel among member economies by streamlining entry process.[50] It generally comes with a maximum validity of five years and grants its holders access to fast-track immigration lanes at participating airports. To date, 19 of the 21 APEC member economies are fully participating members of the ABTC scheme while Canada and the United States are transitional members. The difference between fully participating members and transitional members is participation in the pre-clearance aspect of the ABTC scheme: when travelling to another fully participating member economy, provided pre-clearance is granted, the ABTC holder from a fully

[49] Comparing with information collected earlier in 2017 would however be challenging as more sources have been referred to in the latest collection exercise.
[50] "The Asia Pacific Economic Cooperation Business Travel Card," accessed April 1, 2021, https://www.apec.org/Groups/Committee-on-Trade-and-Investment/Business-Mobility-Group/ABTC.

participating member economy does not need to make a separate application for visa or entry permit.

To further improve on the convenience that ABTC brings, the Business Mobility Group (BMG) has undertaken several projects, including 1) APEC-wide ABTC online lodgment system workshop and 2) ABTC mobile application (or virtual ABTC). In 2016, the majority of the fully participating ABTC economies had no form of online lodgment for their citizens.[51] Moreover, despite having an online system or planning to have one, four economies (China; Korea; Singapore; and Thailand) still require manual data entry of batch uploads of collected applicant information into the ABTC system. The APEC-wide ABTC online lodgment system workshop aimed to allow IT professionals from interested economies to meet with the ABTC system administrators and system design experts from Australia to scope the building of an inclusive online lodgment capability. To date, online lodgment for Australian ABTC card holders has been completed. Additionally, BMG Convenor's Office has been working with Singapore and Thailand to develop online lodgment specifications for other economies. Papua New Guinea; New Zealand; and Japan are also looking into the possibility of setting up an online lodgment platform.

The ABTC mobile application (or virtual ABTC) is another APEC project aimed at enhancing flexibility for business visitors. When fully implemented, it would allow ABTC holders to present their identification details from the digital device instead of a physical card to immigration official.[52] In addition, the "digital card" will provide ABTC holders with real-time updates upon approval of preclearance by a fully participating economy. The project took off in 2019 with discussions on the requirements for both the ABTC holders and airport officials.[53] The virtual ABTC has been rolled out to Australian ABTC card holders.

No quantitative indicator was identified for the purpose of monitoring the implementation of this APEC-wide action. However, a possible indicator would be the number of ABTC card holders – by September 2017, the total number of card holders had increased to nearly 240,000 people. Specifically on the development and implementation of an optional APEC-wide online lodgment for ABTC applications, Business Mobility Group (BMG) updated that online lodgment for Australian ABTC card holders has been completed. Additionally, BMG Convenor's Office has been working with Singapore and Thailand to develop online lodgment specifications for other economies.

Moving forward, economies are of the view that BMG could continue to advance initiatives to facilitate business travels. The forum can do so by raising awareness about ABTC, further enhancing ABTC through activities such as those discussed above, as well as exploring schemes beyond ABTC.

2.3.4 Action #4: Developing a set of good practice principles on domestic regulations in the services sector (Accountable fora: CTI, EC and GOS)

Domestic regulations are important to ensure the smooth and legal operations of the services sector. Economies reserve the right to implement certain domestic regulations to achieve

[51] Business Mobility Group, "Proposals - APEC Business Travel Card (ABTC) APEC-Wide Online Lodgement System Design Workshop," 2016, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=1842.
[52] Business Mobility Group, "Proposals - APEC Business Travel Card (ABTC) Mobile Application," 2019, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2551.
[53] Business Mobility Group, "APEC Advances Digitization of the APEC Business Travel Card," February 5, 2020, https://www.apec.org/Press/News-Releases/2020/0205_ABTC.

legitimate policy objectives. For example, economies might put in place more regulations in the transportation or health sector to ensure public safety. They might also require service providers to share new knowledge and processes as a means of skill and technology transfer. However, excessive regulations could have adverse implications on economic growth and competitiveness of an economy. A study on OECD economies found that service regulation has a significant negative impact on the growth rate of value added, productivity, and exports of services-dependent industries.[54]

It is thus in the interest of APEC economies to craft regulations that meet domestic policy objectives without being more onerous than necessary. But, there is no one-size-fits-all approach to improving domestic regulation, owing to the diverse economic and social realities present in the region. For example, differences in governance structures between economies means that some economies could better accommodate regional priorities than others. Moreover, economies at various stages of development might have differing regulatory capabilities – developing economies may have less resources at their disposal than industrialized economies to effectively enforce regulatory policies. Developing economies may also lack the bandwidth to create nuanced regulations that are more tailored to certain sectors and situations, and instead introduce blanket regulations that could stifle certain economic activities.[55]

To enhance the region's efforts in improving domestic regulations in the services sector while respecting the region's diverse socioeconomic realities, APEC economies agreed to work on developing a set of good practice principles in this area. GOS later developed the "APEC Non-binding Principles for Domestic Regulation of the Services Sector,"[56] which was adopted in late 2018. The document presented a set of best practices in various areas involved in domestic regulation of services sectors. It primarily defines domestic regulations as any regulations involved in the authorization of a service provider, that is, the granting of permission from a regulator to supply services in a market. Among the core principles highlighted in the document include: 1) improving the administration of measures involved in the granting of authorization; 2) maintaining the independence of competent authorities administering authorization; 3) ensuring transparency of relevant processes and laws involved in authorization; 4) adopting technical standards developed through open and transparent processes; and 5) developing measures that are consistent with Article VI of the WTO General Agreement on Trade in Services (GATS).

To complement ongoing efforts in this area, the United States Agency for International Development (USAID), through the US Support for Economic Growth in Asia (US-SEGA), has commissioned two reports. The first report was the "Study on APEC's Non-binding Principles for Domestic Regulation of the Services Sector: Transparency and Predictability in Rulemaking,"[57] which emphasized the importance of transparency and predictability as crucial

[54] Guglielmo Barone and Federico Cingano, "Service Regulation and Growth: Evidence from OECD Countries," *The Economic Journal* 121, no. 555 (September 1, 2011): 931–57, https://doi.org/10.1111/j.1468-0297.2011.02433.x.
[55] For example, see Zeti Akhtar Aziz, "Give the World's Poor a Bank Account," *World Economic Forum*, August 23, 2013, https://www.weforum.org/agenda/2013/08/give-the-worlds-poor-a-bank-account/.
[56] Committee on Trade and Investment, "APEC Non-Binding Principles for Domestic Regulation of the Services Sector," November 13, 2018, https://www.apec.org/-/media/APEC/Publications/2018/11/2018-CTI-Report-to-Ministers/TOC/Appendix-13---APEC-Nonbinding-Principles-for-DR-Drafting-Group.pdf.
[57] Committee on Trade and Investment, Group on Services, and United States Agency for International Development, "Study on APEC's Non-Binding Principles for Domestic Regulation of the Services Sector: Transparency and Predictability in Rulemaking," APEC, January 2020, https://www.apec.org/Publications/2020/01/Study-on-APECs-Non-binding-Principles-for-Domestic-Regulation-of-the-Services-Sector.

pillars in working towards the principles. The report explored transparency provisions present within various trade agreements such as the United States–Mexico–Canada Agreement (USMCA) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). It found that there were several gaps between existing practices and legal obligations, which contributes to regulatory uncertainty among stakeholders. For instance, while 20 APEC economies do publish draft regulations, eight APEC economies do not have a legal obligation to publish domestic regulations before enactment.[58] Though APEC economies may be improving their stakeholder collaboration in developing domestic regulations, the lack of a legal mandate to publish draft regulations for public consultation may make such efforts seem provisional. Aligning legal regimes with actual practice could increase the level of certainty and predictability that stakeholders would have on regulatory development.

A follow-up study entitled "Next Generation Practices for Services Authorization in the Asia-Pacific Region" explored best practices from APEC economies, and highlighted the importance of exploring cross-border spillovers and technology in improving services authorization. For instance, the United States expanded its accreditation of licensed professionals in accountancy and nursing, allowing foreign professionals to take the US competency exams overseas. This awareness of cross-border factors allowed the United States to expand its potential talent pool of professionals who can participate in the accountancy and healthcare sectors. Meanwhile, Chinese Taipei has launched the Commerce Industrial Services Portal (CISP) in 2015, which serves as a single entry point to complete requirements such as company certification, regulatory approvals, and tax registration to operate a services company. This makes it easier for service providers to seek relevant information and reduce transaction costs, expediting the participation of businesses and individuals in Chinese Taipei's services market.

To further support efforts in adopting the non-binding principles, economies have also been hosting various workshops and surveys. For example, Korea organized the "Workshop on Best Practices Sharing to Improve Application of the APEC Non-Binding Principles for Domestic Regulation of the Services Sector" in Puerto Varas, Chile in August 2019. Chinese Taipei also conducted a survey on "Domestic Regulations in APEC Concerning Online Shopping Platform Service Providers" to inform economies of trends and good practices that economies can adopt in regulating new emerging service sectors like e-commerce.

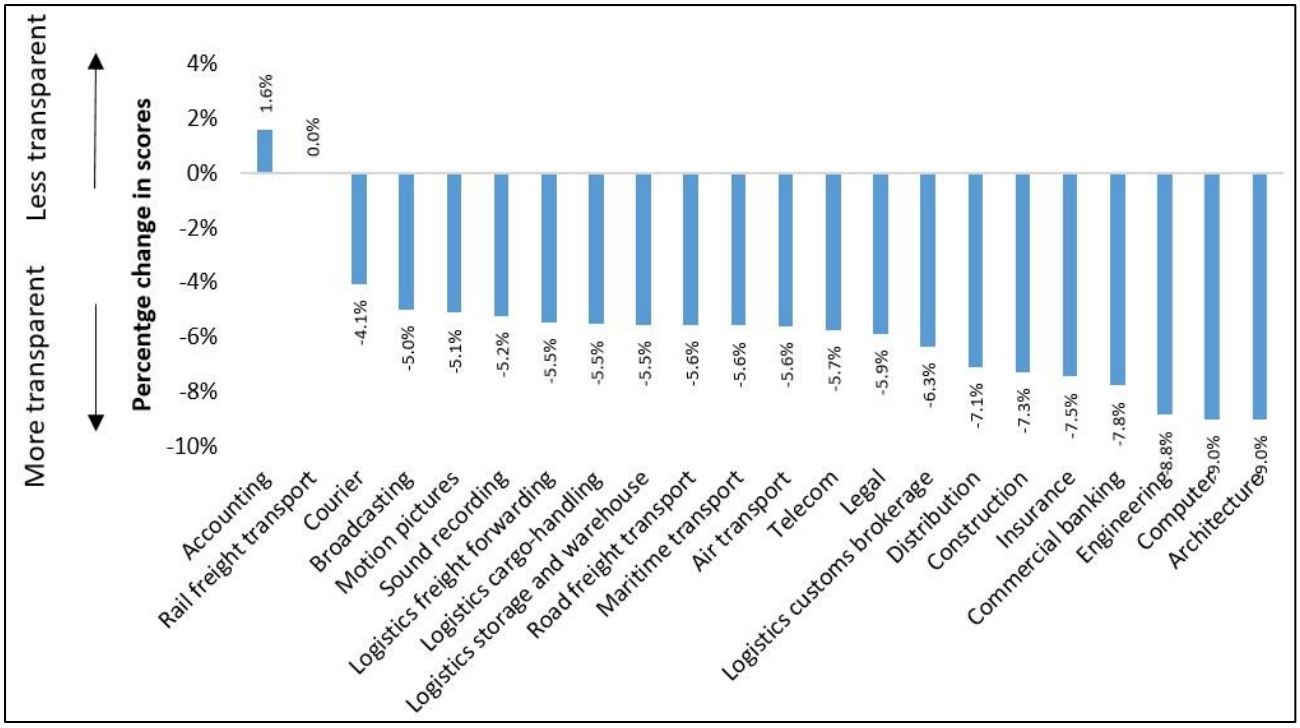
Recognizing the value of improving collaboration between trade and regulatory policy officials, New Zealand through the EC is currently undertaking a project aimed at developing a practical APEC-OECD Resource on International Regulatory Cooperation (IRC).[59] The project will complement previous workshops where economies shared their IRC experience, as well as draw on IRC work underway in APEC economies and a toolkit currently being developed by the OECD.

One way to indirectly measure APEC's progress in this area is through the OECD STRI. In particular, the regulatory transparency sub-indicator gives an idea of whether good practice principles have been enacted. Figure 2.11 shows a breakdown of STRI Regulatory Transparency scores by sector. Comparing APEC's average score between 2016 and 2020 showed an improvement in regulatory transparency for most sectors, with computer services and architecture experiencing the best improvement. On the other hand, regulatory transparency score worsened by 1.6 percent for accounting, whereas it remained unchanged for

[58] Committee on Trade and Investment, Group on Services, and United States Agency for International Development.
[59] Economic Committee, "Proposals - Developing a Practical APEC-OECD Resource on International Regulatory Cooperation," 2020, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2581.

rail freight transport. One measure that APEC economies can adopt to further improve their regulatory transparency score across sectors is to introduce a legal obligation to communicate regulations to the public within a reasonable time, and to solicit public comments from stakeholders, including foreign suppliers, before entry into force. As noted earlier, most APEC economies are already doing it, but codifying it into law can make stakeholders more confident of their involvement in regulatory consultations.

Figure 2.11: Change in APEC's Average STRI Scores Regulatory Transparency (2016 and 2020)



Source: APEC-PSU calculations using data from OECD. Accessed 22 April 2021.
Note: A higher score indicates less regulatory transparency. Calculations comprise of data from 14 APEC economies (AUS; CDA; CHL; PRC; INA; JPN; ROK; MAS; MEX; NZ; PE; RUS; THA; and USA).

Moving forward, economies and fora opined that more capacity building and sharing of best practices would be important to aid members in adopting and operationalizing the various elements identified in the non-binding principles. Completed and ongoing project mapping could be useful in developing more effective capacity building efforts. Economies could also explore more innovative platforms for collaboration and resource sharing. They also noted the value of cross-fora collaboration in implementing the principles given its applicability on work undertaken by other fora (e.g., structural reforms in EC). Additionally, they suggested that APEC contribute to the ongoing discussions in the WTO (i.e., Joint Statement Initiative on Services Domestic Regulations). In the long run, there may be a need to update the non-binding principles in view of the changing landscape and the ongoing developments in the WTO.

2.3.5 Action #5: Implementation of the Renewed APEC Agenda for Structural Reform (RAASR), including progressing the 2016 APEC Economic Policy Report (AEPR) on Structural Reform and Services (Accountable fora: CTI, EC and GOS)

Recognizing that structural reform is the oil that makes the engine of the economy run efficiently, APEC economies have committed to promote and undertake structural reforms for close to two decades. In 2015, APEC's Structural Reform Ministers set forth RAASR, the third iteration of APEC's structural reform agenda. It was embraced against a backdrop of uneven economic growth and widening income disparity, even as the average per capita income increased and absolute poverty levels fell in the APEC region.[60] RAASR identifies three pillars that could act as guideposts for the choice of concrete reform actions by economies, namely: 1) more open, well-functioning, transparent and competitive markets; 2) deeper participation in those markets by all segments of society, including micro, small and medium enterprises (MSMEs), women, youth, older workers, and people with disabilities; and 3) sustainable social policies that promote the above-mentioned objectives, enhance economic resilience, and are well-targeted, effective, and non-discriminatory.

Promoting structural reform in the services sector is a key component of RAASR. The 2015 Joint Structural Reform Ministerial Statement welcomed the integration of services reform in RAASR and among others, instructed the EC to raise the importance of services in RAASR, and to encourage economies to implement unilateral reforms aimed at further improving the services sector, as part of their structural reform action plans under RAASR.

This is hardly surprising considering that many literature have shown the significant correlations between services competitiveness and other indicators, including broader economic measures. For example, Hoekman and Shepherd (2015) used World Bank enterprise survey data from 58,000 firms in more than 100 developing economies to show that service sector productivity matters for the productivity of downstream firms producing goods.[61] Moreover, they indicated that lower barriers to services trade and investment increase the productivity performance of domestic manufacturing industries. Mattoo et al. (2006) showed that economies with open financial and telecommunication sectors display a GDP growth rate about 1.5 percentage point higher than other economies,[62] while Eschenbach and Hoekman (2006) found that liberalization and adoption of good regulatory practices in financial, telecommunications, energy, and transport services are statistically significant explanatory variables for the economic performance of a sample of 20 transition economies during the 1990–2004 period.[63]

The value of undertaking services reform is of an added importance in the context of APEC. Contributing to more than half of the region's GDP, services sectors by virtue of their competitiveness and efficiency can either drive or inhibit the region's overall performance. Moreover, given the relative importance of women and MSMEs in services, successful services

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[60] APEC, "2015 Structural Reform Ministerial Meeting - Ministerial Statement" (2015 Structural Reform Ministerial Meeting, Cebu, Philippines, 2015), https://www.apec.org/Meeting-Papers/Sectoral-Ministerial-Meetings/Structural-Reform/2015_structural.

[61] Bernard Hoekman and Ben Shepherd, "Services Productivity, Trade Policy and Manufacturing Exports," *The World Economy* 40, no. 3 (September 22, 2015): 499–516, https://doi.org/10.1111/twec.12333.

[62] Aaditya Mattoo, Randeep Rathindran, and Arvind Subramanian, "Measuring Services Trade Liberalization and Its Impact on Economic Growth: An Illustration," *Journal of Economic Integration* 21, no. 1 (2006): 64–98, https://doi.org/10.11130/jei.2006.21.1.64.

[63] Felix Eschenbach and Bernard Hoekman, "Services Policy Reform and Economic Growth in Transition Economies," *Review of World Economics* 142, no. 4 (December 1, 2006): 746–64, https://doi.org/10.1007/s10290-006-0091-7.

reform can play an important role in delivering more inclusive growth. Acknowledging the complexity of undertaking services reform which includes the need to balance the various objectives of regulations, APEC's EC focused the APEC Economic Policy Report 2016 on structural reform and services. Among the policy recommendations arising from the report include: 1) paying more attention to services; 2) pursuing reforms on a unilateral basis; 3) focusing on productivity; 4) relying on market mechanisms and competition; 5) recognizing and measuring the positive spillover effects of structural reform; 6) applying value chain perspectives to leverage services reforms; 7) adopting a whole of government outlook to anticipate potential silo problems; 8) considering need to address adjustment costs; 9) designing reform programs to be flexible to reflect learning by doing; 10) pursuing cross–fora collaboration and joint work programs at APEC; and 11) implementing measures to measure progress and impacts of structural reforms.

In response to the call by Structural Reform Ministers, many economies have included priorities and actions with implications for the services sector in their RAASR individual action plans (IAPs). These priorities and actions can generally be divided into two broad groups (see section 2.4 for more detailed descriptions into activities undertaken by individual economies). The first group comprises of priorities and actions which do not explicitly state that services sector is their primary focus, but by virtue of the reforms would have positive implications on services sector. One such area pertains to regulations to facilitate business conduct which arguably would apply to most businesses including those in the services sector. As an illustration, Australia indicated that under one of its priorities, the government would be reducing red tape and unnecessary regulation to make it easier for businesses to invest, create jobs, and grow the economy. One of Indonesia's priorities noted that the economy plans to implement good regulatory practices, while one of the actions under Papua New Guinea's priority to encourage a low cost, competitive, and transparent business environment is to make it easier to do business. Reforms in areas such as human capital development, labor market, and innovation would also have implications on services sector as they would enhance the competitiveness of the sector across various metrics (e.g., quality of workforce, type of services provided). Likewise, infrastructure spending and efforts to improve market access via free trade agreements and regional trade agreements (FTAs/RTAs) would lead to improved services access and provision.

The second group comprises of priorities and actions which explicitly identify services or specific sub-sectors as their primary focus. For example, Canada indicated that it would be renewing its financial sector legislation, while Chile shared that it would be implementing a series of measures to promote services export. Both Japan and Korea noted that efforts would be taken to enhance their healthcare sector. The Philippines indicated that it would be improving the efficiency of the logistics sector by establishing a one-stop shop to process applications for the accreditation and registration of Multimodal Transport Operators. Tourism is another services sub-sector identified by several economies such as Japan, Korea, and New Zealand in their IAPs.

At APEC-wide level, several initiatives had been undertaken. For example, the APEC Multi-Stakeholder Dialogue on Structural Reform in Logistics Services was initiated by Viet Nam to facilitate information exchange on structural reforms in logistics services and discuss ways to address barriers to trade and investment in logistics services among various stakeholders such as regulators, policymakers and businesses.[64] The CTI-EC-FTAAP Policy Dialogue on

[64] Committee on Trade and Investment, "Proposals - APEC Multi-Stakeholder Dialogue on Structural Reform in Logistic Services," 2017, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2119.

Competition Related Provisions in FTAs/EPAs from a Business Perspective discussed how competition policies in FTAs/EPAs can foster environments conducive to business and investment.[65] The APEC Collaborative Framework for Online Dispute Resolution (ODR) of Cross-Border Business-to-Business (B2B) Disputes has been developed to provide a useful guide for businesses (particularly MSMEs) for tapping online dispute resolution for negotiation, mediation and arbitration for business-to-business disputes.[66] The Conference on Good Regulatory Practice (GRP) has been conducted annually to provide a greater understanding of the different GRP elements among members and also give opportunity for them to update on their GRP-related activities. The latest conference (GRP13) focused on GRP in the regulation of new and emerging technologies.[67] The report entitled "Structural Reform Measures to Improve Women's Access to Labor Markets, Finance and Capital" highlighted the importance of sex-disaggregated data in informing policy change, including supporting unilateral reforms in specific services sectors such as financial services.[68] The development of the APEC Non-Binding Principles for Domestic Regulation of the Services Sector and APEC index – elaborated in sections 2.3.4 – contributed to this APEC-wide action as well.

A mid-term and final review of RAASR had be conducted in 2018 and 2020, respectively. The objective of both reviews is to assess how much progress has been attained by member economies in their structural reform efforts under RAASR, and how they can be enhanced. Specifically on services, both reviews noted that while some sectors have become less restrictive, others have become more restrictive. This indicates that economies can do more to improve regulations affecting the services sector.

One of the quantitative indicators used for the purpose of monitoring the implementation of this APEC-wide action is the OECD STRI. As highlighted in section 2.2.1, analyzing scores between 2016 and 2020 showed mixed progress – while some sub-sectors have become more open, others have become less open (Figure 2.1). Zooming in on data for 2020 showed that the main restrictions affecting services trade vary between sub-sectors. For some sub-sectors, it was restrictions on foreign equity, while for others, it was restrictions on movement of people.

Another indicator used to monitor progress is the World Bank/WTO STRI, which has only one data point (2016) since ASCR's inception. As indicated in section 2.2.1, comparing APEC's performance vis-à-vis that of OECD economies showed that on average, APEC underperformed OECD across all services sub-sectors covered by the World Bank/WTO STRI (Figure 2.3).

Keeping in mind that RAASR ended in 2020, the EC formed the RAASR Action Team to lead the work in developing the priorities of the new five-year program on structural reform. Endorsed in the Structural Reform Ministerial Meeting in June 2021, the Enhanced APEC

[65] APEC Division - Economic Affairs Bureau - Ministry of Foreign Affairs, Japan, "CTI-EC FTAAP Policy Dialogue on Competition Related Provisions in FTAs/EPAs from a Business Perspective" (Committee on Trade and Investment, December 2020), https://www.apec.org/Publications/2020/12/CTI-EC-FTAAP-Policy-Dialogue-on-Competition-Related-Provisions.

[66] Hong Kong, China, "APEC Collaborative Framework for Online Dispute of Cross-Border Business-to-Business Disputes - Endorsed" (Second Economic Committee Meeting, Puerto Varas, Chile, 2019), http://mddb.apec.org/Documents/2019/EC/EC2/19_ec2_022.pdf.

[67] Economic Committee, "Proposals - 13th Conference on Good Regulatory Practices (GRP13)," 2020, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2639.

[68] Elin Cohen and Caroline Rubin, "Structural Reform Measures to Improve Women's Access to Labor Markets, Finance and Capital" (APEC - Policy Support Unit, October 2019), https://www.apec.org/Publications/2019/10/Structural-Reform-Measures-to-Improve-Womens-Access-to-Labor-Markets-Finance-and-Capital.

Agenda for Structural Reform (EAASR) outlines four pillars of work: i) Creating an enabling environment for open, transparent, and competitive markets; ii) Boosting business recovery and resilience against future shocks; iii) Ensuring that all groups in society have equal access to opportunities for more inclusive, sustainable growth, and greater well-being; and iv) Harnessing innovation, new technology, and skills development to boost productivity and digitalization. Economies will be encouraged to submit individual action plans which nominate reform actions under all pillars and across all sectors, including services.

2.3.6 Action #6: Supporting liberalisation, facilitation and cooperation of environmental services, by implementing and building on the agreed Environmental Services Action Plan (ESAP) (Accountable fora: CTI and GOS)

Sustainable development, which can be defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs,"[69] is crucial to safeguarding the prosperity for all the people and future generations in APEC. Promoting trade in environmental goods and services helps economies move towards sustainable development as this could encourage the uptake of more sustainable products and processes with less impact on the environment.

In recognition of the importance of sustainable development, APEC economies have collectively been working to facilitate trade in environmental goods and services. Much progress has been achieved in facilitating the trade of environmental goods. In 2012, APEC economies developed a list of 54 environmental goods due for tariff reductions to no more than 5 percent by the end of 2015.[70] These tariff cuts, implemented since 2016, are expected to lower the costs of environmental goods such as solar panels, wind turbines, and air pollution equipment; thereby promoting the trade of USD300 billion within the region and USD500 billion worldwide.[71] In addition to opening new sources of economic growth, liberalization of trade in environmental goods has better positioned APEC to increase renewable energy generation and reduce energy intensity by 45 percent by 2035.

While liberalizing trade of environmental goods has positive spillovers to the economy and the environment, a study by the OECD has argued that there are synergies between the liberalization of both trade in environmental goods and services.[72] Environmental services typically involve one or more environmental goods, increasing demand for such products. A study in 2013 found that 70 percent of environmental services delivered in APEC are connected to the use of environmental goods.[73] Moreover, innovations in environmental goods can increase the competitiveness of environmental services. As such, economies can further their competitiveness and environmental standing if they work towards liberalizing trade in both environmental goods and services.

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[69] International Institute for Sustainable Development, "Sustainable Development," accessed April 1, 2021, https://www.iisd.org/about-iisd/sustainable-development.
[70] Carlos Kuriyama, "The APEC List of Environmental Goods" (APEC - Policy Support Unit, November 28, 2012), https://www.apec.org/Publications/2012/11/The-APEC-List-of-Environmental-Goods.
[71] APEC Committee on Trade and Investment, "APEC Cuts Environmental Goods Tariffs," January 28, 2016, https://www.apec.org/Press/News-Releases/2016/0128_EG.
[72] Ronald Steenblik, George Stubbs, and Dominique Drouet, "Synergies between Trade in Environmental Services and Trade in Environmental Goods," April 19, 2006, 129–78, https://doi.org/10.1787/9789264035782-8-en.
[73] Liping Li et al., "Study Report on APEC Environmental Services-Related Technology Market" (APEC Committee on Trade and Investment and APEC Group on Services, August 2013), https://www.apec.org/Publications/2013/10/Study-Report-on-APEC-Environmental-Services-Related-Technology-Market.

However, progress in liberalizing and facilitating access to and provision of environmental services have been relatively slower than that for environmental goods. Environmental services may touch on sensitive sectors such as utilities and energy production, which some economies might consider as integral to their security and strategic interests. Furthermore, it was suggested that existing classifications of environmental services based on the WTO's Sectoral Classification List (W/120) or the UN's Central Product Classification (CPC) may be outdated. As such, liberalizing trade in environmental services following extant classifications of environmental services may actually be more detrimental to environmental objectives.[74]

To inform ongoing work in liberalizing trade in environmental services, APEC had endorsed in 2015 the Environmental Services Action Plan (ESAP). It comprises of three main phases: 1) the conduct of a survey on the regulatory and policy measures adopted by APEC members under Central Product Classification 94; 2) the identification of key challenges in promoting liberalisation, facilitation and cooperation and the recommendation of actions to address these challenges; and 3) the collection and sharing of information pertaining to the recommended actions.

In November 2016, PSU in conjunction with the Committee on Trade and Investment (CTI) published the "Survey of Regulatory Measures in Environmental Services."[75] The study provided a general survey of the regulatory frameworks and measures that are currently used by APEC economies to regulate environmental services covered under the CPC Division 94 (CPC94) Version 2.1. The survey found that across APEC, environmental services are regulated by multiple agencies at various jurisdictional levels (i.e., central, regional, state, municipal). Although the majority of regulatory measures affecting environmental services are non-discriminatory and do not directly impede trade and investment, a significant number of restrictive measures are concentrated on environmental services delivery – licensing and approval procedures are found to be the dominant forms of regulatory restrictions on trade in environmental services, comprising almost a third of the total number of restrictions. The next most prevalent forms of restrictions are controls on workers (e.g., restrictions of foreigners serving in board of directors, restrictions on types of people allowed to work in these sectors), limitations on foreign investments, and requirements on legal entities that a foreign service provider must have before being allowed to deliver service in a market. In October 2017, PSU published three more reports focusing on specific environmental sectors, namely energy

[74] See David Waskow, "Environmental Services Liberalization: A Win-Win or Something Else Entirely?," *The International Lawyer* 37, no. 3 (2003): 777–95, https://www.jstor.org/stable/40707739. One criticism raised on the current classification system is that such classifications do not distinguish between environmental services based on their impact on the environment. As such, haphazardly liberalizing an environmental sector could potentially facilitate trade in both environmentally-friendly and environmentally-damaging services. For instance, efforts to liberalize refuse disposal services may fail to distinguish between firms engaged in recycling and those engaged in carbon-intensive incineration. Sectors like sanitation services and environmental remediation services could have negative environmental externalities such as waste discharge and water pollution. Liberalizing environmental sectors without minimizing the potential negative spillovers may actually do more harm than benefit to the environment. Moreover, setting standards might make it prohibitively challenging for service providers and partners from developing economies to comply with given their current resources, making it harder for some economies to be willing to harmonize their standards. As such, it is important to ensure that APEC economies have the right considerations and information in place before liberalizing trade in environmental services.

[75] ITS Global Pty Ltd, The Australian APEC Study Centre at RMIT University, and APEC - Policy Support Unit, "Survey of Regulatory Measures in Environmental Services," APEC, November 2016, https://www.apec.org/Publications/2016/11/Survey-of-Regulatory-Measures-in-Environmental-Services.

efficiency businesses,[76] environmental damage remediation services,[77] and renewable energy.[78] These reports complement the earlier survey by giving a more focused analysis of the issues faced within the specific subsectors. They showed that while environmental sub-sectors have their own regulatory challenges, there were commonalities among them, such as lack of fiscal support, policy enforcement capabilities, and transparent regulatory frameworks.

In May 2017, PSU collaborated with the Pacific Economic Cooperation Council (PECC) and Japan to organize the "APEC Workshop on Environmental Services" held in Ha Noi, Viet Nam. The workshop highlighted key lessons from the PSU survey and the three sector-specific publications; as well as provided an engagement platform between environmental service providers and governments, allowing businesses to better explain their current needs and challenges.

Using information gathered from the earlier studies and workshops, APEC completed the interim review of ESAP in 2018,[79] which highlighted five key challenges faced by APEC economies in implementing ESAP. Firstly, there is a need to scrutinize the scope of environmental services. Many efforts to liberalize environmental services can be found in various FTAs, but commitments in most of these agreements are based on the first iteration of the CPC, which is already outdated. Second, APEC economies can liberalize environmental services alongside ongoing work to liberalize environmental goods as they reinforce one another. Third, regulatory measures on environmental services are sometimes not clear and can work as barriers to trade. APEC economies should therefore take strides to clarify such regulations and mitigate other onerous requirements. Fourth, APEC economies should work to overcome human resource challenges faced by environmental service providers. Finally, noting that the delivery of some environmental services may be inadvertently impeded by bureaucratic procedures such as registration requirements, APEC economies are encouraged to raise public awareness and streamline the registration and legalization of such services.

The final review of the ESAP in 2020 highlighted three key areas of work.[80] Firstly, it emphasized the need to define environmental services. Most economies and FTAs still adhere to the old categorization based on the CPC, which in many cases do not distinguish clearly between services that may have negative externalities. Working with one another to define the scope of environmental services and consider sectors with negative externalities might make it conducive for APEC economies to join ongoing work on liberalization of certain environmental services. Secondly, the review highlighted the need to develop good regulatory practices in licensing and approving environmental service providers, encouraging economies to adopt the principles of simplicity, transparency, accountability, accessibility, and cooperation in licensing and sanctioning environmental service providers. Improving these

[76] International Institute for Energy Conservation (IIEC) and MP Ensystems Advisory Private Limited, "Sector Study on Environmental Services Energy Efficiency Businesses" (APEC - Policy Support Unit, October 2017), https://www.apec.org/Publications/2017/10/Sector-Study-on-Environmental-Services-Energy-Efficiency-Businesses.
[77] Ramboll Environ Singapore Pte Ltd, "Sector Study on Environmental Services Environmental Damage Remediation Services" (APEC - Policy Support Unit, October 2017), https://www.apec.org/Publications/2017/10/Sector-Study-on-Environmental-Services-Environmental-Damage-Remediation-Services.
[78] Tilak K. Doshi, "Sector Study on Environmental Services Renewable Energy" (APEC - Policy Support Unit, October 2017), https://www.apec.org/Publications/2017/10/Sector-Study-on-Environmental-Services-Renewable-Energy.
[79] Committee on Trade and Investment, "2018 CTI Annual Report to Ministers - Appendix 5: Environmental Services Action Plan (ESAP) Interim Review," November 2018, https://www.apec.org/-/media/APEC/Publications/2018/11/2018-CTI-Report-to-Ministers/TOC/Appendix-5---ESAP-Interim-Review.pdf.
[80] Washington CORE, L.L.C., "Study for Final Review of Environmental Services Action Plan (ESAP)" (Group on Services, December 2020), https://www.apec.org/Publications/2020/12/Study-for-Final-Review-of-Environmental-Services-Action-Plan.

measures could allow more service providers to offer their services legally and in line with established standards. Finally, the review underscored the importance of building domestic human capacity to support the operation of environmental services. To work on these three areas, the ESAP final review has recommended the following action points: 1) agree upon definition for environmental services; 2) categorize barriers to trade in environmental services; 3) assess costs and benefits of liberalization; 4) conduct regional surveys; 5) develop regional capacity building initiatives; and 6) produce frameworks for regulatory review. To complement the final review, a workshop was also organized to provide insights on how regulatory authorities in APEC economies could optimize domestic regulations so as to create a more conducive environment for trade in environmental services.[81]

In 2020, New Zealand organized the "Workshop to Advance the APEC Environmental Services Agenda: Enhancing APEC Economies' Understanding of Environmental Services." The workshop called for a change in the way environmental services are approached by the region. A range of approaches discussed during the workshop include: 1) further research and data gathering, 2) defining services by their dual or end-use, and 3) exploring accession instruments that address the temporary entry of goods and equipment which support the delivery of environmental services.[82] Follow-up research entitled "Environmental Services in the APEC Region: Definition, Challenges and Opportunities" built on the workshop findings by exploring the range of possible environmental services, considering the gender dimension of environmental services, analyzing the data available and identifying data gaps on trade in environmental services, and making policy recommendations for APEC to take forward.[83]

2.3.7 Action #7: Progressive liberalization and facilitation of manufacturing-related services, by implementing and building upon the agreed Manufacturing Related Services Action Plan (MSAP) (Accountable fora: CTI and GOS)

Services play a critical role in supporting the manufacturing sector. Manufacturers rely on a suite of services to function. Logistics providers ensure the storage and transport of materials between facilities. Construction services allow manufacturers to build plants needed to scale up their operations. Engineering and mechanical services maintain and upgrade existing equipment used in manufacturing. Information and communication technology providers help sustain the necessary systems and databases that manufacturers use to make business decisions. Among APEC economies, data from OECD TiVA showed that services contribute between 19.5 to 47.4 percent of the total value of exports from the manufacturing sector in 2016. For APEC as a whole, services alone account for almost 25 percent of the total value of exports from manufacturing.

Indeed, to underscore the importance of services in the manufacturing sector, the term "servicification" has been coined to signify the intensification in the purchase, production, sale,

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[81] Washington CORE, L.L.C., "Workshop on Manufacturing-Related Services and Environmental Services: Contribution to the Final Review of Manufacturing-Releted Services Action Plan (MSAP) and Environmental Services Action Plan (ESAP)" (Committee on Trade and Investment, November 2020), https://www.apec.org/Publications/2020/11/Workshop-on-Manufacturing-Related-Services-and-Environmental-Services.

[82] Group on Services, "Proposals - Workshop to Advance the APEC Environmental Services Agenda: Enhancing APEC Economies' Understanding of Environmental Services," 2020, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2564.

[83] Hildegunn Kyvik Nordås and Ronald Steenblik, "Environmental Services in the APEC Region: Definition, Challenges and Opportunities" (Group on Services, May 2021), https://www.apec.org/Publications/2021/05/Environmental-Services-in-the-APEC-Region.

and export of services related to the sector.[84] Services have thus become increasingly a source of competitiveness in various sectors. A study by the OECD has shown that services quality and policy competitiveness impact the degree of product differentiation, unit prices obtained in export markets, and the duration of trade by manufacturing firms.[85] Pre-manufacturing services (such as research, consulting, and design) and post-manufacturing services (such as advertising, marketing, and repair) likewise create added value for manufacturing sectors.

Noting the growing importance of services and their role in spurring other economic sectors such as manufacturing, APEC has undertaken several initiatives to support work in this area. In 2015, PSU published a report entitled "Services, Manufacturing and Productivity" to explore the link between services and manufacturing productivity using various databases such as the WTO-OECD Trade in Value Added (TiVA) database and OECD Structural Analysis (STAN) database.[86] This report found that business services contributed the most to manufacturing since it generated the highest value added contribution to manufacturing among various services sectors. According to TiVA's database, business services are made up of five categories: 1) real estate activities; 2) renting activities for machines and equipment; 3) computer-related activities; 4) research and development; and 5) other business activities such as legal, accounting, consultancy, engineering, advertising, among others. Among these, "other business activities" and "research and development" are the most used business services in manufacturing. PSU also prepared a report entitled "Services in Global Value Chains: Manufacturing-Related Services" to better understand the role of services in manufacturing, and how policies could affect access to and provision of these services.[87] It comprises of case studies on 22 firms based in 12 APEC economies, with economic activities ranging from manufacturing of aircraft components to manufacturing of electrical appliances. The report shows the omnipresence of various forms of services in manufacturing, highlighting that regulation in most forms of services would have tangible spillovers to manufacturing. Along with other resources, this report contributed to the development of the Manufacturing Related Services Action Plan (MSAP), which aims to increase the availability and accessibility of services through progressive liberalization and facilitation of such services.

An interim review was conducted in 2018 to monitor progress towards MSAP implementation.[88] It focused on six main areas, namely: 1) investment policy; 2) labor-related policy; 3) customs-related procedure; 4) standards and conformance; 5) intellectual property; and 6) regulatory and policy environment. Under investment policy, it has been found that FDI restrictions could prevent firms from operating the most efficient business models, and that investment policy changes could derail expansion plans and the operation costs of firms. In terms of labor-related policies, it was emphasized that labor quotas, economic needs text, complex entry requirements, discretionary decision-making procedures on recognition of qualifications, and lack of mutual recognition of qualifications impede the ability of firms to fully leverage the potential of the region's workforce. In services related to customs procedures, the implementation of single windows could be further improved, while the persistence of complex procedures and human intervention in customs procedures hamper effective service

[84] Patrick Low and Gloria O. Pasadilla, "Services in Global Value Chains: Manufacturing-Related Services" (Committee on Trade and Investment, November 2015), https://www.apec.org/Publications/2015/11/Services-in-Global-Value-Chains-Manufacturing-Related-Services.
[85] Hildegunn Kyvik Nordås and Yunhee Kim, "The Role of Services for Competitiveness in Manufacturing," April 5, 2013, https://doi.org/10.1787/5k484xb7cx6b-en.
[86] Pasadilla and Wirjo, "Services, Manufacturing and Productivity."
[87] Low and Pasadilla, "Services in Global Value Chains: Manufacturing-Related Services."
[88] CTI Chair, "Appendix 6 - Manufacturing Related Services Action Plan Interim Review," in *30th APEC Ministerial Meeting* (Port Moresby, Papua New Guinea: APEC, 2018), http://mddb.apec.org/Documents/2018/MM/AMM/18_amm_011app06.pdf.

delivery. Varying standards and conformance requirements present in APEC economies contribute to a lack of clarity and harmonization, thereby creating additional compliance costs for companies. On intellectual property, some economies might have policies requiring firms to transfer advanced technologies or disclose proprietary information such as source code, contributing to the decision of some firms to withhold the sale of the most advanced models in the economy concerned. Finally, the lack of regulatory transparency and stability may disrupt the plans and targets set by various firms, thereby affecting their competitiveness.

A final review was conducted in 2020.[89] One key contribution of the review is the undertaking of work to further understand the scope/coverage of manufacturing-related services, which is expected to help economies in creating more targeted policy interventions. Moreover, the study expanded on the interim review by examining the texts of FTAs/RTAs and incorporating insights obtained from various workshops such as the "Workshop on Best Practices Sharing to Improve Application of the APEC Non-Binding Principles for Domestic Regulation of the Services Sector"[90] and the "Workshop on Translating APEC's Non-Binding Principles for Domestic Regulation for the Services Sector into Practice: A Focus on Transparency and Predictability in Rule Making."[91] Additionally, the study highlighted two additional areas of work that economies could consider, namely: 1) localization and human content restrictions; and 2) limitations on cross-border data flows. Under localization and human content restrictions, APEC economies may have regulations that require firms to meet certain domestic supplier quotas and workforce composition, which may not lead to the most efficient outcome for the firms involved. Moreover, to recognize the growing role of digitalization, APEC economies should fine-tune their regulation on data transfers to ensure that such regulations would not impede the overall competitiveness of firms. A workshop was organized to complement the final review and to provide insights on how APEC could facilitate a more seamless services trade. The theme for manufacturing-related services focused on how collaboration between economies can be fostered to enhance the delivery of such services. [92]

One indicator that can be used to indirectly monitor APEC's performance in liberalizing manufacturing-related services would be the OECD STRI. As seen in section 2.2.1, analyzing scores between 2016 and 2020 shows that on average, APEC has made positive progress across many sub-sectors, but became more restrictive in sectors such as accounting, telecommunications, air transport, road and freight transport, rail freight transport, and computer services, which could have implications on the competitiveness of the manufacturing sector considering their role in ensuring the smooth functioning of GVCs (Figure 2.1). Zooming in on data for 2020 shows that the main restrictions affecting logistics and transport services in the region include documentations required for imports and visa requirements for freight workers.

Another indicator used to monitor progress is the World Bank/WTO STRI which only has one data point (i.e., year 2016) since ASCR's inception. As indicated in section 2.2.1, comparing

[89] Washington CORE, L.L.C., "Study for Final Review of Manufacturing Related Services (MSAP)" (Group on Services, December 2020), https://www.apec.org/Publications/2020/12/Study-for-Final-Review-of-Manufacturing-Related-Services.
[90] Korea, "Program: Workshop for Sharing Best Practices of Applying the APEC Non-Binding Principles for Domestic Regulation of the Services Sector" (APEC, August 19, 2019), http://mddb.apec.org/Documents/2019/GOS/WKSP4/19_gos_wksp4_001.pdf.
[91] United States, "Agenda - Workshop on Translating APEC's Non-Binding Principles for Domestic Regulation for the Services Sector into Practice: A Focus on Transparency and Predictability in Rule Making," August 20, 2019, http://mddb.apec.org/Documents/2019/GOS/WKSP5/19_gos_wksp5_001.pdf.
[92] Washington CORE, L.L.C., "Workshop on Manufacturing-Related Services and Environmental Services."

APEC's performance vis-à-vis that of OECD economies showed that on average, APEC underperformed OECD across all services sub-sectors covered (Figure 2.3).

This is indicative that there is more room for improvements to support the realization of this APEC-wide action. Indeed, in their responses to survey questionnaire circulated as part of this review, economies and fora noted the need for further studies, the importance of more capacity building, the value of enhancing cross-fora collaboration, and the importance of agreeing on concrete actions to take forward MSAP to the next level.

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

Supporting cooperation in the education sector is arguably a key pillar of regional integration. Internship schemes and student exchange programs enhance intercultural awareness, skills and employability and promote social cohesion.[93] Research collaborations between institutions facilitate expertise pooling on complex research projects, reduce research cost, and contribute to knowledge creation.[94] Fundamental to the success of these initiatives is the mutual recognition of standards and qualifications, since assessment of recognized standards, qualifications, and credit systems is one of the common pre-requisites for admissions, employment, among others. Besides widening the opportunities for students, qualification recognition can improve labor mobility and lead to more efficient allocation of labor in the region. After all, the availability and the ability of professionals and skilled workers affects investment decisions about where to locate certain business activities, thereby directly affecting regional competitiveness. [95]

APEC has undertaken various strands of work to advance progress in this area. The "Global Competencies and Economic Integration" project commissioned in 2015–2016 assessed the demand for global talent[96] across APEC economies and developed recommendations for economies to improve global talent streams.[97] Analysis of survey responses from 124 organizations across seven APEC economies underscored businesses' needs for a multilingual and culturally competent workforce. Recommendations arising from the project include the need to: 1) establish standards and assessments of global competencies; 2) infuse global competencies into education systems through innovative pedagogies and ICT delivery systems;

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[93] UNESCO, *Migration, Displacement and Education: Building Bridges, Not Walls* (Paris, France, 2019), https://unesdoc.unesco.org/ark:/48223/pf0000265866.page=117.

[94] Jun Song Huang, "Building Research Collaboration Networks - An Interpersonal Perspective for Research Capacity Building," *The Journal of Research Administration* 45, no. 2 (2014): 89–112, https://files.eric.ed.gov/fulltext/EJ1157238.pdf.

[95] Demetrios Papademetriou, Guntur Sugiyarto, and Dovelyn Rannveig Mendoza, *Achieving Skill Mobility in the ASEAN Economic Community: Challenges, Opportunities, and Policy Implications* (Manila, Philippines: Asian Development Bank, 2016), https://www.adb.org/publications/achieving-skill-mobility-asean-economic-community.

[96] Global talent is defined as having foreign language and intercultural skills in combination with soft, technical, and business skills in the project.

[97] Human Resource Development Working Group, "Proposals - Global Competencies and Economic Integration," 2015, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=1694.

3) build partnerships and enhance interactions between the education sector and industry; and 4) strengthen APEC-wide integration of people, technologies, mechanisms and standards in pursuit of global competencies.

Project DARE (Data Analytics Raising Employment) focused on addressing the region's digital skills gaps by identifying skills and competencies needed for data science and analytics.[98] It brought together various stakeholders including government, businesses, and academia to develop a set of 10 recommended APEC Data Science and Analytics Competencies, namely: 1) operational analytics, 2) data visualization and presentation, 3) data management and governance, 4) domain knowledge and application, 5) statistical techniques, 6) computing, 7) data analytics methods and algorithms, 8) research methods, 9) data science engineering principles, and 10) 21st century skills. These recommended competencies could serve as a resource to equip academic institutions and training providers across the region with the tools needed to align curricula, courses, and programs with industry needs.

On Technical and Vocational Education and Training (TVET), Chapter 3 of the APEC 2018 Report on Education and Economic Development (REED) published in November 2019 focused on "Qualifications frameworks, skills recognition and technical and vocational education and training."[99] The chapter discussed the role of TVET in economic development and how the various qualification frameworks (e.g., domestic and regional – ASEAN qualification reference framework and APEC integrated referencing framework for skills recognition and mobility) can potentially facilitate mobility of TVET participants in the region. It also noted that while having qualification frameworks and regional initiatives are steps in the right direction, the success of these initiatives would be very much dependent on how they are being operationalized (e.g., process for recognition thereof by the relevant authorities). The workshop on "Regional Industry-Academia Collaboration for Talent Development" focuses on how industry-academia collaboration involving technical and vocational colleges and competency training can promote the development of talent which matches the demands of the labor market among the youths.[100] A follow-up project focusing on women (e.g., identification of demands and challenges faced by women, encouraging women's participation in non-traditional sectors) is currently ongoing. [101]

Several projects have been launched to promote entrepreneurship among the youths. The APEC Entrepreneurship Education Program (AEEP) project provides an avenue to university students in the region to understand more about APEC and social business. Students are invited to create a social business model that could contribute to socio-economic development in APEC at the

[98] APEC, "Big Data Analytics in Critical Demand Across APEC," *APEC*, June 21, 2017, https://www.apec.org/Press/Features/2017/0620_DSA.
[99] Yan Wang, "APEC 2018 Report on Education and Economic Development" (APEC Human Resources Development Working Group, November 2019), https://www.apec.org/Publications/2019/11/APEC-2018-Report-on-Education-and-Economic-Development.
[100] Chinese Taipei, "2019 APEC Taipei Forum: Regional Industry-Academia Collaboration for Talent Development: An Exchange of Skills Training, Internships, and Jobs," 2019, https://ice-moe.github.io/.
[101] Human Resource Development Working Group, "Proposals - Regional Industry-Academia Collaboration for Talent Development and Inclusive Growth: Skills Training, Internships, Jobs and Women," 2019, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2575.

final stage of the program.[102] The APEC Forum on Digital Innovation and Youth Entrepreneurship aims to facilitate sharing of knowledge, skills and technical know-how between experienced and future entrepreneurs in APEC economies. [103]

The advent of digital technologies and tools has widened the opportunities available to students to interact – online learning is but one of them. Indeed, online learning has the potential to facilitate increased virtual cross-border mobility, owing to its lower cost compared to traditional higher education. In this regard, the APEC Online Education Workshop Series aimed to build economies' capacities in developing, delivering, and evaluating the quality of online courses, through the sharing of good practices.[104] A workshop was held in Viet Nam in November 2019 and focused on two key areas: 1) exploring and building cultural acceptance of online learning; and 2) implementing online curriculum, assessment, and integrity; and establishing learning outcomes. While the pandemic has derailed countless educational programs, digitally-enabled online learning provided both a short-term solution and long-term opportunity for education in the region. To this end, Korea undertook the "2020 APEC e-learning Training Program (AeLT)" project to understand the impact of COVID-19 on the education sector and how adoption of technologies can overcome some of these challenges.[105] Working under the theme of "Educational Policies and Responses in the Post COVID-19 era: Cases from the Republic of Korea and APEC Member Economies," Korea invited various stakeholders including education specialists and policymakers in the APEC region to share their perspectives on the usage and impact of ICT in the school curriculum, as well as e-learning policies, trends, and strategies in November and December 2020.

Recognizing that information exchange is key to improving policies in the region, the APEC Learning Community Builders (ALCoB) project brings together teachers, students and experts to share educational policies and practices at various levels of education.[106] Specifically on science, technology, engineering and mathematics (STEM) education, the Seminar on Best Practice Models for Innovative to STEM-Plus Education Teacher Professional Development had been organized to engage relevant players in collaboration, exchange, joint innovation and shared training in this area. The webinar on STEM-Plus Education for Women and Girls was organized to provide a platform for exchanging ideas on STEM+ education and related gender issues.[107]

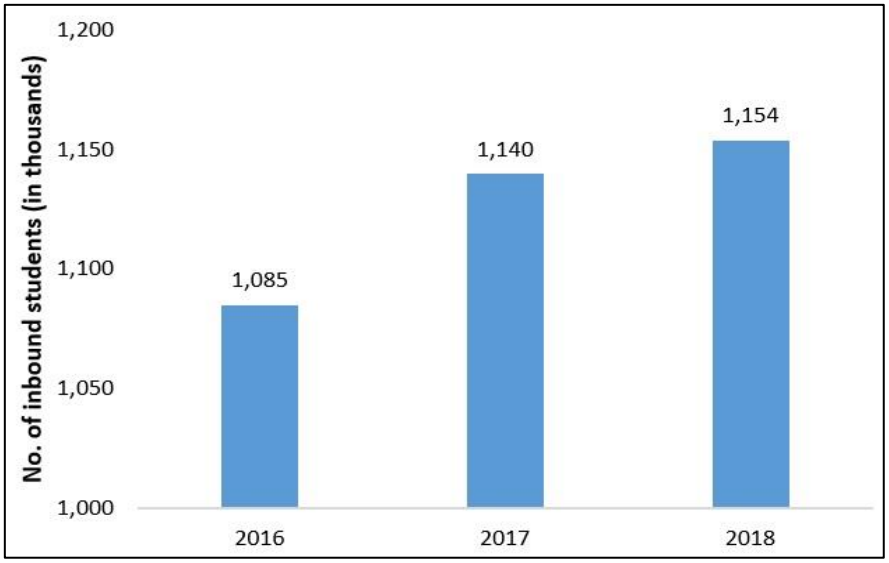
Projects have also been undertaken to facilitate researcher mobility and research collaboration. The "APEC Guiding Principles for Research Integrity" project sought to examine the variability in research integrity management practices in APEC economies.[108] Although the report found a certain level of disparity in management practices, it also noted that practices in

[102] Human Resource Development Working Group, "Proposals - APEC Entrepreneurship Education Program (AEEP): Nurturing Youth Entrepreneurs to Enhance Resilience in APEC Region Society in Response to the Outbreak of COVID-19," 2020, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2693.
[103] Chinese Taipei, "2019 APEC Youth Innovation & Entrepreneurship Project," 2019, https://www.yietaipei.com/.
[104] Human Resource Development Working Group, "Proposals - APEC Online Education Workshop Series," 2018, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2187.
[105] Human Resource Development Working Group, "Proposals - 2020 APEC e-Learning Training Program (AeLT)," 2020, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2671.
[106] Human Resource Development Working Group, "Proposals - APEC Learning Community for Shared Prosperity (ALCom) Phase 2: Actualising Seamless Education Using Digital Technology in APEC Region," 2020, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2694.
[107] Chinese Taipei, "APEC STEM-Plus Education for Women and Girls Webinar," March 2021, https://www.apecstemplustw.org/.
[108] Human Resource Development Working Group, "Proposals - APEC Guiding Principles for Research Integrity," 2016, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=1768.

some fields such as human health and medical research are more closely aligned. The report recommended a four-stage roadmap towards achieving research integrity principles among APEC economies, covering aspects such as the importance of setting clear definitions of research integrity; fostering a positive research culture; apportioning responsibility and accountability at different levels (i.e., economy, institution and individual); conducting education programs on research integrity; and formalizing the framework for international collaboration agreements.[109] The second phase of the project sought to develop a common understanding on the definition of research integrity before collaboratively developing a set of guiding principles on research integrity.[110] In the same vein, "APEC Education Research Network" builds the capacity of APEC members through sharing, strengthening, maintaining and developing knowledge, abilities, skills and technical know-how to improve their policies and practices in education sector. Besides enabling policymakers and researchers in APEC economies to engage in joint research that addresses common challenges in the APEC region, it also acts as a catalyst to facilitate policy reforms by members and enhance their institutional capacity for long-term impact.[111]

One outcome indicator used to indirectly measure progress with regards to the implementation of this APEC-wide action is the number of inbound students (i.e. foreign students) in APEC economies. UNESCO data is available until 2019, but data for the latest year is incomplete. In addition, data is not available for all economies. For the purpose of the MTR, only data up to 2018 are used. Analysis showed that the number of intra-APEC inbound students increased by 6.3 percent, from approximately 1.085 million in 2016 to 1.154 million in 2018 (Figure 2.12). From the available data, the top destination economies in 2018 are the United States; Australia; and Japan, while the top origin economies in 2018 are China; Viet Nam; and Korea.

Figure 2.12: Intra-APEC inbound students (2016-2018)



Source: APEC-PSU calculations using data from UNESCO. Accessed 13 April 2021.

[109] However, making comparison with information collected earlier in 2017 will be challenging as more sources have been referred to in the latest collection exercise. See Yi Ren and Alan McCormack, "APEC Research Integrity Principles Project: Report to Member Economies" (APEC, June 2016), https://aimp2.apec.org/sites/PDB/Supporting%20Docs/2849/Completion%20Report/HRD%2001%202016S_APEC%20Guiding%20Principles%20for%20Research%20Integrity%20Report.pdf.

[110] Human Resource Development Working Group, "Proposals - APEC Guiding Principles for Research Integrity - Phase 2," 2017, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=1971.

[111] Human Resource Development Working Group, "Proposals - APEC Education Research Network," 2015, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=1712

The presence of MRAs that APEC economies have with one another is another indicator used to monitor progress with regards to this action as it indicates the cross-recognition of educational standards and professional qualifications by economies. As indicated in section 2.3.2, non-exhaustive information from multiple sources showed that with the exception of one economy, APEC economies have MRAs with their partners. Each MRA usually covers a single sub-sector (e.g., accounting, actuarial science, architecture, education, engineering, nursing, tourism) and can be bilateral or involve more than one partner. The mobility of educated workers within the region is yet another indicator used for monitoring. Based on information provided by economies in response to a survey circulated as part of this review, only one economy collected, to a certain extent, the number and profile of their nationals in other APEC economies.

Economies are of the view that more activities can be undertaken to advance this action. These include organizing webinars, forums and workshops focusing on various aspects such as TVET and entrepreneurship promotion. For example, the ongoing project titled: "Gauging Demand and Supply of Technical and Vocational Education and Resolving Skill Mismatch" aims to examine demand and supply of TVET from the perspectives of government, academia and industry sectors in APEC region, and identify potential solutions to skill mismatch through sharing of best practices among member economies.[112] Economies also opined that aligning this action with the APEC Education Strategy 2016-2030 and its action plan could lead to additional activities. Individually, economies could consider offering scholarships to students from the region.

2.3.9 Action #9: Collaboration in responding to the rapid developments in internet-based technology to promote a regulatory approach that provides appropriate prudential oversight, legitimate consumer and security protections while enabling the flow of trade-related data in the context of an increasingly digitalized world (Accountable fora: DESG)

The advent of digital economy has brought many opportunities and benefits. For example, from the perspective of businesses, e-commerce has created an additional channel for firms of all sizes to market their products. Improved connectivity, coupled with a lower cost to collect and use data on a large scale, has enabled firms to harness data analytics as a determinant of their competitiveness. From the perspective of consumers, digital solutions and tools have greatly facilitated day-to-day activities such as purchasing daily necessities, maintaining communications, and learning new skills. Governments have also leveraged on digital technologies to improve public service provision. Despite these opportunities and benefits, digitalization poses a new set of challenges. Some of these challenges pertain to digital inequality, data privacy, cybersecurity, online misinformation, and asymmetric market power of some platforms. As more people venture onto the digital world, these challenges are likely to become more prevalent. Maximizing the opportunities of the digital economy while overcoming the challenges thus requires economies to undertake concerted and holistic efforts on many fronts.

Acknowledging that concerted efforts are needed, APEC Ministers endorsed the APEC Framework on Cross-border E-commerce Facilitation in 2017. The Framework has five main objectives: 1) create a favorable regulatory ecosystem for e-commerce to promote

[112] Human Resource Development Working Group, "Proposals - Gauging Demand and Supply of Technical and Vocational Education and Resolving Skill Mismatch," 2021, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2791

predictability, transparency, security, fair competition and consistency; 2) promote the development of ICT infrastructure to facilitate cross-border e-commerce; 3) encourage and facilitate greater participation of businesses in global commerce, in particular MSMEs; 4) enhance cooperation between the public and private sectors, including on consumer protection; and 5) contribute to trade and investment facilitation in the region, and support the achievement of the Bogor Goals and post-2020 vision.[113] Five working pillars and corresponding activities have been identified to help achieve these objectives, namely: 1) promoting transparent and predictable legal and regulatory approaches and measures that are business-friendly and coherent to facilitate cross-border e-commerce in the region; 2) enhancing capacity building so that APEC economies can assist MSMEs to increase their cross-border e-commerce participation in global and regional markets; 3) strengthening cross-border data privacy protection through increased implementation of existing APEC programs; 4) facilitating cross-border paperless trade in the region; and 5) addressing emerging and cross-cutting issues in cross border e-commerce.

To improve transparency on the state of laws and regulations affecting e-commerce in the region, economies participated in a survey of e-commerce regulations in APEC and had them published in the APEC Trade Repository.[114] On consumer protection, a workshop entitled "Promoting Consumer Protection in Digital Trade: Challenges and Opportunities" had been organized to better understand the challenges faced by consumer protection agencies in digital trade; and to promote regional cooperation in the area, including the creation of a framework for enforcement cooperation. [115]

Noting the importance of facilitating free flow of data across borders without prejudice to data privacy and protection, APEC has established the Cross Border Privacy Rules (CBPR) system, a voluntary certification scheme that allows certified companies to transfer personal data (inter- and intra-company) across member economies taking part in the initiative. The CBPR system is complemented by the Privacy Recognition for Processors (PRP) system, which applies to personal information processors and allows them through certification to demonstrate their ability to effectively implement privacy obligations of information controllers when processing personal information. Over the years, economies have conducted seminars, workshops, and dialogues to explain, promote, and upgrade the system.[116] Moreover, the E-commerce Steering Group (ECSG), the predecessor to the Digital Economy Steering Group (DESG) enhanced and streamlined the CBPR.org website as part of its overall communications strategy to better inform stakeholders about the CBPR system and the value of pursuing CBPR certification in 2018.

Furthermore, several activities on data privacy protection have been undertaken. For example, Korea organized a policy dialogue entitled "Personal Data Protection and Utilization in the Asia-Pacific Region: Challenges and Opportunities" to share policies which ensure protection

[113] "2017 APEC Ministerial Meeting, Annex A: APEC Cross-Border E-Commerce Facilitation Framework" (Da Nang, Viet Nam: APEC, 2017), https://www.apec.org/Meeting-Papers/Annual-Ministerial-Meetings/2017/2017_amm/Annex-A.
[114] "APEC Trade Repository," accessed May 16, 2021, http://tr.apec.org/.
[115] Soung-In Park, "Promoting Consumer Protection in Digital Trade: Challenges and Opportunities" (APEC Electronic Commerce Steering Group, June 2020), https://www.apec.org/Publications/2020/06/Promoting-Consumer-Protection-in-Digital-Trade.
[116] Electronic Commerce Steering Group, "Proposals - Seminar on Capacity Building for Compliance with Cross-Border Privacy Rules System in APEC," 2017, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2018; Electronic Commerce Steering Group, "Proposals - APEC Cross-Border Privacy Rules System Fostering Accountability Agent Participation for Participants, Developing Economies, and MSMEs Benefit Workshop," 2018, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2324.

of data privacy and at the same time, promote its flow and utilization while respecting domestic laws and regulations.[117] A project entitled "Hosting an APEC forum to improve cross-border effectiveness of the personal data breach notification system" is currently ongoing to enhance understanding of the status of different personal data breach notification systems of member economies. [118]

For the purpose of monitoring the implementation of this APEC-wide action, the number of economies and firms participating in CBPR and PRP systems are tracked. Under the CBPR, the number of participating economies as of June 2021 stands at nine, namely Australia; Canada; Japan; Korea; Mexico; the Philippines; Singapore; Chinese Taipei; and the United States; while the number of certified firms as of June 2021 stands at 40. On PRP, two economies are currently participating (Singapore and the United States), while 23 firms have been certified. Since the last update reflected in the 2017 PSU Baseline Indicators Report, the numbers of economies and firms participating in the CBPR and PRP have increased. Back then, only five economies participated in CBPR system while no economies participated in PRP system. In terms of number of firms, 20 of them participated in CBPR system while none participated in PRP system.

The status of online protection laws is another indicator monitored. Information from UNCTAD and economy sources showed that 20 economies have laws related to electronic transactions and cybercrime, 18 economies have laws related to consumer protection, while 19 economies have laws on data protection and privacy (Table 2.1). While the total number of economies with specific laws have remained unchanged compared to the last update collected for the 2017 Baseline Indicators Report (with the exception of those relating to data protection and privacy), it should be noted that some economies have amended existing laws/regulations or are in the midst of introducing/drafting new ones.

Table 2.1: Status of Online Protection Laws

Economies	Electronic Transactions	Consumer Protection	Data Protection and Privacy	Cybercrime
Australia	Legislated	Legislated	Legislated	Legislated
Brunei Darussalam	Legislated	No legislation	No legislation	Legislated
Canada	Legislated	Legislated	Legislated	Legislated
Chile	Legislated	Legislated	Legislated	Legislated
China	Legislated	Legislated	Legislated	Legislated
Hong Kong, China	Legislated	Legislated	Legislated	Legislated*
Indonesia	Legislated	Legislated	Legislated	Legislated
Japan	Legislated	Legislated	Legislated	Legislated
Korea	Legislated	Legislated	Legislated	Legislated
Malaysia	Legislated	Legislated	Legislated	Legislated
Mexico	Legislated	Legislated	Legislated	Legislated

[117] Choong-nyoung Lee, "Public-Private Dialogue (PPD) on Personal Data Protection and Utilization in the Asia-Pacific Region: Challenges and Opportunities" (Digital Economy Steering Group, April 2021), https://www.apec.org/Publications/2021/04/Public-Private-Dialogue-on-Personal-Data-Protection-and-Utilization-in-the-Asia-Pacific-Region.

[118] Digital Economy Steering Group, "Proposals - Hosting an APEC Forum to Improve Cross-Border Effectiveness of the Personal Data Breach Notification System," 2020, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2697.

New Zealand	Legislated	Legislated	Legislated	Legislated
Papua New Guinea	No data	No data	No legislation	Legislated
Peru	Legislated	Legislated	Legislated	Legislated
The Philippines	Legislated	Legislated	Legislated	Legislated
Russia	Legislated	Draft	Legislated	No legislation
Singapore	Legislated	Legislated	Legislated	Legislated
Chinese Taipei	Legislated	Legislated	Legislated	Legislated
Thailand	Legislated	Legislated	Legislated	Legislated
United States	Legislated	Legislated	Legislated	Legislated
Viet Nam	Legislated	Legislated	Legislated	Legislated

Source: APEC-PSU compilations from UNCTAD and economy sources (for Hong Kong, China; Russia; and Chinese Taipei). Accessed 16 December 2020.
Note: *Although there is no standalone Hong Kong, China Law chapter on cybercrime or cybersecurity, there are a number of offences provided in various ordinances governing computer related crimes.

Moving forward, economies opined that more capacity building and information sharing activities focusing on various aspects of the digital economy such as consumer protection and data privacy would be beneficial to advance this action. Some economies are also of the view that more can be done to raise awareness about the CBPR system, with the aim of promoting its wider adoption; while other economies hold that CBPR should be discussed within APEC framework. Certainly, there is also a need to identify synergies between this action and AIDER implementation.

2.3.10 Action #10: Supporting certain cross-border provision of financial services subject to practical needs, domestic circumstances and regulations of each economy, including by engagement by interested economies in the building on the Asia Region Funds Passport initiative (Accountable fora: FMP and GOS)

As one of the key backbone services, financial services play a central role in supporting a multitude of economic activities. These include facilitating transactions, mobilizing savings, allocating funds, and managing risk, among others.[119] Despite improvements in facilitating access to financial services, more can be done. This includes strengthening credit information bureaus for lending institutions to make sound decisions and apply appropriate interest rate schemes; reducing cumbersome documentary requirements; lowering transaction fees; allocating resources to MSMEs; and employing technology to improve financial inclusion (e.g., facilitating electronic or mobile transactions).[120]

Foreign financial providers may have a mixed impact on domestic financial stability, and as such may require certain policies to minimize their negative externalities. Nevertheless, cross-border provision of financial services can enhance the critical role of financial services as an engine of economic growth and inclusion.[121] The presence of foreign providers, for example,

[119] World Trade Organization, "Services: Financial Services," accessed May 16, 2021, https://www.wto.org/english/tratop_e/serv_e/finance_e/finance_e.htm.
[120] Rhea Crisologo Hernando, "APEC: Trekking the Road to Financial Inclusion" (APEC - Policy Support Unit, October 2018), https://www.apec.org/Publications/2018/11/APEC---Trekking-the-Road-to-Financial-Inclusion; Emmanuel A. San Andres and Rhea Crisologo Hernando, "APEC Financial Inclusion Capacity Building Package - Synthesis Report" (APEC - Policy Support Unit), accessed June 20, 2021, https://www.apec.org/Publications/2019/10/APEC-Financial-Inclusion-Capacity-Building-Package---Synthesis-Report.
[121] Dorothée Rouzet et al., "Services Trade Restrictiveness Index (STRI): Financial Services," *OECD Trade Policy Papers*, OECD Trade Policy Papers (OECD Publishing, November 4, 2014), https://ideas.repec.org/p/oec/traaab/175-en.html.

generally leads to a more competitive banking sector as it stimulates the domestic providers to transform themselves in various ways to stay in business (e.g., by lowering net interest margins, cost ratios, and rents).[122] The wider availability of options could also enhance financial access by different segments of the society, including MSMEs.[123]

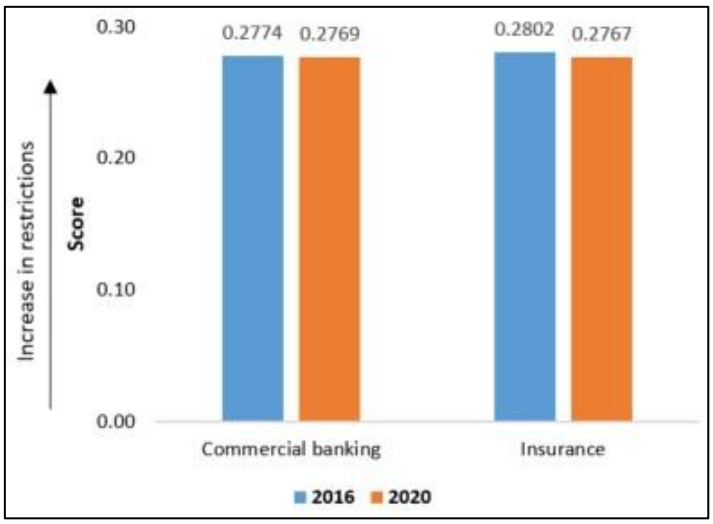
Regional arrangements can facilitate the cross-border provision of financial services. One particular initiative through which APEC has worked to strengthen the competitiveness of the financial markets in the region is the Asia Region Funds Passport (ARFP). Established through the Finance Ministers' Process (FMP), the ARFP is a multilateral framework intended to support the development of the funds management industry in the region through improved market access and regulatory harmonization.[124] The key objectives of the ARFP include: 1) providing more diverse range of investment opportunities; 2) deepening the region's capital markets to attract finance for economic growth; 3) facilitating the recycling of the region's savings locally, growing the pool of funds available for investment in the region; 4) strengthening the capacity, expertise, and international competitiveness of financial markets and fund management industry in the region; and 5) maintaining legal and regulatory frameworks that promote investor protection as well as fair, efficient, and transparent markets for financial services. The Memorandum of Cooperation came into effect on 30 June 2016 and included Australia; Japan; Korea; New Zealand; and Thailand. In addition, the Memorandum ensures that any other eligible APEC economies can participate in the passport even after it comes into effect. The ARFP was officially launched on 1 February 2019. To date, Australia; Japan; Korea; New Zealand; and Thailand are ready to receive registration applications from prospective domestic passport funds and entry applications from foreign passport funds. Since the launch of ARFP in 2019, the ARFP Joint Committee has had several face-to-face meetings and organized a technical workshop to share information on various topics such as tax treatment for funds in ARFP economies and implementation of ARFP, including passporting processes.[125] Participating economies have also been engaging with other economies who may be interested to join ARFP. Additionally, they have been engaging with the industry to promote ARFP in their respective jurisdictions.

As with several APEC-wide actions, the OECD STRI is one of the indicators used to monitor progress in this APEC-wide action. In particular, STRI scores for the commercial banking and insurance sub-sectors are analyzed to review progress in this area. Comparing the average scores for APEC economies between 2016 and 2020 in the commercial banking and insurance sub-sectors showed that restrictions have only fallen slightly – the score for the commercial banking sub-sector improved by 0.0005 (from 0.2774 in 2016 to 0.2769 in 2020), while the insurance sub-sector improved by 0.0035 (from 0.2802 in 2016 to 0.2767 in 2020) (Figure 2.13). Additionally, there is a wide variation in scores across these sub-sectors – the individual

[122] Stijn Claessens and Luc Laeven, "What Drives Bank Competition? Some International Evidence," *Journal of Money, Credit and Banking* 36, no. 3 (2004): 563–83, https://doi.org/10.1596/1813-9450-3113.
[123] Thorsten Beck, Asli Demirgüç-Kunt, and Vojislav Maksimovic, "Bank Competition and Access to Finance: International Evidence," *Journal of Money, Credit and Banking* 36, no. 3 (2004): 627–48, https://doi.org/10.1353/mcb.2004.0039.
[124] APEC, "Asia Region Fund Passport - About ARFP," Asia Region Funds Passport, September 19, 2013, https://fundspassport.apec.org/about-us/about/.
[125] "Asia Region Funds Passport: Annual Implementation Report 2017-2018" (APEC, 2018), https://cdn.tspace.gov.au/uploads/sites/20/2018/09/20180912-ARFP-Annual-Implementation-Report-Final1.pdf; "Asia Region Funds Passport: Annual Implementation Report 2018-2019" (APEC, 2019), https://fundspassport.apec.org/wp-content/uploads/2021/02/ARFP-implementation-report-2018-2019.pdf; "Asia Region Funds Passport: Annual Implementation Report 2019-2020" (APEC, 2020), https://fundspassport.apec.org/wp-content/uploads/2021/02/ARFP-Final-Annual-Implementation-Report-2019-2020-2.pdf.

economy scores for the commercial banking sub-sector in 2020 ranged between 0.175 and 0.501, while those for the insurance sub-sector ranged between 0.105 and 0.551.

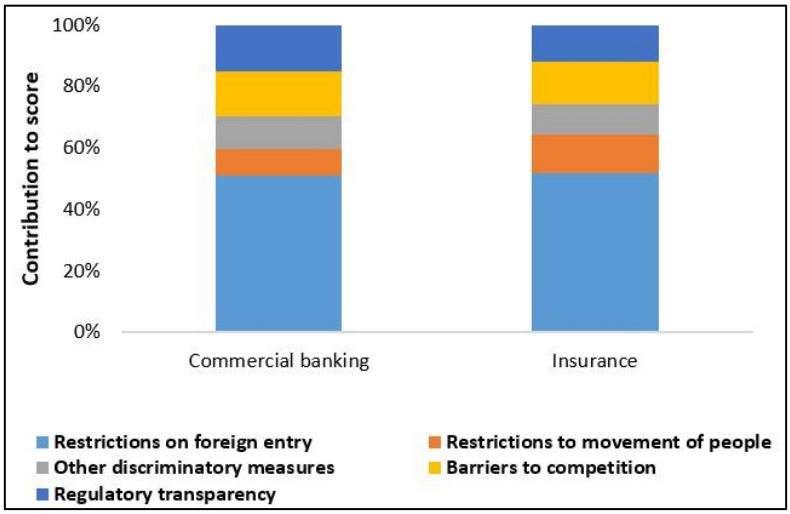
Figure 2.13: Average OECD STRI scores in commercial banking and insurance sectors for APEC (2016 and 2020)



Source: APEC-PSU calculations using data from OECD. Accessed 22 April 2021.
Note: A higher score indicates higher levels of restriction. Calculations comprise of data from 14 APEC economies (AUS; CDA; CHL; PRC; INA; JPN; ROK; MAS; MEX; NZ; PE; RUS; THA; and USA).

The main restrictions in these sub-sectors are those affecting foreign entry (Figure 2.14). Examples of these restrictions include regulations limiting foreign equity share, more stringent licensing criteria for foreign companies, restrictions on branch and ATM networks, and restrictions on cross-border data flows. There are also restrictions which act as barriers to competition and further discriminatory measures. Examples of restrictions acting as barriers to competition are regulation of interest rates on deposits, regulation on product tying, and requiring regulatory approval for new products and services. Examples of those acting as further discriminatory measures are restrictions on extending loans or taking deposits in foreign currency; as well as restrictions on lending to non-residents for domestically-licensed banks.

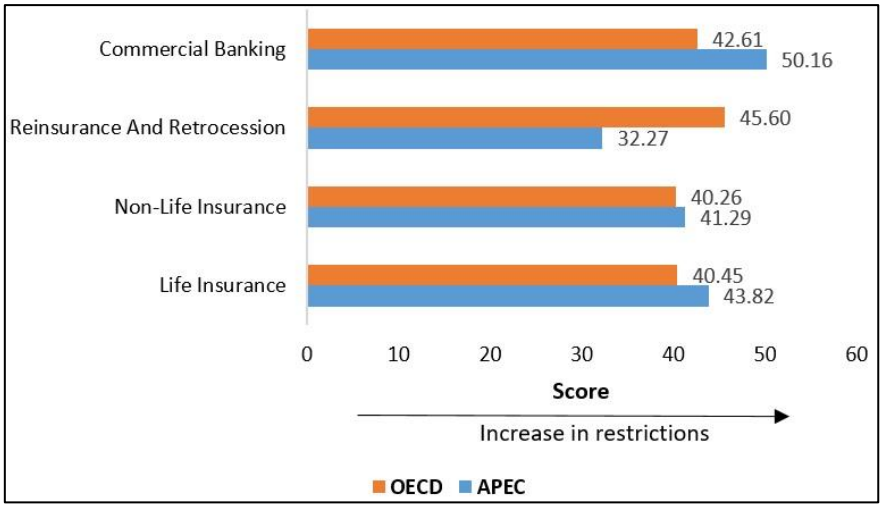
Figure 2.14: Breakdown of average OECD STRI scores in commercial banking and insurance sectors for APEC in 2020 (by type of restrictions)



Source: APEC-PSU calculations using data from OECD. Accessed 22 April 2021.

Another indicator used to monitor progress is the World Bank/WTO STRI, which covers more APEC economies relative to the OECD STRI (19 vs. 14 economies) and breaks down the insurance sub-sector into three categories, namely: reinsurance and retrocession, non-life insurance, and life insurance. However, only one data point is available (2016) since ASCR's inception. Comparing APEC's performance with that of OECD economies showed that on average, APEC underperformed OECD across all sub-sectors covered except reinsurance and retrocession (Figure 2.15). This observation is fairly consistent with that of OECD STRI – OECD is less restrictive than APEC in both commercial banking and insurance sub-sectors in both 2016 and 2020. Likewise, there is also a wide variation in World Bank/WTO STRI scores across sub-sectors among individual APEC economies.

Figure 2.15: Comparison of World Bank/WTO STRI in commercial banking and insurance sectors for APEC and OECD (2016)



Source: APEC-PSU calculations using data from World Bank/WTO. Accessed 21 January 2021.

One outcome indicator used to monitor progress is the number of transactions or cross-border sales between ARFP-participating economies. Based on survey data obtained from participating economies, there have been no transactions to date.

Moving forward, economies opined that more capacity building activities are important to share information and experience on the various measures that members are implementing to facilitate cross-border financial services. Specifically on ARFP, members are of the view that activities such as webinars and studies could raise awareness about the initiative. Capacity building activities could also be organized to help prepare members who are yet to join ARFP to be able to do so in the near future. Finally, economies opined that there is a need to continue improving on various aspects of the ARFP, such as possibly passporting arrangements and scope of eligible fund types that can be offered.

2.3.11 Action #11: Supporting APEC's work on developing air, sea, and land transportation in line with the APEC Connectivity Blueprint 2015–2025 (Accountable fora: TPTWG)

The transportation sector spans multiple sub-sectors such as air, maritime, rail, and road transport services. An efficient transportation network brings many advantages, including improved connectivity to international markets, reduced logistics cost, and enhanced

participation in GVCs. As an illustration, a 2013 OECD-WTO study noted that survey respondents singled out the quality of transportation networks and their associated costs as the main factor that prevents companies from entering GVCs.[126] In addition, past reform efforts in the transportation sector have been shown to be beneficial to APEC economies. For example, the 2006 air transport agreement between Korea and China saw fares decreased by an average of more than 8 percent on these routes and doubled traffic. APEC members that adopted the separation of track ownership and operations in rail transport (which provided access for new competitors) saw an average annual productivity growth of 3.5 percent. Finally, the removal of cross-border freight licenses between Thailand and Laos in 2004 led to a decrease in freight rate by about 20-30 percent. [127]

Noting the importance of the transportation sector, APEC has undertaken several initiatives to further promote work on improving the efficiency of the sector. One such initiative is the APEC Connectivity Blueprint. Adopted in 2014, the blueprint seeks to achieve a seamlessly and comprehensively connected and integrated Asia-Pacific through actions aimed at strengthening the three pillars of connectivity – physical, institutional, and people-to-people.[128] For the pillar on physical connectivity, the Transportation Working Group (TPTWG) undertook the project "Attracting Private Investment to Transportation Infrastructure Public-Private Partnerships (PPPs): Training APEC Economies to Better Package Bankable Projects" in 2015–2016 to help economies better understand the investment decision of private investors and developers on transportation infrastructure projects.[129] Australia; Korea; and Singapore contributed in areas such as establishing frameworks for bankable PPP infrastructure projects; sharing knowledge and trends in PPP development; and developing a handbook with information on PPP deal structuring, procurement, and relationship management. For the pillar on institutional connectivity, TPTWG held a capacity-building workshop for preventing accidents in maritime dangerous goods and containers transportation in 2018. The workshop sought to enhance the abilities of administrative officers and relevant staff, to improve their understanding of international regulation of seaborne transportation, and to foster an APEC-wide network to share other issues related to seaborne transportation.[130] In an effort to increase safety and at the same time, reduce trade costs across supply chains as well as their reliability, a study of "Best Verified Gross Mass (VGM) Practices to Maintain and Enhance the Supply Chain Connectivity in the APEC Region" had been conducted to understand the issues and challenges faced by various stakeholders in complying with the new International Convention for the Safety of Life at Sea (SOLAS) VGM rules, and share best practices in implementing them.[131]

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[126] World Trade Organization and Organisation for Economic Co-operation and Development, eds., *Aid for Trade at a Glance 2011: Showing Results*, Aid for Trade at a Glance 2011 (Geneva, Switzerland, 2011), https://www.wto.org/english/res_e/publications_e/aid4trade11_e.pdf.

[127] Christopher Findlay, "The Impacts and Benefits of Structural Reforms in Transport, Energy, and Telecommunications Sectors" (APEC - Policy Support Unit, January 2011), https://www.apec.org/Publications/2011/01/The-Impacts-and-Benefits-of-Structural-Reforms-in-Transport-Energy-and-Telecommunications-Sectors.

[128] APEC - Policy Support Unit, "APEC Connectivity Blueprint," January 2015, https://www.apec.org/Publications/2015/01/APEC-Connectivity-Blueprint.

[129] Transportation Working Group, "Proposals - Attracting Private Investment to Transportation Infrastructure Public-Private Partnerships (PPPs): Training APEC Economies to Better-Package "Bankable Projects"," 2015, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=1740.

[130] Transportation Working Group, "Proposals - APEC Workshop/Seminar on Capacity Building for Preventing Accidents in Maritime Dangerous Goods and Containers Transportation," 2017, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2020.

[131] Transportation Working Group, "Proposals - The Study of Best Verified Gross Mass (VGM) Practices to Maintain and Enhance the Supply Chain Connectivity in the APEC Region," 2017, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=1997.

Recognizing that the transportation sector is currently being disrupted and transformed by technologies, APEC has undertaken several projects to better understand the interface between transportation and technology. One example is the "Disruptive Technologies and the Changing Nature of Work in the Transportation Sector" project, which sought to identify the key disruptive technologies and examine jobs that will likely experience the greatest shift as a result of the technological change.[132] It aimed to provide recommendations on how economies can benefit from the economic and social opportunities of this change. China has undertaken a project aimed to "promote supply chain connectivity by enhancing and better understanding digital innovation in APEC port industry."[133]

Korea spearheaded the "APEC SEN (Seafarers Excellence Network) Strategic Development and Management Planning for Sustainable Future" project between 2019 and 2020 to establish and formulate solid and sustainable future plans for the network.[134] Among others, the project aims to help seafarers to: 1) strengthen employability through online and offline maritime education and training; 2) attain improved welfare by ensuring a high degree of work-life balance between on-board vessels and ashore; and 3) advance their career development and job transition through re-training in the digital age.[135] Noting the increased use of new technologies in facilitating personal mobility (e.g., ridesharing and car-sharing), the United States initiated a project titled "Identifying Uses of App-Based Transportation Mobility Technologies for Inclusive Smart Cities."[136] The objective of the project is to create an inventory of policies and regulations; and to identify best practices on how technologies can be used to achieve positive outcomes such as developing smart cities, increasing access to mobility, and enhancing resiliency throughout the transport system.

The OECD STRI is one of the indicators used to monitor progress with regards to implementation of this APEC-wide action. STRI scores for the logistics, transport and courier sub-sectors are analyzed in particular. Comparing the average scores for APEC economies between 2016 and 2020 in the logistics sub-sectors showed that restrictions have fallen by a range of 0.005 (logistics freight forwarding) and 0.010 (logistics cargo-handling) (Figure 2.16). Among the four logistics sub-sectors, the most restrictive sector as of 2020 is logistics cargo-handling (0.36), while the least restrictive sector is logistics freight forwarding (0.26). As with other services sub-sectors, there is a wide variation in restrictions across these sub-sectors among individual economies – for example, the score for the logistics storage and warehousing sub-sectors in 2020 ranged between 0.11 and 1.00, while that for the logistics customs brokerage ranged between 0.15 and 1.00.

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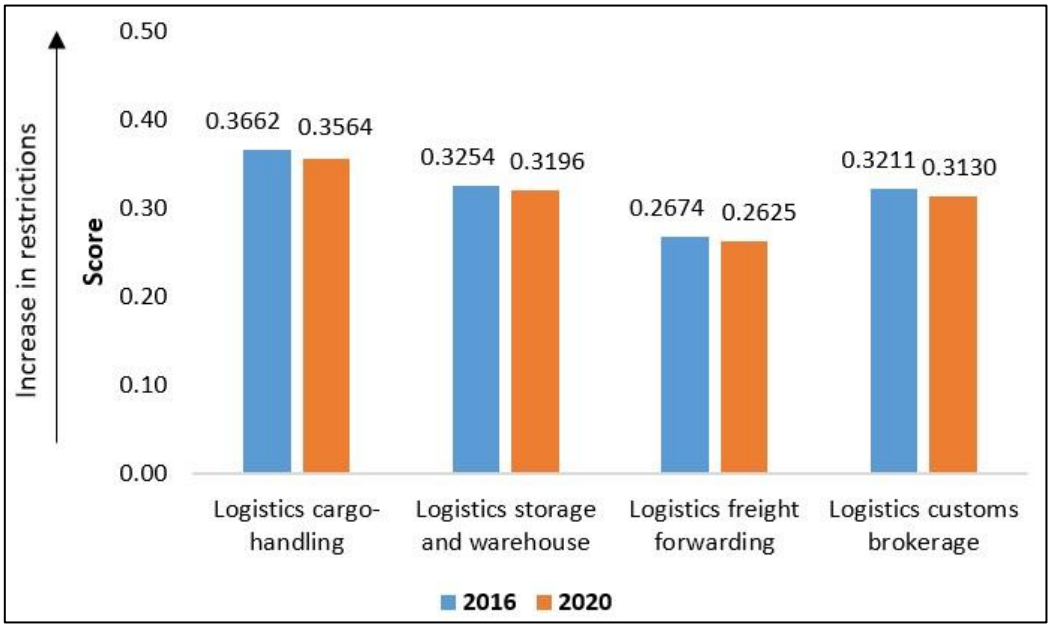
[132] Transportation Working Group, "Proposals - Disruptive Technologies and the Changing Nature of Work in the Transportation Sector," 2019, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2427.
[133] Transportation Working Group, "Proposals - Promote Supply Chain Connectivity by Enhancing and Better Understanding Digital Innovation in APEC Port Industry," 2019, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2467.
[134] Transportation Working Group, "Proposals - APEC SEN (Seafarers Excellence Network) Strategic Development and Management Planning for Sustainable Future," 2019, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2407.
[135] APEC, "APEC Seafarer Excellence Network - Background," accessed June 1, 2021, http://sen.apec.org/senap/background.php.
[136] Transportation Working Group, "Proposals - Identifying Uses of App-Based Transportation Mobility Technologies for Inclusive Smart Cities," 2019, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2538.

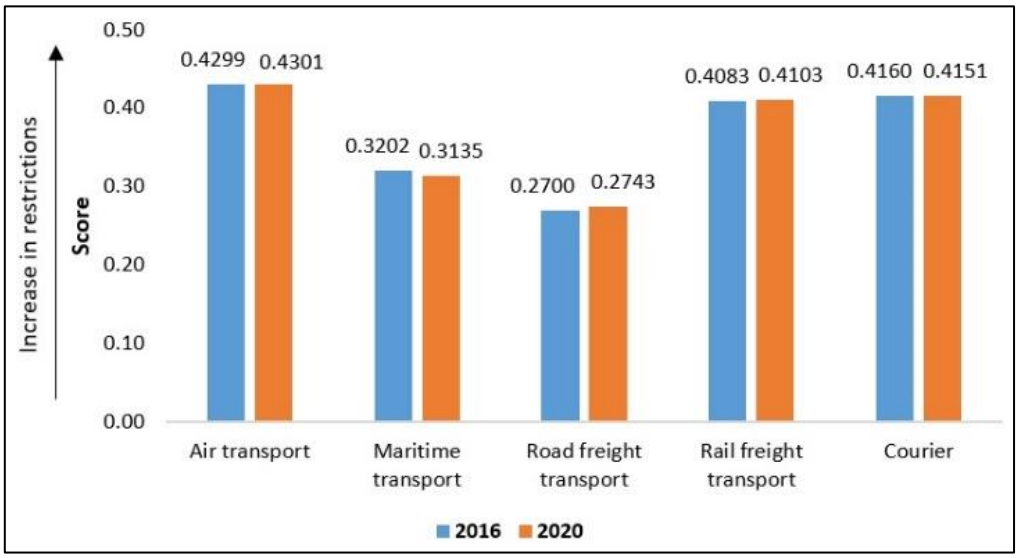
Figure 2.16: Average OECD STRI scores in logistics sectors for APEC (2016 and 2020)



Source: APEC-PSU calculations using data from OECD. Accessed 22 April 2021.
Note: A higher score indicates higher levels of restriction. Calculations comprise of data from 14 APEC economies (AUS; CDA; CHL; PRC; INA; JPN; ROK; MAS; MEX; NZ; PE; RUS; THA; and USA).

Comparing the average scores for APEC economies between 2016 and 2020 in the transport and courier sub-sectors showed that two sub-sectors have become less restrictive, namely maritime transport and courier (Figure 2.17). On the contrary, air transport, road freight, and rail freight sub-sectors have become more restrictive in 2020. Among them, the most restrictive sector is air transport (0.43), while the least restrictive sector is road freight transport (0.27). Wide variations in score among individual economies are also observed across these sub-sectors – for example, the score for the rail freight transport sub-sector ranges between 0.15 and 1.00, while that for courier ranges between 0.26 and 0.88.

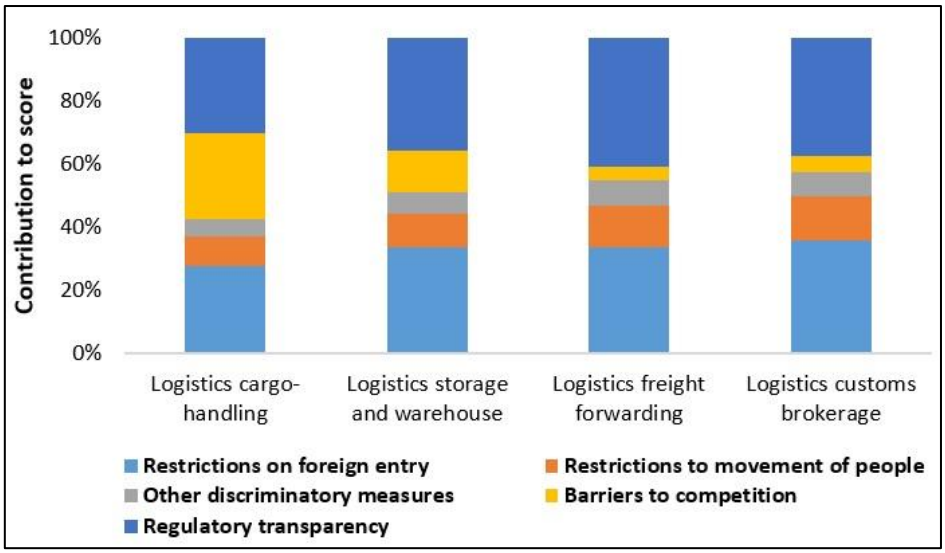
Figure 2.17: Average OECD STRI scores in transport and courier sectors for APEC (2016 and 2020)



Source: APEC-PSU calculations using data from OECD. Accessed 22 April 2021.
Note: A higher score indicates higher levels of restriction. Calculations comprise of data from 14 APEC economies (AUS; CDA; CHL; PRC; INA; JPN; ROK; MAS; MEX; NZ; PE; RUS; THA; and USA).

The main restrictions in the logistics sub-sectors are those affecting foreign entry and those pertaining to regulatory transparency (Figure 2.18). Examples of restrictions affecting foreign entry include those limiting foreign equity share, subjecting licenses to quotas and economic needs tests, and restrictions on cross-border data flows. Examples of those pertaining to regulatory transparency include the lack of a legal obligation to communicate regulations to the public within a reasonable time prior to entry into force, the limited validity of visas, and the absence of visa exemption for temporary entry/transit of crew.

Figure 2.18: Breakdown of average OECD STRI scores in logistics sectors for APEC in 2020 (by type of restrictions)

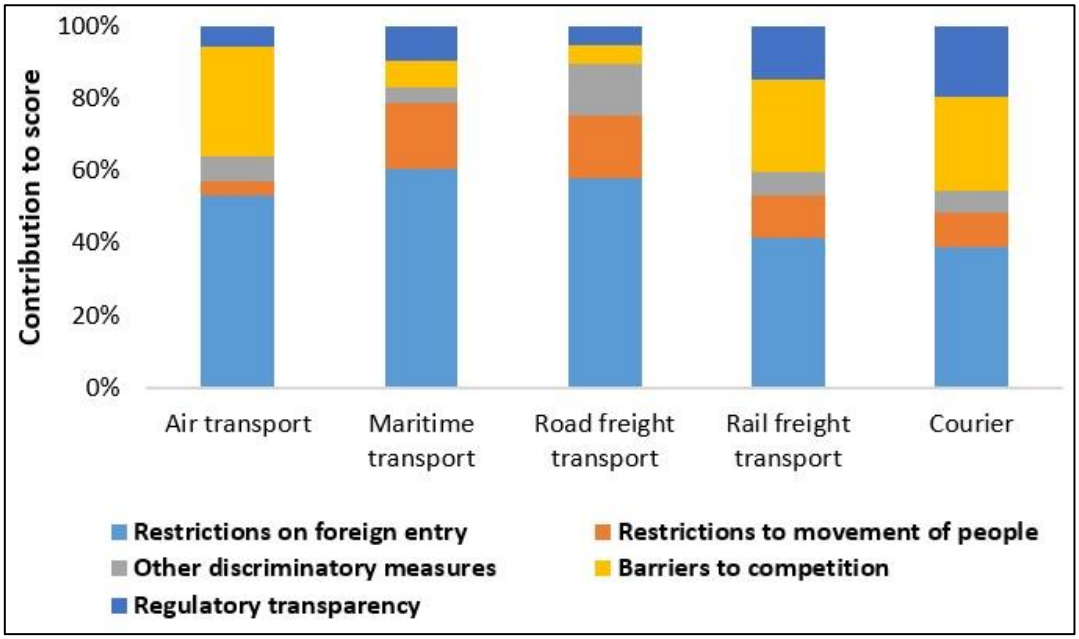


Source: APEC-PSU calculations using data from OECD. Accessed 22 April 2021.

With regards to the transport and courier sub-sectors, the main restrictions are those affecting foreign entry (Figure 2.19). Examples of restrictions affecting foreign entry include those

limiting foreign equity share, those restricting cross-border mergers and acquisitions, and those requiring board of directors and/or managers to be nationals. There are also other restrictions such as those acting as barriers to competition, which include preferential slot allocation to certain air carriers, price regulation on services, and the unavailability of dispute settlement mechanisms.

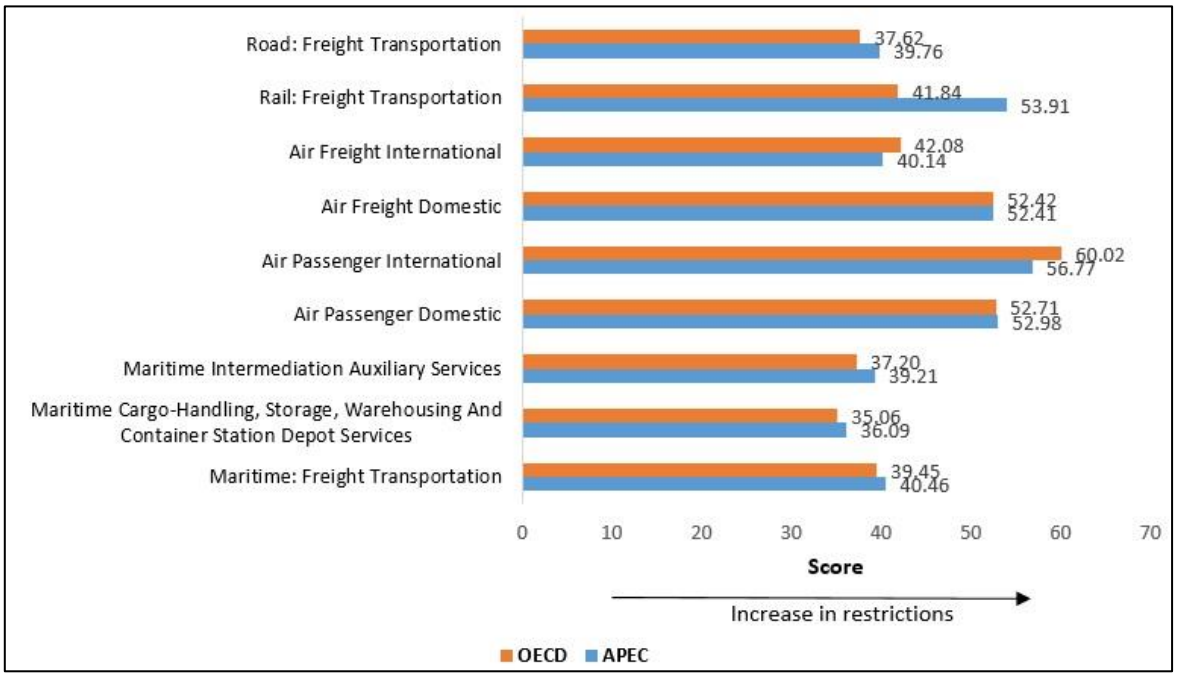
Figure 2.19: Breakdown of average OECD STRI scores in transport and courier sectors for APEC in 2020 (by type of restrictions)



Source: APEC-PSU calculations using data from OECD. Accessed 22 April 2021.

Another indicator used to monitor progress is the World Bank/WTO STRI, which covers more APEC economies relative to the OECD STRI and breaks down some of the sub-sectors into more categories. For example, the air transport sub-sector is categorized into air freight international, air freight domestic, air passenger international, and air passenger domestic. The maritime sub-sector is categorized into maritime freight transportation; maritime cargo-handling, storage, warehousing and container station depot services; and maritime intermediation auxiliary services. However, only one data point is available (2016) since the inception of ASCR. Comparing APEC's performance with that of OECD economies showed that on average, APEC underperformed OECD across six sub-sectors, namely road freight transportation; rail freight transportation; air passenger (domestic); maritime intermediation auxiliary services; maritime cargo-handling, storage, warehousing and container station depot services; and maritime intermediation auxiliary services (Figure 2.20). There is also a wide variation in World Bank/WTO STRI scores across sub-sectors among individual APEC economies. For example, the score for maritime freight transportation range from 15 to 60, while that for rail freight transportation range from 25 to 100.

Figure 2.20: Comparison of World Bank/WTO STRI in transport and logistics sectors for APEC and OECD (2016)



Source: APEC-PSU calculations using data from World Bank/WTO. Accessed 21 January 2021.

Specifically on air transport, one indicator for monitoring progress of liberalization is the number of air services agreements that members have with one another. Data from ICAO and complemented by update from economies shows that each member economy has air services agreements with between 4 to 19 other APEC members (Table 2.2). Singapore has the highest number of partners (19), followed by Australia; Hong Kong, China; the Philippines; and United States (at 18 each); China; Japan; Malaysia; and New Zealand (at 16 each).

Table 2.2: Number of Intra-APEC Partners with which Economies Have Air Services Agreements

Economy	No. of intra-APEC partners
Australia	18
Brunei Darussalam	14
Canada	15
Chile	9
China	16
Hong Kong, China	18
Indonesia	10
Japan	16
Korea	15
Malaysia	16
Mexico	14
New Zealand	16
Papua New Guinea	4
Peru	4
The Philippines	18
Russia	14

Singapore	19
Thailand	14
United States	18
Viet Nam	10

Source: APEC-PSU compilations from ICAO. Accessed 3 May 2021.
Note: Data for Hong Kong, China; the Philippines; Russia; and Singapore has been updated based on feedback from respective economies. Data for Chinese Taipei is not available.

Moving forward, economies opined via the MTR survey that there is a need to strengthen cooperation and connectivity across various mode of transportation, including maritime, air and land through sharing of experiences and good practices. TPTWG could also focus efforts on improving the investment climate, especially with regards to infrastructure development and on achieving targets identified in the APEC Connectivity Blueprint. Specifically on the latter, access to various information such as types of infrastructure needed and gaps in institutional frameworks would be crucial.

2.3.12 Action #12: Support APEC's work on developing the travel and tourism sector for sustainable and inclusive growth, building on the work of the APEC Tourism Strategic Plan (Accountable fora: TWG)

The travel and tourism sector is an important source of growth for many economies. In the context of APEC, a study conducted by PSU in 2016 showed that tourism (measured in terms of tourist arrivals) has a positive and significant impact on macroeconomic indicators such as GDP, employment, and trade. For example, a 1 percent increase in tourist arrivals is linked to 0.03 percent increase in GDP, all other factors held constant, while a 1 percent increase in tourist arrivals correlates to a 0.02 percent increase in employment.[137] The sector also plays a critical role from the perspective of inclusion. Indeed, empirical evidence from the same study indicated that tourism development has a positive impact on poverty reduction and inclusive growth (defined as growth in household incomes coupled with improvements in distribution). More specifically, every 1 percent increase in tourist arrivals is associated with a 0.12 percent reduction in the number of poor people in the region.

Given these benefits and the potential to realize more, Tourism Ministers announced during the 8th APEC Tourism Ministerial Meeting in 2014 their plan to achieve the target of 800 million international tourists among APEC economies by 2025. However, achieving the target and associated benefits are not a given/guarantee as a wide range of factors (e.g., connectivity, ease of entry, safety, attractions, awareness of destination) need to come together. Black swan events such as COVID-19 could also affect the growth of the sector. Recognizing that the Tourism Working Group (TWG) is well-placed to advance relevant initiatives as well as for information exchange and data sharing on tourism and related areas, the forum has undertaken various activities to support the achievement of this goal, among others. It recently updated its Strategic Plan for the period 2020–2024. Four priorities are identified, namely: 1) digital transformation; 2) human capital development; 3) travel and facilitation competitiveness; and 4) sustainable tourism and economic growth.[138]

[137] Emmanuel A. San Andres, Denise Cheok, and Liyana Othman, "Tourist Arrivals and Inclusive Growth" (APEC - Policy Support Unit, August 2016), https://www.apec.org/Publications/2016/08/Tourist-Arrivals-and-Inclusive-Growth.
[138] APEC, "APEC Tourism Working Group," APEC, 2020, https://www.apec.org/Groups/SOM-Steering-Committee-on-Economic-and-Technical-Cooperation/Working-Groups/Tourism.

MSMEs play a critical role in ensuring inclusion in the tourism sector. This is because employment opportunities for the poor are usually coursed through MSMEs by nature of the jobs offered (e.g., less skill-intensive, flexible work arrangements). Noting this, CTI in collaboration with TWG had developed a project titled "SMEs' Integration into Global Value Chains in Services Industries: Tourism Sector" to identify challenges faced by MSMEs in the sector and propose corresponding policy recommendations.[139]

In an effort to promote regional skills recognition and mobility, Australia and Peru, through TWG and HRDWG, finalized the pilot of the APEC Occupational Standards Framework in the travel, tourism, and hospitality sector.[140] The framework's objective is to inform the distinct training standards/curriculum in each economy's TVET system so as to ensure that the various training leads to outcomes which meet the needs of businesses in the sector and provide the level of service expected by consumers. The project covers occupational standards for six job roles in the tourism sector, namely: bar attendant, cook, event coordinator, front desk attendant, housekeeper and travel consultant.[141] Separately but related to development of tourism workforce, Australia through the TWG had produced the report on "Developing the Tourism Workforce of the Future in the Region" in February 2017.[142]

Visa requirements are an important consideration among tourists when deciding which economies to travel to – all other factors held constant, the same PSU study mentioned earlier showed that imposing visas alone reduces bilateral tourist arrival growth by half a percentage point. It is therefore critical to monitor how APEC economies have fared in this regard. Analysis of information obtained from the Passport Index and economy sources showed that holders of passports from APEC economies will require visas from between 6 to 18 other APEC economies (Table 2.3).[143] APEC economies have a wide divergence in their visa policies concerning holders of passports from APEC economies: only Indonesia grants visa free access to all APEC citizens, while some economies require visas from citizens of all other 20 APEC economies (Table 2.4). Compared to the information collected back in 2017, 11 origin economies have lost some visa-free access privilege to other APEC economies. Citizens and passport holders of 11 APEC economies now require visas to visit one or two more APEC economies. However, two other APEC economies enjoyed greater visa-free access. Viet Nam can enter one additional APEC economy visa-free, while Chinese citizens and passport holders received visa-free access to three more APEC economies. Regarding the visa policies of APEC economies, four economies have become more restrictive, requiring visas from travelers of more APEC economies in 2020 than in 2017. Meanwhile, five economies have reduced their visa requirements, requiring entry visas from travelers from fewer APEC economies.

More importantly, despite this variation in visa requirements over time, it can be observed that more economies have facilitated the process through the use of electronic travel authorization (eTA), eVisa, and visa on arrival. For example, from the perspective of the origin economy

[139] Committee on Trade and Investment, "SMEs' Integration into Global Value Chains in Services Industries: Tourism Sector."
[140] Human Resource Development Working Group, "Proposals - APEC Occupational Standards Framework: Test in the Travel, Tourism and Hospitality Industry," 2016, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=1883.
[141] SkillsIQ, "APEC Tourism Occupational Standards Development Project," 2017, https://www.skillsiq.com.au/NewsandEvents/LatestNews/APECTourismOccupationalStandardsDevelopmentProject.
[142] Nicole Garofano et al., "Developing the Tourism Workforce of the Future in the APEC Region" (APEC Tourism Working Group, February 2017), https://www.apec.org/Publications/2017/04/Developing-the-Tourism-Workforce-of-the-Future-in-the-APEC-Region.
[143] Passport Index, "Passport Index - Global Mobility Intelligence" accessed through "Internet Archive: Wayback Machine."

which has observed improvements, compared to the situation in 2017, their citizens are now able to obtain visas via eTA, eVisa, and/or visa on arrival to between 1 and 4 additional destination economies as of 2020.

Table 2.3: Visa Requirements for Citizens and Passport Holders of APEC Economies

Economy of Citizenship/ Passport Issuer	Number of APEC Destination Economies		
	Offering visa-free access	Requiring eTA, eVisa, and visa on arrival	Requiring visas applied through non-electronic and other means
Australia	13	5	2
Brunei Darussalam	13	5	2
Canada	14	4	2
Chile	13	5	2
China	2	7	11
Hong Kong, China	13	6	1
Indonesia	9	2	9
Japan	13	5	2
Korea	13	6	1
Malaysia	13	3	4
Mexico	9	6	5
New Zealand	13	5	2
Papua New Guinea	6	4	10
Peru	11	4	5
The Philippines	9	2	9
Russia	11	4	5
Singapore	14	5	1
Chinese Taipei	7	10	3
Thailand	13	2	5
The United States	14	4	2
Viet Nam	7	2	11

Source: Passport Index, accessed 14 April 2020 by Wayback Machine and economy sources.
Note: The numbers above do not reflect the border control measures against COVID-19 taken by each economy. eTA refers to electronic travel authorization. Passport index data have been adjusted using economy sources. Hong Kong, China residents do not need visa for China but nevertheless need to have "Home Return Permit" (HRP). The table above considers the two as distinct and, for the purpose of the Table, HRP is not counted as visa requirement.

Table 2.4: Visa Policies of APEC Economies towards Citizens and Passport Holders of other APEC Economies

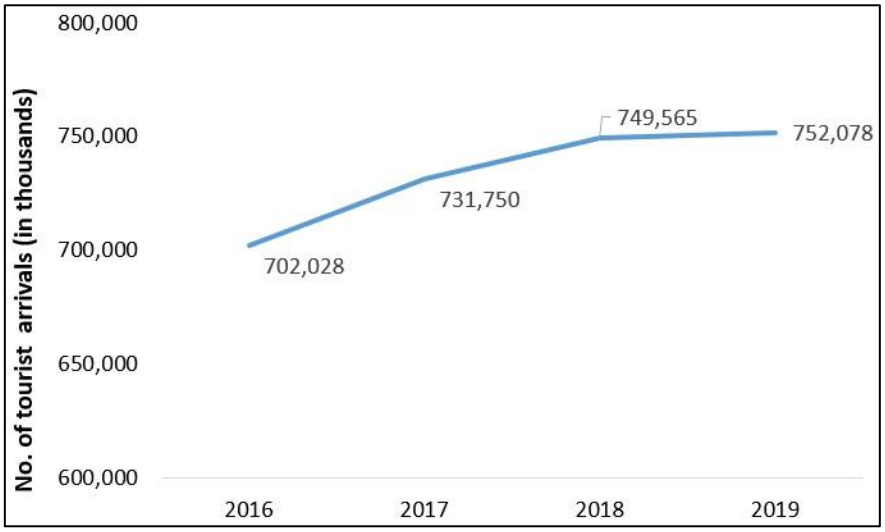
APEC Economy	Number of APEC economies whose Citizens/Passport Holders		
	Receive visa-free access	Require eTA, eVisa, and visa on arrival	Require visas applied through non-electronic and other means
Australia	0	20	0
Brunei Darussalam	14	3	3
Canada	1	11	8
Chile	16	0	4
China	4	1	15
Hong Kong, China	18	1	1
Indonesia	20	0	0
Japan	14	0	6
Korea	14	0	6
Malaysia	19	1	0

Mexico	11	1	8
New Zealand	1	11	8
Papua New Guinea	0	20	0
Peru	18	0	2
The Philippines	18	1	1
Russia	6	0	14
Singapore	18	2	0
Chinese Taipei	13	2	5
Thailand	16	4	0
The United States	1	8	11
Viet Nam	9	10	1

Source: Passport Index, accessed 14 April 2020 by Wayback Machine and economy sources.
Note: The numbers above do not reflect the border control measures against COVID-19 taken by each economy. eTA refers to electronic travel authorization. Passport index data have been adjusted using economy sources. Hong Kong, China as a destination economy does not require visa for Chinese citizens but requires an exit-entry permit for travelling to and from Hong Kong, China. For the purpose of the Table, exit-entry permit is not counted as visa requirement.

One outcome indicator used to indirectly monitor the implementation progress of this APEC-wide action is the number of international tourist arrivals. Analysis showed that the number of international tourist arrivals in APEC has increased from approximately 702 million in 2016 to 752 million in 2019, at a CAGR of 2.32 percent (Figure 2.21). Based on the available data, the top destination economies in 2019 are the United States (166 million); China (163 million); Mexico (97 million); Hong Kong, China (56 million); and Thailand (40 million).

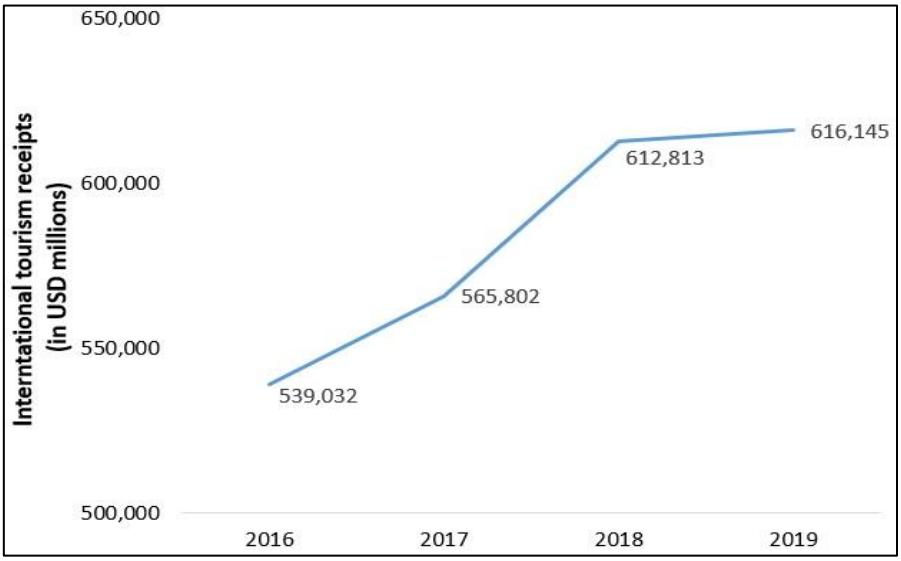
Figure 2.21: Number of international tourist arrivals in APEC



Source: APEC-PSU calculations using data from World Bank World Development Indicators (Primary source: UNWTO) and StatsAPEC. Accessed 13 April 2021.

Another outcome indicator monitored is the total international tourism receipts in APEC. Analysis showed that it has been on the upward trend, with a CAGR of 4.56 percent between 2016 and 2019 (Figure 2.22). More specifically, international tourism receipts in APEC increased from approximately USD 606 billion in 2016 to USD 616 billion in 2019. The top recipient economies in 2019 are the United States (USD 233 billion); Thailand (USD 65 billion); Japan (USD 49 billion); Australia (USD 48 billion); and Hong Kong, China (USD 33 billion).

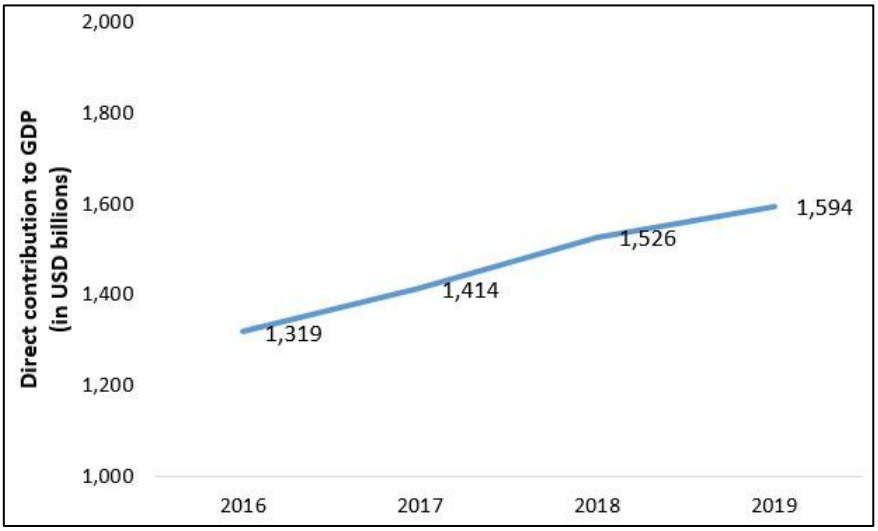
Figure 2.22: Total international tourism receipts in APEC



Source: APEC-PSU calculations using data from World Bank. Accessed 13 April 2021.
Note: Data from CDA and PRC are not available. BD; NZ; PNG; and SGP data in 2019 refers to 2018 data.

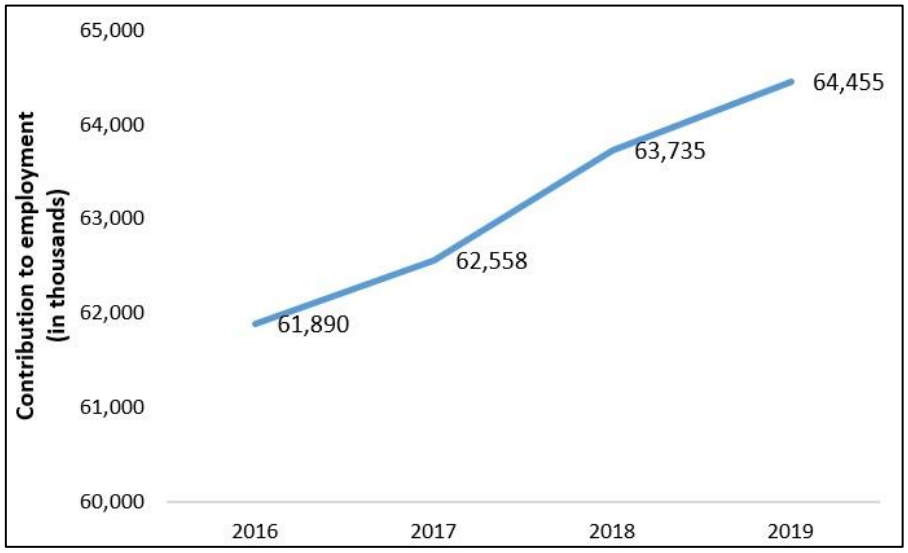
The travel and tourism sector made direct and significant contribution to the GDP and employment in APEC economies. The sector's direct contribution to GDP increased from USD 1.3 trillion in 2016 to USD 1.6 trillion in 2019 (Figure 2.23), while its direct contribution to employment increased from 61.9 million to 64.5 million over the same period (Figure 2.24). It is worthwhile to note that these contributions have been on an upward trend over the years, with a CAGR (2016–2019) of 6.53 percent and 1.36 percent for GDP and employment, respectively. For APEC collectively, the direct GDP contribution per person employed in the travel and tourism sector increased from approximately USD 21,311 in 2016 to USD 24,735 in 2019.

Figure 2.23: Direct contribution of travel and tourism sector to GDP in APEC



Source: APEC-PSU calculations using data from World Travel and Tourism Council (WTTC). Accessed 25 January 2021.

Figure 2.24: Direct contribution of travel and tourism sector to employment in APEC



Source: APEC-PSU calculations using data from World Travel and Tourism Council (WTTC). Accessed 25 January 2021.

2.3.13 Action #13: Development of services data and statistics to measure and support implementation of the Roadmap and improve tracking of services trade and investment more broadly (Accountable fora: CTI and GOS)

To allow policymakers to plan and make more informed decisions, it is important that they have access to a clear, well-elaborated measurement framework and reliable statistics that are regularly updated with information as well as data comparable across sectors and economies. As the saying goes, "if you cannot measure it, you cannot improve it." Achieving this requires economies to undertake a myriad of activities. For example, with regards to information/indicators that have yet to be collected, economies would need to build the capacity of their statistical agencies and/or collaborate with international organizations so that they could begin collecting them. With regards to indicators that have been collected, economies may need to fine-tune existing collection processes. Such efforts may help economies disaggregate their data as well as harmonize with international standards to ensure comparability with other economies. Where achieving comparability may not be feasible in the near term, providing information such as how certain statistics have been derived could mitigate some of the measurement challenges.

Recognizing the value of services data and statistics, APEC has undertaken various activities to improve the statistical capabilities of the region. To provide more visibility on member economies' engagement in GVCs, a series of capacity building workshops have been conducted over the years with the aim of developing the APEC Trade in Value Added (TiVA) database. While the database does not focus solely on services-related data, it provides insights on the role of various services in GVCs. Two reports were published as part of the APEC TiVA initiative. The first lays out the methods used to construct the APEC TiVA database,[144] while the second provides background information on the key concepts and approaches related to GVC analysis, describes various TiVA-based analytical frameworks, as well as elaborates on the major APEC TiVA indicators and their applications in GVC analysis.[145]

[144] The APEC TiVA Technical Group and Jones, "Methodologies of Constructing the APEC TiVA Database for Better Understanding Global Value Chains in the APEC Region."
[145] The APEC TiVA Core Technical Task Force and Jones, "APEC TiVA Initiative Report Two: Better Understanding Global Value Chains in the APEC Region."

To improve the monitoring of the regulatory environment affecting services trade and investment, and acknowledging that both the OECD and World Bank/WTO STRI do not cover all member economies, APEC has committed to the development of the APEC index. In 2017, GOS and CTI endorsed the paper on "Next Steps for the Work of Measuring the Regulatory Environment in Services Trade of APEC," which essentially operationalized the development of APEC index at the working level. The list of activities associated with the APEC index development can generally be divided into two main strands and they complement one another.

The first pertains to a series of capacity building activities whose objectives include enhancing participants' perspectives on the importance of services sector in their economies, how policies can affect the services regulatory environments in their economies and how tools such as the STRI can be used to monitor policy reforms. These include: 1) Workshop on Trade in Services Index Data (October 2017); 2) APEC Symposium on Services Trade (May–June 2018); 3) Capacity Building Workshop on Information Gathering Techniques for Assessing the Services Environment (November 2018); and 4) Advancing the Services Agenda in APEC: A Focus on Implementing the APEC Index Pilot Program (July 2019).

The second pertains to the technical group establishment and meetings. The role of the technical group includes discussing the approaches of existing indices and reaching consensus on the path that APEC should take regarding the development of a draft APEC index, as well as agreeing on the details of the pilot program. Four economies volunteered to participate in the pilot program, namely: Chile; Peru; Chinese Taipei; and Viet Nam. Each of these economies had proposed sectors that they would like to focus on during the pilot (Table 2.5).

Table 2.5: Volunteer Economies and Sector Coverage for the APEC Index Pilot Program

	Distribution	Computer	Telecommunications	Logistics (storage and warehouse)
Chile	●		●	
Peru	●	●	●	●
Chinese Taipei	●	●	●	●
Viet Nam	●	●		●

Source: APEC-PSU compilations.

To keep the momentum going, a series of webinars entitled "APEC Webinar Series on Advancing the Services Trade Agenda in APEC: Expanding Sectoral Data Collection, Measurement, and Analysis for the APEC Index" has been organized between September and December 2020. Each webinar focuses on different aspects such as translating qualitative services trade barriers into quantitative trade costs, effects of services trade restrictiveness on economic performance, and digital trade.[146]

[146] Group on Services, "Proposals - Advancing the Services Agenda in APEC: Expanding Sectoral Data Collection, Measurement and Analysis for the APEC Index," 2020, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2573.

Separately, GOS has continued to consider including services-related regulations in the APEC Trade Repository (APEC TR), an online resource containing member economies' trade and tariff information.[147] Doing so will facilitate access to relevant regulations within a single website by various stakeholders. With regards to mode 3 trade in services statistics, Indonesia planned to organize a workshop titled "APEC Best Practices on Developing Services Related Statistics in Mode 3".

In line with the objective of this APEC-wide action, the number of economies having certain services data and statistics are monitored. Summarizing the available information showed that most APEC economies have data on cross-border trade in services, services trade in value added, and number of arrivals/departures (Table 2.6). There have also been improvements in data coverage (both in terms of year and economy) for several indicators – for example, with regards to services FDI, while the latest year where data was available used to be 2012 when the PSU Baseline Indicators Report was prepared back in 2017, the latest year where data is available is now 2018/2019. OECD STRI now covers 14 APEC economies as compared to the situation in 2017 when only 11 APEC economies were covered. In fact, if volunteer economies participating in the pilot program of APEC index are included, notwithstanding variation in sector coverage, 16 APEC economies will now be covered by OECD STRI. Despite these improvements, more efforts are needed to improve data availability for intra-APEC trade in services and inward/outward foreign affiliate trade in services (FATS).

Indeed, responding to the survey questionnaire circulated as part of this review, economies and fora noted the importance to continue raising the awareness among policymakers of the value in having up-to-date and comprehensive statistics on services. They also see the need to continue with capacity building activities aimed at developing relevant services-related statistics and indicators including taking forward the work on APEC index (e.g., expanding coverage to include more services sectors and APEC economies).

[147] "APEC Trade Repository."

Table 2.6: Selected measures/indicators for trade in services, latest year available

		AUS	BD	CDA	CHL	PRC	HKC	INA	JPN	ROK	MAS	MEX	NZ	PNG	PE	PHL	RUS	SGP	CT	THA	USA	VN
Cross-border trade in services	IMF	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'18	'19	'19	'19	'19	X	'19	'19	'19
Trade in services by sector	IMF	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'18	'19	'19	'19	'19	X	'19	'19	X
Intra-APEC trade in services	OECD	'19	X	'19	X	X	'17	X	'19	'18	X	X	'19	X	X	X	X	X	X	X	'19	X
Services trade in value added	OECD	'16	'16	'16	'16	'16	'16	'16	'16	'16	'16	'16	'16	X	'16	'16	'16	'16	'16	'16	'16	'16
Share of services in manufacturing sector	OECD	'16	'16	'16	'16	'16	'16	'16	'16	'16	'16	'16	'16	X	'16	'16	'16	'16	'16	'16	'16	'16
Inward/outward foreign affiliate trade in services (FATS)	WTO	'09	X	'17	X	'16	'16	X	'17	'09	X	X	'11	X	X	X	X	'18	X	'17	'17	'11
Foreign direct investment (FDI) in tertiary sector	ITC	'18	'17	'18	'18	'18	'18	'19	'14	'18	'19	'18	X	X	'18	'17	'19	'18	X	'19	X	'19
Investment in services by sector	ITC	'18	'17	'18	'18	'18	'18	'19	'14	'18	'19	'18	X	X	'18	'17	'19	'18	X	'19	X	'19
Number of arrivals/departures	WB/economy sources	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19
Intra-APEC arrivals/departures	UNWTO	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19	'19
OECD STRI	OECD	'20	X	'20	'20*	'20	X	'20	'20	'20	'20	'20	'20	X	'20*	X	'20	X	'19*	'20	'20	'19*
World Bank/WTO STRI	WB/WTO	'16	X	'16	'16	'16	'16	'16	'16	'16	'16	'16	'16	X	'16	'16	'16	'16	'16	'16	'16	'16

Source: Various.
Note: *Volunteer economies for APEC index pilot program.

2.3.14 Action #14: Progressive facilitation of services to improve the regional food system to ensure access to safe, high quality food supplies across the Asia-Pacific (Accountable fora: PPFS)

The food system, defined as all activities involved in the food value chain, plays a critical role in eliminating hunger and improving accessibility to food. Given that the world population is expected to increase to 9.8 billion in 2050, enhancing the food system is key to ensuring food security. In the context of APEC, this noble cause takes on an added significance considering that the region is home to 38 percent of the world's population.

Services are a crucial component of the food system. They support various stages of the food value chain and ensure the smooth functioning of the entire system. Financial services enable different actors in the food value chain such as farmers and food manufacturers to access working capital and therefore invest in talents and technology. Insurance services assist farmers and firms to manage risks and recover following disasters. Transportation and logistics services including cold-chain management facilitate the long-distance trade of food products and minimize food losses/wastage. Business services including R&D, marketing, accounting, and legal services augment the core competitiveness of producers by providing professional advice. Indeed, latest data from OECD TiVA (i.e, year 2016) showed that services collectively contribute between 17.2 and 41.5 percent of the total export value added of APEC economies in the food products industry, and between 8.8 and 35.5 percent in the agriculture, hunting, forestry, and fishing industry.[148]

Recognizing the close linkage between services and the food system, APEC economies have undertaken several projects aimed at facilitating access to critical services by various actors in the food system. New Zealand, through the Policy Partnership on Food Security (PPFS), tasked PSU to prepare a report titled "Insights on the Regulatory Environment within APEC Economies and Its Impact on Trade in Services in Food Value Chains."[149] The study pointed out that improving the regulatory environment requires a "whole-of-government" approach and that there is no "one-size-fits-all" solution both across governments and across sectors. Among the recommendations arising from the report are that economies adopt international standards and best practices in regulatory issues affecting the food industry and services sectors associated to it; upgrade existing or build new infrastructure; and enhance the use of technology and modern ICT services.

Following the report, New Zealand had conducted case studies focusing on horticulture sector in Indonesia and Mexico. The project aims to examine barriers and impediments to services in the sector, and to provide practical insights on how the provision and regulation of such services can be improved.[150] In April 2021, New Zealand organized the Workshop on Services and the Food System, a public-private forum where participants deliberated on various themes,

[148] Organisation for Economic Co-operation and Development, "Trade in Value Added (TiVA): Principal Indicators," December 2018, https://stats.oecd.org/Index.aspx?datasetcode=TIVA_2018_C1.
[149] Crystal Jiquan Liu et al., "Insights on the Regulatory Environment within APEC Economies and Its Impact on Trade in Services in Food Value Chains" (APEC - Policy Support Unit, August 2019), https://www.apec.org/Publications/2019/08/Insights-on-the-Regulatory-Environment-within-APEC-Economies-and-Its-Impact-on-Trade-in-Services.
[150] Policy Partnership on Science, Technology and Innovation, "Proposals - Services and the Food System Project: Business Insights on Improving Services in the Food System Using Illustrative Case Studies from the Horticulture (Fruit and Vegetable) Sector," 2019, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2475.

including regulatory barriers, product integrity and traceability, as well as education and training as a service.[151]

In addition to the above, Korea had organized the APEC Forum on Inclusive Food System and Food Security in the Asia-Pacific Region through Public-Private Partnership in 2016 whose objectives include reviewing and analyzing issues to improve the efficiency and effectiveness of a regionally integrated food system; and improving policy coordination to enable inclusive food system and food security in the region.[152] Between 2017 and 2019, the Smart Agriculture Initiative for Sustainable Growth, a 3-year work program was initiated to share policy experiences and best practices in promoting smart agriculture in the region.[153] More recently, the APEC Webinar on Sharing Best Practices on Food Security Policies in Response to the COVID-19 was organized to share best practices and explore innovative policy measures (e.g., enhancing social protection programs, leveraging technology to improve supply chain resilience) to overcome food security issues brought forth by the pandemic.[154]

The prevalence of food inadequacy was originally identified as an indicator to indirectly monitor economies' success in facilitating services access and provision to improve the regional food system. As this indicator is no longer available in the FAO website, the prevalence of undernourishment is used instead. It expresses the probability that a randomly selected individual from the population consumes an amount of calories that is insufficient to cover her/his energy requirement for an active and healthy life. The FAO had earlier indicated that the prevalence of food inadequacy is conceptually analogous to the prevalence of undernourishment. Comparing the prevalence of undernourishment level for the period of 2014-2016 and 2018-2020 showed mixed performance (Figure 2.25) – while six economies have seen a decrease in prevalence level, four economies have seen an increase in prevalence level, indicating higher probability of finding undernourished individuals.[155]

Figure 2.25: Prevalence of undernourishment in APEC economies (percent)

	2014-2016	2015-2017	2016-2018	2017-2019	2018-2020
Australia	<2.5	<2.5	<2.5	<2.5	<2.5
Brunei Darussalam	<2.5	<2.5	<2.5	<2.5	<2.5
Canada	<2.5	<2.5	<2.5	<2.5	<2.5
Chile	3.0	3.1	3.0	3.0	3.4
China	<2.5	<2.5	<2.5	<2.5	<2.5
Hong Kong, China	<2.5	<2.5	<2.5	<2.5	<2.5
Indonesia	7.0	6.8	6.4	6.4	6.5
Japan	<2.5	<2.5	<2.5	<2.5	<2.5
Korea	<2.5	<2.5	<2.5	<2.5	<2.5
Malaysia	3.8	3.5	3.4	3.2	3.2

[151] Policy Partnership on Food Security, "Proposals - Workshop on Services and the Food System 2021," 2020, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2631.
[152] Policy Partnership on Food Security, "Proposals - APEC Forum on Inclusive Food System and Food Security in the Asia-Pacific Region through Public-Private Partnership," 2016, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=1815.
[153] Policy Partnership on Food Security, "Proposals - Smart Agriculture Initiative for Sustainable Growth," 2017, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=1998.
[154] Policy Partnership on Food Security, "Proposals - APEC Webinar on Sharing Best Practices on Food Security Policies in Response to the COVID-19," 2020, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2659.
[155] The indicator does not provide the exact value if the prevalence of undernourishment is less than 2.5 percent. This is the case for 10 APEC economies.

Mexico	5.0	5.8	6.1	6.2	7.2
New Zealand	<2.5	<2.5	<2.5	<2.5	<2.5
Papua New Guinea	25.0	25.2	25.1	24.9	24.6
Peru	5.9	6.9	7.6	7.9	8.7
The Philippines	13.3	12.1	10.9	9.7	9.4
Russia	<2.5	<2.5	<2.5	<2.5	<2.5
Chinese Taipei	3.9	3.9	3.7	3.6	3.3
Thailand	7.3	7.5	7.7	7.9	8.2
United States	<2.5	<2.5	<2.5	<2.5	<2.5
Viet Nam	8.1	7.8	7.2	6.8	6.7

Source: FAO. Accessed 3 August 2021.
Note: Data are not available for Singapore.

2.3.15 Action #15: Strengthen domestic and regional energy security and lower the carbon intensity of energy supply and use across region (Accountable fora: EWG)

The success of modern economies is contingent on reliable access to energy. Services such as logistics and transportation rely on access to fuel. Manufacturing and most professional services like accountancy, business, law, and ICT need electricity to be able to produce goods and deliver services. Utility services themselves also need reliable access to resources to be able to generate energy used in industrial activities. In the early 20th century, fossil fuels such as coal, crude oil, and natural gas were the main resources used to produce energy and electricity. Increased access to energy allowed economies to rapidly industrialize and uplift the standard of living and prosperity of their people.

However, developments in late 20th century such as the 1970 Oil Crisis highlighted the risks of overreliance on carbon intensive resources like fossil fuels as a source of energy. Energy produced from fossil fuel resources is susceptible to supply chain disruptions and price fluctuations. Fossil fuels are also non-renewable, and will become scarcer as demand for energy grows. In APEC alone, oil demand has grown at more than double the growth of oil production since 1990, making APEC more dependent on oil imports and more vulnerable to external shocks.[156] In addition, fossil fuels contribute greatly to greenhouse gas emissions, which exacerbate ozone depletion, global warming, and climate change.[157]

To reduce their reliance on carbon intensive resources, economies worked on improving the efficiency of fossil fuel use, as well as invested in developing alternative sources of energy. Some measures explored to optimize fossil fuel use and reduce carbon emissions include refurbishing existing plants, deploying new technologies such as carbon capture and storage technologies, decommissioning old plants, substituting coal with natural gas, and increasing the use of biofuels.[158] In parallel, advancements in renewable energy technologies such as solar, wind, and hydroelectric power made it more feasible for economies to increase the uptake of

[156] Energy Working Group, "Asia-Pacific Economic Cooperation - Energy Working Group Strategic Plan for 2019-2023" (57th Energy Working Group Meeting, Manila, Philippines, 2019), http://mddb.apec.org/Documents/2019/EWG/EWG57/19_ewg57_005.pdf.
[157] Irving M. Mintzer, "Energy, Greenhouse Gases, and Climate Change," *Annual Review of Energy* 15, no. 1 (1990): 513–50, https://doi.org/10.1146/annurev.eg.15.110190.002501.
[158] Elisa Lanzi, Elena Verdolini, and Ivan Haščič, "Efficiency-Improving Fossil Fuel Technologies for Electricity Generation: Data Selection and Trends," *Energy Policy* 39, no. 11 (November 2011): 7000–7014, https://doi.org/10.1016/j.enpol.2011.07.052.

renewable energy. While energy from fossil fuels is often produced in centralized power plants and is subject to supply chain disruptions, energy produced from renewable energy can be localized, vastly reducing an economy's susceptibility to widespread power outage.[159] Economies and businesses harnessing energy from renewable sources could thus spread out their risks, enhance their energy security, and increase their resiliency and competitiveness.

Within APEC, the Energy Working Group (EWG) has been working to affirm its mission "to build the capacity of APEC members to strengthen domestic and regional energy security and lower the carbon intensity of energy supply and use across the region, facilitated by information and data exchanges; joint research and development; and open trade and investment."[160] EWG has been organizing several workshops and seminars to inform policymakers of best practices in the energy sector.

Between 2014 and 2018, EWG had a strategic plan focusing on four main objectives: 1) strengthen energy security; 2) promote energy efficiency and sustainable communities; 3) develop cleaner energy sources; and 4) prosperity through trade, investment, and economic growth.[161] During this period, EWG completed several workshops and publications along these areas.

In terms of strengthening energy security, EWG has organized several workshops to ensure the availability of energy for people and service providers during unexpected disruptions such as natural calamities. China organized a series of workshops on the use of solar-powered emergency shelter solutions (SPESS) to provide access to energy and emergency shelter for disaster-affected victims.[162] This workshop is one of several exploring the application of new technologies in restoring access to electricity and energy in times of calamities. In July–August 2018, a capacity building workshop entitled "APEC Workshop on Promoting Resilience in the Energy Sector" was held in Cebu, the Philippines to inform practitioners and policymakers on best practices in climate resilience planning for the energy sector. The workshop discussed the risks of energy disruption due to natural disasters and explored ways for APEC members to make their energy and electricity sources less susceptible to disruption. The workshop also aimed to build an understanding of 1) methodologies for evaluation of climate change risks to power system resources, infrastructure, and demand; 2) integrated resource and resilience planning; and 3) climate risk screening for hydropower resources.

Under promoting energy efficiency and sustainable communities, EWG has published the "Compendium of Energy Efficiency Policies in APEC Economies" in October 2017 to promote information sharing of good practices and scalable solutions across economies.[163] EWG also organized workshops to help economies work towards more sustainable communities. Some

[159] Allyson Umberger, "Distributed Generation: How Localized Energy Production Reduces Vulnerability to Outages and Environmental Damage in the Wake of Climate Change," *Golden Gate University Environmental Law Journal* 6, no. 1 (2012): 33, https://digitalcommons.law.ggu.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1096&context=gguelj.
[160] Energy Working Group, "Asia-Pacific Economic Cooperation - Energy Working Group Strategic Plan for 2019-2023."
[161] Energy Working Group, "Asia-Pacific Economic Cooperation - Energy Working Group Strategic Plan for 2014-2018" (46th Expert Group on Energy Efficiency and Conservation Meeting, Cebu, Philippines, 2015), http://mddb.apec.org/Documents/2019/EWG/EWG57/19_ewg57_005.pdf.
[162] Energy Working Group, "Developing Solar-Powered Emergency Shelter Solutions as an Energy-Resilience Tool for Natural Disaster Relief in APEC Community" (First Energy Resilience Task Force Meeting, Hawaii, United States, 2015), http://mddb.apec.org/Documents/2015/EWG/ERTF/15_ewg50_ertf_003.pdf.
[163] Energy Working Group, "Compendium of Energy Efficiency Policies in APEC Economies," October 2017, https://www.apec.org/Publications/2017/11/Compendium-of-Energy-Efficiency-Policies-in-APEC-Economies.

solutions discussed include incentivizing energy efficiency measures at power plants and the purchase of more energy-efficient vehicles.[164]

Regarding the development of cleaner energy sources, EWG and the Expert Group on New and Renewable Energy Technologies have published a report entitled "Filling the Gap to Double Renewable Energy in the APEC Region," which highlights the challenges faced by APEC economies in adopting renewable energy technologies. The report highlighted that while several APEC economies have policies to encourage renewable energy generation, many economies have yet to develop robust renewable energy storage and transmission systems. Chinese Taipei had organized a workshop on the long-term reliability of photovoltaic systems in isolated regions like islands. Besides providing information on technical innovations in photovoltaic systems, the workshop also touched on how the uptake of these solar-powered energy systems can be increased, such as by liberalizing access to financing for such projects, as well as reducing tariffs for photovoltaic equipment.[165] These studies help make renewable energy become a more feasible source of reliable energy for consumers and service providers.

The last area of work in EWG's strategic plan for 2014 to 2018 is prosperity through trade, investment, and economic growth. In October 2016, EWG published a report entitled "Energy and Economic Competitiveness," showing how fluctuations of energy prices would affect trade and services competitiveness of APEC economies, especially in energy-intensive industries like manufacturing and logistics.[166] Although prices of fossil fuel resources are highly volatile, APEC economies still rely on conventional energy resources since renewable energy generation is still more expensive in comparison. To make renewable energy a more practical and competitive source of energy, APEC economies need to support mechanisms that facilitate investments in sustainable energy infrastructure and technology. In 2018, China culminated a series of workshops and seminars on green financing models, and published the report "Promoting Innovative Green Financing Mechanisms for Sustainable and Quality Infrastructure Development in the APEC Region." The report highlighted how policymakers can support mechanisms to finance initiatives on green technologies like clean energy.

EWG has launched a new strategic plan for 2019 – 2023. The new plan has five main objectives: 1) strengthen energy security; 2) advance clean energy; 3) promote energy efficiency and low-carbon communities; 4) enhance energy resilience and energy access; and 5) facilitate energy trade and investment.[167]

While most projects are still ongoing, EWG has already completed a number of projects and workshops that could potentially increase the competitiveness of services in the APEC region. In September 2019, the APEC Energy Resilience Task Force co-chaired by the United States and the Philippines supported a "Workshop on Improving Electric Grid Resilience to Natural Disasters." One idea raised in the workshop is the establishment of microgrids, which refer to localized and decentralized energy networks fueled by renewables and other conventional

[164] Energy Working Group, "Supporting the Development and Implementation of Low Emission Development Strategies in the Transport Sector," July 2018, https://www.apec.org/Publications/2018/10/Supporting-the-Development-and-Implementation-of-Low-Emission-Development-Strategies.
[165] Energy Working Group, "Workshop Report: Long-Term Reliability Study of Photovoltaic PV System Installation on Islands," July 2017, https://www.apec.org/Publications/2017/07/Workshop-Report-LongTerm-Reliability-Study-of-Photovoltaic-PV-System-Installation-on-Islands.
[166] Energy Working Group, "Energy and Economic Competitiveness," October 2016, https://www.apec.org/Publications/2017/01/Energy-and-Economic-Competitiveness.
[167] Energy Working Group, "Asia-Pacific Economic Cooperation - Energy Working Group Strategic Plan for 2019-2023."

energy sources. They could restrict system breakdown to a certain locale, thereby mitigating the risk of energy disruption and improving the resilience and competitiveness of energy providers as well as services relying on reliable access to energy. In November 2020, EWG published a report entitled "Roadmap for the Integration of Sustainable Energy and Transport in Small Islands," which explores how renewable energy could modernize transport connections in isolated communities. This in turn would improve connectivity to underserved areas, allowing the development of more service activities like tourism. [168]

Two indicators are used to monitor the implementation progress of this APEC-wide action, namely: 1) share of renewable energy; and 2) energy intensity ratio.[169] Specifically on APEC share of renewable energy, data provided by Asia Pacific Energy Research Centre (APERC) showed that the share of renewable energy in total primary energy supply (TPES) has increased from 6.4 percent in 2016 to 6.9 percent in 2018, while the share of renewable energy in total final energy consumption (TFEC) has increased from 8.0 to 8.6 percent over the same period (Figure 2.26). Between 2016 and 2018, APEC energy intensity ratio decreased by a further 2.4 percent.

Figure 2.26: APEC share of renewable energy and energy intensity ratio, 2016-2021

	2016	2017	2018	2019	2020	2021
APEC share of renewable energy (%)						
Total primary energy supply (TPES)	6.4%	6.7%	6.9%	7.2%	7.4%	7.7%
Total final energy consumption	8.0%	8.4%	8.6%	9.0%	9.3%	9.6%
APEC energy intensity ratio (%, relative to 2005 level)	-19.4%	-21.5%	-21.8%	-23.5%	-25.2%	-26.8%

Source: Asia Pacific Energy Research Centre.
Note: 2016-2018 values are based on actual data, while 2019-2021 values are based on extrapolations.

2.3.16 Action #16: Examination of the impact of the Next Generation Trade and Investment Issues on Mode 3 Trade in Services (Accountable fora: IEG)

Since APEC's inception, its members have collaborated intensively to facilitate trade and investment flows, signing several FTAs and bilateral investment treaties. These liberalized trade and investment regimes greatly improved the region's business environment. At the same time, this conducive environment for collaboration, coupled with the development of new technologies, contributed to a rapid transformation in both the regional and global economy. Global supply and production chains have become more interdependent and complex, posing challenges to regional integration. Within trade in services, new trends like digitalization led to the rise of several new business models such as cloud computing and online streaming services.[170] As a result, investors might have novel business models that may not be supported by existing trade and investment regulations. To maintain a conducive environment for businesses to remain competitive, APEC economies must ensure that trade and investment

[168] Energy Working Group, "Roadmap for the Integration of Sustainable Energy and Transport in Small Islands," November 2020, https://www.apec.org/Publications/2020/11/Roadmap-for-the-Integration-of-Sustainable-Energy-and-Transport-in-Small-Islands.
[169] Energy intensity refers to energy use relative to gross domestic product (GDP).
[170] See "APEC Economic Policy Report 2019: Structural Reform and the Digital Economy" (APEC - Policy Support Unit, December 2019), https://www.apec.org/Publications/2019/11/2019-APEC-Economic-Policy-Report.

regimes are aligned with current business opportunities. Regulations and processes should also be clear and predictable to encourage investments.

In the 2010 APEC Leaders' Meeting in Yokohama, Japan, APEC Leaders recognized the importance of addressing non-conventional trade and investment issues and their impact on current trade and investment regulations. They put forward the need to identify and address "next generation trade and investment issues (NGeTI)," described as:

- Issues that have been considered to be traditional trade issues, but need to be addressed in new ways given changes to the global trading environment; and
- Issues that either did not exist or were not considered trade issues 15 years ago, but now have a real impact on companies' ability to do business in the region.[171]

Mode 3 trade in services (commercial presence), that is, "service provided within an economy by a locally-established affiliate, subsidiary, or representative office of a foreign-owned and -controlled company,"[172] is the most important avenue of delivering services to a foreign market. In most economies, commercial presence is the dominant mode for trading services globally, and services delivered by mode 3 are greater than the value of total cross-border trade in services (mode 1).[173] A study on 29 emerging market economies in Africa, Asia, Latin America, and emerging Europe from 2003 and 2007 showed that excessive business entry regulations can be a significant barrier to investment in an economy.[174]APEC economies are thus looking at NGeTIs to mitigate barriers to mode 3 trade in services. Exploring the impact of NGeTIs could help policymakers implement more targeted policies to encourage the growth of services delivered through commercial presence in another economy.

APEC economies have enumerated various NGeTIs for consideration. For instance, relating to work on sustainable investment, Papua New Guinea had led the "Workshop on Sustainable and Inclusive Investment Policies within the APEC Region" on August 2018.[175] This workshop discussed the importance of FDI in sustainable and inclusive growth, noting that the benefits of investments (e.g. poverty reduction, MSME development, women's empowerment) would be magnified through strategic investments policies. This study was followed-up on November 2020 by Malaysia, which spearheaded the "Public-Private Dialogue on Inclusive and Responsible Business and Investment (IRBI)" at the sideline of APEC's Second Investment Experts' Group Meeting. One of the points raised in the dialogue was how investors and businesses can adopt the United Nations' 17 Sustainable Development Goals as a signpost to ensure that their business investments are aligned towards sustainable development. This shows that APEC economies and investors are increasingly becoming more conscientious towards investments, and are willing to explore mechanisms to ensure that their investments are responsible and contribute to sustainable economic growth.

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[171] APEC, "CTI Report to Ministers - Appendix 6: Collective Strategic Study on Issues Related to the Realization of the FTAAP," November 2016, https://www.apec.org/Groups/Other-Groups/-/media/APEC/Publications/2016/11/2016-CTI-Report-to-Ministers/TOC/Appendix-6-Collective-Strategic-Study-on-Issues-Related-to-the-Realization-of-the-FTAAP.pdf.
[172] World Trade Organization, "GATS Training Module Chapter 1: Basic Purpose and Concepts," 2020, https://www.wto.org/english/tratop_e/serv_e/cbt_course_e/c1s3p1_e.htm.
[173] World Trade Organization, *World Trade Report 2019: The Future of Services Trade*, 2019, 7, 24, https://www.wto.org/english/res_e/booksp_e/00_wtr19_e.pdf.
[174] Birungi Korutaro and Nicholas Biekpe, "Effect of Business Regulation on Investment in Emerging Market Economies," *Review of Development Finance* 3, no. 1 (January 1, 2013): 41–50, https://doi.org/10.1016/j.rdf.2013.01.001.
[175] Investment Experts Group, "Workshop on Sustainable and Inclusive Investment Policies within the APEC Region," 2018, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2240.

Five APEC-wide NGeTIs have been endorsed to date: facilitating global supply chains (2011); enhancing small and medium-sized enterprise (SME) participation in global production chains (2011); promoting effective, non-discriminatory, and market-driven innovation policy (2011); transparency in RTAs/FTAs (2012); and manufacturing-related services in supply chains/value chains (2014). All of them would have implications in the services sector.

Actions along these five APEC-wide NGeTIs are often interrelated. A study commissioned by the Australian Department of Foreign Affairs and Trade illustrated that two of the endorsed NGeTIs – facilitating global supply chains, and manufacturing services related to supply chains and value chains – are dependent on various services like distribution centers, freight retailing, computer services, movement of manufacturers across borders, marketing, among others – most of which require commercial presence in an economy.[176] As such, economies working on these areas would benefit from liberalizing investment and market entry rules for service providers as they could increase the competitiveness and offerings of the sector.

However, current RTAs and FTAs in APEC vary on how they treat commercial presence, emphasizing the importance of transparency with RTAs/FTAs.[177] Some RTAs/FTAs consider investment in services under a dedicated investment chapter, while others subsume it within a specific services chapter. These differences could lead to divergent investments and market entry procedures, making it onerous for mode 3 services providers to adhere to: service providers operating in various markets might face increased compliance costs to meet various trade and investment regimes. To improve transparency of investment rules, Peru organized the "Capacity Building Workshop on Investor-State Dispute Settlement (ISDS) Prevention and Management," which aimed to give more information on ISDS mechanisms as well as to improve clarity in treaty drafting.

Australia's aforementioned study looks at how trade agreements like the CPTPP, the EU-Canada Comprehensive Economic and Trade Agreement (CETA), and the Pacific Alliance could serve as guideposts towards the harmonization of treatment of mode 3 services. [178] In addition, Australia with the IEG worked on the APEC Investment Commitment Handbook. Published in September 2020, the handbook increases transparency on bilateral agreements by reviewing obligations contained in international investment treaties with the aim of minimizing violations.[179]

One indicator used to monitor progress implementation of this APEC-wide action is World Bank's Ease of Doing Business (EoDB) indicators, which evaluate various business regulations that affect the establishment and operation of businesses. Analysis of APEC's average scores between 2016 and 2019 showed that the region continues to improve in terms of facilitating business conduct. Its overall score increased from 74.2 in 2016 to 76.7 in 2019, registering an improvement of 2.5 (Figure 2.27). Under individual categories (e.g., starting a business, getting credit, enforcing contracts), APEC on average registered improvements ranging between 1.1 and 4.5.

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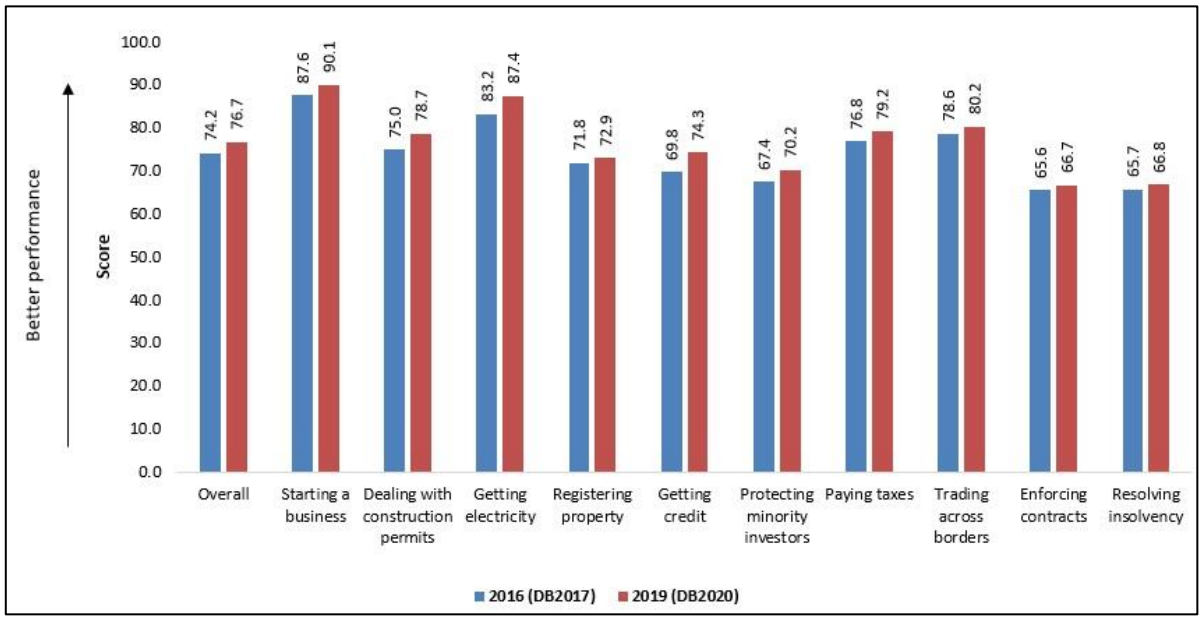
[176] Trading Nation Consulting, "Prominent 'Next Generation' Trade and Investment Issues: A Stocktake of Trade Policy Responses in the APEC Region, Other Regions, and the WTO" (First Committee on Trade and Investment Meeting, Santiago, Chile, 2019).
[177] APEC, "CTI Report to Ministers - Appendix 6: Collective Strategic Study on Issues Related to the Realization of the FTAAP."
[178] Trading Nation Consulting, "Prominent 'Next Generation' Trade and Investment Issues: A Stocktake of Trade Policy Responses in the APEC Region, Other Regions, and the WTO."
[179] Committee on Trade and Investment, "Handbook on Obligations in International Investment Treaties," September 2020, https://www.apec.org/Publications/2020/09/Handbook-on-Obligations-in-International-Investment-Treaties.

Figure 2.27: World Bank Ease of Doing Business average scores for APEC



Source: APEC-PSU calculations based on data from the World Bank. Accessed 26 October 2020.
Note: An economy's score is reflected on a scale from 0 to 100, where 0 represents the lowest performance and 100 represents the best performance. A higher score indicates better performance. For economies with multi-city data, data from the city with the largest population is used. APEC score is the average of all 21 economies.

Another monitored indicator is the OECD STRI, which identifies the regulatory policies that affect trade in services, including mode 3. As seen in Figure 2.1, comparing the STRI scores for year 2016 and 2020 showed mixed progress. For sub-sectors registering improvements, they varied between 0.2 percent (commercial banking and courier) to 2.7 percent (logistics cargo-handling). Breaking down 2020 data indicated that main restrictions affecting services trade differ between sub-sectors. For example, the main restrictions for some sectors (e.g., accounting, broadcasting and air transport) were foreign equity while for others (e.g., architecture and engineering), they were regulations affecting the movement of people (Figure 2.2).

The number of intra-APEC partners with which member economies have trade agreements incorporating investment chapters is another indicator used to determine progress in advancing this APEC-wide action. Singapore has the highest number of partners within APEC with which they have trade agreements with investment chapters. Singapore is followed by Australia; New Zealand; Brunei Darussalam; and Malaysia (Table 2.7). For economies whose number of partners have increased compared to the situation back in 2016, the increase in the number of partners ranged between 1 and 10. These agreements can be either regional (i.e., signed between the economy and a group of partners) or bilateral (i.e., signed between two economies). Recent notable agreements include the CPTPP and the ASEAN-Hong Kong, China Free Trade Agreement (AHKFTA). Besides having trade agreements with investment chapters incorporated, APEC economies also have bilateral investment treaties with one another. Latest analysis showed that China has the highest number of partners with which they have signed such treaties and/or have them in force (14). This is followed by Korea (11); Russia (10); Thailand (10); and Viet Nam (10). Compared to the situation in 2016, this is relatively unchanged as only one new bilateral investment treaty (i.e., the Chile–Hong Kong, China Investment Agreement) has come into force since then.

Table 2.7: Number of Intra-APEC Partners with which Economies Have Trade Agreements with Investment Chapters

Economy	No. of intra-APEC partners
Australia	17
Brunei Darussalam	16
Canada	11
Chile	12
China	13
Hong Kong, China	10
Indonesia	12
Japan	14
Korea	14
Malaysia	16
Mexico	10
New Zealand	16
Papua New Guinea	0
Peru	12
The Philippines	12
Russia	1
Singapore	18
Chinese Taipei	3
Thailand	12
United States	4
Viet Nam	17

Source: APEC-PSU compilations from UNESCAP. Accessed 5 April 2021.
Note: The count has included relevant agreements which economies have signed but have yet to be ratified due to ongoing domestic processes.

APEC economies have generally entered into various types of double tax agreements (DTAs) with respect to taxes on income and/or other taxes for the purpose of eliminating double taxation between them. Based on the latest compilation, Canada; Japan; and Korea has the highest number of partners with which they have signed DTAs and/or related arrangements between private sectors (19), followed by New Zealand (18). Australia and Malaysia have DTAs with 17 other members each. Compared to the situation in 2016, 9 economies have increased the number of partners with which they have such agreements by between 1 to 2 economies. This indicates that economies continue to explore opportunities to sign DTAs with one another.

Having an English language website from which investment related laws/regulations can be accessed would be beneficial for potential investors, in particular from the perspective of transparency. Five economies indicated in their survey responses that they have such sites.[180] The sixth economy shared that while it does not have such a site, it is possible to download an investor's guide in English.[181]

[180] Hong Kong, China, "InvestHK," accessed June 1, 2021, https://www.investhk.gov.hk/en/home; Japan, "Investing in Japan," accessed June 1, 2021, https://www.jetro.go.jp/en/invest/setting_up/; Malaysia, "InvestMalaysia," accessed June 1, 2021, https://investmalaysia.mida.gov.my/EIP/InvestMalaysia.aspx; Perú, "ProInversión," accessed June 1, 2021, https://www.proinversion.gob.pe/modulos/LAN/landing.aspx?are=1&pfl=1&lan=9&tit=institucional; United States, "SelectUSA," accessed June 1, 2021, https://www.selectusa.gov/welcome.
[181] Chile, "InvestChile Investor's Guide - Full Version," accessed June 1, 2021, https://tools.investchile.gob.cl/investors-guide.

2.3.17 Action #17: Supporting the development of innovative MSMEs and their participations in the Digital Economy under the SMEWG Strategic Action Plan (Accountable fora: SMEWG)

MSMEs are considered as the engines of growth and innovation in APEC. Though definitions of MSMEs vary across economies, it is estimated that there are almost 150 million MSMEs in APEC, representing approximately 99.8 percent of all enterprises in the region. They contribute over 60 percent of total employment and typically account for around half of GDP or value added in most APEC economies.[182] While the majority of start-ups and other small firms are likely to close or stagnate within their early years, innovative MSMEs are poised to grow rapidly. An estimate in the US notes that while small start-ups account for only about 10 percent of firms, they can contribute up to more than 20 percent of firm-level gross job creation in a given standard year.[183]

Facilitating participation in the digital economy is one way to propel MSMEs to greater opportunities. Research has found that in developing economies, manufacturing MSMEs with a website are more integrated with GVCs. These MSMEs tend to import a higher share of their inputs for production and export a higher share of their outputs compared to MSMEs without a website.[184] The effect of digital connectivity on integration with GVCs is stronger for MSMEs than for large firms, showing that MSMEs have more to gain with digitalization. Moreover, several studies have suggested that smaller firms engaging in international trade typically engage in cross-border trade instead of establishing a commercial presence overseas. Service-oriented MSMEs can take advantage of this, being able to directly sell and/or deliver their services via the internet.[185] After all, many MSMEs in APEC are mostly engaged in services activities such as wholesale and retail trade, business services, maintenance, logistics, construction, and ICT-related activities.[186]

Recognizing the importance of the digital economy in unleashing the potential of MSMEs, APEC's Small and Medium Enterprises Working Group (SMEWG) has launched a series of strategic plans to steer work in the forum. A strategic action plan was laid out for the years 2017–2020, with one priority area dedicated to entrepreneurship, innovation, and the internet and digital economy. Under this pillar, the SMEWG sought out four objectives: 1) promote an entrepreneurial culture amongst the youth, women, and other individuals; 2) foster innovation in SMEs to strengthen business competitiveness; 3) help SMEs to build capabilities to take advantage of and compete effectively in the internet and digital economy; and 4) support SMEs development in specific industries based on the economic development needs of individual member economies.[187] Working towards these four objectives, SMEWG and APEC economies

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[182] Hredzak, "Overview of the SME Sector in the APEC Region."
[183] John C. Haltiwanger et al., "High-Growth Young Firms: Contribution to Job, Output, and Productivity Growth," in *Measuring Entrepreneurial Businesses: Current Knowledge and Challenges*, ed. John C. Haltiwanger et al., Studies in Income and Wealth, volume 75 (Chicago, IL: The University of Chicago Press, 2017), https://doi.org/10.7208/9780226454108-004.
[184] Rainer Lanz et al., "E-Commerce and Developing Country-SME Participation in Global Value Chains," WTO Working Papers, vol. 2018/13, WTO Working Papers, November 13, 2018, https://doi.org/10.30875/ec5f0f21-en.
[185] Hildegunn Kyvik Nordås, "Services SMEs in International Trade: Opportunities and Constraints" (The E15 Initiative, May 2015), http://e15initiative.org/publications/services-smes-in-international-trade-opportunities-and-constraints/.
[186] Hoekman, Schuman, and Pasadilla, "2016 APEC Economic Policy Report."
[187] APEC, "SMEWG Strategic Plan 2017 - 2020" (45th Small and Medium Enterprises Working Group Meeting, Ho Chi Minh City, Viet Nam, 2017).

have organized a series of workshops and dialogues to aid other economies and related stakeholders.

Under promoting an entrepreneurial culture amongst the youth, women, and other individuals, APEC economies have organized various workshops targeting specific groups of people. For example, in February 2020, Malaysia hosted the "APEC Young Entrepreneurs' Kick-Off" in Kuala Lumpur. The workshop featured panel discussions and presentations for young entrepreneurs to hear about opportunities and trends in the digital economy. Participants also had the opportunity to network with and deliver pitches to potential investors.[188] Additionally, APEC has launched several initiatives geared to help women partake in the digital economy. On October 2019, Viet Nam hosted in Hanoi a "Program of Supporting Women in Starting Online Businesses."[189] This program consisted of a series of panels and roundtable talks, discussing the current ecosystem of women-led MSMEs, as well as women's barriers to participation. The panels highlighted the potential of digitally-enabled businesses to cater to women with specific needs: women taking care of children and women with disabilities can leverage on digital tools to make entrepreneurship work for their respective situations and constraints. However, to empower women-led MSMEs, APEC economies would need to raise awareness on the benefits of digitalization, and build the capacity of women on the area. Working on the need for capacity building, Indonesia held "Strengthening Women Empowerment in Industry 4.0 through Digital Entrepreneurship Training" on November 2020. The training covered several issues such as capacity building programs to develop women's digital literacy and entrepreneurship skills.

APEC has also taken steps to ensure inclusion by working to make these digital opportunities more accessible to all their people, regardless of their locations. The Philippines; Russia; Chinese Taipei; and Thailand spearheaded APEC's Local Innovation Ecosystem Initiative, hosting a series of four workshops in 2019. This set of workshops gathered together a panel of experts and policymakers, discussing various ways of cultivating the local innovation and MSME ecosystem. The various strategies and tools that were introduced in these workshops as a means to promote local MSME and innovation ecosystems include: 1) leveraging on public-private partnerships such as through infrastructure projects; 2) revitalizing and gentrifying local communities; 3) building collaboration and networking across local MSMEs; and 4) establishing regional inclusive innovation centers.[190]

To foster innovation among SMEs and strengthen their business competitiveness, workshops have been organized to explore how economies can support greater uptake of digitalization in APEC, such as by fostering digital literacy in APEC and by improving the quality of internet connectivity.[191,192] In 2015, SMEWG hosted workshops on the growth opportunities in new

[188] Small and Medium Enterprises Working Group, "APEC Young Entrepreneurs Kick-Off," September 2020, https://www.apec.org/Publications/2020/09/APEC-Young-Entrepreneurs-Kick-off.
[189] Small and Medium Enterprises Working Group, "Proposals - Program of Supporting Women in Starting Online Businesses," 2018, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2338.
[190] Small and Medium Enterprises Working Group, "APEC Local Innovation Ecosystem Initiative: Revitalization for Inclusive Growth and Sustainable Future," 2018, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2344.
[191] Small and Medium Enterprises Working Group, "Agenda - Digital Transformation Workshop" (Sydney, Australia, 2017), http://mddb.apec.org/Documents/2017/SMEWG/WKSP1/17_smewg44_wksp_001.pdf.
[192] Small and Medium Enterprises Working Group, "Agenda - APEC Workshop on Enabling MSME Access to the Digital Economy" (Ho Chi Minh City, Viet Nam, 2017), http://mddb.apec.org/Documents/2017/SMEWG/WKSP2/17_smewg45_wksp_001.pdf.

Online-to-Offline (O2O) business models, bringing together ICT industry experts to help participants recognize the benefits and risks of O2O business models. APEC has pushed through with work on digitalizing MSMEs through the APEC Online-to-Offline (O2O) Initiative. Started in 2016, the SMEWG-sponsored initiative sought to 1) establish a dedicated APEC SME O2O Expert Group; 2) publish the "APEC Digital Competitiveness and Resilience Guidebook;" and 3) host capacity building summits and fora on O2O innovation areas such as e-commerce, sharing economy, and the collaborative industry.[193] Since its establishment, the initiative has hosted several workshops and published two guidebooks on various aspects of MSME digitalization: the first explores how MSMEs can build up their resilience against digital threats,[194] while the second looks at how MSMEs can embrace digital transformation.[195]

SMEWG has also organized sector-specific workshops to provide targeted discussions in industries of interest. For example, the "APEC Business Ethics for SMEs Forum: Vision for Sustainable, Dynamic, and Innovative Health Enterprise" hosted in Santiago, Chile in September 2019, focused on preparing developing member economies to accommodate digital health innovations from medical technology associations and other MSMEs.[196]

In September 2020, SME Ministers launched a new strategic plan for 2021 – 2024, focusing on five priority areas: 1) entrepreneurship, innovation, and start-ups; 2) SME access to international markets and GVCs; 3) inclusive capability development towards digitalization; 4) access to finance and alternative financial solutions; and 5) government to business interaction. Further projects are expected in the next few years. For example, later in 2021, Australia will be hosting the "Growing Indigenous Businesses in APEC through Trade" workshop, which is expected to produce a brief report on the impediments and opportunities (e.g., e-commerce) faced by indigenous-owned businesses.[197] Viet Nam is also working on the "Multi-Stakeholder Dialogue on Addressing Impediments for MSMEs' Integration into Global Value Chain in Agriculture and Food Sector," scheduled later in 2021.

One indicator used to indirectly monitor MSMEs' familiarity with the digital economy, and hence their readiness to participate in it, is the share of small and medium firms having their own website, which is collected as part of the World Bank Enterprise Survey. As indicated earlier, data for the year 2010 or later is available for 11 APEC economies. Since the last update reflected in the 2017 PSU Baseline Indicators Report, two economies have had data updates, namely Peru (2017) and Russia (2019). On small firms having their own website, Peru's share increased from 43.7 percent in 2010 to 53.9 percent in 2017, while Russia's share decreased slightly from 55.2 percent in 2012 to 53.8 percent in 2019 (Figure 2.28). With regards to medium firms, Russia's share decreased from 68.6 percent in 2012 to 67.6 percent in 2019, while Peru's share increased from 54.8 percent in 2010 to 79.9 percent in 2017.

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[193] Small and Medium Enterprises Working Group, "APEC Online-to-Offline (O2O) Initiative - Enhancing SME Digital Competitiveness and Resilience towards Quality Growth," 2016, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=1847.

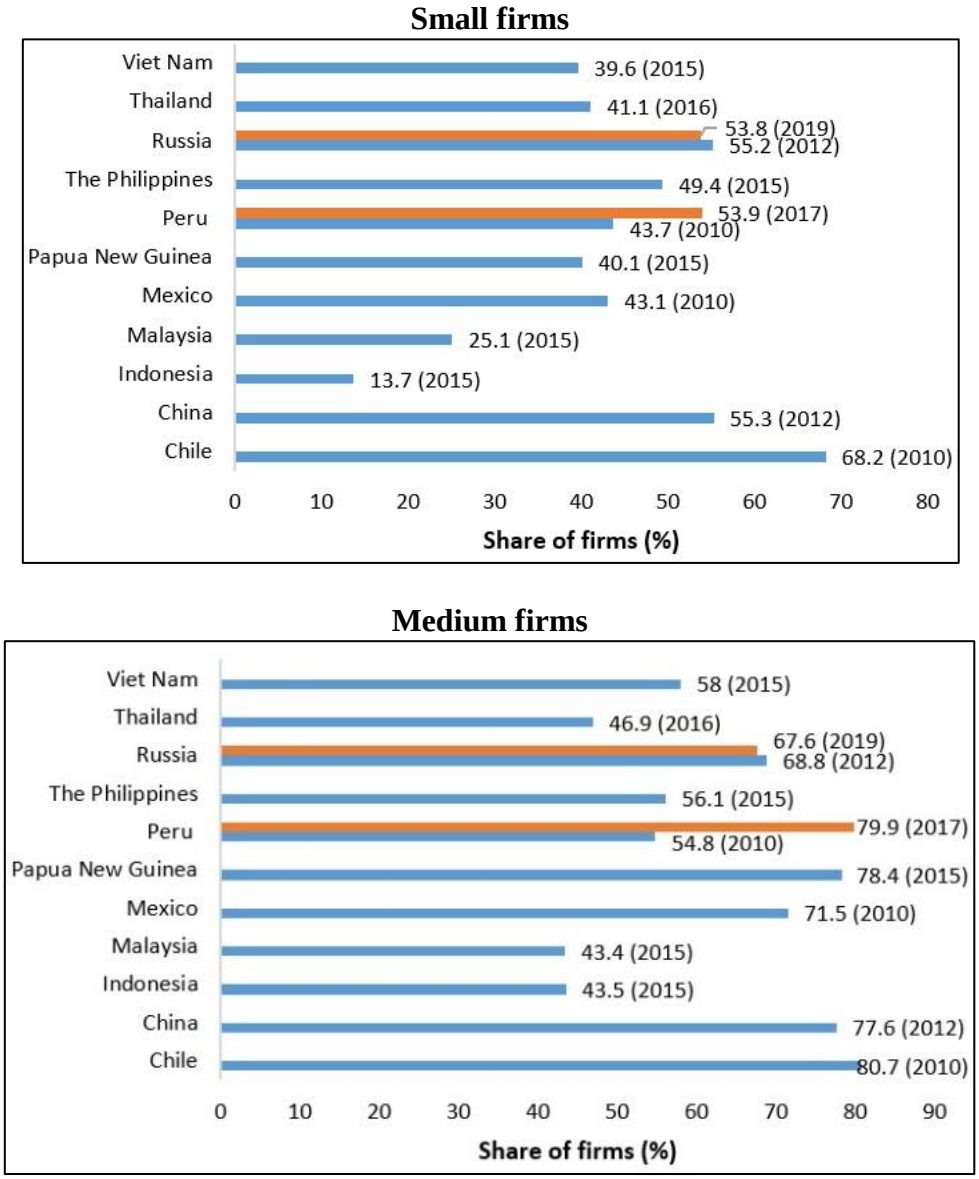
[194] Small and Medium Enterprises Working Group, "APEC Guidebook on SME Digital Resilience," APEC, July 2017, https://www.apec.org/Publications/2017/11/APEC-Guidebook-on-SME-Digital-Resilience.

[195] Small and Medium Enterprises Working Group, "Guidebook on SME Embracing Digital Transformation," APEC, March 2020, https://www.apec.org/Publications/2020/03/Guidebook-on-SME-Embracing-Digital-Transformation.

[196] Small and Medium Enterprises Working Group, "2019 APEC Business Ethics for SMEs Forum: Vision for Sustainable, Dynamic, and Innovative Health Enterprise," 2018, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2250.

[197] Small and Medium Enterprises Working Group, "Proposals - Growing Indigenous Businesses in APEC through Trade," 2021, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2722.

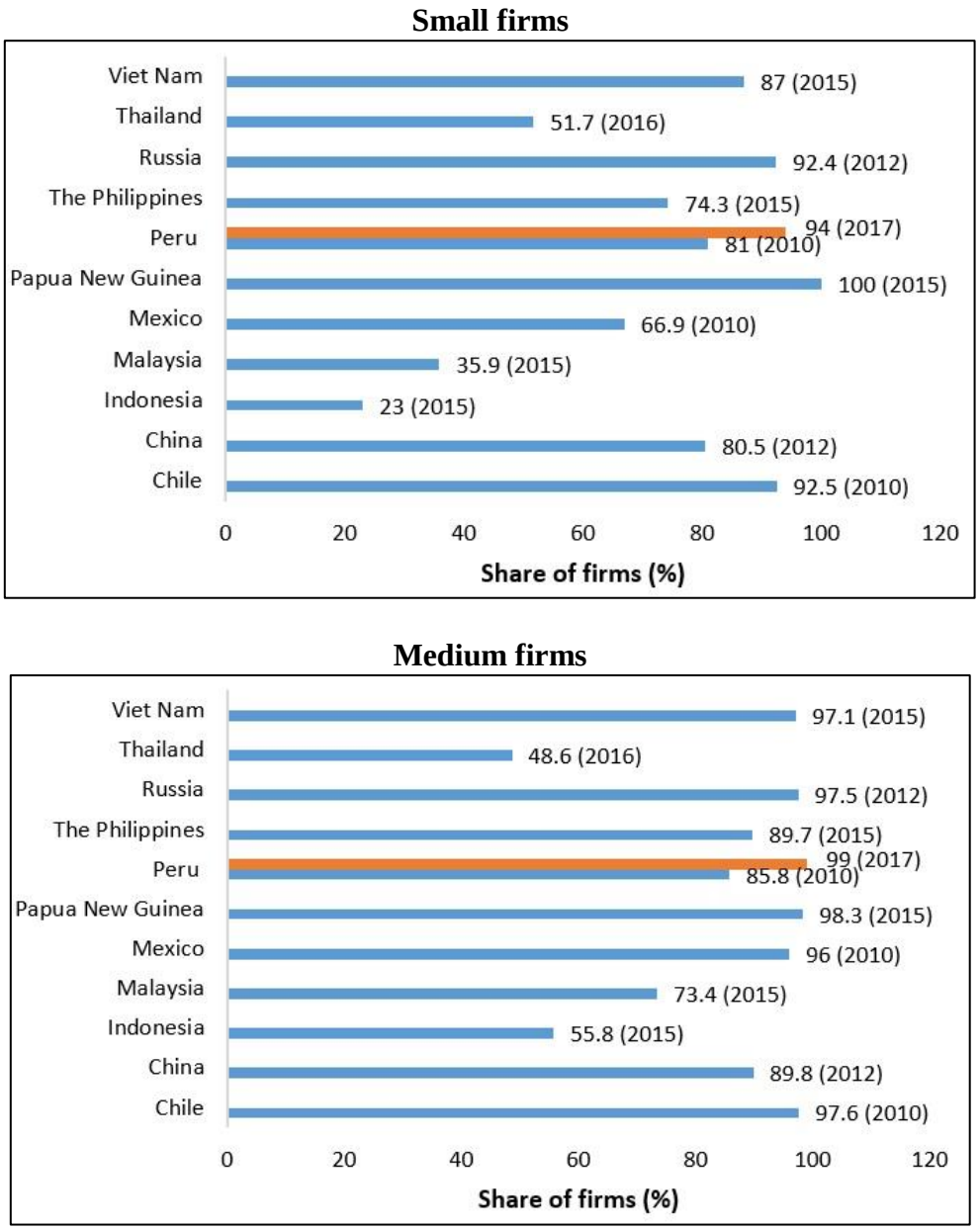
Figure 2.28: Share of small and medium firms having their own website



Source: APEC-PSU calculations using data from World Bank. Accessed 26 January 2021.

The same survey has information on the share of small and medium firms using e-mail to interact with clients/suppliers as well, although this information is not collected for Russia in 2019. On small firms using e-mail, Peru's share increased from 81 percent in 2010 to 94 percent in 2017, while that for medium firms increased from 85.8 percent in 2010 to 99 percent in 2017 (Figure 2.29).

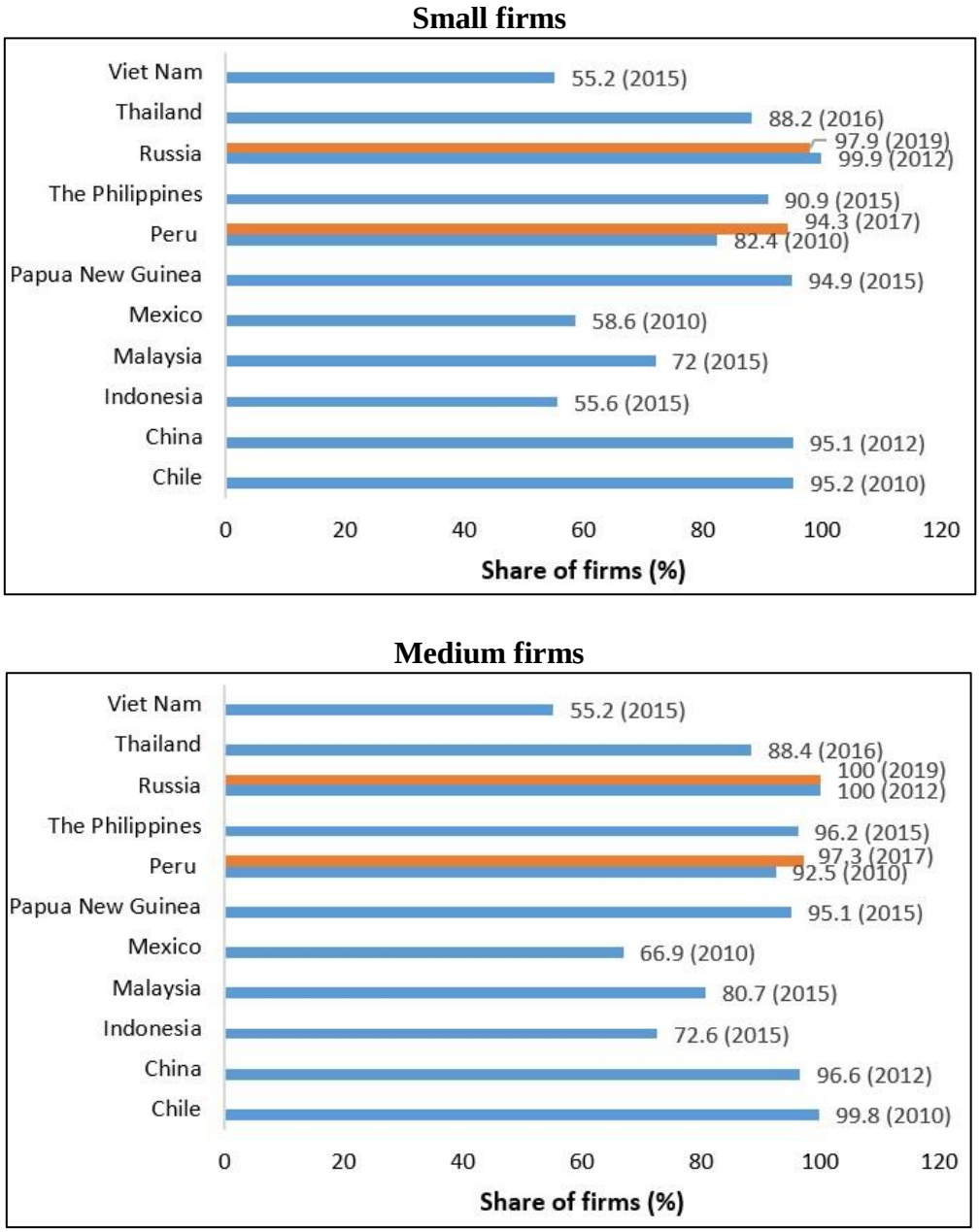
Figure 2.29: Share of small and medium firms using e-mail to interact with clients/suppliers



Source: APEC-PSU calculations using data from World Bank. Accessed 26 January 2021.

Another indicator monitored is the share of small and medium firms with a checking or savings account because this is arguably one of the pre-requisites to make or receive online payments. On small firms with a checking or savings account, Peru's share increased from 82.4 percent in 2010 to 94.3 percent in 2017. Russia's share decreased slightly from 99.9 percent in 2012 to 97.9 percent in 2019, although Russia's share is still close to 100 percent (Figure 2.30). With regards to medium firms, virtually all of Russia's medium firms have a checking or savings account in both 2012 and 2019. On the other hand, Peru's share increased from 92.5 percent in 2010 to 97.3 percent in 2017.

Figure 2.30: Share of small and medium firms with a checking or savings account



Source: APEC-PSU calculations using data from World Bank. Accessed 26 January 2021.

2.3.18 Action #18: Enhancing ICT infrastructure and services to support economic growth (Accountable fora: TELWG)

ICT infrastructure and services have transformed the global economy, serving as a catalyst for economic growth. According to the OECD, the overall impact of ICT on business performance and economic growth can be felt in three main ways. Firstly, investment in ICT contributes to capital deepening, which could raise overall labor productivity. Secondly, ICT facilitates rapid technological progress, which could generate greater multifactor productivity growth. Finally, ICT helps firms and individuals increase their overall efficiency, and consequently, their

productivity.[198] Firms could use ICTs to acquire real-time information, allowing them to make better business decisions and organize cross-border value chains and networks.[199] Likewise, individuals could leverage ICT resources to upskill and improve their potential economic contribution. As such, reliable access to quality ICT infrastructure and services are crucial for economies to remain competitive.

The COVID-19 pandemic has emphatically reiterated ICT's importance in the global economy. Forced into the "new normal" of social distancing and home quarantines; individuals, firms, government, and non-profit organizations now rely on ICTs to work, study, socialize, and access basic resources and services. ICTs support economic activities like e-commerce, remote working, and information sharing, allowing societies to continue functioning amidst the new normal.

Despite the importance of ICTs, the International Telecommunication Union estimated that in 2020, almost 3.6 billion people around the world remained offline, without reliable access to online education, employment, or critical information such as health advisories.[200] Furthermore, research on 62 different economies has shown that the impact of ICT on economic growth is uneven: ICT plays a major role in the growth of high and upper-middle income economies, while ICT contributes little to the growth of lower-middle income economies. In lower middle income economies, factors like inadequate stock of human capital and lack of robust telecommunication infrastructure could reduce the benefits derived from ICT.[201] As most economic activity is currently facilitated by ICT networks, communities without access to reliable ICT networks will be further left out, exacerbating the existing digital divide.[202] As such, it is even more important for APEC economies to ensure that their ICT networks are robust, competitive, and widely available.

APEC's Telecommunications and Information Working Group (TELWG) focuses on ICT-related matters, and "aims to advance the development of information and communication technology (ICT) infrastructure and services as well as to promote cooperation, information sharing, and the development of effective ICT policies and regulations in the Asia-Pacific region."[203] Working towards enhancing the competitiveness of APEC's ICT infrastructure and services, TELWG has formulated strategic action plans for 2016 – 2020 and for 2021 – 2025.

The TELWG strategic action plan for 2016 – 2020 has five priority areas: 1) develop and support ICT innovation; 2) promote a secure, resilient, and trusted ICT environment; 3) promote regional economic integration; 4) enhance the digital economy and the internet economy; and 5) strengthen cooperation.

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[198] Organisation for Economic Co-operation and Development, *ICT and Economic Growth: Evidence from OECD Countries, Industries and Firms* (Paris, France: OECD, 2003), https://doi.org/10.1787/9789264101296-en.
[199] Ýsmail Seki, "The Importance of ICT for the Knowledge Economy: A Total Factor Productivity Analysis for Selected OECD Countries," in *Papers of the Annual IUE-SUNY Cortland Conference in Economics* (Izmir University of Economics, 2008), 72–90, https://ideas.repec.org/h/izm/prcdng/200804.html.
[200] ITU, "WTISD 2020: Working towards 'Connect 2030' in the Time of COVID-19," ITU News, May 17, 2020, https://news.itu.int/wtisd-2020-working-towards-connect-2030-in-the-time-of-covid-19/.
[201] Ayoub Yousefi, "The Impact of Information and Communication Technology on Economic Growth: Evidence from Developed and Developing Countries," *Economics of Innovation and New Technology* 20, no. 6 (September 1, 2011): 581–96, https://doi.org/10.1080/10438599.2010.544470.
[202] Patrick Njoroge and Ceyla Pazarbasioglu, "Bridging the Digital Divide to Scale Up the COVID-19 Recovery," *IMF Blog* (blog), November 5, 2020, https://blogs.imf.org/2020/11/05/bridging-the-digital-divide-to-scale-up-the-covid-19-recovery/.
[203] APEC, "Telecommunications and Information Working Group," APEC, March 16, 2021, https://www.apec.org/Groups/SOM-Steering-Committee-on-Economic-and-Technical-Cooperation/Working-Groups/Telecommunications-and-Information.

Under the priority of developing and supporting ICT innovation, TELWG held dialogues and events in areas like emerging technologies like blockchain and ICT infrastructure for "Smart Sustainable City," and new novel practices like network virtualization and the Internet of Things (IoT). TELWG hosted the Innovative Economic Development of 'Internet + Service' Industry" in June 2016, enabling APEC economies to discuss issues pertaining to services in the internet economy and ICT usage among traditional service sectors.[204] The workshop aimed to help APEC economies improve the productivity in the services sector by fostering greater adoption and use of new ICTs. TELWG conducted a study on the deployment of Internet Protocol version 6 (IPv6), an upgrade of the communications protocol that identifies devices and routes traffic across the internet. An information paper entitled "IPv6 Deployment Strategies in APEC Economies" was later released in 2017, sharing trends in IPv6 deployment across APEC economies to serve as learning points among members.[205] In October 2019, Korea hosted an industry roundtable on "Facilitating Innovation and Diversity of 5G Networks Ecosystems in the APEC region" to promote the next generation 5G mobile network, the most recent technology standard for broadband cellular networks.[206] Also in October 2019, Korea hosted a workshop spearheaded by Viet Nam entitled "Recommendations for Implementation of Smart Sustainable City (SSC) ICT Infrastructures in the APEC Region," which explored policy frameworks, technical solutions, and best practices to resolve challenges in deploying ICT infrastructure for the development of SSCs in APEC.[207] Increased adoption of these new ICT can enhance connectivity and improve the overall competitiveness of both ICT service providers and users within an economy. These workshops aimed to build the capacity of APEC members in understanding the opportunities, challenges, and risks involved in developing and deploying these new technologies. Furthermore, these workshops emphasized the importance of cultivating a supportive environment for the private sector to enable them to pilot new technologies and hire skilled personnel to deploy these technologies.

Working towards a more secure, resilient, and trusted ICT environment, TELWG and APEC economies have conducted various dialogues and studies to increase the security of ICT networks. Malaysia conducted an experiment on the security of access to wi-fi networks, and hosted a series of workshops in 2015 and 2016 entitled "Promoting Secured Public Wi-Fi Usage Based on Malaysia's Experiment." The workshops discussed risks of public wi-fi networks such as vulnerabilities to hacking, and recommended measures to increase the security of public wi-fi networks.[208] In these workshops, APEC economies also shared their various strategies in exploring and mitigating emerging cybercrime and threats. On December 2017, Malaysia followed-up on this theme of mitigating emerging cyberthreats by co-hosting the "Workshop on Cybersecurity Incident Management Awareness." The workshop informed

[204] Telecommunications and Information Working Group, "Facilitating Innovative Economic Development of Internet Service Industry in APEC Region," May 2017, https://www.apec.org/Publications/2017/05/Facilitating-Innovative-Economic-Development-of-Internet--Service-Industry-in-APEC-Region.
[205] Telecommunications and Information Working Group, "IPv6 Deployment Strategies in APEC Economies," August 2017, https://www.apec.org/Publications/2017/08/IPv6-Deployment-Strategies-in-APEC-Economies.
[206] Telecommunications and Information Working Group, "Agenda - Industry Roundtable on Facilitating Innovation and Diversity of 5G Network Ecosystems in the APEC Region" (Seoul, Korea, 2019), http://mddb.apec.org/Documents/2019/TEL/TEL60-LSG-IR/19_tel60_lsg_ir_001.pdf.
[207] Nhat Le Tran, "Recommendations for Implementation of Smart Sustainable City Information and Communication Technology Infrastructures in the APEC Region" (APEC Telecommunications and Information Working Group, April 2020), https://www.apec.org/Publications/2020/04/Recommendations-for-Implementation-of-Smart-Sustainable-City.
[208] Telecommunications and Information Working Group, "Agenda - Workshop on Promoting Secured Public Wi-Fi Usage Based on Malaysia's Experiment: Phase 2" (Kyoto, Japan, 2016), http://mddb.apec.org/Documents/2016/TEL/TEL54-SPSG-WKSP1/16_tel54_spsg_wksp1_001.pdf.

APEC economies on best practices on incident management and intelligence information gathering to better respond to cyberthreats.[209] Papua New Guinea organized several "Innovation Roundtable on Universal Broadband Access" wherein various economies and ICT practitioners discussed challenges and methods used in delivering universal broadband access and improving connectivity among the population.[210] Among the recommendations discussed in the workshops are liberalizing investments in infrastructure and improving licensing approaches for ICT service providers. These actions would enable service providers to invest and deliver their services to more isolated areas. Furthermore, to improve public trust and reception towards ICT, APEC also explored ways to better guarantee the rights of ICT users. In April 2017, APEC hosted a workshop on "Protecting the Rights of Telecommunications Users." A summary document on the workshop was later published, highlighting recommendations to enhance regulation and explore ICT solutions to better protect the rights of telecommunications service users.[211]

Regional economic integration is also prioritized by TELWG, as evidenced by completed and ongoing projects to expedite MRAs and conformity assessment work across economies. TELWG has a dedicated task force on conformity assessment and mutual recognition, which regularly meets to facilitate regional integration. Economies also routinely use these meetings to provide an update of their ongoing work in MRAs. Moreover, APEC economies are working on mutual recognition of skills of ICT workers to enhance the competitiveness of the ICT sector. In October 2019, Papua New Guinea led a workshop in Seoul, Korea entitled "Supporting Digital Transformation through a Common ICT Skills Recognition Framework."[212] The workshop encouraged APEC economies to develop a common ICT framework in order to better match the needs of both skilled ICT workers and ICT employers. Increasing the labor market efficiency of the sector would contribute to a more productive and competitive ICT sector.

The internet and digital economy are powered by ICT services and infrastructure. In March 2019, TELWG organized several public-private dialogue with SMEs, non-government organizations, academics, and technical communities involved with the region's digital economy. These workshops are aimed to generate conversation among policymakers and industry practitioners on current regulatory challenges in the digital economy, and discussed what needs to be done to balance cyber-safety and regulatory concerns with creating a conducive space for the deployment of new ICT services and infrastructure. Among some of the initiatives showcased by participants were building regulatory sandboxes and revising competition policy to encourage more investments in ICT. Moreover, APEC also worked on improving the capability of economies to measure the digital economy. Mexico hosted the "Workshop on Best Practices, Collection, and Publication of ICT's Statistical Information" in

[209] Telecommunications and Information Working Group, "Proposals - APEC Workshop on Cybersecurity Incident Management Awareness," 2017, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2100.
[210] Telecommunications and Information Working Group, "Agenda - Innovation Roundtable on Universal Broadband Access" (Port Moresby, Papua New Guinea, 2018), http://mddb.apec.org/Documents/2018/TEL/TEL57-DSG-IR/18_tel57_dsg_ir_001.
pdf.
[211] APEC Telecommunications and Information Working Group, "Regulatory Provisions and Technological Applications to Protect the Rights of Telecommunication Service Users - Workshop Report," July 2017, https://www.apec.org/Publications/2017/07/Regulatory-Provisions-and-Technological-Applications-to-Protect-the-Rights-of-Telecommunication-Serv.
[212] Papua New Guinea, "Agenda - Workshop on Supporting Digital Transformation Through a Common ICT Skills Recognition Framework" (Seoul, Korea, 2019), http://mddb.apec.org/Documents/2019/TEL/TEL60-DSG-WKSP/19_tel60_dsg_wksp_001.
pdf.

Bangkok, Thailand on 13 December 2017.[213] The workshop aimed to equip policymakers and public authorities with information on how to establish a suitable barometer for the health and size of the digital economy.

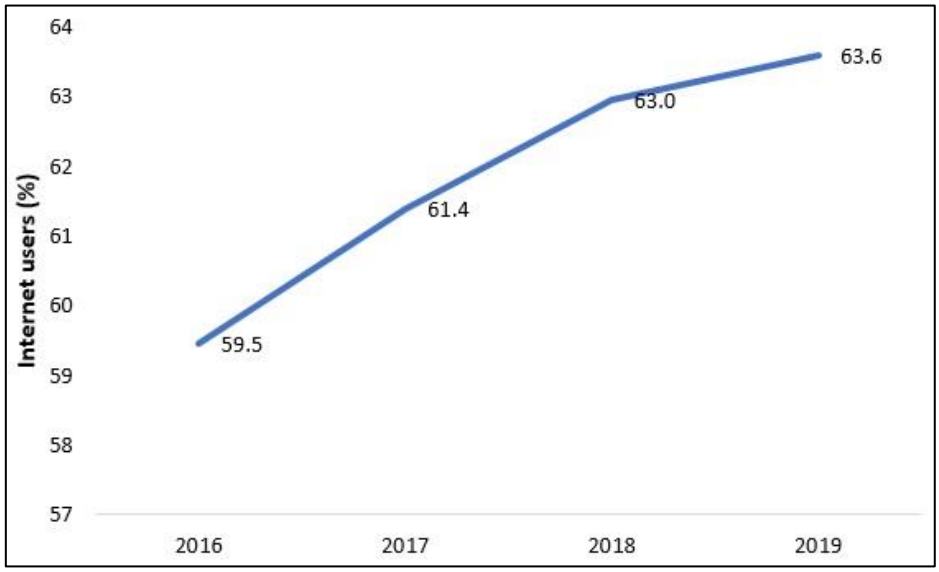
TELWG has also steered collaboration across APEC economies beyond traditional ICT matters. For example, Russia spearheaded work on the application of ICT like IoT in disaster monitoring and mitigation. It produced a report in February 2019 entitled "Application of Internet of Things in Earthquakes and Waterfloods Monitoring System."[214] The report shows how IoT can be used to help reduce material and human losses in case of natural disaster, which could help economies mitigate risks and shocks on economic growth.

In 2020, TELWG endorsed a new strategic action plan for 2021–2025. The new action plan has four priority areas: 1) Telecommunication/ICT Infrastructure and Connectivity; 2) Trusted, Secure, and Resilient ICT; 3) ICT Policies and Regulations to Enable Innovation, Economic Integration, and Inclusiveness; and 4) Collaboration in Telecommunications in ICTs and Applications.[215] Specifically on ICT infrastructure and services, noting their positive spillover effects on other sectors, APEC economies opined that capacity building and information sharing on ICT infrastructure development could go a long way in helping economies to increase their investment on this front.

One indicator used to indirectly monitor economies' success in enhancing ICT infrastructure and services as indicated in this APEC-wide action is the percentage of individuals using the internet. Analysis of data from the International Telecommunication Union (ITU) showed that the share of internet users in the APEC region has been on upward trend, increasing from 59.5 percent in 2016 to 63.6 percent in 2019 (Figure 2.31). At the same time, the share among individual economies ranged between 11.2 and 96.2 percent in 2019, pointing to a substantial digital divide across economies.

[213] Telecommunications and Information Working Group, "Agenda - Workshop on Best Practices on Collection, Validation and Publication of ICT's Statistical Information" (Bangkok, Thailand, 2017), http://mddb.apec.org/Documents/2017/TEL/TEL56-DSG-WKSP/17_tel56_dsg_wksp_001.pdf.
[214] Telecommunications and Information Working Group, "Application of Internet of Things in Earthquakes and Waterfloods Monitoring System," February 2019, https://www.apec.org/Publications/2019/06/Application-of-Internet-of-Things-in-Earthquakes-and-Waterfloods-Monitoring-System.
[215] Telecommunications and Information Working Group, "APEC Telecommunications and Information Working Group Strategic Action Plan (2021 - 2025)," October 14, 2020, https://www.apec.org/-/media/Files/Groups/TEL/TEL-SAP-2021-2025.docx.

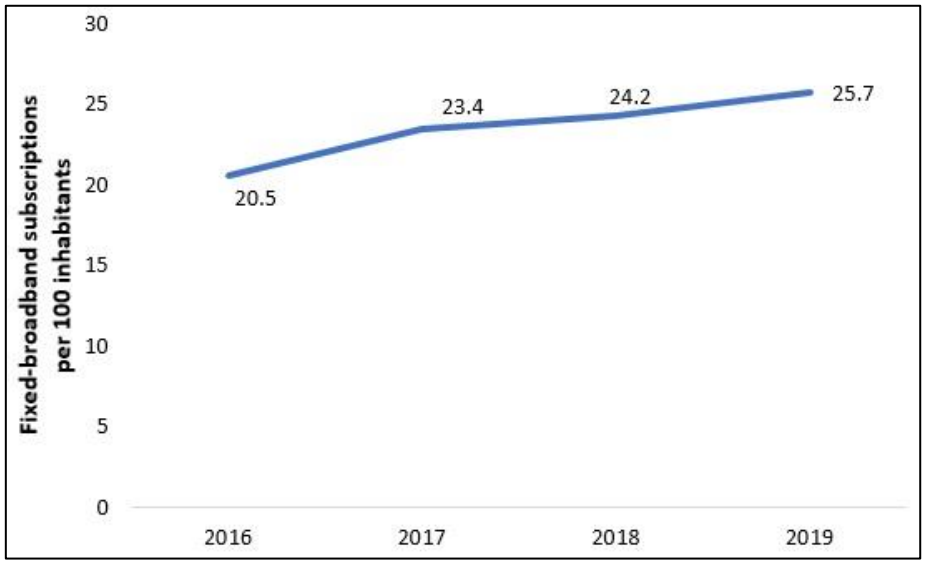
Figure 2.31: Percentage of individuals using the internet in APEC



Source: APEC-PSU calculations using data from ITU. Accessed 27 January 2021.

Another monitored indicator is the fixed broadband subscriptions per 100 inhabitants. Analysis showed that likewise, the value has been increasing over time, from 20.5 per 100 inhabitants in 2016 to 25.7 per 100 inhabitants in 2019 (Figure 2.32). Among individual economies, the value ranged significantly from 0.2 and 42.8 per 100 inhabitants in 2019.

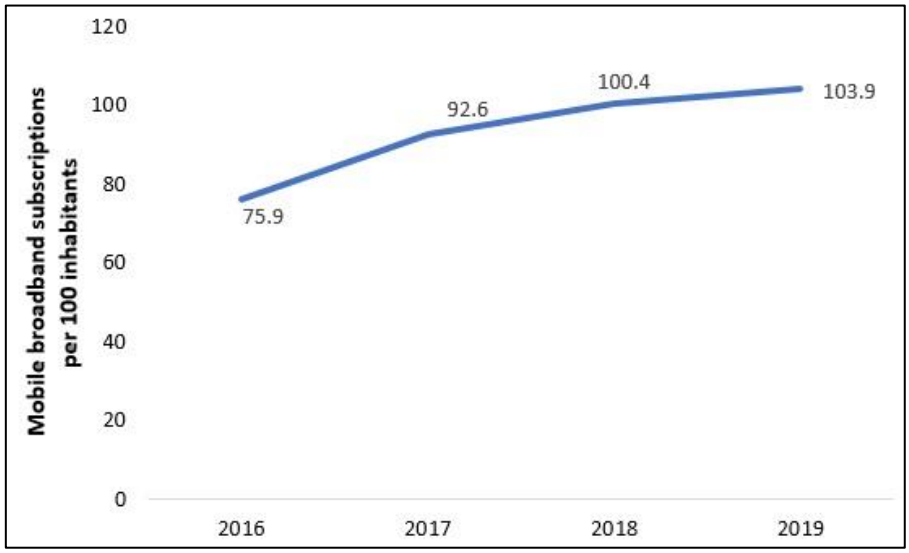
Figure 2.32: Fixed broadband subscriptions per 100 inhabitants in APEC



Source: APEC-PSU calculations using data from ITU. Accessed 27 January 2021.

The active mobile-broadband subscriptions per 100 inhabitants is also monitored for the purpose of this APEC-wide action. The same message can be derived – while analysis showed that the value has increased over time, from 75.9 per 100 inhabitants in 2016 to 103.9 per 100 inhabitants in 2019 (Figure 2.33), the value for individual economies ranges significantly. In 2019, they ranged between 10.9 and 193.3 per 100 inhabitants. The existing digital divide is clearly illustrated here: while populations in some economies do not have mobile broadband access, many people in other economies have more than one subscription.

Figure 2.33: Active mobile-broadband subscriptions per 100 inhabitants in APEC



Source: APEC-PSU calculations using data from ITU. Accessed 27 January 2021.
Note: 2017 data from Papua New Guinea; Peru; and the Philippines refer are used to calculate 2018 APEC value.

2.3.19 Action #19: Development of an enabling environment for innovation activities including that of services to enhance their contribution to economic growth (Accountable fora: PPSTI)

Innovation drives economic growth and creates new opportunities: technological advancement made possible the four industrial revolutions that propelled the world to rapid economic growth. The first industrial revolution used water and steam power to facilitate the mechanization of production. The second leveraged electricity to introduce mass production. The third used electronics and information technology to automate production. Finally, the ongoing fourth industrial revolution, characterized by the fusion of technologies that combines the physical, digital, and biological spheres, is paving the way for accelerated technological innovation.[216] New technologies from the fourth industrial revolution are radically transforming production processes and business models. For example, IoT, where billions of physical devices, sensors, and computers are connected to the internet, allow firms to redefine their business models from merely selling a product to providing a managed service. These innovations make firms and businesses more competitive and agile in a rapidly changing world.[217]

Within services, innovation is widely seen as a catalyst to create sustained competitive advantage.[218] Though the impact of innovation varies across sectors, multiple studies have shown that innovation generally increases firm performance, productivity, and competitiveness. A survey in Norway found that the financial performance of manufacturing firms with service innovation is higher than firms without service innovation. Moreover,

[216] Klaus Schwab, "The Fourth Industrial Revolution: What It Means and How to Respond," January 14, 2016, https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/.
[217] Jean-Marc Frangos, "The Internet of Things Will Power the Fourth Industrial Revolution. Here's How," June 24, 2017, https://www.weforum.org/agenda/2017/06/internet-of-things-will-power-the-fourth-industrial-revolution/.
[218] Susanne Durst, Anne-Laure Mention, and Petro Poutanen, "Service Innovation and Its Impact: What Do We Know About?," *Investigaciones Europeas de Dirección y Economía de La Empresa* 21, no. 2 (May 1, 2015): 65–72, https://doi.org/10.1016/j.iedee.2014.07.003.

innovative firms in both manufacturing and service industries saw significantly higher productivity growth than firms without service innovation activities.[219] A study in Chinese Taipei likewise found that within the financial services industry, firms offering innovative services like data analytics and management advisory services financially outperform those only providing traditional services.[220]

APEC has long recognized the importance of innovation in economic growth. The Policy Partnership on Science, Technology and Innovation (PPSTI) is the forum within APEC which focuses on "the development of science and technology cooperation as well as effective science, technology, and innovation (STI) policy recommendations in APEC."[221] PPSTI collaborates extensively with various government bodies, the private sector, academia, and other APEC sub-fora. In 2015, PPSTI approved a strategic plan for the period 2016 – 2025, with a dedicated sub-group on "Promoting Enabling Environment for Innovation." This sub-group has three priority areas: 1) promote science and technological entrepreneurship; 2) accelerate commercialization of science and technology; and 3) promote public-private partnerships for science and technology innovation.[222]

Under promoting science and technological entrepreneurship, PPSTI has coordinated several workshops and discussions. For example, China organized the "APEC Workshop on Cross Border Mobility of Entrepreneurial Mentors to Promote Capacity Building of STI MSMEs" in Xi'an in January 2018. The workshop facilitated discussions on the mobility of entrepreneurial mentors for STI start-ups, given their importance in capacity building for STI MSMEs.[223] In October 2018, Australia, through the US Department of State's Global Innovation through Science and Technology (GIST) initiative, hosted the GIST APEC Startup Training. The workshop provided a space for STI entrepreneurs across APEC region to showcase their innovations to policymakers and potential investors. The workshop also had a dedicated session for women STI entrepreneurs.[224] PPSTI's initiatives to stimulate STI entrepreneurship highlighted the importance of outreach and network-building among innovators and budding entrepreneurs.

Although many new technologies and innovations have vast applications in APEC, they may not be readily deployed due to lack of fiscal support, regulatory barriers, and lack of skilled workers in these areas. To accelerate commercialization of science and technology, various economies have organized thematic symposiums and dialogues focusing on specific innovations. In 2016, China organized a symposium on the "internet of vehicles," focusing on

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[219] Tor Helge Aas and Per Egil Pedersen, "The Impact of Service Innovation on Firm-Level Financial Performance," *The Service Industries Journal* 31, no. 13 (October 1, 2011): 2071–90, https://doi.org/10.1080/02642069.2010.503883.
[220] Yi-Fang Yang, Lee Wen Yang, and Yahn-Shir Chen, "Effects of Service Innovation on Financial Performance of Small Audit Firms in Taiwan," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, 2014), https://papers.ssrn.com/abstract=2322964.
[221] APEC, "Policy Partnership on Science, Technology and Innovation," APEC, accessed March 16, 2021, https://www.apec.org/Groups/SOM-Steering-Committee-on-Economic-and-Technical-Cooperation/Working-Groups/Policy-Partnership-on-Science-Technology-and-Innovation.
[222] Policy Partnership on Science, Technology and Innovation, "Policy Partnership on Science, Technology and Innovation Strategic Plan (2016-2025) (Endorsed)" (6th Policy Partnership on Science, Technology and Innovation Meeting, Manila, Philippines, 2015), http://mddb.apec.org/Documents/2015/PPSTI/PPSTI2/15_ppsti2_004.pdf.
[223] Policy Partnership on Science, Technology and Innovation, "APEC Workshop on Cross Border Mobility of Entrepreneurial Mentors to Promote Capacity Building of STI MSMEs," 2017, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2080.
[224] Policy Partnership on Science, Technology and Innovation, "APEC Women in STEM Initiative: Workshop, GIST Boot Camp, and Roundtable," 2018, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2236.

innovative vehicles with IoT features. The symposium had panel discussions with industry representatives and policymakers, discussing ways to commercialize and increase the uptake of high-tech vehicles. Other topics discussed include intellectual property protection, road safety, and capacity-building opportunities for developing economies. The discussions also touched on the potential use of these vehicles for improved public transportation in the future. Meanwhile, the APEC Climate Center hosted the APEC Climate Symposium in August 2017 in Can Tho, Viet Nam, using the theme "Building Resilient Agro-Food Systems from Production to Consumption: Interdisciplinary Approaches for Sustainable Food Security Using Climate Information." The symposium brought together agro-business experts, scientists, and policymakers to discuss how new technologies in climate and weather monitoring systems can improve practices in food production, storage, and distribution.[225] These thematic symposiums and dialogues aimed to help policymakers and the public understand the potential of new technologies with the hope of alleviating regulatory burdens and increasing their uptake.

As shown in the previous examples, PPSTI collaborates extensively with the private sector to bolster partnerships for science and technology innovation. PPSTI held two seminars on the sharing economy and digital technology connectivity in Chile and Malaysia in 2019 and 2020, respectively. The first seminar, "APEC Public Private Dialogue on Science Technology and Innovation," discussed how emerging APEC economies can leverage public–private partnerships (PPPs) in science and technology innovation. It also touched on the importance of digital skills in the sharing economy. The second seminar, "APEC Public Private Dialogue on Science Technology and Innovation: Capitalize on Research and Development," expounded on how PPPs can support collaboration and enterprise in future technologies both in developing and industrialized economies. In June 2020, PPSTI published a summary report of these two seminars entitled "APEC Public-Private Dialogue on Sharing Economy and Digital Technology and Connectivity for Inclusive Development", highlighting ways that economies can collaborate with the private sector to create a supportive environment for innovative activities.[226]

In response to the pandemic, PPSTI hosted a virtual COVID-19 Policy Dialogue in August 2020, providing a platform for experts to assess and identify science, technology, and innovation (STI) opportunities, best practices, and tools to support economic recovery. As a result of this dialogue, PPSTI endorsed the PPSTI Statement on COVID-19, which recognizes the importance of STI in APEC's post-COVID recovery, and affirms commitments to the APEC Women in STEM Principles and Actions. In 2021, PPSTI conducted an internal comprehensive evaluation of the PPSTI Strategic Plan (2016–2025), initially scheduled for 2020 but postponed because of the pandemic. Through this initiative, PPSTI reviewed its activities, evaluated progress on Key Performance Indicators and identified new and emerging opportunities to support the APEC region and its Leaders. In 2022, PPSTI expects to revise its Strategic Plan, based on the findings from this evaluation.[227]

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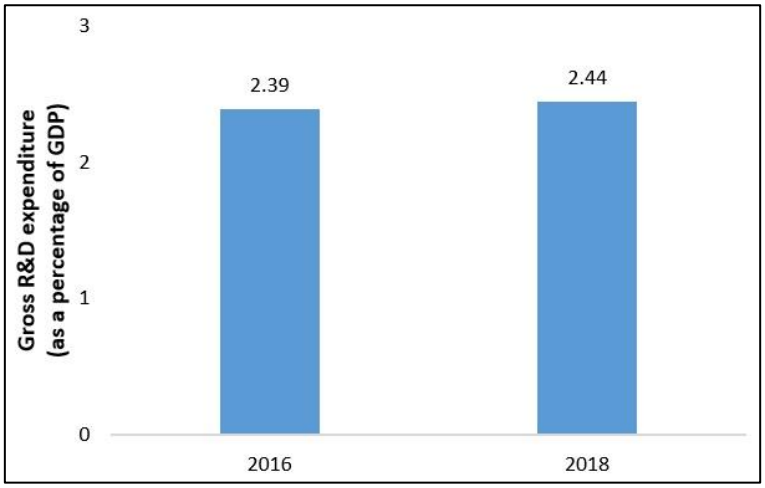
[225] APEC Climate Center and Korea, "Building Resilient Agro-Food Systems from Production to Consumption: Interdisciplinary Approaches for Sustainable Food Security Using Climate Information," 2017, https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx?ID=2001.

[226] Policy Partnership on Science, Technology and Innovation, "APEC Public-Private Dialogue on Sharing Economy and Digital Technology Connectivity for Inclusive Development," June 2020, https://www.apec.org/Publications/2020/06/APEC-Public-Private-Dialogue-on-Sharing-Economy-and-Digital-Technology-Connectivity.

[227] Policy Partnership on Science, Technology and Innovation, "Approach to Comprehensive Evaluation of the Policy Partnership on Science, Technology and Innovation Strategic Plan," 2021, http://mddb.apec.org/Documents/2021/PPSTI/PPSTI1/21_ppsti1_010.pdf.

One indicator used to indirectly monitor economies' efforts in developing an enabling environment which is supportive of innovation is R&D expenditure as a percentage of GDP. Analysis of UNESCO data showed that the share has increased slightly from 2.39 percent in 2016 to 2.44 percent in 2018 (Figure 2.34). It is also worthwhile to indicate that the share varies between individual economies. In 2018, the spread ranged from 0.13 to 4.81 percent.

Figure 2.34: R&D expenditure as a percentage of GDP in APEC



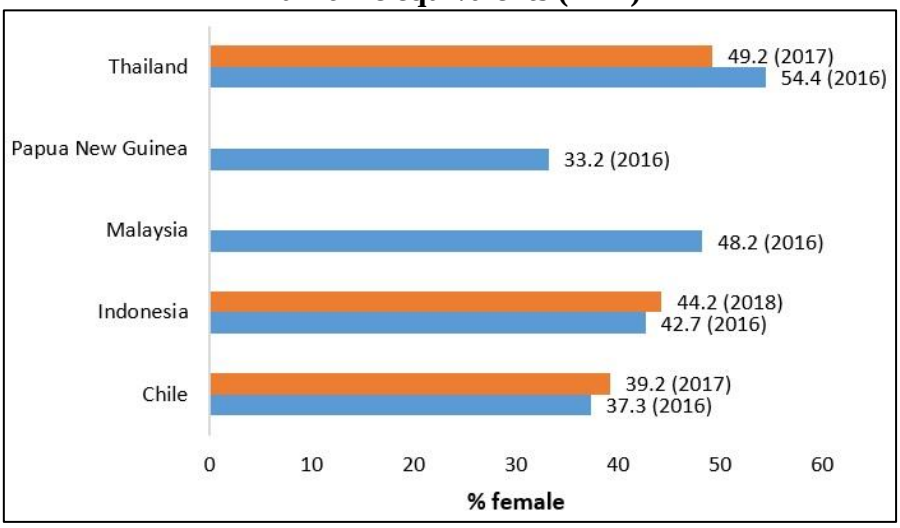
Source: APEC-PSU calculations using data from UNESCO. Accessed 27 January 2021.
Note: For APEC values in 2016, data for 2015 are used for AUS; NZ; and VN. For APEC values in 2018, data for 2017 are used for AUS; CHL; NZ; SGP; THA; and VN. APEC average excludes BD; MAS; PNG; PHL; and CT.

Another method of looking at economies' efforts in creating an enabling environment for innovative activities, especially from the angle of inclusion, is to monitor the percentage of women's participation in R&D activities in STI fields. However, data availability is patchy. With regards to full-time equivalents (FTE) data,[228] only five economies have data for 2016 (Figure 2.35). Of these, three economies have later data for comparison to be made. For Chile, the percentage of females as FTEs in R&D has increased from 37.3 percent in 2016 to 39.2 percent in 2017; while for Indonesia, the percentage has increased from 42.7 percent in 2016 to 44.2 percent in 2018. In the case of Thailand, the percentage has decreased from 54.4 percent in 2016 to 49.2 percent in 2017. With regards to headcounts (HC) data,[229] eight economies have data for 2016, which range between 21.2 and 53.4 percent. Of these, six economies have later data, allowing for comparison to be made. Five out of six economies have registered increased share of female among R&D personnel.

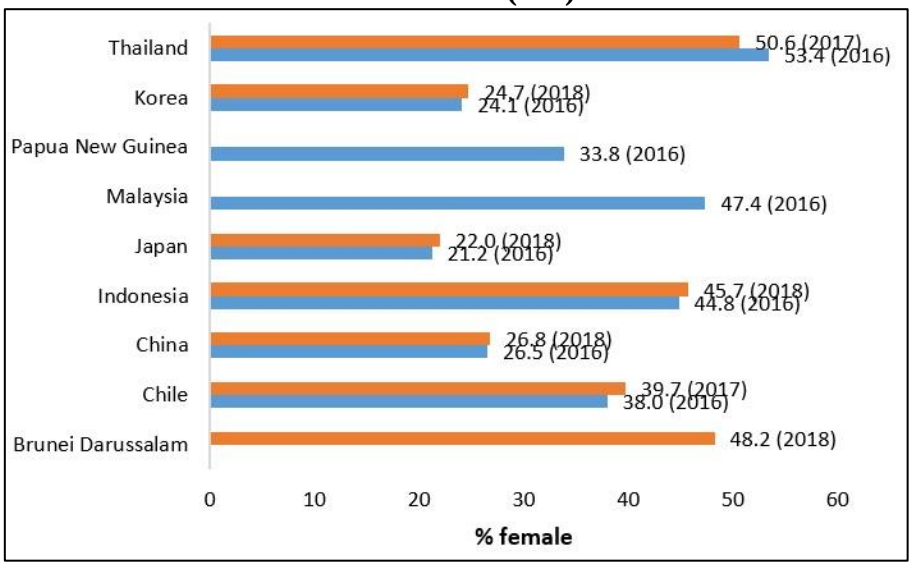
[228] UNESCO defined the Full-time equivalent (FTE) of R&D personnel as the ratio of working hours actually spent on R&D during a specific reference period (usually a calendar year) divided by the total number of hours conventionally worked in the same period by an individual or by a group. In other words, one full-time equivalent may be thought of as one person-year.
[229] UNESCO defined the headcount (HC) of R&D personnel as the total number of individuals contributing to intramural R&D, at the level of a statistical unit or at an aggregate level, during a specific reference period (usually a calendar year). That means headcount data reflect the total number of persons who are mainly or partially employed in R&D.

Figure 2.35: Percentage of female among R&D personnel in STI

Full-time equivalents (FTE)



Headcounts (HC)



Source: APEC-PSU calculations using data from UNESCO. Accessed 27 January 2021.

2.4 INDIVIDUAL ECONOMY ACTIONS

Analysis of the RAASR individual action plans (IAPs) and subsequent updates submitted by economies showed that many economies have indeed included priorities and actions with potentially positive implications on services sector. As indicated earlier in section 2.3.5, these priorities and actions can generally be divided into two broad groups, namely 1) those comprising of priorities and actions which do not explicitly state that services sector is their primary focus/beneficiary but by virtue of the reforms would have positive implications on services sector; and 2) those comprising of priorities and actions which explicitly identify services or specific sub-sectors as their primary focus/beneficiary.

General priorities and actions

Enhancing regulatory reforms

Specifically on the first group, one area which priorities and actions hope to tackle relates to regulatory reforms**.** The business conduct facilitated by these reforms would benefit many businesses including those in the services sector. For example, under its priority of improving competition and reducing administrative burden, Australia has established a new deregulation taskforce to examine regulations from the perspective of businesses; identify regulations and bureaucratic processes which impose the largest costs on the economy; and propose solutions such as removing these barriers or making them easier to overcome. Australia is also looking to improve and strengthen its regulatory impact assessment (RIA) framework to minimize regulatory burden on individuals, businesses, and community organizations. Brunei Darussalam indicated that it has conducted a number of legal and regulatory reforms to make it easier and faster to start a business (e.g., starting a business in a single procedure via a government website). Chile has launched its "Regulatory Simplification" agenda to reduce bureaucracy and eliminate obsolete regulations so as to boost productivity and competitiveness. China indicated that to create a more favorable environment for starting a business, the central government has improved public services, streamlined administration, and delegated more power to lower levels of government.

Indonesia conveyed that it launched an Online Single Submission licensing system to cut lengthy procedures, and that 16 of its passed Economic Policy Packages have deregulated around 222 regulations. Japan indicated that it has unified overlapping disclosure elements across business and annual securities reports to enhance corporate governance. Malaysia strengthened engagement mechanisms between the government and the private sector on policy development; and released circulars, policies, and guidelines such as the Online Public Consultation Circular, the National Policy for the Development and Implementation of Regulations, and the Guideline on Public Consultation Procedures. It has also conducted annual capacity building on RIAs and routinely published the Annual Report on Modernisation of Regulations (ARMR) to share improvements in the regulatory environment with stakeholders. Mexico has published the General Law on Better Regulation to implement the National Policy on Better Regulation.

New Zealand shared that regulatory agencies are expected to only propose new policy when accompanied by a relevant RIA. Papua New Guinea has introduced a One-Stop-Shop initiative to streamline and create a central online hub or repository of doing business regulations and laws in one portal, hence making it easier for businesses to find and access regulations. Peru

plans to establish the Regulatory Reform Committee to serve as a gatekeeper of new regulations. The Philippines has reduced unnecessary regulatory burdens through Project Repeal. Russia has extended the areas subjected to RIA procedures and implemented regulatory guillotine mechanisms to review regulations that adversely affect business climate and reduce regulatory burden. Chinese Taipei strengthened public consultation work and implemented RIAs to enhance good regulatory practice. Thailand introduced the Online Electronic Corporate Registration System (e-Registration) to allow business owners to register their companies online, and established One Stop Service Centers in all 10 Special Economic Zones to facilitate investment. Viet Nam shared that several of its passed resolutions such as Resolution 02 and Resolution 19 have led to significant improvements in various elements of doing business indicators.

More competitive labor market

Another area wherein priorities and actions would benefit businesses and service providers are those aimed at making various segments of society and the broader labor market more competitive**.** For example, Australia is investing in a women's specific round of the National Careers Institute Partnerships Grants Program to fund projects that support career opportunities for women and improve career outcomes while creating better pathways in education and training. Australia also runs the Transition to Work employment service, through which eligible young people aged 15-24 receive intensive, pre-employment support to develop practical skills to get a job, connect with education or training, find local job opportunities and connect with relevant local community services. Likewise, Canada's Youth Employment and Skills Strategy aims to provide comprehensive, flexible and youth-centric supports to help young Canadians aged 15 to 30 develop the skills and work experience they need to succeed in the labor market. Canada's strategy places greater emphasis on responding to the needs of youth that may face barriers to their participation in the workforce - these can include pre-employment skills development, wage subsidy and individualized supports such as transport, child-care or culturally-specific supports and services. Brunei Darussalam has set up the Manpower and Employment Council (MPEC) to develop and deliver effective manpower planning with close alignment to employability and employment. To address mismatch and develop an industry-ready workforce, the Manpower Industry Steering Committee (MISC) identified five industries which will be prioritized, namely hospitality and tourism, information and communication technology, marine, energy, and construction.

Chile has launched "Digital Talent", a public-private initiative to train unemployed people and people who need new skills to stay in jobs with high likelihood of automation. Chile's universal childcare provision bill amends Chile's Labor Code to promote work-life balance and hopefully, enhance women's participation. Hong Kong, China has launched the Higher Education Employment Information e-Platform (HEEIP) to reinforce employment support for job seekers with higher education. Additionally, it has enhanced subsidies and revised relevant parts of the Hong Kong Planning Standards and Guidelines to increase the provision of whole-day kindergarten places, hence enabling more parents to participate in the labor market. Japan has increased childcare arrangements and instituted certain initiatives under The Fifth Basic Plan for Gender Equality and other acts to empower women and enable them to better participate in the labor market. Korea has undertaken several initiatives including providing total care services (e.g., career counselling, vocational training, internships) and establishing the Women's Re-Employment Center (Saeil Center) to encourage skills development and employment opportunities for women.

New Zealand's Crown–Māori Economic Growth Partnership lays out an organizing framework to drive an all-of-government focus to achieve positive economic outcomes for Māori. Some of its goals include generating greater educational participation and performance, and a skilled and successful workforce. The Philippines has repositioned its TVET towards global competitiveness and social equity. In particular, the TVET for global competitiveness caters to the needs of wage/self-employed workers, and aims to impart skills needed in the field of emerging technologies and newly established companies, among others. Viet Nam has promoted the implementation of science, technology, engineering, and mathematics (STEM) model in education.

Enhancing MSME competitiveness

MSMEs make up a significant share of businesses in most economies and many are also involved in services activities. Priorities and actions aimed at enhancing MSME competitiveness would therefore have positive implications on the services sector. For example, Brunei Darussalam established Darussalam Enterprise (DARe) to drive the growth of MSMEs. DARe runs entrepreneurial bootcamps and accelerator programs, among others. Chile published the 30-day payment law, which reduces the maximum payment term from the date a debtor received invoice from 60 to 30 days. This is expected to allow SMEs to receive payment in a more timely fashion, and hence employ them for various uses more opportunistically. Indonesia introduced the People's Business Financing (Kredit Usaha Rakyat) program, wherein financial institutions provide loans to MSMEs with a guarantee scheme of which 70 percent are subsidized by the government. Malaysia launched the SME Integrated Plan of Action (SMEIPA) to coordinate, streamline, monitor, and evaluate the progress and effectiveness of SME development programs through output and outcome assessment.

The Philippines created a more comprehensive credit information system and established alternative collaterals for borrowers to improve MSMEs' access to financial services, thereby enhancing their competitiveness. The Russian Small and Medium Business (RSMB) Corporation has developed SME Business Navigator (www.smbn.ru), an information resource portal that assists entrepreneurs in starting or expanding their business. Both RSMB Corporation and Central Bank Russia also provide guarantee and financial support for SMEs. Chinese Taipei built a comprehensive ecosystem to assist women and youth MSMEs towards better development and internationalization. Chinese Taipei cultivated a favorable environment for the growth and development of MSMEs, and worked on enhancing the capabilities of MSMEs to leverage on ICTs and participate in the digital economy. The United States' Small Business Administration (SBA) provides mentorship, business advice, and training assistance to entrepreneurs and small business owners.

Innovation promotion

Yet another area wherein economies' priorities and actions hope to strengthen and could have had positive implications on businesses involved in the services sector is innovation promotion. For example, innovation promotion activities can potentially facilitate the development and provision of new products and services, hence making businesses more competitive. In this regard, Australia committed additional funding to invest in enabling infrastructure such as supercomputers, artificial intelligence, and machine learning capabilities. Its government has also tasked Innovation and Science Australia (ISA) to investigate barriers in undertaking R&D activities and non-R&D innovations in the economy. Canada established and added funding to

the Strategic Innovation Fund to support innovative investments across the economy. It has reviewed regulatory requirements and practices that impede innovation and growth in high-growth sectors (such as service-related sectors like health and transportation) and introduced regulatory roadmaps to address these issues. Chile facilitates business and investment R&D through tax incentives and has reformulated Law No. 20.241 on Tax Incentives for R&D (Innovation and Development) to reduce bureaucracy and allow the incentives to be used by some MSMEs. Additionally, it has launched "Digitaliza tu PYME" to provide smaller companies with digital tools to improve their productive capacities.

Encouraging investment

Economies have also identified priorities and actions aimed at encouraging investment, which could have positive implications on specific sectors such as services and the broader economy. Australia's 10-year Enterprise Tax Plan (ETP) and Growing Jobs and Small Business package (which comprises of corporate tax rate reduction, tax discount, and immediate deductibility on asset purchases) aims to encourage investment and support job creation. Japan's Working Group for Revising Regulations and Administrative Procedures under the Council for Promotion of Foreign Direct Investment discussed issues which impede foreign investment, and compiled them for further review in a report in 2017. Furthermore, the Support Program for Regional Foreign Direct Investment in Japan was launched in 2018 to advance regional revitalization through FDI. The Program to Intensively Attract Foreign Direct Investment in Regional Japan was likewise adopted in 2019 to provide support to priority local governments. New Zealand's Investment Attraction Strategy hopes to attract higher levels of business investment, including in R&D, so as to accelerate growth throughout the economy. Russia approved a law to protect and encourage investment, regulating the conclusion of agreements between government entities at the federal and/or state level and private enterprises.[230]

Infrastructure spending

Infrastructure spending has the potential to enhance the competitiveness of the services sector. For example, widening broadband access could facilitate more widespread access to digital services. Improvements to road and port infrastructure can lead to a more competitive logistics sector. In this regard, Canada has committed an additional CAD 1.7 billion over 13 years to ensure that 100 percent of Canadians have access to high-speed internet by 2020. The Canada Infrastructure Bank is actively engaged with various jurisdictions and the private sector to explore innovative financing solutions to invest in trade and transportation, transit, green infrastructure, and broadband. Chile created an Infrastructure Fund in 2016 to cooperate with third parties in developing, building, maintaining, and/or financing public infrastructure. Japan has introduced the "Action Plan for Promoting Public-Private Partnership (PPP)/Private Finance Initiative (PFI)" to expand private participation in public services/assets and identified several priority areas such as airports; roads; and facilities for meetings, incentives, conferences and exhibitions (MICE). New Zealand's Ultra-Fast Broadband (UFB) initiative is bringing faster, better internet to 80 percent of New Zealanders in various locations including homes, schools, and businesses. Papua New Guinea gazetted the PPP Act in early 2018, and is currently in the process of establishing the PPP Centre. The Philippines is implementing the National Broadband Plan to accelerate the deployment of fiber optic cables and wireless technologies in order to improve internet speed and affordability across the economy. The United States is expanding broadband capacity to provide a robust environment for innovation.

[230] Based on updates provided by Russia.

Viet Nam improved the appraisal of public investment projects as well as community monitoring of public investment projects.

Improving market access

Improving market access is another area which several priorities and actions aim to advance. From the business perspective, FTAs/RTAs and other mechanisms aimed at promoting market access could reduce or simplify trade regulations between economies, hence making foreign providers more competitive. The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) was noted by Australia, Canada and Japan as one of the FTAs that they sought to advance. Other FTAs mentioned by Canada include the Canada–EU Comprehensive Economic and Trade Agreement (CETA) and United States–Mexico–Canada Agreement (USMCA), while Japan provided updates on the state of the various investment agreements that it has with its partners such as Armenia, Jordan, Morocco, and the United Arab Emirates. Korea noted that its FTAs with five Central American economies (Costa Rica, El Salvador, Honduras, Nicaragua and Panama) has entered into force, and that negotiations are underway for several FTAs including Korea–MERCOSUR FTA and Korea–Philippines FTA. It is also looking into upgrading existing FTAs such as the Korea–ASEAN FTA and Korea–India FTA.

Services-specific priorities and actions

The second group of economy-specific priorities and actions explicitly identify services or specific sub-sectors as their primary focus. Chile shared that it has undertaken various activities and initiatives aimed at promoting services export such as training and certification. It has also set up the Public-Private Technical Committee for the Export of Services to understand different issues that inhibit services export and propose measures to facilitate and enhance it. Japan is promoting the use of ICTs and providing staff training to revitalize and improve productivity in the services industry. Korea implemented a comprehensive innovation strategy for service industries in 2019, and developed a series of innovation plans for four key industries: tourism, healthcare, logistics and content. Viet Nam improved the legal framework for the development of the services sector as well as reviewed barriers and unnecessary burdens affecting services export.

Under *the financial sector*, Canada undertook a legislative review on the financial sector to ensure that legislative and regulatory framework remains robust and technically sound amidst emerging trends and developments. Hong Kong, China tabled various measures to facilitate the healthy development of the fintech ecosystem in the economy. These include opening applications for the Cross-Border Testing with other members of the Global Financial Innovation Network for industry to trial and scale new fintech solutions in multiple jurisdictions, and various fintech supervisory or regulatory sandboxes to allow financial institutions to conduct pilot trials of fintech initiatives without having to achieve full compliance with the existing supervisory or regulatory requirements.[231] In addition to its fintech regulatory sandbox mechanism and accelerator "FintechSpace" established in 2018, Chinese Taipei launched the “FinTech Development Roadmap” in 2020. This Roadmap aims to cultivate a friendly ecosystem by fostering information sharing, regulation adaptation, capacity building, digital infrastructure, Fintech Space's performance, international networking and suptech development, in order to facilitate the provision of financial services with better efficiency, accessibility, usability, and quality.[232] New Zealand passed the Financial Services

[231] Based on updates provided by Hong Kong, China.
[232] Based on updates provided by Chinese Taipei.

Legislation Amendment Act 2019 into law to establish a more level playing field for financial advice, which is expected to promote investment in the sector. Papua New Guinea is putting in place the Financial Sector Development Strategy (FSDS) Governance Structure to implement reforms in the financial sector when fully set up.

In *the logistics sector*, Indonesia increased the number of Bonded Logistics Centers to facilitate the storage of industrial raw materials, and to function as an air cargo hub and floating storage among others. The Philippines has established a one-stop shop to process applications for the accreditation and registration of multimodal transport operators. In *the healthcare sector*, Japan is looking into providing personalized healthcare services using IoT, and improving the quality and productivity of nursing care by employing technologies such as robots and real-time sensors. In *the tourism sector*, Japan is reviewing regulations and restrictions in efforts to make the tourism industry more productive and competitive. New Zealand has developed the New Zealand– Aotearoa Government Tourism Strategy to generate productive, inclusive, and sustainable growth in tourism.

3. IMPACT AND IMPLICATIONS OF COVID-19 ON SERVICES SECTOR AND TRADE[233]

3.1 INTRODUCTION, OVERVIEW AND CONTEXT

Given the importance of services to the regional economy, the economic shocks associated with the COVID-19 pandemic have assumed particular importance for APEC member economies. Business consultancy McKinsey summarizes the situation as follows:

> "With the humanitarian crisis from coronavirus evolving on a daily basis, businesses are grappling with how to continue serving their customers and communities around the world. The task is uniquely challenging for industries that rely heavily on in-person interaction, including a wide swath of sectors from banking and insurance to hospitality, telecommunications, and industrial services. Physical distancing, reduction of nonessential operations, and limited contact are fundamental in protecting human health—and raise fundamental challenges about how these organizations can continue to reach customers and meet their expectations."[234]

The situation facing policymakers is very different from the last worldwide economic shock, namely the Global Financial Crisis (GFC) of 2008-2009. Services in fact weathered that storm much better than goods in terms of trade performance, even though the financial services sector was the initial locus of the shock.[235] As the quote from McKinsey highlights, however, the economic stress surrounding the COVID-19 pandemic is much more acute for services relative to goods, because in-person interactions have become more difficult due to increased public health risks.

At the same time, service providers have been innovative in adopting solutions, including through the use of digital platforms. How have these dynamics affected the production and trade of services in the Asia-Pacific? Will they persist as the situation returns to normal, thanks to vaccination efforts? What policy responses may be necessary to enable service providers to take advantage of changes in technology and preferences, as well as to ensure they are well placed to respond to future risks? These are some of the questions that this chapter will address.

This chapter is designed to contribute to one part of the mid-term review (MTR) of the ASCR. Specifically, the objective is "to understand the impact and implications of COVID-19 on services sector and trade, and consequently how services sector in the APEC region can respond and adapt to the post-COVID environment, specifically with respect to the next phase of ASCR implementation."

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[233] Prepared by Ben Shepherd (Principal), Bernard Hoekman (Senior Advisor) and Anirudh Shingal (Senior Consultant), Developing Trade Consultants. All uses of the dollar sign ($) in this chapter refer to US dollars unless otherwise indicated.
[234] Nicolas Guzman et al., "Coronavirus' Impact on Service Organizations: Weathering the Storm" (McKinsey, April 2020), https://www.mckinsey.com/business-functions/operations/our-insights/coronavirus-impact-on-service-organizations-weathering-the-storm.
[235] Ingo Borchert and Aaditya Mattoo, "The Crisis-Resilience of Services Trade," *The Service Industries Journal* 30, no. 13 (November 1, 2010): 2115–36, https://doi.org/10.1080/02642060903289944.

Against this background, the chapter aims at addressing the following items:

1. Review and analyze the impact and implications of COVID-19 on services access, provision, competitiveness, and cross-border trade in the APEC region;
2. Identify how the services sector can respond and adapt to the post-COVID environment;
3. Identify how APEC economies can support the services sector and facilitate services trade to respond and adapt in this context; and
4. Identify potential steps and any updates required to ensure the continued relevance of ASCR in a post-COVID environment.

The approach to dealing with these questions is to combine quantitative and qualitative approaches. Under the first heading, the available data on services trade, production, and restrictiveness prior to the COVID-19 pandemic is analyzed. The objective of this review is to establish a baseline that fully takes into account the varying economic and developmental circumstances of Asia-Pacific economies. On this basis, high frequency data are used to look at changes from the benchmark during the pandemic period, focusing on both the size and scope of the negative shock but also the rate of recovery.

Given that data availability is still relatively limited, it is not feasible to tell the story of the pandemic's impacts on the services sector exclusively using quantitative methods. This chapter therefore supplements the data review with a set of case studies looking at how individual economies have responded to sector-level shocks during the COVID-19 period. The case studies are chosen with a view to being representative of APEC's diverse membership, and therefore cover developing and developed economies, as well as economies in Asia and the Americas.

With a view to informing discussion on the ASCR mid-term review, the analysis draws on the data review and case studies to discuss in a forward looking way the emerging policy environment for services in the region. A particular focus is the relationship between the ASCR's APEC-wide actions, and the requirements of the services sector post-COVID. The objective is to draw on experience, practice, and data, to develop policy insights that can help ensure that the ASCR continues to provide a strong framework for the development of the services sector all across the Asia-Pacific region.

Against this background, the chapter proceeds as follows. Section 3.2 establishes a data baseline, using information on as many member economies as possible, with a view to providing region-level insight that both identifies general patterns but is also respectful of economy-level differences. Section 3.3 moves from that baseline to consider the pandemic shock and responses to it, starting with a review of the available high frequency data, then moving to the case studies. Section 3.4 discusses the future policy environment from the perspective in particular of supporting recovery post-COVID, and develops insights for the ASCR as a regional framework. The final section concludes and summarizes the policy implications of our findings.

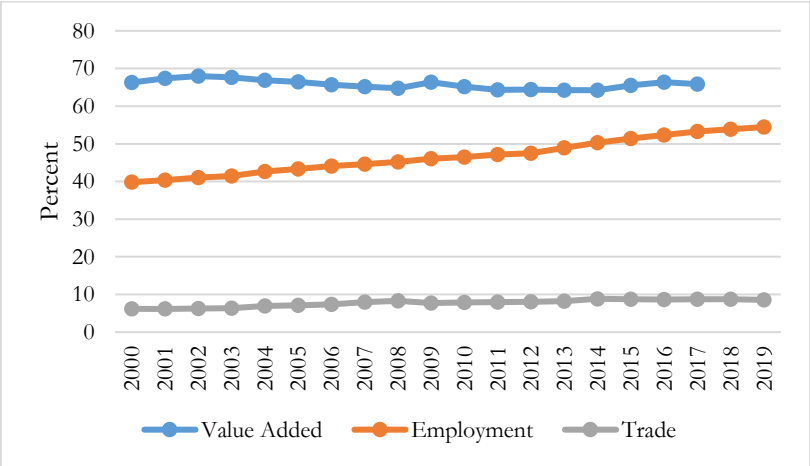
3.2 DATA BASELINE: SERVICES TRADE, PRODUCTION AND RESTRICTIVENESS IN APEC PRE-COVID

3.2.1 Servicification in Asia-Pacific

Economies all around the world have been seeing an increased role for services in production and trade, a process referred to in general terms as "servicification" or "servitization". The drivers of this trend are partly technological and partly structural. On the technological side, increased prevalence and efficiency of information and communication technologies (ICTs) means that services activities can be unbundled more easily than in the past, which in turn results in greater use of market-based sourcing arrangements both within and between economies. On the structural side, higher per capita incomes are usually associated with an increase in relative demand for services, so successful development usually translates into a growing services sector.

Figure 3.1 shows that APEC member economies are a core part of this global trend. Services value added accounted for nearly two-thirds of regional GDP in 2017; the range runs from 38% in Brunei Darussalam to 88% in Hong Kong, China. More marked is the trend in employment: the services sector made up 40% of regional employment in 2000, but nearly 55% in 2019, again with substantial dispersion of results around these figures at the economy level. So while value added has not changed markedly over the sample period, there has been a clear shift in labour markets. Finally, on the trade side, total services trade relative to GDP increased from 6.2% in 2000 to 8.6% in 2019, with a range from 5.2% in Mexico to 108% in Singapore. So in line with the increased technological sophistication of services sectors, there has been a clear shift towards greater sourcing of services from suppliers in other economies. Data from the WTO's experimental Balanced Trade in Services (BATIS) dataset suggests that intra-APEC trade accounted for nearly 55% of total services exports by APEC member economies in 2019, which suggests that intra-regional linkages are an important part of the picture in terms of the development of the services sector in the Asia-Pacific and that the ASCR and similar initiatives could bring real value in terms of strengthening these linkages.

Figure 3.1: Services value added as a percentage of GDP, services trade relative to GDP, and services employment as a percentage of total employment (APEC, 2000-2019)



Source: StatsAPEC.

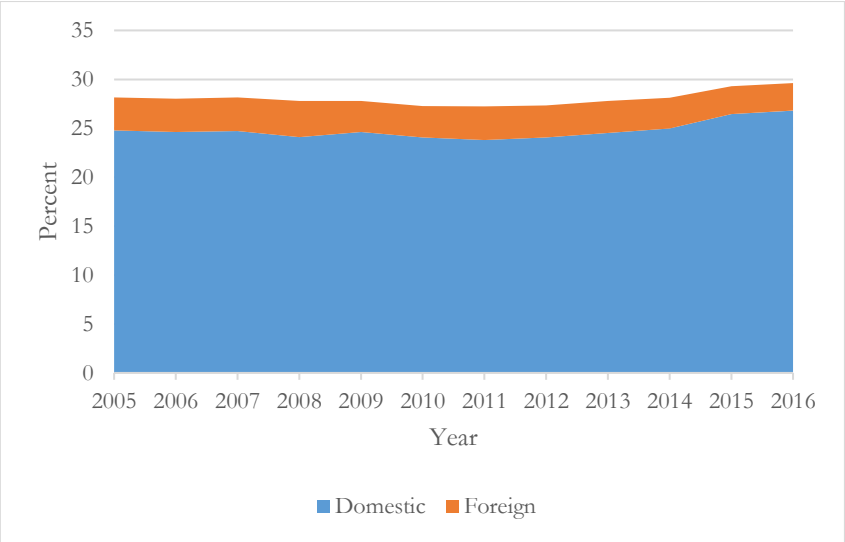
A second dimension of servicification that comes out less well in Figure 3.1 is the increasing interlinkages between manufacturing and services. On the one hand, most manufacturing firms

increasingly rely on services inputs. Obvious examples include transport services, which are necessary for moving goods from the producer to the consumer, and telecommunications, which help firms reach consumers through online sales. But manufacturers also make extensive use of research and design services, financial services, and professional services. Thanks to the technological change discussed above, it has become increasingly feasible to source these services inputs in the marketplace.

Conscious of these developments, trade economists have developed the concept of trade in value added that makes it possible to trace the sectoral origins of exports through the full network of input-output linkages required to produce them. The proportion of the value of exported goods that is accounted for by value added sourced in the services sector is a common measure of the degree of servicification of trade.

The OECD-WTO Trade in Value Added (TiVA) database provides this kind of breakdown of the value of gross exports. Figure 3.2 shows results for APEC through the latest year for which data are currently available (2016), distinguishing between services value added sourced in the exporting economy and services value added sourced in other economies. Together, domestic and foreign value added account for 29.6% of the gross value of APEC's exports of manufactured goods, up from 28.1% in 2005. Although the increase is relatively modest, it has taken place against the background of slowing trade integration in the wake of the Global Financial Crisis; despite the crisis, servicification has proceeded in the region, albeit at a relatively restrained pace. So the trend towards increasing servicification not only of the economy as a whole, but also of manufacturing in particular, is clear in these data. Moreover, research by the APEC Policy Support Unit (PSU) suggests that this number is a lower bound, because manufacturing firms also supply many services inputs in-house or through non-market transactions within corporate groups. They use firm-level case studies to show that services inputs can account for as much as half of total costs in manufacturing firms on average.[236]

Figure 3.2: Services value added embodied in exports of manufactured goods by origin; percent of gross value (APEC, 2005-2016)



Source: OECD-WTO TiVA database.
Note: Data cover all APEC economies except Papua New Guinea.

[236] Low and Pasadilla, "Services in Global Value Chains: Manufacturing-Related Services."

3.2.2 Trade by Mode of Supply

The WTO General Agreement on Trade in Services (GATS) recognizes four modes of supply for internationally traded services. Mode 1 trade is pure cross border trade, for example when a lawyer in Hong Kong, China, provides advice to a client in Viet Nam by email. Mode 2 involves movement of the consumer, for instance when a tourist from the United States travels to Chile for a vacation. Mode 3 is sales by foreign affiliates, such as when a Canadian energy firm establishes a subsidiary in Mexico and sells services there. Finally, Mode 4 involves temporary movement by service providers, such as when a management consultant from Singapore undertakes a contract in Indonesia, then returns to Singapore at its conclusion.

While the GATS framework has governed international trade in services for more than 25 years, statistical practice in most economies still lags behind. The standard data source for trade in services, including for the figures on trade reported above, is the balance of payments. It uses different statistical concepts from the GATS modes of supply, but primarily covers trade under Modes 1 and 2 only.

The WTO has now released an experimental Trade in Services by Mode of Supply (TISMOS) database. They use existing data combined with statistical techniques and approximations based on limited observations to provide the first rigorous, global estimates of services trade at a sectoral level disaggregated by mode of supply. These data are vital for establishing a baseline of services trade prior to the COVID-19 pandemic: the ability to trade particular services depends to some extent on the necessity for personal interactions, which should be reflected in trade data by mode of supply because Modes 2 and 4 in particular highlight cases where movement across borders is needed.

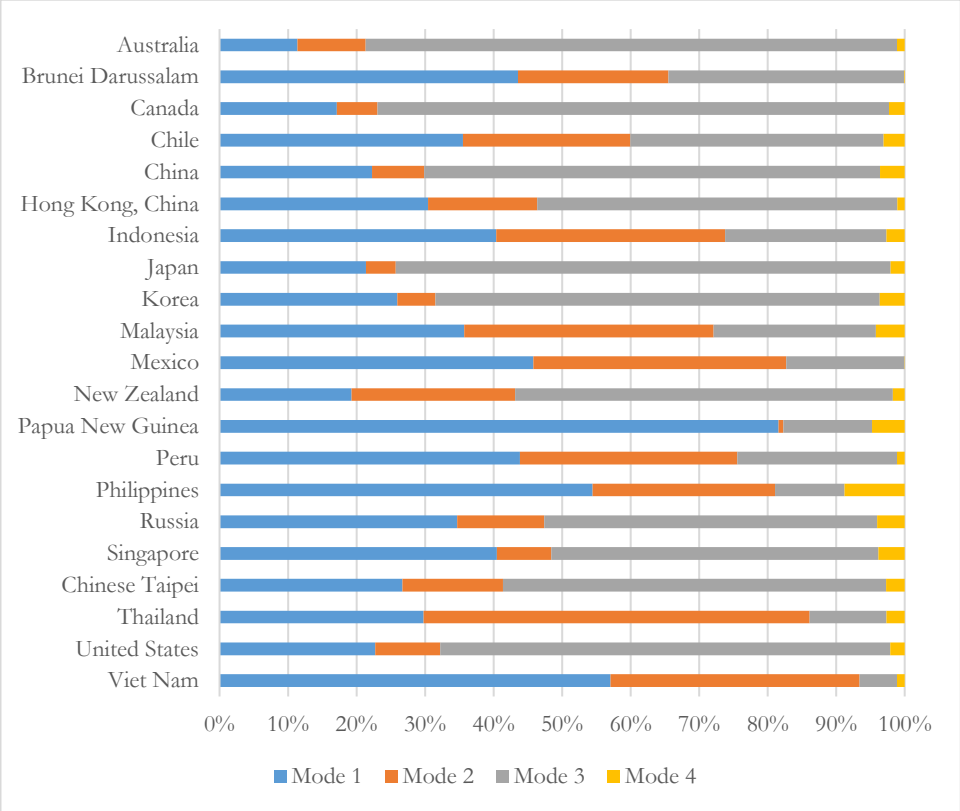
Figure 3.3 shows results for APEC economies, taking total services exports to provide an overall view of the extent to which different economies rely on personal interactions for their services trade. Clearly, experiences are very different across economies: in some, like Viet Nam or Papua New Guinea, the majority of services exports are by Mode 1, which does not require personal interactions. For other economies like Australia; Canada; China; Japan; and Korea, Mode 3 dominates—as is frequently the case for services data around the world, in particular in high income economies. For these economies, there is still some vulnerability to disruptions to in person interactions, as some proportion of Mode 3 foreign affiliate sales will require personal interactions in the importing economy; retail is an example. This assessment is corroborated by UNCTAD estimates which show that foreign direct investment declined by 40% on average in 2020 relative to the value in 2019 and is projected to decline by a further 5% to 10% in 2021.[237] Finally, there are some economies such as Thailand, where Mode 2 has the largest share, or the Philippines where Mode 4 is relatively important. In both cases, there is good reason to expect that disruptions to personal movements across borders would disrupt trade significantly, unless firms are able to switch to pure cross-border provision. Taking the proportion of exports not taking place by Mode 1 as a proxy for the potential degree of economic disruption caused by changes to the ability to engage in personal interactions, the data show that APEC economies on average have 65% of their services exports at least partially at risk, ranging from 18% in Papua New Guinea to 89% in Australia. Even this figure is only approximate, however. Modal supply of services is not a clear-cut matter, as there are linkages across the different modes of supply. For instance, sales via Mode 3 often require in person contact to establish a subsidiary and ensure its ongoing operations. But in the absence of more

[237] UNCTAD, "Global Foreign Direct Investment Projected to Plunge 40% in 2020," June 16, 2020, https://unctad.org/news/global-foreign-direct-investment-projected-plunge-40-2020.

complete data, this figure can be taken as an approximate guide as to the proportion of services trade subject to potentially severe disruption.

Figure 3.3 presents data at the level of economies. In terms of general patterns in the data, there is evidence that economies at higher per capita income levels tend to have a relatively larger proportion of Mode 3 in total services exports, as would be expected by their corresponding level of capital intensity. But these aggregate figures obscure significant heterogeneity by sector. Or equivalently, the patterns observed in Figure 3.3 are to a significant extent driven by sectoral patterns of specialization. For instance, Thailand has an important tourism industry, which is reflected in the large proportion of Mode 2 exports. So in assessing the impacts of the pandemic, as well as in reporting on efforts by economies and firms to respond, it will be important to take the sectoral dimension into account, in addition to general technological differences across economies that can also influence results. The case studies in Section 3.3 do this explicitly, by focusing on an individual sector in each economy.

Figure 3.3: Total services exports by GATS mode of supply (APEC economies, 2017), %



Source: WTO TISMOS database.

3.2.3 Applied Services Policies

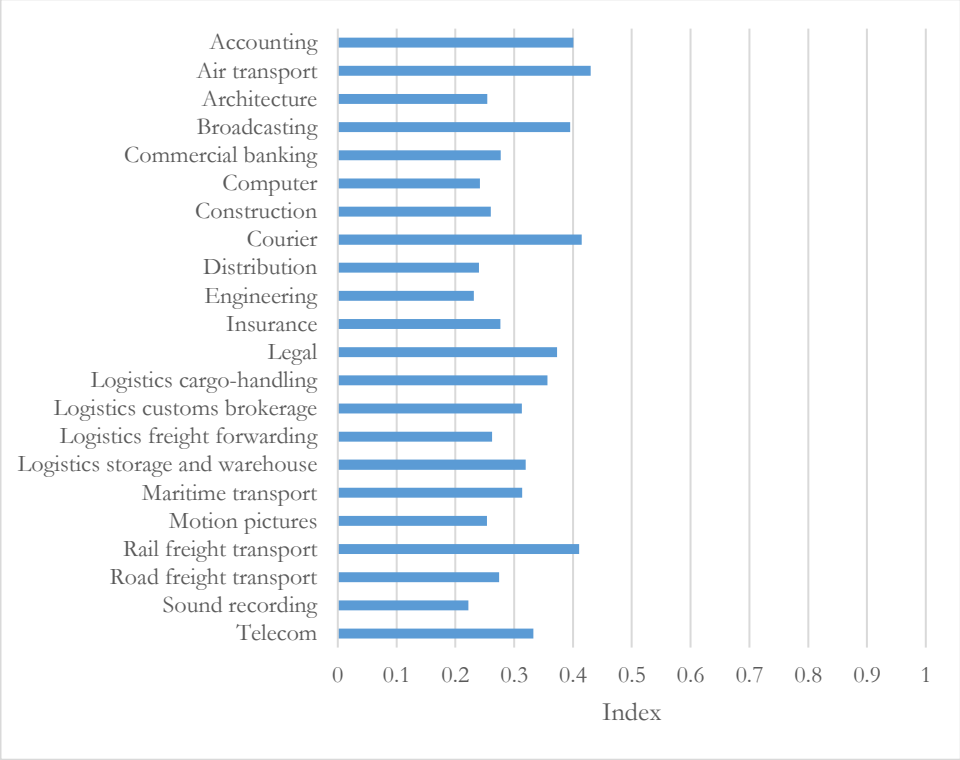
Another important aspect of the baseline against which responses to the COVID-19 pandemic need to be understood is trade policy. Cataloguing and quantifying restrictions to services trade is not a simple exercise, and indeed is one that APEC member economies are currently engaged in. At the present time, the most comprehensive and updated data source is the OECD's Services Trade Restrictiveness Index (STRI) database.[238] STRIs are defined at the sectoral

[238] Organisation for Economic Co-operation and Development, "Services Trade Restrictiveness Index Regulatory Database."

level, and use an index approach to quantify the restrictiveness of policies that affect the ability of service providers to enter markets or supply services. The index ranges from zero (least restrictive) to one (most restrictive).

Figure 3.4 presents average sectoral STRIs for APEC member economies for which data are available. For the region as a whole, policy settings are comparable to what is seen elsewhere in terms of most favored nation (MFN) policy settings, although heterogeneity is considerable. At the level of sectors, computer, construction, distribution, road freight transport, sound recording, engineering, architecture, and logistics freight forwarding stand out as having a relatively low level of restrictiveness. By contrast, courier, rail transport, air transport, broadcasting, legal, and accounting have relatively high levels of restrictiveness.

Figure 3.4: Average STRI by sector for APEC member economies (2020)



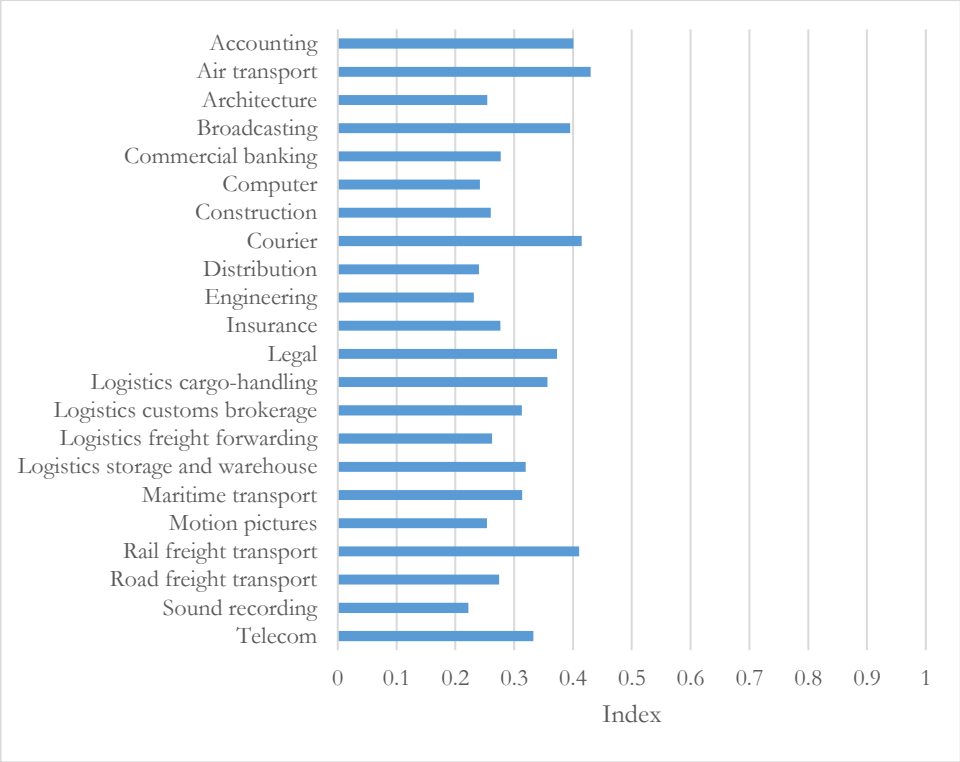
Source: OECD STRI database.
Note: Figure shows simple averages across APEC member economies for which data are available, namely Australia; Canada; Chile; China; Indonesia; Japan; Korea; Malaysia; Mexico; New Zealand; Peru; Russia; Thailand; and the United States.

The pattern of policies evidenced by Figure 3.4 suggests that when there is a significant negative shock to exports, such as the one associated with the COVID-19 pandemic, it may be necessary for economies to consider adjusting policies in particular areas. Those sectors with relatively more restrictive policies, on a regional level, would be candidates for the review, at least to the extent that they involve in-person interactions. Air transport stands out as both a sector that is directly affected by restrictions on cross-border movements of people, and also one where MFN policy settings are relatively restrictive. Clearly, economies need to keep the policy context in mind as they design responses to negative shocks.

With this point as background, Figure 3.5 looks at a different aggregation of policy restrictions in the OECD database, focused exclusively on GATS Mode 1. The rationale for looking at these data is that policy restrictions affecting pure cross-border trade—including online trade—

would make it harder for firms to adapt to a shock like COVID-19 by substituting part of their existing exports to Mode 1. Interestingly the pattern of restrictiveness by sector is the same for Mode 1 as for the overall index discussed above: the same sectors that are relatively restrictive in general tend to be relatively restrictive in Mode 1 as well. Economies need to be cautious about this characteristic of the policy benchmark, as it suggests that there may be trade policies in those sectors that would tend to hold businesses back from adapting to COVID-19 by, for instance, moving their overseas sales exclusively online.

Figure 3.5: Average Mode 1 STRI by sector for APEC member economies (2020)



Source: OECD STRI database.
Note: Figure shows simple averages across APEC member economies for which data are available, namely Australia; Canada; Chile; China; Indonesia; Japan; Korea; Malaysia; Mexico; New Zealand; Peru; Russia; Thailand; and the United States.

3.3 IMPACTS OF THE COVID-19 PANDEMIC: SHOCK, RESPONSE, AND ADAPTATION

3.3.1 Overview of the Pandemic and its Effects on the Services Sector[239]

Reasoning from first principles, there are two sets of effects of the COVID-19 pandemic on services trade, but they act in opposite directions (Figure 3.6). As a result, the overall impact is ambiguous, and it will require the release of data in the future before making a full empirical assessment of the impact of the crisis.

On the one hand, the pandemic constitutes a clear drag on some types of services trade, specifically those that require in-person contact. For this reason, the impact of the pandemic on services trade is likely very different from the impact on goods trade: the latter was primarily

[239] This section is adapted from a report prepared for The Commonwealth Secretariat: Ben Shepherd and Anirudh Shingal, "Services Trade of Commonwealth Member Countries: Response to the COVID-19 Pandemic," *International Trade Working Paper 2021/03, The Commonwealth Secretariat*, 2021, https://thecommonwealth.org/sites/default/files/inline/ITWP%202021_03_UPDF.pdf.

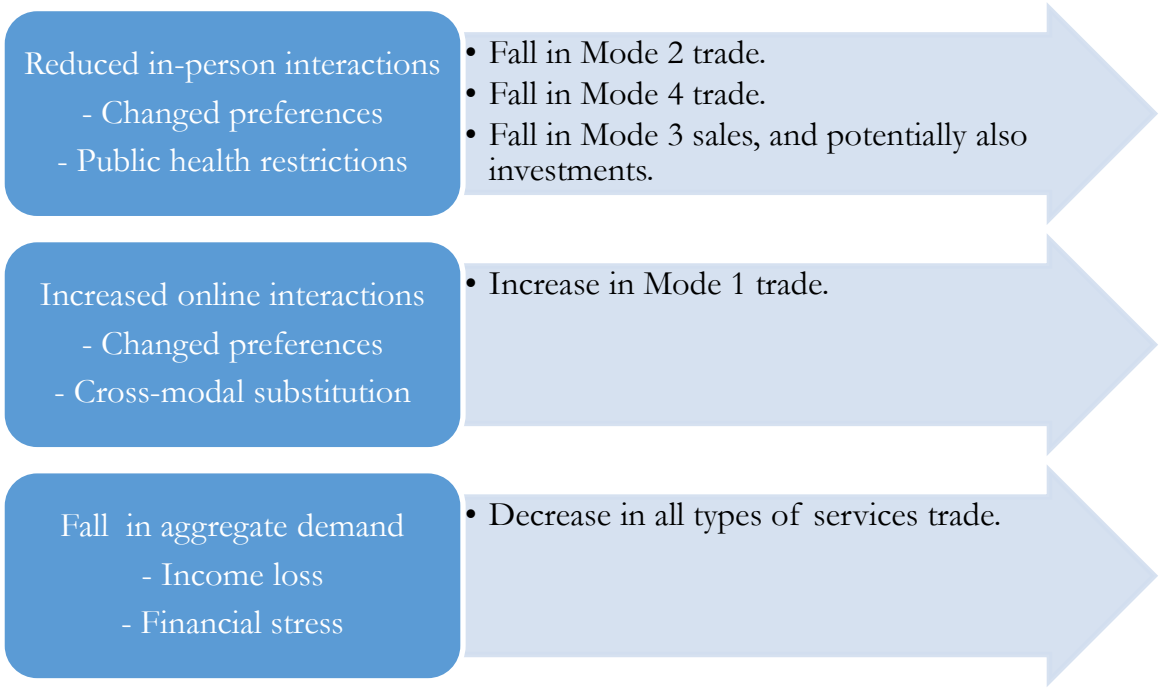
disrupted in the short term because of difficulties in distribution and logistics, related to in-person contacts; as those problems were resolved, goods trade could bounce back relatively rapidly, constrained mostly by negative demand shocks associated with the pandemic. As a result, WTO data show that global trade in manufactured goods was down by 3% in the third quarter of 2020 and up 6% in the fourth quarter, both measured year on year; by contrast, world trade in commercial services was down by 24% in the third quarter and 19% in the fourth quarter. So the fall is larger and recovery slower in services relative to goods.

From a services point of view, the pandemic has given rise to two shocks that affect the propensity of producers and consumers to meet in person. The first is that preferences have clearly changed in response to the increased risk profile of in-person interactions, so parties have increasingly preferred to refrain from them when possible. The second aspect is regulatory: many economies have restricted the ability of people to meet physically, and in particular to travel across borders for that purpose. While regimes differ across economies and through time, a fair summary is that in-person meetings have both become less desirable due to the perception of increased risk, and also more difficult from a regulatory compliance standpoint.

Against the background of the GATS Modes of Supply discussed above, these kinds of shocks have clear implications for Modes 2 and 4. In the case of Mode 2, it is consumers whose movements are impeded, with a corresponding reduction in trade. For Mode 4, it is service suppliers, again with a consequent reduction in trade. The case of Mode 3 is more ambiguous. The investment transactions at the base of Mode 3 can, in principle, take place without in-person interactions, although they have traditionally been an important part of large-scale investment decisions. But for statistical purposes, the value of Mode 3 trade is not the value of investment in an overseas services business, but the value of sales by that business. So the twin shocks referred to above again play a role. To the extent that in-person interactions have become less desirable or less feasible, one effect may be to reduce the sales of foreign owned firms in sectors where such interactions are important. Examples include hotels and restaurants, as well as distribution (although some parts of the retail sector have been exempted from restrictions in order to facilitate the supply of essential goods). In any case, for Modes 2 and 4 in particular, but also potentially for Mode 3, it seems highly likely that an effect of the pandemic has been to reduce trade. Given the unprecedented scale and scope of the emergency, it is likely that the extent of that reduction is large—see below for an analysis of this question for APEC member economies using high frequency data.

The case of Mode 1 is quite different, however. Since it focuses on pure cross-border supply, it captures trade in services taking place through online means. Anecdotally, there has been a substantial movement of some types of in-person interactions online, to take account of the changes noted above. Business meetings, negotiations, and information exchanges have systematically moved online in many parts of the world, subject to having access to the necessary infrastructure and services. So in some sectors, there is a countervailing force in the direction of increased services trade in Mode 1 specifically, as substitution across modes takes place in response to the pandemic. The strength of this positive effect relative to the negative one discussed above is an empirical question, which cannot be answered definitively given the data currently available. It will surely vary substantially from one sector to another, as well as across economies, and at the regional level within economies. The interaction between those two variables, namely economy patterns of specialization, will be a major determinant of the size of the overall economic shock as a result of the pandemic, at least through the trade vector.

Figure 3.6: Summary of pandemic effects on services trade



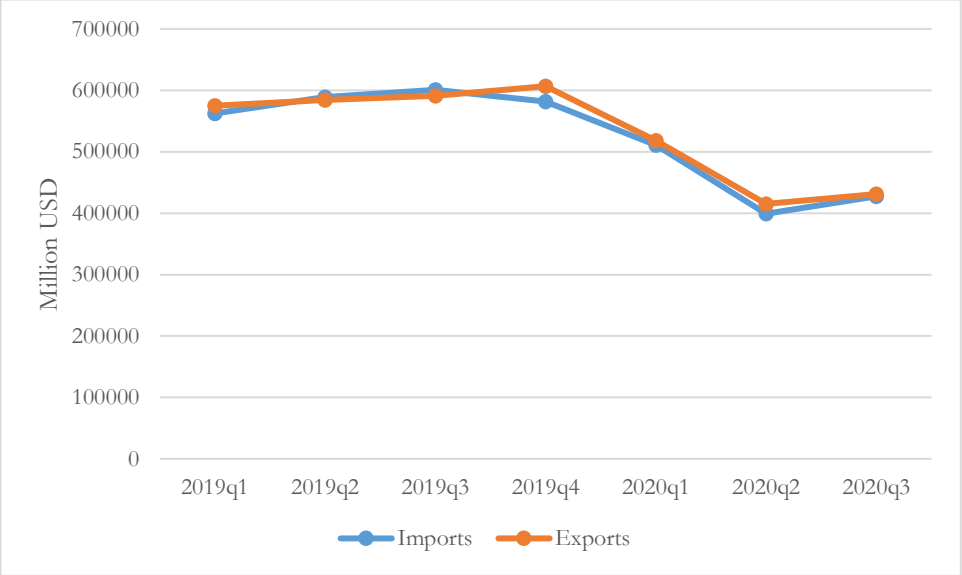
Source: Authors.

3.3.2 Trade Impacts of the Pandemic: Insights from High Frequency Data

Parsing the impact of the COVID-19 pandemic on services trade is not straightforward, as trade data are typically only reported at annual frequency. However, WTO has quarterly and monthly data available for selected economies. This section focuses on the quarterly data, which covers most APEC member economies to at least some degree. While some economies have reported data through the end of 2020, a few have not; the analysis therefore focuses on the 2019 quarter one through 2020 quarter three period, which captures a baseline (2019) and the crisis (2020). An important constraint on the WTO data is that they are only reported at an aggregate level, not bilaterally. It is therefore impossible to say anything about particular trading relationships, including intra-regional ones. The analysis is therefore at the aggregate level with partner "world".

Figure 3.7 shows total exports and imports of services by APEC member economies. The two series track very closely, which is in line with expectations. There is a gentle upward trend during 2019 but then a sharp fall in the first two quarters of 2020, and a slight recovery in the third quarter. The impact of the COVID-19 pandemic is therefore clear: the fall coincides with its onset. Of course, economies have experienced the crisis in different ways and at different times, and these data sum across all economies thereby obscuring that (a point that is addressed further below). Nonetheless, the analysis is informative: 2020 trade (exports + imports) in quarter 3, even after a small rebound, was still 28% lower than what was observed in 2019 quarter 3. So the pandemic, acting through the mechanisms discussed above, has clearly had a major impact on services trade in APEC; the region is still recovering from that shock, though the extent of recovery on a region-wide basis remains unclear as complete data are not available for the fourth quarter of 2020 and no data at all are available for the first quarter of 2021.

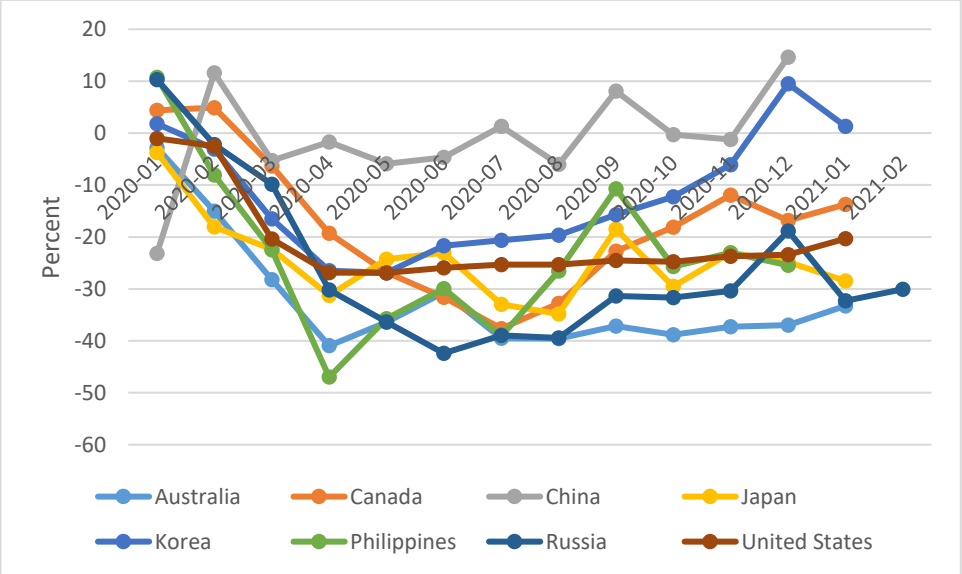
Figure 3.7: Total exports and imports of services (APEC, 2019-2020 quarterly data)



Source: WTO. Note: APEC is the sum of exports or imports across all member economies.

To provide further detail on these results, Figure 3.8 shows monthly trade data for those APEC member economies that report it to WTO. Exports for all economies are expressed as percentage changes year-on-year, so the figure shows the changes in trade flows as the pandemic unfolded, relative to each economy's baseline. As in the previous figure, the pattern is clear, although the higher frequency of these data shows some differences in timing across economies. There is a clear fall in exports in early 2020, up to 42% for Australia and 49% for the Philippines. Afterwards, there is some evidence of a recovery, but experiences differ markedly across economies: exports from China and Korea increased, but other economies were still seeing substantial falls, generally on the order of 20% or more. So the pandemic has clearly had a major impact on services trade in the region, and most economies are still feeling a large part of its effects.

Figure 3.8: Monthly services exports (selected APEC economies, 2020-2021), % change year-on-year



Source: WTO. Note: Data unavailable for other APEC member economies.

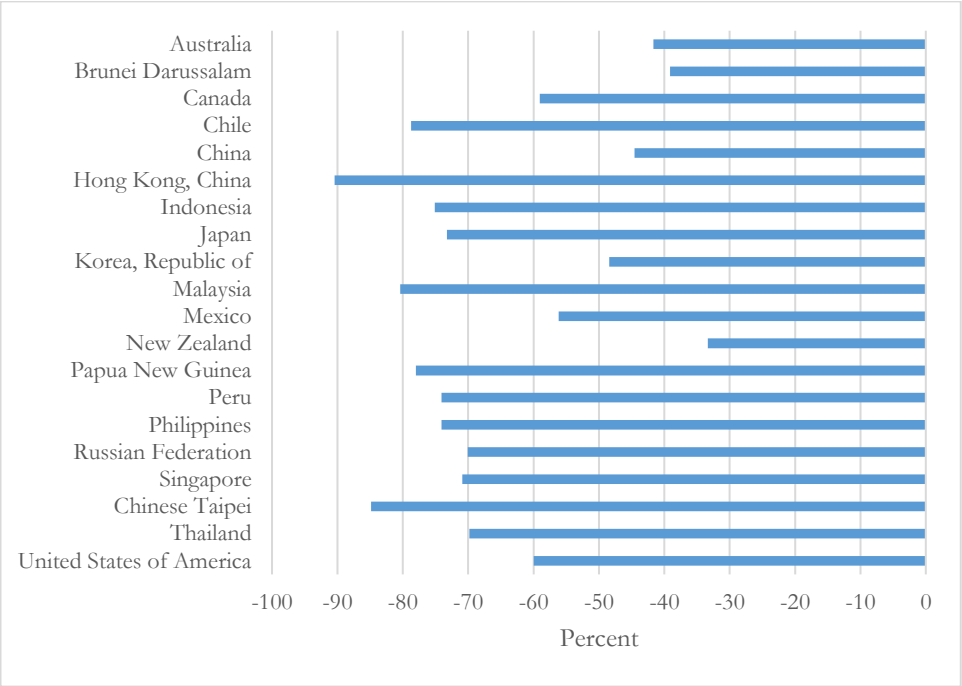
As noted above, however, aggregate results necessarily obscure heterogeneity by economy and by sector. Figure 3.9 through 3.15 therefore present full results at a disaggregated level. The information is summarised in Table 3.1. Each figure looks at one sector, and presents economy-level changes in exports between 2019 and 2020 summing over the first three quarters of each year, for all economies for which data are available. The table computes the percentage of economies reporting data that saw an increase or decrease over the same period. The key takeaway is that, in line with the discussion above, experiences are highly variable depending on patterns of specialization, and differing requirements for in-person contact. Figure 3.9 shows that travel services have been greatly reduced for all economies during the pandemic period, and close to eliminated for some. The same is true of transport services (Figure 3.10) for all economies except China. In other sectors, results are more mixed. Telecommunications services (Figure 3.11) see a relatively even split of reductions in some economies and increases in others, with large falls largely due to pandemic-induced shifts in aggregate demand, as the sector by definition does not require in-person contact, and indeed has served as the backbone for the delivery of online services during the pandemic. Construction services (Figure 3.12) fall significantly in most economies (80%), but there are exceptions like Malaysia and the Philippines. Financial services (Figure 3.13) generally increase (67% of economies), but fall in the Australia; Chile; New Zealand; and the Philippines. Insurance services (Figure 3.14) increase in most economies (65%), but Hong Kong, China; Peru; the Philippines; and the US see falls. The category of other business services (Figure 3.15), which includes a wide range of activities, falls in most economies (71%) likely due to habits of personal presence for professional services, but increases in Canada; Chinese Taipei; Korea; the Philippines; and Thailand, perhaps reflecting increased reliance on online service provision in those economies.

Table 3.1: Summary of Figures 3.9-3.15

Sector	% of Economies with Increase in Exports	% of Economies with Decrease in Exports
Travel	0	100
Transport	10	90
Telecom	41.18	58.82
Construction	20	80
Financial	66.67	33.33
Insurance	64.71	35.29
Business	29.41	70.59

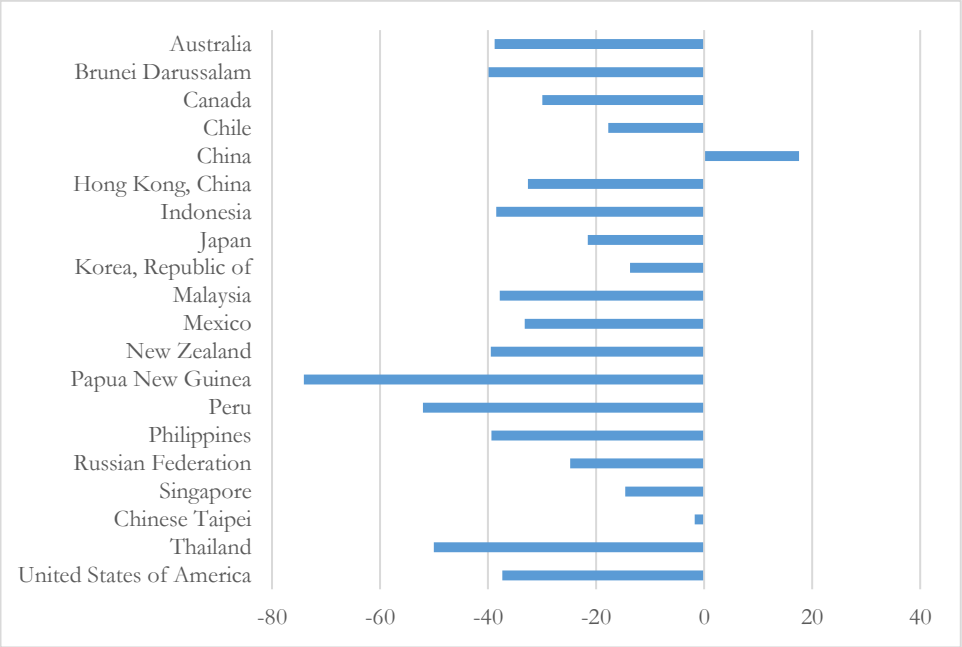
Source: Authors' calculations
Note: Percentages refer to percentages of economies that report data in each case.

Figure 3.9: Travel services, % change in exports between 2019 (Q1-Q3) and 2020 (Q1-Q3), APEC member economies



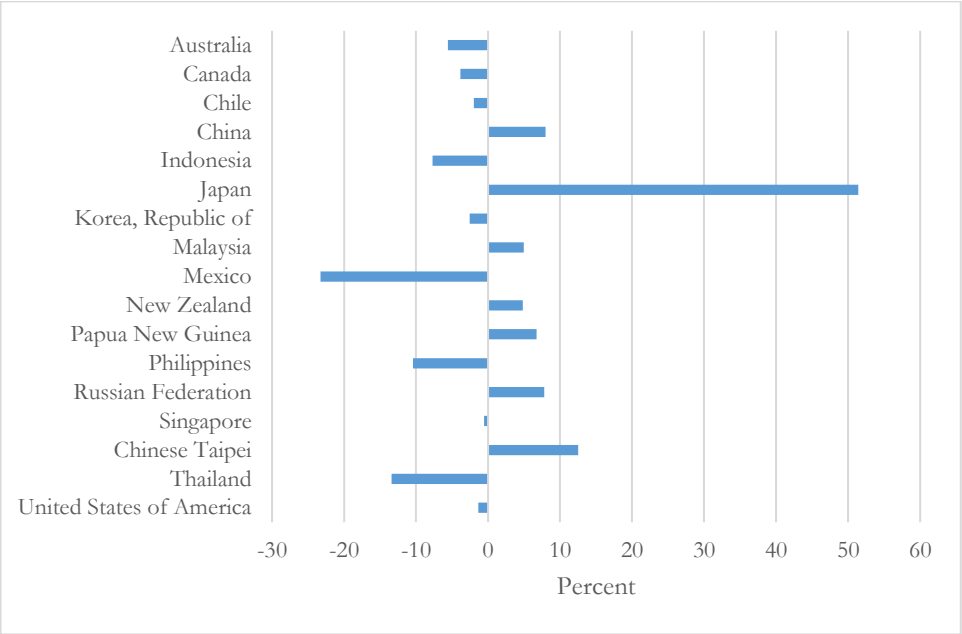
Source: WTO.
Note: Economies not listed did not have all necessary data available.

Figure 3.10: Transport services, % change in exports between 2019 (Q1-Q3) and 2020 (Q1-Q3), APEC member economies



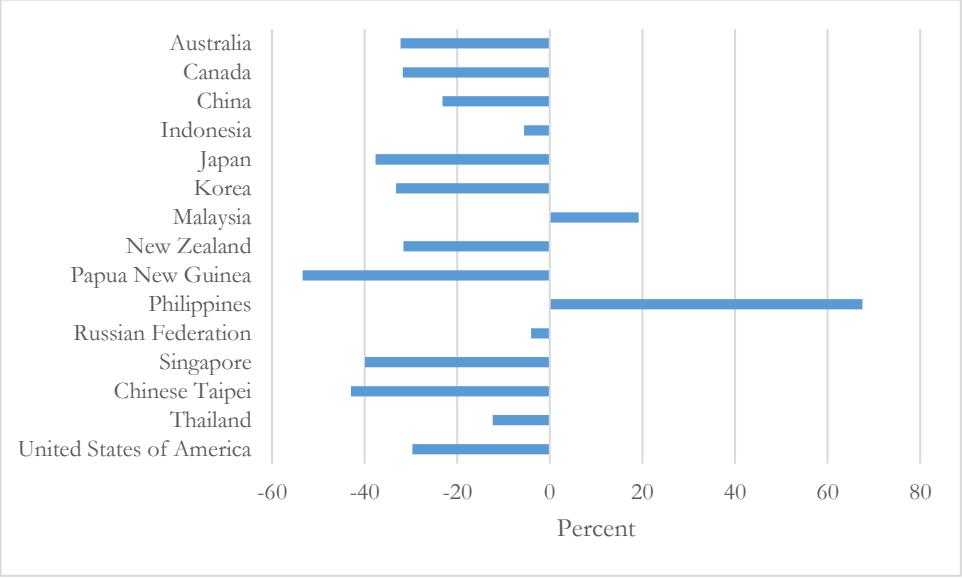
Source: WTO.
Note: Economies not listed did not have all necessary data available.

Figure 3.11: Telecommunications, computer, and information services, % change in exports between 2019 (Q1-Q3) and 2020 (Q1-Q3), APEC member economies



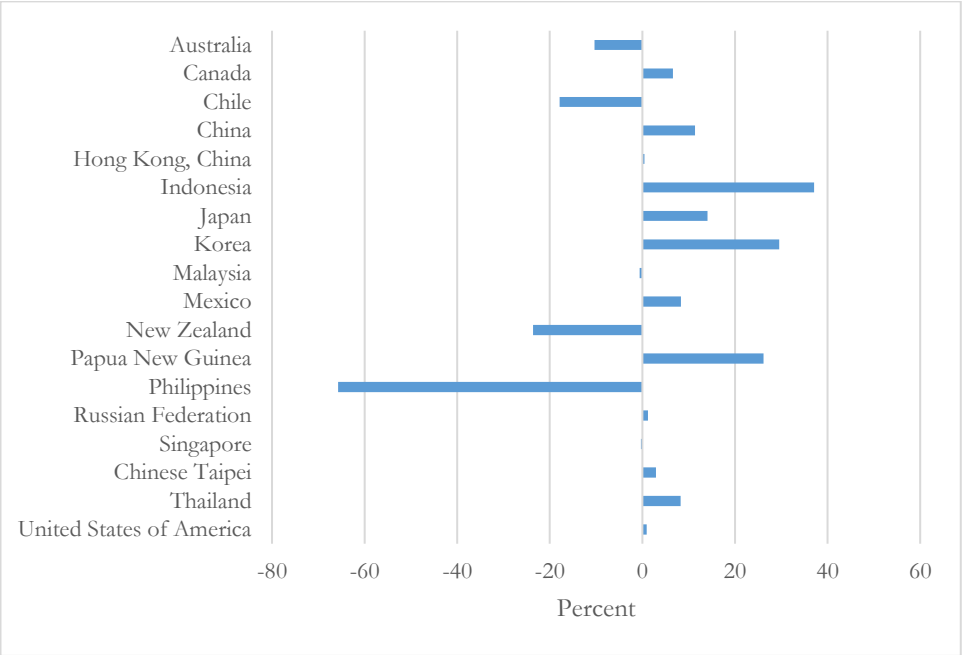
Source: WTO.
Note: Economies not listed did not have all necessary data available.

Figure 3.12: Construction services, % change in exports between 2019 (Q1-Q3) and 2020 (Q1-Q3), APEC member economies



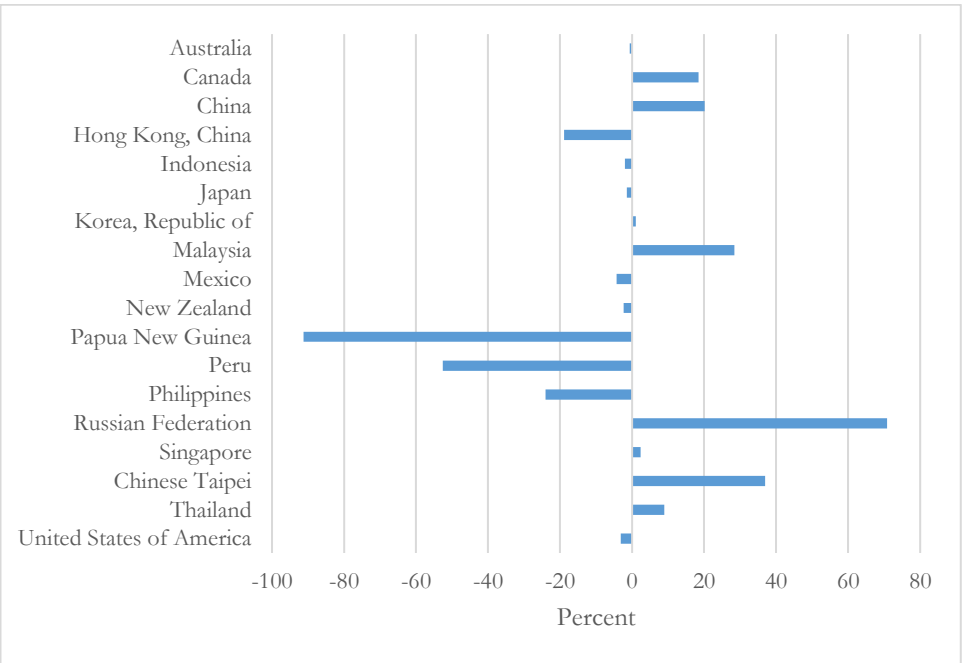
Source: WTO.
Note: Economies not listed did not have all necessary data available.

Figure 3.13: Financial services, % change in exports between 2019 (Q1-Q3) and 2020 (Q1-Q3), APEC member economies



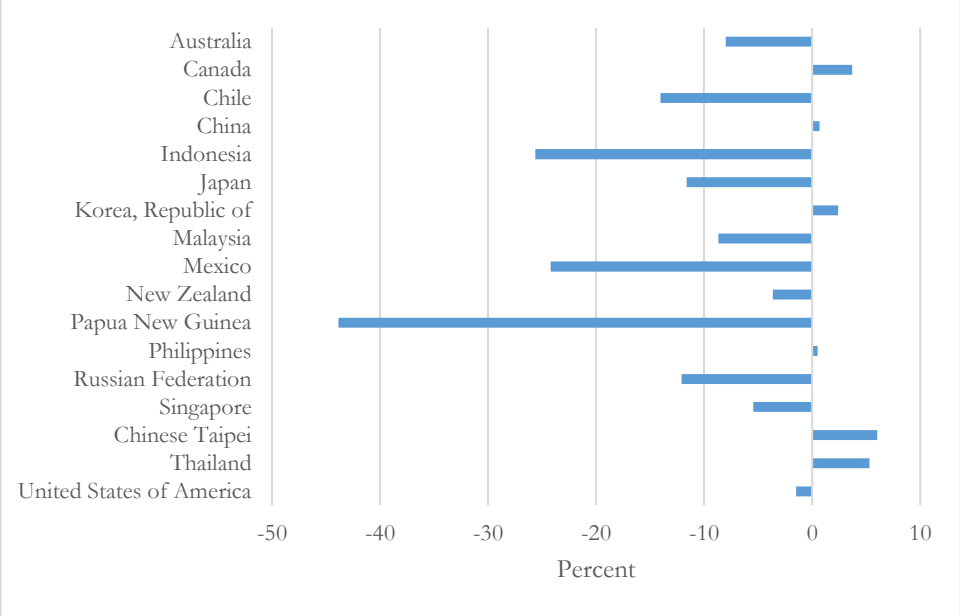
Source: WTO.
Note: Economies not listed did not have all necessary data available.

Figure 3.14: Insurance and pension services, % change in exports between 2019 (Q1-Q3) and 2020 (Q1-Q3), APEC member economies



Source: WTO.
Note: Economies not listed did not have all necessary data available.

Figure 3.15: Other business services, % change in exports between 2019 (Q1-Q3) and 2020 (Q1-Q3), APEC member economies



Source: WTO.
Note: Economies not listed did not have all necessary data available.

At the economy and sector levels, there are clearly complex dynamics in work. The split between in-person and remote services is not clear cut in the trade impact data, likely because aggregate demand also plays a role: even for remotely provided services, a severe economic contraction in trading partners means that total trade values will tend to fall. Nonetheless, a clear conclusion is that where there are contractions, they are sometimes very large: travel services stand out as a special case, falling to close to zero in most economies; but even in other sectors, there are falls in export value of 20% or more in a very short space of time. So the services trade contraction is major in size and scope, even after accounting for the overall slight rebound seen in 2020 quarter 3.

Thus far, the discussion has focused on services trade as recorded in the Balance of Payments, which is a mix of GATS Modes 1, 2, and 4. No high frequency data on trade by GATS mode of supply are currently available, but it is possible to use greenfield investment data as a proxy for Mode 3 trade. Investment is not actually trade, but is likely to be strongly correlated with it: larger investments are likely to generate higher sales, which are the measured value of Mode 3 trade.

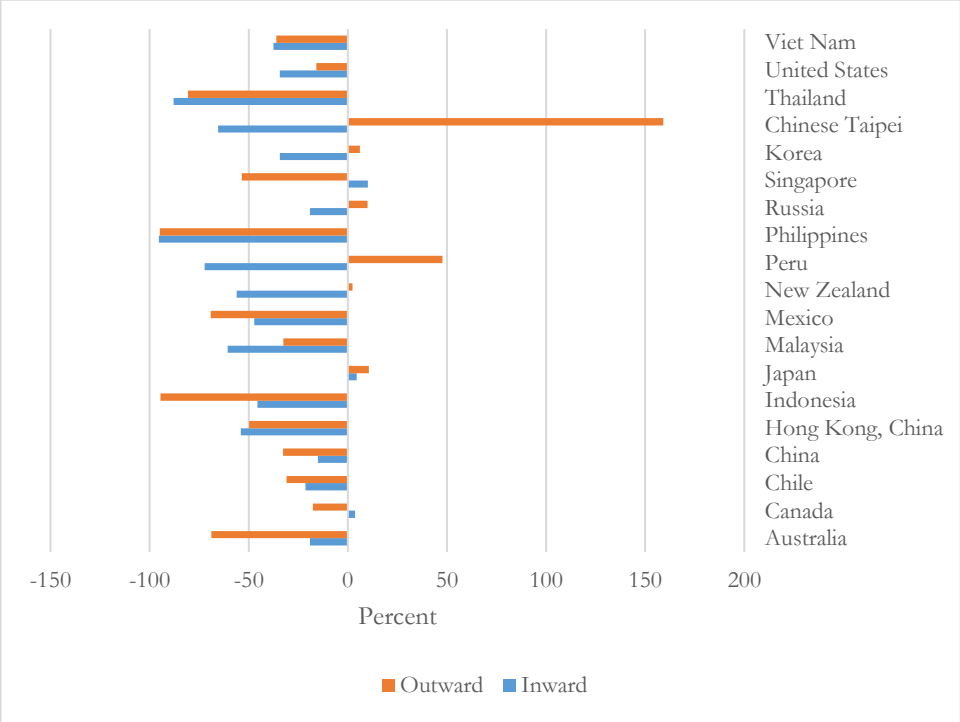
According to data from fDi Markets, a private database maintained by the Financial Times,[240] total announced greenfield investment in services sectors within APEC declined by 37%, considerably more than the 24% fall in investment from APEC economies to non-APEC economies. In other words, the investment (and therefore Mode 3) effects of the pandemic hit intra-regional connections relatively hard. While Brunei Darussalam and Indonesia registered huge declines in announced greenfield investment in services in 2020 as source economies, the Philippines and Thailand were adversely affected as both source and recipient of this

[240] Financial Times, "fDi Markets: The in-Depth Crossborder Investment Monitor from the Financial Times," June 1, 2021, https://www.fdimarkets.com/. The following sectors from fDI Markets are considered to be services sectors in this analysis: real estate, hotels & tourism, leisure & entertainment, healthcare, communications, renewable energy, software & IT services, transportation & warehousing, financial services, business services, and biotechnology.

investment. In contrast, Chinese Taipei and Peru announced considerably more greenfield investment in services in 2020 relative to 2019; Chinese Taipei in particular reported a 159% increase, though the share of APEC members in this investment fell from 44% in 2019 to 27% in 2020.

Figure 3.16 summarizes these findings by presenting the year-on-year changes in investment in services by origin (outward) and destination (inward) economy, summing over all partners within and outside the region. APEC economies have generally seen their inward investment in services fall, and the same is true of outward investment as well, subject to the exceptions already noted. The falls are quantitatively large, in the tens of percent relative to 2019 levels. While extrapolating from these changes to GATS mode 3 services trade is not straightforward, it seems likely that sales by foreign affiliates have been held back by the pandemic in line with the mechanism postulated above.

Figure 3.16: Change in outward and inward greenfield FDI in services, APEC economies; 2020 compared with 2019, % of baseline



Source: fDi Markets.
Note: Economies not listed did not have all necessary data available.

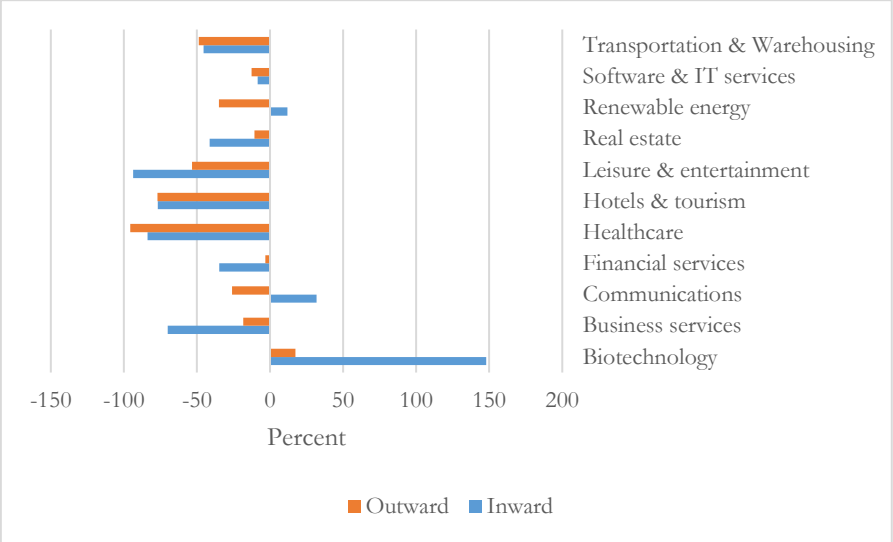
While the United States was by far the largest source (and recipient) of this investment amongst APEC economies followed by China and Japan, only about a third of US announced greenfield investment in services was destined to another APEC member. In contrast, more than half of announced services greenfield investment coming from Hong Kong, China; Japan; New Zealand; Singapore; Korea; and Thailand was destined to another APEC economy during 2019-2020. On the whole, the share of intra-APEC announced greenfield investment in services in total announced APEC greenfield services investment declined from 19.2% in 2019 to 16.4% in 2020.

At a sectoral level, communications, real estate, and renewable energy accounted for the bulk of APEC investment in services, though the real estate sector witnessed a 41.2% decline in

2020 relative to 2019. Other services sectors that saw huge declines in 2020 included leisure and entertainment, healthcare, hotels and tourism, and business services. In contrast, announced greenfield investment in biotechnology more than doubled from $2.2 billion in 2019 to $5.4 billion in 2020.

The renewable energy sector was also the largest recipient of announced services greenfield investment destined to APEC economies, though it again witnessed a 35% decline in 2020 relative to 2019; other major declines were seen in healthcare, hotels and tourism, and transportation and warehousing. Meanwhile, hotels and tourism had $16.4 billion of announced intra-APEC services greenfield investment in 2019 but this plummeted to $3.1 billion in 2020. Renewable energy, real estate, communications, and software were the other sectors attracting the bulk of announced intra-APEC services greenfield investment, but while the first three sectors witnessed a fall in such investment in 2020 relative to 2019, software and IT services witnessed a 15% increase. Figure 3.17 summarizes these results in percentage terms, showing that most sectors have seen substantial declines in inward and outward FDI during the pandemic period, but that biotechnology and communications are exceptions.

Figure 3.17: Change in outward and inward greenfield FDI, APEC economies, by sector; 2020 compared with 2019; % of baseline.



Source: fDi Markets.

Taking all of this together, it is clear that trade in Mode 3 has also suffered as a result of the pandemic, with investment—which drives Mode 3 trade—falling substantially, though not uniformly, during the pandemic period. The sectoral distribution of declines is also suggestive of a pandemic effect, with sectors like communications and biotechnology affected positively, whereas most other sectors are affected negatively.

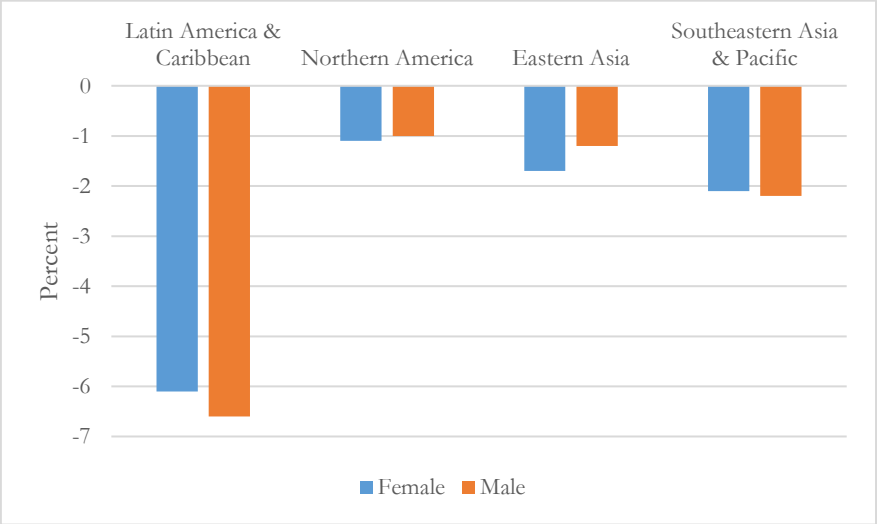
3.3.3 COVID-19 and Inclusion: Evidence from Labor Markets

As a major source of employment, any disruption to the services sector necessarily has implications for work and income. In addition, the services sector employs large numbers of women in many economies, which means that the effects of disruptions are gendered, and can have particularly serious effects for women. In some economies, parts of the service sector provide employment to relatively poor people, as well as ethnic minorities. As a result, it is important to look at the impact of the pandemic from the point of view on inclusion as well.

Given the size of the trade shock, as well as accompanying shocks to production and sale within economies, there must also be major employment impacts in the region. High frequency employment data are not available from standard sources, but ILO sector and economy reports help paint a picture. At an aggregate level, ILO (2021) estimates that in 2020, 8.8% of global working hours were lost relative to 2019; this loss translates into the possible loss of 255 million full time jobs worldwide. Absent support measures, the income loss associated with this change in employment equates to around 4.4% of global GDP, which is a huge economic shock.[241] Latin America is identified as one of the regions where job losses have been particularly severe, though North America, East Asia, Southeast Asia, and Oceania are not.

Again at an aggregate level, ILO (2021) indicates that job loss has hit women harder than men. The report estimates an overall loss in employment of 5% for women, but 3.9% for men. Economic shocks are rarely gender neutral, and the COVID-19 pandemic appears to be no exception. A key factor underlying the gender incidence of employment losses in this case is the concentration of women workers in services sectors, in particular those where in-person interactions are required. However, as Figure 3.18 shows, the regions used by ILO (2021) that overlap with APEC member economies in fact see more nuanced outcomes: only East Asia and North America have substantially higher changes (in percentage terms) of female employment as compared with male employment. Looking at World Bank income groups, the same source indicates that low income economies lost 6.7% of total working hours, compared with 11.3% for lower middle income economies, 7.3% for upper middle income economies, and 8.3% for high income economies. But these aggregates likely obscure substantial variation at more detailed levels.

Figure 3.18: Changes in employment by gender relative to 2019, ILO regions with APEC member economies, %



Source: ILO.
Note: Economy level data are not consistently available for 2020, so the figure reports ILO aggregates corresponding to geographical regions with APEC member economies; however, the regions used by ILO also include economies that are not APEC member economies.

[241] International Labour Organization, "ILO Monitor: COVID-19 and the World of Work. Seventh Edition," January 25, 2021, https://www.ilo.org/global/topics/coronavirus/impacts-and-responses/WCMS_767028/lang--en/index.htm.

In addition to the work discussed above, ILO has also prepared sector-level briefs, including on some services sectors.[242] Examples include construction, road transport, care work (health), food retail, and tourism. Taken together, the briefs show that employment impacts are in line with the trade impacts discussed previously: in those sectors most directly affected, such as tourism, the changes in employment are quantitatively large. Taking tourism as an example, ILO qualifies the impact as "unprecedented," and highlights the implications in terms of lost employment and income in particular for young women. The brief reports an expected contraction of the sector globally by between 45 and 70 percent, which is a huge economic shock relative to what has previously been observed.

Given the importance of the services sector to trade, production, and employment, it clearly needs to be an important part of recovery efforts. The case studies below discuss in detail particular examples of this kind of work by APEC member economies. But as ILO (2021) and the various briefs point out, it is important for governments to work with civil society in the interim as well as with a medium-term outlook, with a view to developing social and economic supports to avoid the dire social consequences that would otherwise occur from such a large and widespread economic shock.[243]

3.3.4 Listening to the Private Sector on the Shock and Responses to it

The data reviewed so far has been at the level of economies and sectors. It paints a sobering picture of the impacts of the COVID-19 pandemic on services production, trade, and employment. But an important additional dimension is the concrete experience of firms on the ground. While information at this level of detail is still scarce other than in a largely anecdotal way, the World Bank's COVID-19 Business Pulse survey provides a starting point. As part of its ongoing projects surveying firms, the World Bank has asked firms in Indonesia, the Philippines, Russia, and Viet Nam questions that deal specifically with their experiences during the pandemic period. This subsection reports on results from that survey, focusing on data for services sectors relative to a manufacturing benchmark. Of course, these figures are based on a survey that draws only a randomly selected sample of firms: around 900 in Indonesia, 500 in Viet Nam, 1,100 in Russia, and 35,000 in the Philippines. As the overall sample is small except in the case of the Philippines, results need to be interpreted cautiously in particular when the data are further stratified by sector or firm size. But in the absence of other data, these kinds of survey results are nonetheless highly informative as to underlying dynamics at a micro-level.

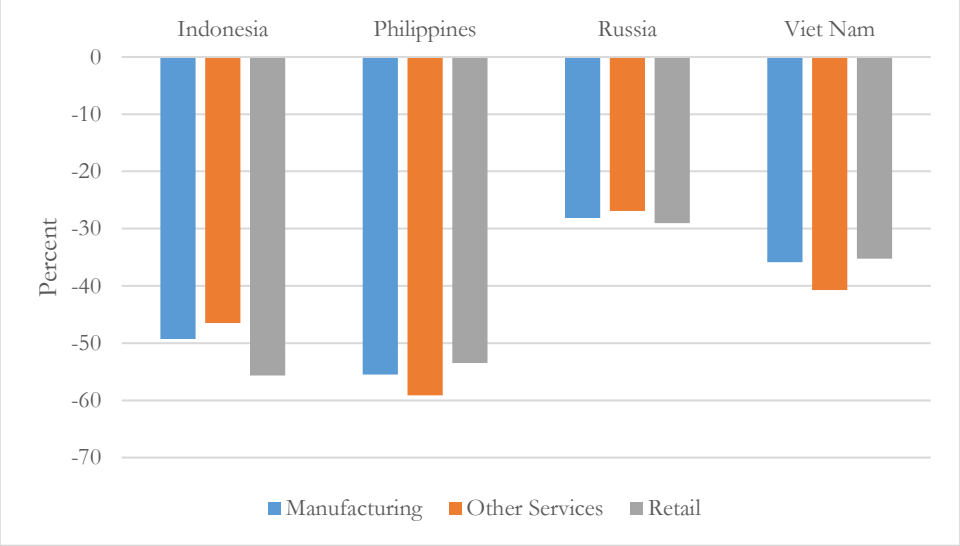
Figure 3.19 shows that in all four economies, firms report huge declines in sales relative to the previous year. Impacts are of the magnitude of one-third to one-fifth on average. In all four economies, there is evidence that at least some services firms are harder hit than manufacturers, although the split between retail and other services differs from one case to another.

In addition to highlighting sectoral differences, the data also show impacts by firm size type (aggregating across all sectors). They therefore help sketch out the impacts on micro, small, and medium enterprises (MSMEs) relative to large firms, which is important from an inclusion standpoint. In terms of lost sales, with the exception of micro-enterprises in Russia and small and medium enterprises in Viet Nam, there is consistent evidence that the average decline in

[242] International Labour Organization, "COVID-19 and the World of Work: Sectoral Impact, Responses and Recommendations," April 22, 2020, https://www.ilo.org/global/topics/coronavirus/sectoral/lang--en/index.htm.
[243] International Labour Organization, "ILO Monitor: COVID-19 and the World of Work. Seventh Edition"; International Labour Organization, "COVID-19 and the World of Work: Sectoral Impact, Responses and Recommendations."

monthly sales is correlated with firm type: the ordering is strict, other than the instances just cited, from large firms with the lowest impacts to micro-enterprises with the highest impacts.

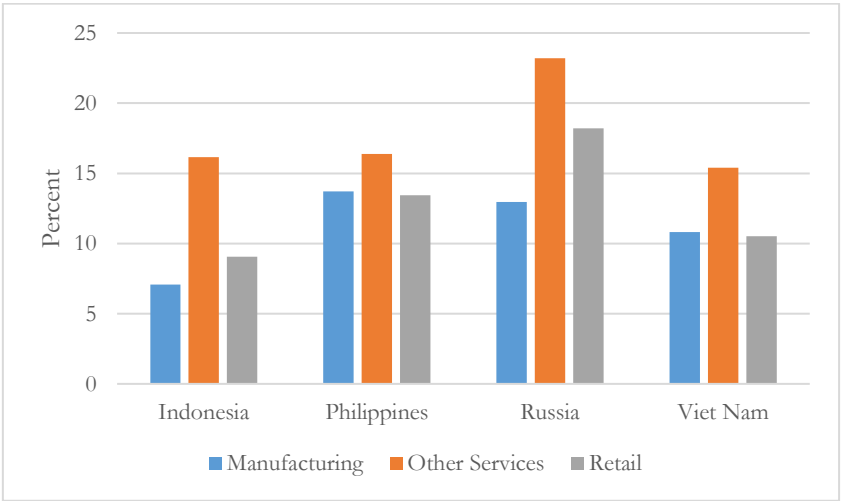
Figure 3.19: Average decline in monthly sales relative to the previous year, selected sectors, %



Source: World Bank.
Note: Data for other APEC member economies not available.

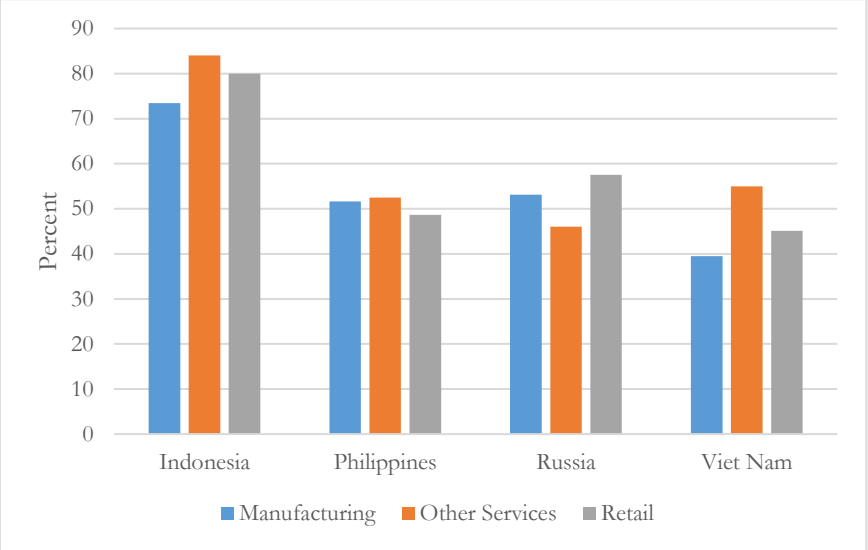
The micro-data therefore match the pattern seen in the economy-level data reported previously. But they also make it possible to see the various ways in which firms are responding to the economic shock with the aims of preserving activity and employment. Figure 3.20 and Figure 3.21 show that firms have been active in making use of digital technologies, either by moving sales activities online or by facilitating remote work. In both cases, the shift to digital engagement seems to be more prevalent among services firms than among manufacturing firms. However, size is again a constraint: larger firms are more likely than smaller firms in most cases to use digital platforms, although remote work practices display no clear pattern in terms of the size distribution of firms.

Figure 3.20: Share of employees who can work remotely, selected sectors, %



Source: World Bank.
Note: Data for other APEC member economies not available.

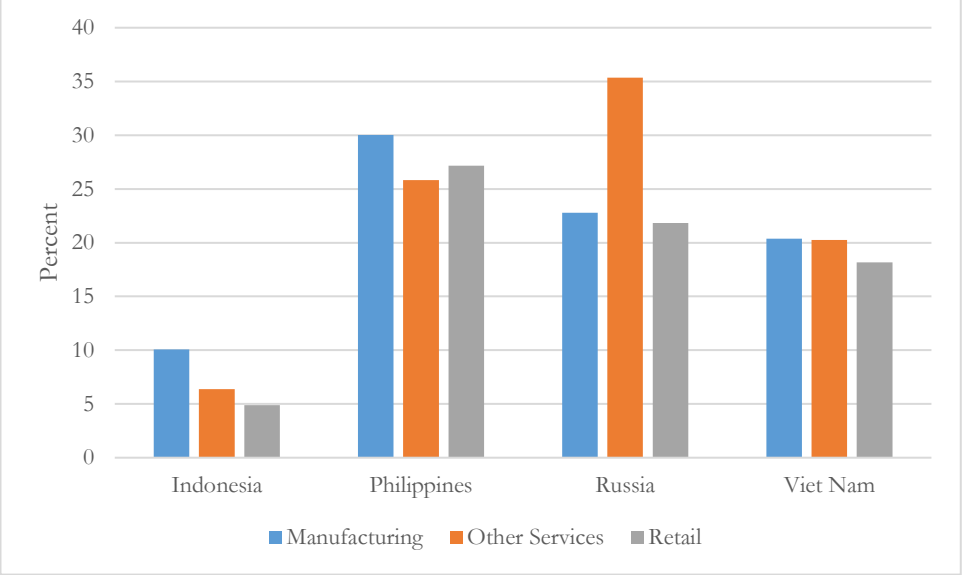
Figure 3.21: Share of firms that started or increased use of digital platforms, selected sectors, %



Source: World Bank.
Note: Data for other APEC member economies not available.

Governments have also been active in supporting firms, including through direct payments, tax extensions or waivers, and wage subsidies. Figure 3.22 shows that this support is widespread, with large proportions of firms in Russia, the Philippines, and Viet Nam reporting that they have received or expect to receive public assistance. Interestingly, other than in Russia, the data tend to suggest that public assistance has been more commonly received by manufacturing firms rather than services firms, even though evidence presented above suggests that the economic impacts have been relatively more severe for services firms. The reasons for this pattern are unclear without further data. But a much clearer pattern in the data is that larger firms are much more likely to report having received or expecting to receive public assistance than smaller firms. There is a clear negative correlation with firm size in all four economies, which suggests that policymakers may need to pay attention to the inclusivity of supportive policies from that point of view.

Figure 3.22: Share of establishments that received or expect to receive public assistance, selected sectors, %



Source: World Bank. Note: Data for other APEC member economies not available.

The World Bank data only cover a small number of APEC member economies, but have the advantage of being fully available in the public domain. In any case the results are in line with those from broader research efforts. For instance, ITC uses a survey approach to conclude that COVID-19 has had a major impact on MSMEs around the world, in particular in developing economies.[244] However, the World Bank data go further, albeit with limited geographical coverage, to describe recovery efforts as well.

Analysing survey results from the private sector reinforces the view expressed above based on economy-level data: the COVID-19 pandemic has been accompanied by a major economic downturn, which has been particularly strongly felt in services sectors through contractions in trade, production, and employment. But the survey data highlight another important aspect of the crisis, which is that firms and governments have responded proactively to these challenges. On the one hand, firms have adopted flexible working arrangements and have been active in adopting digital platform technologies. On the other, governments have taken steps to support affected businesses. So understanding government and firm responses to the pandemic are an important part of understanding how economies can move from a sharp contraction to a recovery, as has already been seen in the high frequency data for some economies.

3.3.5 The Changing Policy Environment

The Global Trade Alert (GTA) project has been cataloguing trade policy interventions in a broad sense since the Global Financial Crisis. The GTA team classifies announced and implemented measures according to a pre-defined set of policies, then codes them as liberalizing or harmful. "Harmful" in this context means that a measure introduces discrimination against foreign providers.

[244] Floriana Borino and Valentina Rollo, "Quantifying the Effect of COVID-19 on Small Business around the World," International Trade Centre, May 28, 2020, https://www.intracen.org/covid19/Blog/Quantifying-the-effect-of-COVID-19-on-small-business-around-the-world-the-world/.

Table 3.2 shows the result of this exercise for APEC member economies during the pandemic period, defined as 2020 and 2021. There is evidence of a substantial amount of liberalization in relation to FDI, as well as to a lesser extent in labor markets. But the largest number of policy changes tracked by the GTA team relates to financial grants and loans to firms, which are classified as harmful because they typically are not available to foreign firms (although this distinction becomes blurred in the case of Mode 3 trade). While these measures can in some cases be discriminatory, they nonetheless respond to a pressing social need and do so in a way that is relatively transparent, and less distortionary than many other types of policies. Table 3.2 therefore shows that there has been an extensive policy response to the pandemic in the region, and that it has most often been through measures that are not among the most distortionary available to governments. So the overall picture is a positive one, which reinforces the view presented in the previous section to the effect that the private sector has seen substantial government support during the pandemic period.

Table 3.2: Policy changes in APEC member economies affecting the services sector, 2020 and 2021

Intervention	Harmful	Liberalizing
Capital injection and equity stakes (including bailouts)	24	
Consumption subsidy	2	
Controls on commercial transactions and investment instruments	1	
Export ban	1	
Export subsidy	2	
FDI: Entry and ownership rule	22	16
FDI: Financial incentive	1	2
FDI: Treatment and operations, nes	5	
Financial assistance in foreign market	25	
Financial grant	146	
Import ban	4	
Import licensing requirement	1	
Import-related non-tariff measure, nes		1
In-kind grant	1	
Interest payment subsidy	2	
Internal taxation of imports	2	
Labor market access		9
Loan guarantee	6	
Local labor	1	
Local operations	3	1
Local sourcing	1	
Localization incentive	4	
Public procurement localization	5	
Public procurement, nes	1	
State aid, nes	2	
State loan	42	
Tax or social insurance relief	31	2
Tax-based export incentive	3	

Trade finance	9	

Source: GTA.

3.3.6 Economy case studies

With these thoughts in mind, this subsection presents a series of economy case studies. Each case study focuses on a single sector. The idea is to examine how the pandemic has affected economic activity in that sector, but also to understand the ways in which governments and businesses have proactively moved to deal with the new challenges they face. Given that the situation on the ground is rapidly evolving, every attempt has been made to ensure that information is current as of writing (May 2021); however, it is possible that policies and practices may have changed since the research for this study was conducted.

The rationale for case study selection is primarily to ensure diversity, and secondarily to identify instances of good practice that could be of use to other economies. To ensure diversity, the case studies look at a range of sectors, ranging from "classic" sectors like transport, to movement-intensive services like tourism, to human services like health and education, to ICT services. Each sector is important in the overall export bundle of the economy concerned, and is also one where a number of economies have actual or emerging export interests. In addition, the case studies cover developing as well as developed economies, and include examples from South America, North America, and Asia.

3.3.6.1 Health services in Singapore

Importance of the sector to the economy

Trade in health services has significant potential to allow consumers to obtain high quality care at reasonable cost, including in the Asia-Pacific.[245]. Health services can be traded under all four GATS modes of supply.[246] (Chanda, 2002). Mode 1 trade is commonly referred to as telehealth and involves the remote provision of services, typically online. Mode 2 is the most commonly considered mode of supply for health services, involving movement of the consumer (patient) to the provider's location. Mode 3 involves sales by foreign affiliates in the healthcare sector, for instance where a hospital group in one economy invests in hospitals in another economy and sells health services through them. Finally, Mode 4 involves temporary movement by medical providers to the patient's location. Clearly, exports under Modes 2 and 4 could be severely disrupted due to restrictions on cross-border movements of people, as well as changes in consumer preferences for international travel.[247]

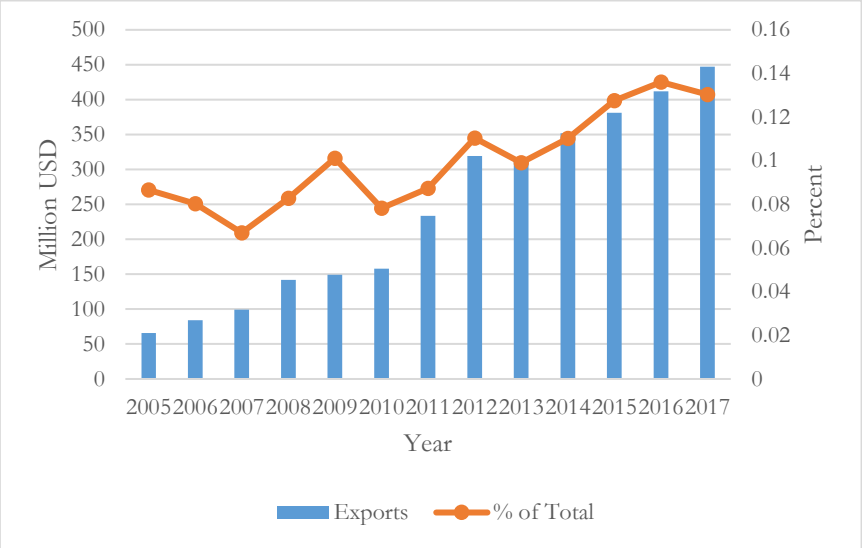
Against this background, Singapore has one of the world's leading health systems, and has become a regional healthcare hub.[248] It attracts more than 0.5 million medical tourists annually, of whom 60% come from another APEC member economy (Indonesia). Health tourism

[245] Jutamas Arunanondchai and Carsten Fink, "Trade in Health Services in the ASEAN Region," *Health Promotion International* 21 Suppl 1 (December 2006): 59–66, https://doi.org/10.1093/heapro/dal052.
[246] Rupa Chanda, "Trade in Health Services," *Bulletin of the World Health Organization*, 2002, https://www.who.int/bulletin/archives/en/80(2)158.pdf.
[247] Tamara Charm et al., "Consumer Sentiment Is Diverging across Countries," McKinsey, October 26, 2020, https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/a-global-view-of-how-consumer-behavior-is-changing-amid-covid-19.
[248] This paragraph is based on: Ayman Falak Medina, "Singapore's Healthcare Industry: Gateway to ASEAN's Healthcare Market," *ASEAN Briefing*, August 18, 2020, https://www.aseanbriefing.com/news/singapores-healthcare-industry-gateway-to-aseans-healthcare-market/.

accounts for just under 4% of total export earnings from tourism. While competition with lower cost choices is intensifying, Singapore retains important advantages in specialty areas such as oncology, organ transplants, orthopaedics, cardiology, and neurology.

Figure 3.23 shows that Singapore's exports of health services have been growing rapidly over recent years. Between 2005 and 2017, they saw an average annualized growth rate of 17%, which is extremely rapid. However, the sector is still small in Singapore's total services exports, given the important role played by other sectors like financial and business services. In 2017, health services accounted for 0.13% of Singapore's total services exports.

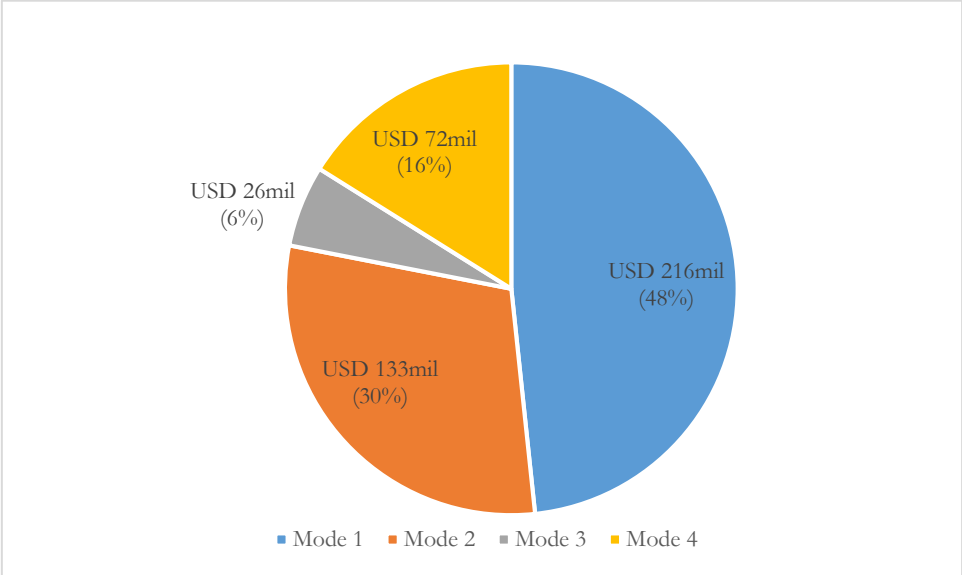
Figure 3.23: Singapore's exports of health services, million USD (left axis) and percent of total services exports (right axis), 2005-2017



Source: WTO TISMOS database.

Before considering the impact of the COVID-19 pandemic on Singapore's exports of health services, it is important to look at the modal breakdown of that trade in the baseline prior to the pandemic (Figure 3.24). Mode 1 accounts for nearly half of total exports, which suggests that even prior to the pandemic, telehealth services were an important part of Singapore's export mix in this sector. Also of interest is that Mode 4 accounts for 16% of total sectoral exports, so the data suggest that Singaporean health professionals also travel to other economies to deliver services. While Mode 2, movement of patients, is highly significant at 30% of the total, it does not account for the overwhelming majority of trade as in the case of some other economies that have important export activities in this sector.

Figure 3.24: Singapore's exports of health services by Mode of Supply, 2017
(million USD and %)



Source: WTO TISMOS database.

The Impact of COVID-19

Comparing data from the Singapore Department of Statistics for exports of health services in 2019 and 2020, there is a fall of less than 4% on an annual basis. This fall is relatively small compared with the impacts examined above in the context of the region-wide data review. Data on trade by mode of supply are not available, but it is likely that in addition to building on an established strong performance in Mode 1 trade, Singapore will have seen some shift from Modes 2 and 4 to Mode 1. Given the size of the economic shock around the world, trade figures are down despite this modal shift, due to the demand contraction elsewhere. But modal substitution is highly likely to have cushioned the fall substantially. The Singaporean experience shows that proactive investment in new technologies and innovative regulatory approaches can help economies deal with unforeseen events such as the COVID-19 pandemic.

Lee et al. (2020) look at the case of telehealth in Singapore, based largely on survey data.[249] They find significant willingness among Singaporeans to embrace the technology, although attitudes differ according to personal characteristics such as age. This finding suggests that internal demand for telehealth has supported the emergence of tailored services in this area, which can then naturally be extended to overseas markets using the same technology.

Response by Firms and the Government

As a high-income economy with well-developed infrastructure and a robust budgetary position, Singapore was able to move rapidly to put in place support programs for sectors affected by the COVID-19 pandemic, focusing on support of businesses and workers. The government has followed up its initial action with a total of four rounds of economic stimulus.[250]

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[249] Kitty Lee, Matt Zafra, and Justin Bay, "COVID-19 Makes Singapore's Digital Health 'On Demand,'" Marsh McLennan, 2020, https://www.mmc.com/insights/publications/2020/august/covid-19-makes-singapore-s-digital-helath--on-demand-.html.

[250] KPMG, "Singapore: Government and Institution Measures in Response to COVID-19," November 24, 2020, https://home.kpmg/xx/en/home/insights/2020/04/singapore-government-and-institution-measures-in-response-to-covid.html.

An important innovation has been Singapore's regulatory sandbox for telemedicine,[251] which enabled the co-creation of process and governance measures to support an effective and efficient regulatory regime and allow the safe growth of telemedicine. This has set the foundations of Singapore's telemedicine efforts in the COVID-19 pandemic. With the sandbox objectives being met, the Ministry of Health has since discontinued the telemedicine sandbox and moved to introduce a voluntary listing system for telemedicine service providers in early 2021, based on required training and commitment to meet essential safety measures.[252] A regulatory sandbox allows for controlled experimentation of new technologies and business models, prior to full-scale regulatory approval.[253] ILO states that "[t]echnological advances, such as online and mobile health applications, 3D-printing and artificial intelligence can enhance health service delivery and ways of working during and beyond the pandemic". But as with any use of new technology, appropriate regulation is also important.[254] Lee et al. (2020) show that Singaporeans have a high degree of confidence in government solutions, and as such, are willing to embrace new technologies like telehealth.[255] It is plausible that during the pandemic, the ability to rely on telehealth services likely freed up in-person treatment for more severe cases. The ability to safely test and deploy this technology locally gives service providers the ability to develop a strong business model and market reputation before moving to international provision—which as the data discussed above show, Singapore has already done. As such, Singaporean health services providers were relatively well positioned to weather the trade disruptions of the COVID-19 pandemic to trade via Modes 2 and 4 by taking advantage of their established capabilities in telehealth and Mode 1 trade. In terms of trade in health services, telehealth means that patients can conveniently access advice and consultation services with providers using online platforms.

From a Mode 2 perspective, it is important to look at the regulatory stance outside the health services sector, and in particular the use of entry restrictions as a public health measure during the pandemic, designed to stop spread of the virus associated with international travel. Singapore, like all other economies, initially responded to the COVID-19 pandemic in part by restricting access to international travellers, including those seeking medical treatment. However, it has since moved to establish a risk-based regime of continued access for visitors from a number of economies, including important regional partners in terms of trade in health services.[256] In combination with a regime of declaration, testing and controlled itinerary, the government is attempting to strike an appropriate balance between managing public health risks, and facilitating international movements of people. Rather than completely shutting down access to international visitors, including health tourists, the Singaporean government has elected to use testing and preventative isolation as a way of ensuring that supporting trade does not come at the expense of public health.

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[251] Ministry of Health, Singapore, "MOH Launches First Regulatory Sandbox to Support the Development of Telemedicine," April 18, 2018, https://www.moh.gov.sg/news-highlights/details/moh-launches-first-regulatory-sandbox-to-support-development-of-telemedicine.
[252] Ministry of Health, Singapore, "Voluntary Listing of Direct Telemedicine Service Providers to Help Patients Make Informed Choices," February 26, 2021, https://www.moh.gov.sg/news-highlights/details/voluntary-listing-of-direct-telemedicine-service-providers-to-help-patients-make-informed-choices.
[253] Baker McKenzie, "International Guide to Regulatory Fintech Sandboxes," December 2018, https://www.bakermckenzie.com/en/-/media/files/insight/publications/2018/12/guide_intlguideregulatorysandboxes_dec2018.pdf.
[254] International Labour Organization, "ILO Sectoral Brief: COVID-19 and the Health Sector," April 11, 2020, https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/briefingnote/wcms_741655.pdf.
[255] Lee, Zafra, and Bay, "COVID-19 Makes Singapore's Digital Health 'On Demand.'"
[256] Immigration & Checkpoints Authority, Singapore, "Travelling to Singapore," accessed June 1, 2021, https://safetravel.ica.gov.sg/arriving/overview.

While the analysis here has focused on the implications of the COVID-19 pandemic for trade in health services, it is also important to consider impacts on the broader healthcare sector in Singapore. The economy has vibrant medical products and biotechnology sectors that also support substantial export income. During the pandemic period, demand for Singaporean pharmaceuticals such as antibiotics and anaesthesia products, has increased with the United States and Japan figuring on the list of the largest export destinations.[257] So in addition to the government action highlighted above in relation to entry measures, the private sector has proved doubly responsive to the crisis. On the one hand, it has leveraged its established expertise in telehealth and trade by GATS mode 1 to support continued engagement with patients in other economies. But in addition, firms have stood ready to answer increased demand from abroad for goods and services that are particularly important in the context of the pandemic. The case study shows how government and the private sector can, within a strong regulatory framework, develop a collaborative approach that helps support activity and employment even in very turbulent economic and social circumstances.

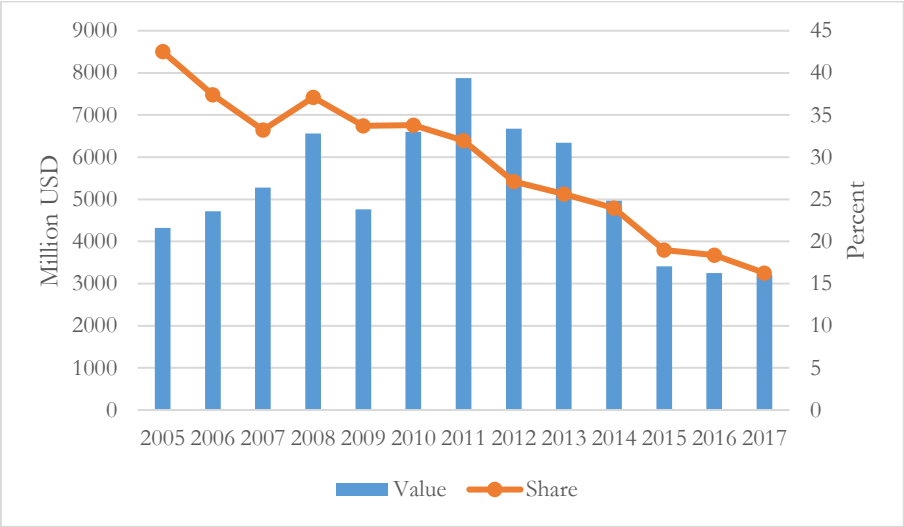
3.3.6.2 Transport services in Chile

Importance of the Sector to the Economy

Transport services are important for the Chilean economy. IMF data suggest that the sector contributed 6% of total value added in 2015 and 5.2% in 2018, while its share in the economy's total services exports increased marginally from 31.6% in 2016 to 31.9% in 2019. According to data from WTO TISMOS, road and sea transport were the dominant subsectors within transport services accounting for 59% and 32% respectively of total transport services exports in 2017, the latest year for which data are available. Figure 3.25 puts these figures in perspective by plotting TISMOS data for 2005 through 2017 in dollar and percentage of total terms. While the share of transport services in total services exports has fallen over time, it is still quantitatively large. Data from the BATIS dataset show that linkages with other APEC economies are vital to Chile's transport sector, accounting for over half of all transport services exports.

[257] Medina, "Singapore's Healthcare Industry."

Figure 3.25: Chile's exports of transport services, million USD (left axis) and percent of total services exports (right axis), 2005-2017



Source: WTO TISMOS database.

The Chilean Government invested nearly $5 billion in 2020 in one of the largest railway development plans in the economy named "Chile on Rails", aimed at doubling rail freight volumes to over 21 million tons a year by 2027, along with triple the passenger numbers. The project will include 27 infrastructure and security projects in order to boost passenger and cargo services throughout Chile, and its completion is expected by 2027.[258] Meanwhile, Chile's freight and logistics market is competitive but fragmented with the presence of many local as well as international players. Chile is considered to have great potential for overseas logistics providers.[259]

The distribution of Chilean transport services exports by mode of supply from WTO TISMOS for the year 2017 reveals that 56% of total transport services were delivered via Mode 1 and 35% by Mode 2. Chile's passenger and freight road and sea transport services were completely delivered by Mode 1 while other road and sea transport services were completely delivered by Mode 2, suggesting that these Mode 2 services would be the worst affected by travel restrictions during the pandemic.

The Impact of COVID-19

This assessment is corroborated by the IMF. In 2020, economic activity contracted by 5.8% with transportation and storage services contributing to 1% of the decline. Overall, the transportation sector contracted by 17.5% (in 2019 prices) due to reduction in land and air transport (and related services), owing to restrictions on the mobility of persons. The greatest fall was observed in the second and third quarters of 2020: 32% and 26.8% respectively. Quarter 4 of 2020, by contrast, witnessed the lowest decline of 7.8%. In contrast, the cargo sector witnessed a rise, including in inland courier services, due to a rise in e-commerce

[258] Mordor Intelligence, "Chile Freight and Logistics Market - Growth, Trends and Forecasts (2020-2025)," 2021, https://www.mordorintelligence.com/industry-reports/chile-freight-and-logistics-market.
[259] Mordor Intelligence.

activity.[260] On the whole, though, both exports and imports of Chilean transport services have fallen during the pandemic. According to ILO, the transport sector along with communication services employed 6% of the workforce in 2019.[261] The pandemic has had a profound impact on employment in the services sector, especially in transportation. ILO estimates show that 14.5% jobs were lost on average during the first three quarters of 2020.[262]

Response by Firms and the Government

At the same time, Chile has been agile in implementing various measures to sustain businesses and employment, and to compensate those most affected by the pandemic. For example, it increased the minimum wage twice in 2020, first in March to adjust for inflation and next in September to offset the negative impact of the pandemic.[263] Similarly, Port Coronel in Chile was the first port in the maritime sector to introduce "thermal cameras" at the main access areas of the port and in the logistics sector of the cargo terminals to measure body temperature with high accuracy in the wake of the pandemic.[264] These actions have helped prevent the spread of the virus, as well as supporting continuity in operation. In fact, the closing of Chilean international borders in March 2020 was not supposed to affect cargo transportation services or the personnel associated with these services.[265]

According to ProChile, the economy's investment agency, Chile has taken several steps to ensure supply chain connectivity in the midst of the crisis brought on by the pandemic.[266] Resolution No. 1179, enacted in April 2020 under the National Customs Directorate, outlined a series of measures to simplify and secure operations of all sea, air, and land ports throughout Chile, using electronic means of communication and other tools. These include: use of email requests for examinations of goods without the presence of customs employees or brokers; provision of shipment mandates through email, allowing customs brokers to perform their duties remotely; handling basic documents for the processing of imports and exports via email; and allowing requests for customs document modifications and the legalization of export declarations to be performed electronically.

The Chilean customs administration has also been instructed to grant the greatest amount of facilities possible so that foreign trade procedures can be carried out expeditiously through electronic means. It has also established coordination with other operators, including port terminals, warehouse managers, and issuers of transport documents, for the completion of electronic procedures.

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[260] Banco Central de Chile, "Boletín Estadístico 7 de abril 2021," April 7, 2021, https://www.bcentral.cl/contenido/-/detalle/boletin-estadistico-7-de-abril-2021.
[261] International Labour Organization, *Panorama Laboral 2020: América Latina y El Caribe* (Lima, Peru: International Labour Organization, 2020), https://www.ilo.org/wcmsp5/groups/public/---americas/---ro-lima/documents/publication/wcms_764630.pdf.
[262] International Labour Organization.
[263] International Labour Organization.
[264] World Bank, "Accelerating Digitalization: Critical Actions to Strengthen the Resilience of the Maritime Supply Chain" (World Bank, 2021), https://sustainableworldports.org/wp-content/uploads/World-Bank-IAPH-joint-paper-accelerating-digitalization.pdf.
[265] Angelo Adasme, Maria Villar, and Felipe Ibarra, "Chile – Significant Travel Restrictions Imposed Due to Coronavirus (COVID-19)," KPMG, March 19, 2020, https://home.kpmg/xx/en/home/insights/2020/03/flash-alert-2020-074.html.
[266] Christian Molinari, "ProChile Highlights Measures to Ensure Logistics Continuity during COVID-19 Crisis," SeafoodSource, April 14, 2020, https://www.seafoodsource.com/news/supply-trade/prochile-highlights-measures-taken-for-logistics-continuity-in-times-of-covid-19.

In addition, Chile; Australia; Brunei Darussalam; Canada; New Zealand; and Singapore have committed to guaranteeing connectivity, and maintaining open and connected supply chains throughout the COVID-19 crisis. In a joint ministerial statement, the participating economies said, "We recognize that it is in our mutual interest to ensure that trade lines remain open, including via air and sea freight, to facilitate the flow of goods including essential supplies," and further committing to "identify and address trade disruptions with ramifications on the flow of necessities."[267] Consistent with this, Chile became the first economy in October 2020 to allow the entry by air of foreign crew members of merchant ships to replace personnel on board, "considering that the workers on the ships are essential to maintain the supply and logistics chain of supplies."[268]

The private sector has also adapted to the pandemic. For instance, when the coronavirus crisis first hit Chile, salmon producers faced problems in shipping exports as international borders and all airlines began closing, including Latin America's largest carrier, LATAM, which was forced to drastically reduce operations due to plunging passenger numbers. In response, many airlines have shifted their focus to cargo transport, and have adapted their fleets accordingly. Similarly, all ports in Chile have adapted and comply with protocols that establish guidelines for timely detection of travellers or crew members who may generate local transmission of COVID-19.[269]

In sum, while Chilean transportation services have been adversely affected by the pandemic, the government has responded by facilitating digitalization and by minimizing impact on cargo and logistics services. Similarly, the private sector has adapted business models to try and minimize short-term losses.

3.3.6.3 Tourism services in Thailand

Importance of the Sector to the Economy

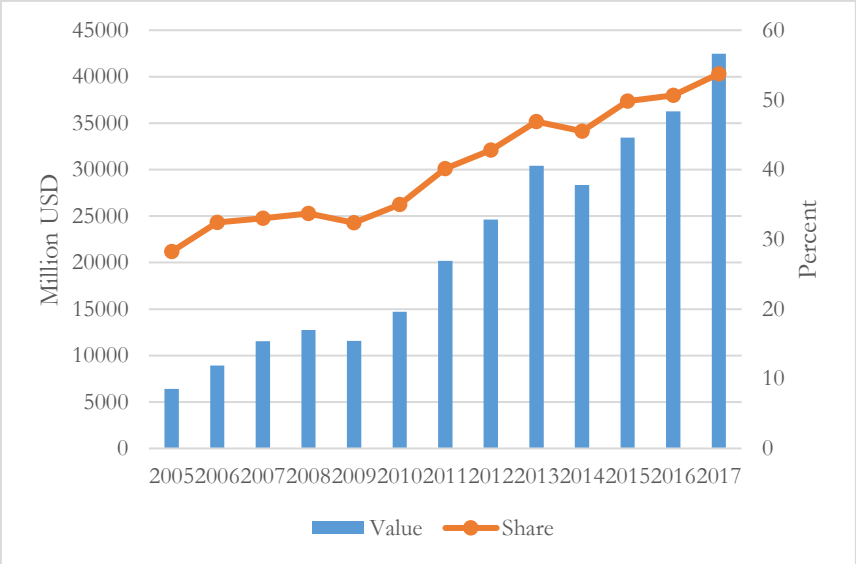
The tourism sector is an integral part of Thailand's economy. In 2017, the United Nations World Tourism Organization (UNWTO) ranked Thailand as the world's ninth most visited destination. According to World Travel and Tourism Council, tourism contributed 19.7% of Thai GDP in 2019. The sector is also a key employer, accounting for 21.4% of the total Thai workforce in 2019.[270] According to data from the World Bank World Development Indicators, receipts from international tourism doubled from 10.4% of total exports in 2010 to 20% in 2019.[271] Thailand received 39.8 million foreign tourists in 2019.[272] It has seen rapid growth in the number of tourist arrivals in recent years, supported by changes in visa policy in the

[267] Molinari.
[268] Michele Labrut, "Chile to Allow International Crew Change," Seatrade Maritime, October 20, 2020, https://www.seatrade-maritime.com/regulation/chile-allow-international-crew-change.
[269] Michele Labrut, "Latin American Ports Take Measures to Remain Open, Guarantee Operations," Seatrade Maritime, March 26, 2020, https://www.seatrade-maritime.com/ports-logistics/latin-american-ports-take-measures-remain-open-guarantee-operations.
[270] World Travel & Tourism Council, "Economic Impact Reports - Thailand," accessed July 26, 2021, https://wttc.org/Research/Economic-Impact.
[271] World Bank, "World Development Indicators."
[272] Office of National Economic and Social Development Council, Thailand, "Thai Economic Performance in Q4 and 2019 and Outlook for 2020," February 17, 2020, https://www.nesdc.go.th/nesdb_en/article_attach/article_file_20200221170629.pdf.

ASEAN region.[273] International tourists predominantly comprise citizens from neighbouring Asian economies. Chinese tourists made up 19% of international visitors in Thailand in 2020, with visitors from Malaysia; Japan; and Russia among APEC economies making up an additional 23%.[274]

According to data from the OECD-WTO BATIS database, travel services accounted for nearly half of Thailand's total services exports in 2005 but their share has risen consistently since then. The share of APEC partners in Thailand's travel services exports has also remained high, at around 60% and above over time. Data from the TISMOS database confirms that all of Thailand's exports of travel services took place via Mode 2, suggesting that they would be severely affected by travel restrictions and social distancing practices imposed during the pandemic. Figure 3.26 presents the basic data, showing the evolution of the value of tourism exports over time along with the share of tourism services exports in total services exports. The data clearly show the sector's importance to the Thai economy.

Figure 3.26: Thailand's exports of travel services, million USD (left axis) and percent of total services exports (right axis), 2005-2017.



Source: WTO TISMOS database.

The Impact of COVID-19

This assessment is corroborated by stylized facts. In March 2020, the government declared a state of emergency due to the pandemic and imposed strict travel restrictions. As a result, foreign tourist arrivals collapsed to essentially zero during the second and third quarters of 2020.[275] Table 3.3 reports monthly data on key tourism performance indicators for Thailand from UNWTO's Tourism Recovery Tracker, which demonstrates the extent of the adverse effect of the pandemic on the sector.[276]

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[273] The ASEAN+3 Macroeconomic Research Office (AMRO), "AMRO Annual Consultation Report: Thailand - 2018," September 2018, https://amro-asia.org/wp-content/uploads/2018/09/2018-Annual-Consultation-Report-on-Thailand-final-upload.pdf.

[274] World Travel & Tourism Council, "Economic Impact Reports - Thailand."

[275] World Bank, "Thailand Economic Monitor: Restoring Incomes, Recovering Jobs" (World Bank, 2020), https://documents1.worldbank.org/curated/en/236271611069996851/pdf/Thailand-Economic-Monitor-Restoring-Incomes-Recovering-Jobs.pdf.

[276] World Tourism Organization (UNWTO), "UNWTO Tourism Recovery Tracker," accessed June 1, 2021, https://www.unwto.org/unwto-tourism-recovery-tracker.

Table 3.3: Key monthly tourism performance indicators for Thailand

	2020										2021	
Performance indicators	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**
International tourist arrivals (YoY, % change)	-76	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100
Hotel occupancy rates (%)	29	8	14	20	19	19	21	24	25	27	15	21
Hotel searches (YoY, % change)	-57	-80	-79	-66	-61	-62	-69	-70	-65	-71	-80	-65
Hotel bookings (YoY, % change)	-68	-90	-89	-71	-60	-66	-63	-70	-61	-67	-76	-31
Short term rentals (YoY, % change)	10	-30	-44	-43	-49	-69	-66	-60	-62	-64	-73	-73
Travel sentiment (Net Sentiment Score)	-6	25	32	36	47	43	36	47	50	31	49	46

Source: UNWTO Tourism Recovery Tracker

In the first quarter of 2020, Thailand's aviation industry experienced a 52% drop in passenger demand and the sector's contribution to GDP contracted by 1.1%, mainly from the declining number of tourists which negatively affected tourism and tourism-related sectors, particularly transportation and storage, and accommodation and food service activities.[277] Research compiled by the United States' ESTA (2020) ranked Thailand as fourth in the list of economies that have suffered huge revenue losses due to COVID-19 induced disruption in tourism.[278] The NESDC estimated a loss of 2.5 million jobs in the tourism sector in the second and third quarters of 2020.[279] The earliest impact of the crisis was seen with a 79% increase in the number of employed people being absent from work in the tourism sector as compared to the preceding quarter.[280]

Response by Firms and the Government

In response to the crisis, the Thai government issued a stimulus package in March 2020 totalling over $30 billion. It introduced an asset warehousing scheme, allowing businesses to use their assets as collateral with the option of buying them back at a later date. The government hopes this scheme will appeal to property owners, particularly in the tourism industry. A recent survey conducted by the Thai Hotels Association concluded that some $2.6 billion of combined hotel assets wanted to enrol in the program.[281] The government also allotted $18 billion to ramp up financial aid to temporary workers, contract workers, and self-employed persons via monthly payments for six months. The government allocated $641 million to a domestically-

[277] Asian Development Bank, *Covid-19 Active Response and Expenditure Support Program – Impact of Covid-19 on Thailand's Tourism Sector* (Manila, Philippines: Asian Development Bank, 2020), https://www.adb.org/sites/default/files/linked-documents/54177-001-sd-12.pdf.
[278] ESTA - United States, "How the Coronavirus Affected Tourism around the World," 2020, https://www.official-esta.com/information/reports/how-the-coronavirus-affected-tourism-worldwide.
[279] Chatrudee Theparat, "NESDC: 14.4m Workers at Risk," *Bangkok Post*, May 28, 2020, https://www.bangkokpost.com/business/1925808/nesdc-14-4m-workers-at-risk.
[280] International Labour Organization, "COVID-19 and Employment in the Tourism Sector: Impact and Response in Asia and the Pacific," April 2020, https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/briefingnote/wcms_742664.pdf.
[281] Ayman Falak Medina, "Thailand Approves Latest Economic Relief Package for Businesses," *ASEAN Briefing*, March 31, 2021, https://www.aseanbriefing.com/news/thailand-approves-latest-economic-relief-package-for-businesses/.

oriented "We Travel Together" program, which subsidised accommodation, food, air travel, and other expenses up to 40% for Thai citizens travelling out of their residential province. This package is expected to benefit 24,700 hotels and accommodation service providers, as well as 36,755 restaurants.[282]

The Thai government has also provided extensions to hotels and other accommodation services for the payment of their electricity bills. It has also exempted citizens from Singapore and China from the 14-day quarantine imposed on arrival for other international tourists. Thailand granted long-term visas to citizens of 56 economies in order to incentivise long-term stays by international visitors. Seven major Thai airlines also received $700 million in concessional financing to sustain their operations. The Tourism Ministry aims to return $44 million in deposits that the Tourism Department receives as license fee from inbound, outbound and domestic tour companies, with each company receiving 50-70% of the deposit back for tours that were cancelled. The Ministry has also asked for a $32 million budget for building and renovating attractions in local communities.[283] Finally, Thailand has also planned Community Capacity Building in Special Areas for Sustainable Tourism Project, along with other training and skill upgrading initiatives.[284]

Thailand was amongst the first economies in the region to develop hygiene and safety standards, to build consumer confidence and prepare for the re-start of international tourism. The Tourism Authority of Thailand created a Security and Health Administration (SHA) certification that requires all tourism businesses to adhere to certain guidelines and regulations concerning hygiene. The government has also focused its resources on digital marketing sources by dedicated marketing campaigns, as well as providing digital literacy training to people working in tourism and related sectors. These efforts have helped by boosting consumer confidence as evidenced by gradual improvement in the "Travel Sentiment" index in the early months of 2021 even though Thailand has strict regulations still in place for international arrivals.[285]

Though Thailand managed to effectively flatten the curve on its COVID-19 infections by May 2020, it experienced a second wave in December which has weakened the prospects for its tourism sector. The government has taken various fiscal and socio-economic measures to aid businesses in tourism and affiliated sectors, as well as a policy-focused approach to promote domestic tourism. Thailand has a significant domestic market, which registered 131 million domestic trips in 2019,[286] so facilitating a switch for operators primarily focused on overseas tourists can help support the industry during the short-term. Occupancy rates of hotels and resorts in Thailand improved slightly to 21% in February 2020. Hotel bookings showed a gradual increase of 17% year-on-year in March 2021.[287]Thailand's travel bubble scheme was suspended indefinitely as three of its key partners experienced renewed outbreaks of COVID-19. But the government has strengthened its tourism sector through financial aid as well as

[282] Asian Development Bank, *Covid-19 Active Response and Expenditure Support Program – Impact of Covid-19 on Thailand's Tourism Sector*.
[283] International Labour Organization, "COVID-19 and Employment in the Tourism Sector: Impact and Response in Asia and the Pacific."
[284] World Tourism Organization (UNWTO), "COVID-19: Measures to Support the Travel and Tourism Sector (Asia and the Pacific)," March 15, 2021, https://webunwto.s3-eu-west-1.amazonaws.com/s3fs-public/2020-06/asia-and-the-pacific.pdf.
[285] World Tourism Organization (UNWTO).
[286] World Tourism Organization (UNWTO), "UNWTO Tourism Statistics eLibrary," UNWTO eLibrary, February 2021, https://www.e-unwto.org/toc/unwtotfb/current.
[287] World Tourism Organization (UNWTO), "COVID-19: Measures to Support the Travel and Tourism Sector (Asia and the Pacific)."

digital initiatives to take on pre-pandemic levels of tourists, with the expectation of fully opening international borders by October 2021, given continued cooperation between government and the private sector in containment efforts.

3.3.6.4 Higher education services in Canada

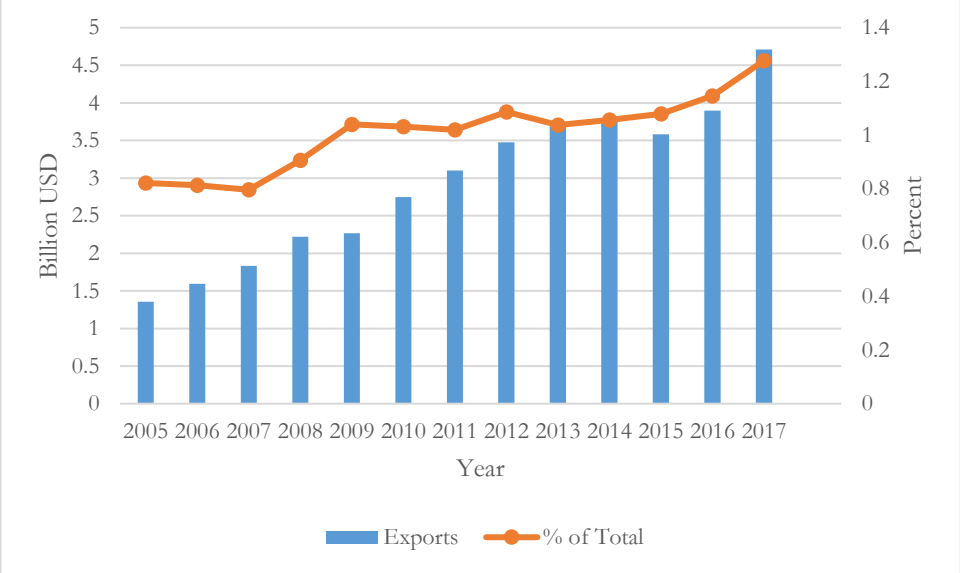
Importance of the Sector to the Economy

Canada has a vibrant higher education sector, which has been ranked 6th in terms of the most popular destinations for inward students in higher education.[288] Between 2004 and 2015, the international student population at Canadian institutions of higher learning more than doubled.[289] In addition to an attractive sectoral offering based on high educational quality, Canada's relatively liberal approach to providing international students with a track to permanent residency is also an important factor in the decision-making process of potential students from overseas. In 2017, Canada's exports of education services were valued at $4.5 billion, which was 1.3% of total services exports. So while the sector is significant in terms of the export earnings and employment it supports, it still accounts for a modest proportion of Canada's overall services exports, given the economy's size, income level, and extent of diversification.

Figure 3.27 uses WTO data to show the evolution of Canada's exports of education services from 2005 to 2017. There is clear evidence that the sector has been growing faster than services exports overall, as the proportion of the total it accounts for increased from 0.8% to 1.3% during the sample period. In addition, it is important to stress that direct export earnings—the fees overseas students pay to educational institutions—are only one part of the economic benefits of the sector from the Canadian perspective. Students also inject purchasing power into the local economy, while universities have supply linkages to other Canadian businesses, thereby supporting indirect as well as direct employment from the education sector.

[288] Surendra Gera, "The Economic Impact of International Students: Evidence from Canada and Selected OECD Economies," accessed June 1, 2021, https://carleton.ca/india/wp-content/uploads/International-Students-Economic-Impact-1.pdf.
[289] Gera.

Figure 3.27: Canada's exports of education services, billion USD (left axis) and percentage of total services exports (right axis), 2005-2017



Source: WTO TISMOS database.

The Impact of COVID-19

The ILO suggests that over 90% of enrolled learners worldwide have had their studies disrupted due to the COVID-19 pandemic.[290] Traditionally, education is a sector that has relied very heavily on in-person interactions in relatively confined spaces, so it has been perceived as a potential risk for viral spread, and educational institutions have suffered closures for health reasons during much of the pandemic period in a number of economies, including Canada.

The situation for the higher education sector has an additional dimension, due to the fact that these services are traded internationally whereas primary and secondary education are rarely traded. A key determinant of the ability of students to access the sector is therefore their ability to travel internationally. This ability has been severely disrupted during the pandemic, in addition to any changes in preferences that may have taken place due to the perceived risk of interacting in person. The ILO notes that educators and institutions have been innovative in shifting activities online wherever possible, so the ability to react in this way is one determinant of the ability of businesses and economies to adapt to the pandemic shock in this sector.[291]

When the COVID-19 pandemic erupted, Canada adopted extensive travel restrictions, as did all other economies. Given that education services are largely exported via Mode 2, this step had obvious implications for foreign students seeking to enter Canada for study purposes. In light of the difficulty of safely ensuring in-person interactions, the sector has undergone an extensive transition to online learning.[292] Students already in Canada have therefore been able to undertake online courses in the same way as their Canadian counterparts, while those outside have also used online resources and have thereby effectively shifted their trade from Mode 2

[290] International Labour Organization, "ILO Sectoral Brief: COVID-19 and the Education Sector," June 2020, https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/briefingnote/wcms_742025.pdf.
[291] International Labour Organization.
[292] Study International, "Canadian Universities Going Online in Fall 2020: What We Know so Far," May 18, 2020, https://www.studyinternational.com/news/canadian-universities-going-online-fall-2020/.

to Mode 1. This modal shift shows how businesses have used the ability to move their offerings online as an important way of maintaining activity through the pandemic period.

Transitioning to online learning is an area of active research and experimentation in the higher education sector. On the one hand, the transition is not possible without high quality hard infrastructure, particularly broadband internet access. This access is required both for the instructor (in Canada in this case) and also for the students (located in other economies). Given that a substantial number of students come from developing economies to the higher education sector in Canada, it can be challenging to ensure that the basic requirements of hard infrastructure are met. At the same time, there is also a discussion around appropriate methods of instruction, as well as other aspects of soft infrastructure that go into online instruction. Methods are evolving in this area.

Response by Firms and the Government

Noting the importance of cross-border movements of students to the sector, the Canadian government moved to modulate its travel restrictions to strike an appropriate balance between protecting public health and facilitating international services trade. While requirements are constantly changing in response to public health conditions on the ground, the government has taken steps to facilitate entry to registered students provided that their institution has a COVID-19 readiness plan that has been approved by the relevant Province or Territory.[293] In addition, incoming students are subject to general health requirements, including a negative test result prior to travel, a mandatory quarantine period, and a second negative test after arrival.[294] So while travel to Canada has been restricted in important ways as a result of need to prevent pandemic spread, there has been a clear choice by the authorities to facilitate entry for authorized students subject to reasonable assurance that their travel will not negatively impact the public health situation.

Partly as a result of this approach, industry estimates suggest that Canada's universities may see only a modest decline in revenue as a result of the COVID-19 pandemic, on the order of 1.4% in 2020.[295] The Canadian case study shows that combined action by industry and government can help deal with the negative effects of the COVID-19 pandemic, although it is still unknown what the medium-term outlook for the sector will be. In addition, there is an ongoing question as to the level of future international student arrivals, assuming that travel restrictions are eased further. Consumer preferences for travel have changed markedly due to the pandemic and are varied across economies,[296] so some students are opting to remain in their home economies and pursue online learning. It is unclear to what extent this will continue in the future.

Of course, higher education is not only an export earning sector. It is also a generator of innovation and knowledge, which in turn can lead to important technological changes within an economy. As such, Canadian universities—including with international students and

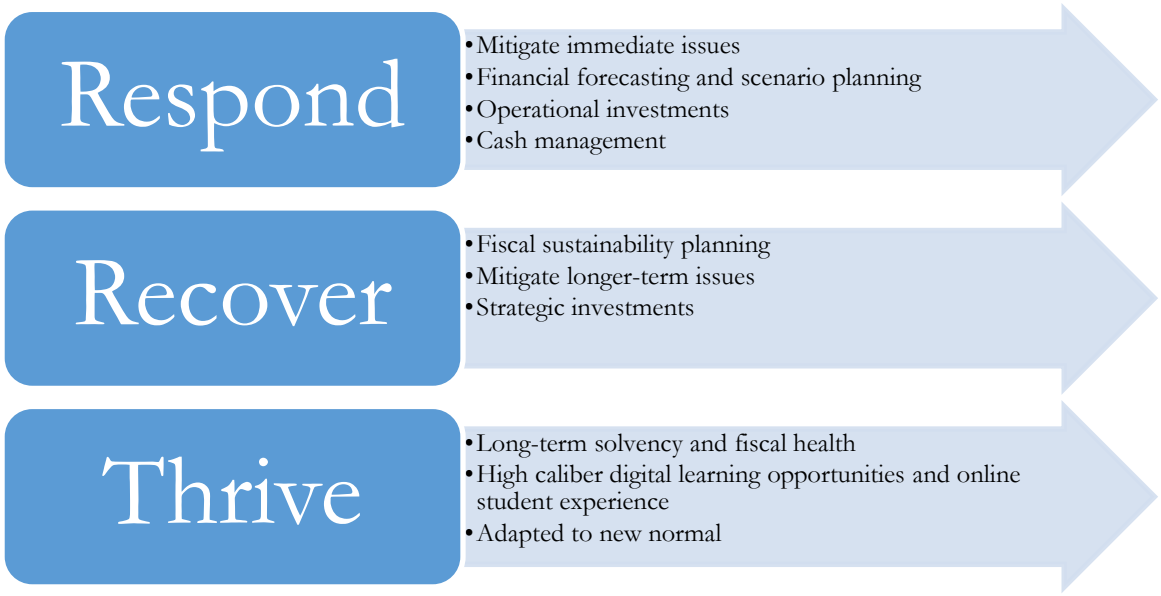
[293] Government of Canada, "Coronavirus Disease (COVID-19): International Students," June 3, 2021, https://www.canada.ca/en/immigration-refugees-citizenship/services/coronavirus-covid19/students.html.
[294] Government of Canada, "Flying to Canada Requirements Checklist – Travel Restrictions in Canada," June 18, 2021, https://travel.gc.ca/travel-covid/travel-restrictions/flying-canada-checklist.
[295] IbisWorld, "Colleges & Universities in Canada: Industry Trends (2015-2020)," July 28, 2020, https://www.ibisworld.com/default.aspx.
[296] Charm et al., "Consumer Sentiment Is Diverging across Countries."

researchers—have been working extensively with government, businesses, and civil society to help promote the economy's response to the COVID-19 pandemic. Universities Canada, a peak body, includes research on responses to the pandemic, in particular in the medical area, designed to support treatment and mitigation activities.[297] Examples include research on therapeutics and diagnostics, but also on dealing with the misinformation surrounding COVID-19. As such, universities, including through their international linkages, can be an important part of the economy's response to the wide ranging economic and social challenges posed by the COVID-19 pandemic.

In looking towards the future, DiNello and Robinson (2021) encourage Canadian higher education providers to embrace a three-step paradigm: respond, recover, and thrive (Figure 3.28).[298] It makes clear that some of the challenges faced by higher education providers are comparable to those seen by other firms in the economy, in particular the need to manage financial resources in a constrained environment, and ultimately to develop a new approach to sustainability. But as the chart makes clear, an important part of this process is to look at the extent to which some changes in the sector, such as increased use of online learning, may be important developments beyond a short-term response. While it is still unclear as to what extent consumer preferences are changing durably as a result of the COVID-19 pandemic, it seems plausible, as Figure 3.28 indicates, that a key part of developing competitiveness over the medium-term will be to devote relatively more focus to online offerings by universities and other higher education providers. Against this background, El Masri and Sabzalieva (2020) highlight the need for a "whole of government" approach in which different levels of administration work collaboratively together with providers to adopt a successful long-run management of the pandemic and its aftermath.[299]

[297] Universities Canada, "Canada's Universities Mobilize in Response to COVID-19," March 2021, https://www.univcan.ca/coronavirus-covid-19-and-canadian-universities-information-and-resources/canadas-universities-mobilize-in-response-to-covid-19/.
[298] Mark DiNello and Craig Robinson, "Planning for the Impact of COVID-19 on Higher Education in Canada" (Deloitte, 2021), https://www2.deloitte.com/ca/en/pages/public-sector/articles/impacts-of-covid-19-on-higher-education.html.
[299] Amira El Masri and Emma Sabzalieva, "Dealing with Disruption, Rethinking Recovery: Policy Responses to the COVID-19 Pandemic in Higher Education," *Policy Design and Practice* 3, no. 3 (July 2, 2020): 312–33, https://doi.org/10.1080/25741292.2020.1813359.

Figure 3.28: Three step paradigm for dealing with the higher education impacts of the COVID-19 pandemic



Source: Adapted from DiNello and Robinson (2021).

3.3.6.5 ICT services in the Philippines

Importance of the Sector to the Economy

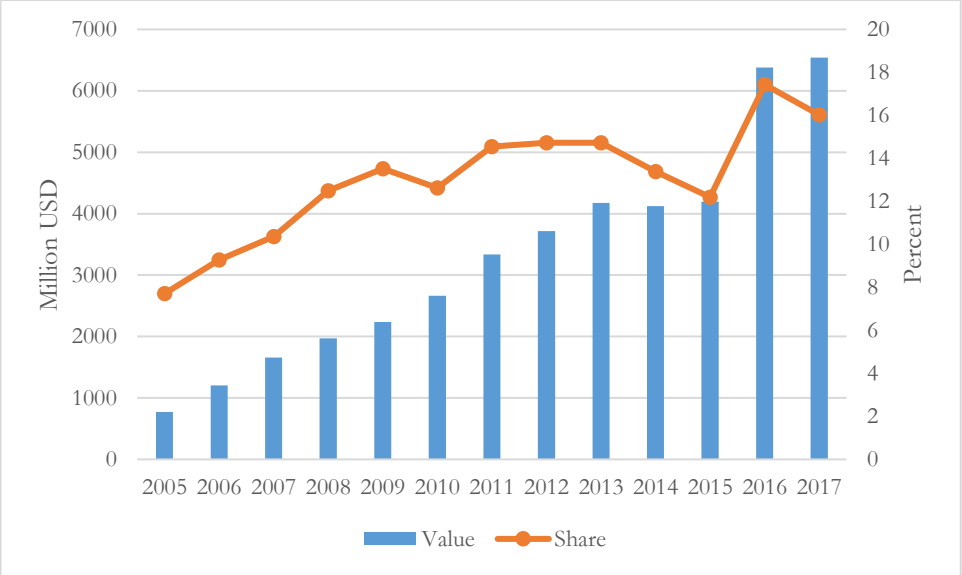
According to data from the Philippines Statistics Authority (PSA), the ICT sector has, on average, contributed 3.2% of the Philippines' GDP over the last decade (from 2011-2020). The sector's contribution to the economy's GDP actually increased from 2.9% in 2019 to 3.3% in 2020, amidst the COVID-19 pandemic. The sector grew at a high rate of 9.1% in 2019.[300] The sector employed 347,000 persons in 2017 amounting to 1% of the economy's total employment,[301] and registered a year on year growth rate of 2% in job creation in July 2019.[302] The Philippines is potentially a significant player in the global digital market. From 23 million in 2010, the number of internet users in the Philippines has more than tripled to 73 million in 2020. The Philippines has also penetrated foreign markets, being a leader in the Information Technology and Business Process Outsourcing (IT-BPO) industry.[303]

The IMF's Balance of Payments valued exports of services from the economy's ICT sector at $1.3 billion in 2019 and PSA estimated it to be 14.1% of Philippines total service exports. BATIS data suggest that the share of APEC member economy destinations in the Philippines' total and ICT services exports has also remained high, at well above 60% over time. Figure 3.29 shows the evolution of Philippine ICT services exports over 2005-2017 using data from WTO TISMOS. The distribution of these exports by mode of supply for the year 2017 reveals that 77% of total ICT services were delivered via Mode 1 and 23% by Mode 4. While the

[300] Philippine Statistics Authority, "Philippine Statistics Authority: Data Series (Base 2018)," accessed July 26, 2021, https://psa.gov.ph/national-accounts/base-2018/data-series.
[301] Philippine Statistics Authority, "2018 Compilation of Industry Statistics on Labor and Employment," November 2018, https://psa.gov.ph/sites/default/files/2018%20CISLE%20Final.pdf.
[302] World Bank, *Philippines Economic Update: October 2019 Edition - Resuming Public Investment, Fast Tracking Implementation* (Washington, D.C.: World Bank, 2019), https://documents1.worldbank.org/curated/en/224501570715185892/pdf/Philippines-Economic-Update-Resuming-Public-Investment-Fast-Tracking-Implementation.pdf.
[303] World Bank, *Philippines Digital Economy Report 2020 : A Better Normal Under COVID-19 - Digitalizing the Philippine Economy Now* (Washington, D.C.: World Bank, 2020), https://openknowledge.worldbank.org/handle/10986/34606.

economy's telecom and information services exports were completely transacted cross-border, 25% of Philippine computer services exports, worth $ 1.3 billion in 2017, were delivered by Mode 4. While the latter would thus be adversely affected by restrictions on international travel imposed during the pandemic, the bulk of the economy's ICT services exports would be relatively insulated and may even witness positive growth.

Figure 3.29: The Philippines' exports of telecommunications, computer, information, and audiovisual services, million USD (left axis) and % of total services exports (right axis), 2005-2017



Source: WTO TISMOS database.

The Impact of COVID-19

This is exactly what happened. While the Philippine economy contracted by 10.0%, year-on-year, in the first three quarters of 2020 and exports fell by 18.7%, the ICT industry expanded by 5.3 %, benefitting from increased demand for ICT services amid the transition to home-based work for many workers and an increasing shift toward digital commerce and payments.[304] Of the firms interviewed in ADB's Enterprise Survey in the Philippines, ICT enterprises made up 11.5% of enterprises maintaining "limited operations" during the pandemic-induced lockdowns and social-distancing measures. Additionally, 63.9% of firms in this category reported "not more than 50% operationality" while 36.1% reported "more than 50% operational" when asked about their functioning. At the same time, firms from the ICT sector also made up 11.1% of the total number of firms that were permanently shut due to COVID-19, highlighting the more severe adverse effects of the pandemic. This said, ICT firms made up only 7.3% of the firms that witnessed a decline in sales in April 2020 but made up 17.2% of all the firms that saw an increase in their sales during the same time period. ICT firms also accounted for 29.1% of enterprises that reported WFH was possible for more than 50% of

[304] World Bank, "Philippine Economic Update: December 2020 Edition - Building a Resilient Recovery" (World Bank, December 2020), https://openknowledge.worldbank.org/bitstream/handle/10986/34899/Philippines-Economic-Update-Building-a-Resilient-Recovery.pdf.

employees,[305] though the "Other Service Sectors" category noted 134,000 job losses between October 2019 and October 2020.[306]

Response by Firms and the Government

Both the government and the private sector have responded to the crisis. The Philippines' ICT sector gained prominence during the pandemic as it was the only sector that proved resilient and exhibited the potential to push the economy forward despite social-distancing measures. According to GlobalData (2020),[307] the ICT sector grew in 2020 driven by wider digital transformation initiatives taken by local enterprises and growing customers' needs. The survey noted that 84% of Philippine enterprises increased their ICT budget in 2020 compared with only 66% in 2019, despite new business challenges such as declining sales and retrenchment due to COVID-19. Additionally, 84 % and 74% of enterprises are considering investing in managed cloud services and cloud management platforms, respectively, within the next two years. "This enables businesses to orchestrate workloads across different platforms to drive operational efficiency. Philippine enterprises are also looking to increase their investment in IoT and analytics (e.g., artificial intelligence/machine learning) to gain a wider view of operational data to improve business processes (e.g., predictive maintenance) as well as to enhance customer experience (e.g., real-time asset tracking for logistics company)."[308]

However, digitalization is largely constrained by the economy's low penetration of high-speed broadband, which lags behind neighbouring middle-income economies. The digital divide in the Philippines is large with nearly 60% of households not having access to the internet, and thus being unable to reap the benefits of digitalization.[309] The government has therefore directed its resources to strengthen digital infrastructure through the Medium-Term Information and Communications Technology Harmonization Initiative (MITHI).

A total of $441 million will be allocated towards MITHI in 2021, focusing on improving telecommunications infrastructure and accelerating investments in online information systems in the education, health, and social protection sector.[310] Of this amount, $194 million will be used to support the government's daily ICT expenses, including the maintenance of computers and data centers, replacement of outdated desktops, and internet subscriptions and payment for license subscriptions. Additionally, $156 million has also been set aside to fund the ICT requirements for telecommunications infrastructure "to aid in the shift to e-governance post pandemic."[311] Among the items to be funded are free internet Wi-Fi access connectivity, along with the National Government Data Center, the National Broadband Plan and the economy-wide government portal. The administration has also allocated substantial funds for

[305] Asian Development Bank, *The COVID-19 Impact on Philippine Business: Key Findings from the Enterprise Survey* (Manila, Philippines: Asian Development Bank, 2020), https://www.adb.org/publications/covid-19-impact-philippine-business.
[306] World Bank, "Philippine Economic Update: December 2020 Edition - Building a Resilient Recovery."
[307] GlobalData, "Enterprise ICT Investment Trends in Philippines 2020," July 2020, https://store.globaldata.com/report/gd0369ci--philippines-enterprise-ict-investment-trends-2020/.
[308] GlobalData, "ICT Market in Philippines to Continue to Grow in 2020 notwithstanding COVID-19, Forecasts GlobalData," July 28, 2020, https://www.globaldata.com/ict-market-in-philippines-to-continue-to-grow-in-2020-notwithstanding-covid-19-forecasts-globaldata/.
[309] World Bank, *Philippines Digital Economy Report 2020 : A Better Normal Under COVID-19 - Digitalizing the Philippine Economy Now*.
[310] World Bank.
[311] Alexis Romero, "Duterte Admin Allots P21.4 Billion for ICT in Proposed 2021 Budget," *The Philippine Star*, September 6, 2020, https://www.philstar.com/headlines/2020/09/06/2040492/duterte-admin-allots-p214-billion-ict-proposed-2021-budget.

cybersecurity efforts to protect the confidentiality of sensitive information of the government, businesses, and individuals, as well as to enforce data privacy provisions in existing laws. The government was also able to support the increased usage of digital payments through two payment systems—PESONet and InstaPay—whose transaction volume rose by 624% and 130%, respectively, in the year 2020.[312]

The ICT sector is set to play a pivotal role in charting the post-COVID economic recovery in the Philippines. The sector has been resilient throughout the first year of the pandemic and the various initiatives undertaken by the Philippine government to boost its digital infrastructure will enable the sector to grow rapidly. Additional efforts by the government to improve digital literacy amongst its citizens and provide adequate skill training to its labor force will further enhance the potential of the ICT sector to become a key driver of economic growth in the post-pandemic recovery period for the Philippines.

3.3.6.6 Summary of findings from the case studies

Evidence from the case studies shows that irrespective of the sector, the private sector and governments in APEC economies have actively taken measures to sustain economic activity during the pandemic, and lay the groundwork for future recovery. Canada, for instance, has managed the risks inherent in travel for educational purposes by requiring educational institutions to have an approved pandemic action plan before their foreign students can be authorized to enter or re-enter Canada.

The case studies also show that while economies have taken necessary COVID-appropriate precautions to minimize adverse health impacts, they have also explored fungibility between modes of supply and in particular, taken steps towards greater digitalization. This is true of the transport sector in Chile as well as for health services in Singapore, where, a regulatory sandbox for telemedicine has spurred a move from Mode 2 and Mode 4 trade towards Mode 1. However, such cross-modal substitution is only likely to partially offset the huge negative demand impact on services markets due to the pandemic. Meanwhile, for economies like the Philippines, with an established capacity in IT-enabled services, the pandemic has provided them with an opportunity to capitalize on this capacity as more and more services activities move online. Enhanced investment in ICT infrastructure to address the digital divide has been the policy response in this case.

One sector that has been particularly hard hit by the crisis has been tourism and its ancillary services as they rely almost exclusively on consumer movements (Mode 2 trade). In response, APEC economies have implemented a battery of policy measures and collaborated with the private sector to promote tourism as well as help businesses remain open (see Box 3.1). While the pain from the combined public health and economic shocks is very real in this sector, evidence shows that creative and concerted action can nonetheless help provide some degree of cushion to those most directly affected.

Taking these economy and sectoral experiences together, it is clear that the services sector, including traded services, has been hit with a major economic shock, potentially one with little precedent in terms of size, scope, and nature. It is important for governments to work together with the affected industries to support employees and others who suffer very direct negative

[312] Benjamin E Diokno, "Accelerating Digital Transformation in the COVID-19 Era; Digital Transformation in the Financial Services and Navigating through the Pandemic" (ESCOM Webinar, Bangko Sentral ng Pilipinas, 2020), https://www.bis.org/review/r201210f.pdf.

consequences from this shock, but to do so in a way that maintains an open trading environment. Intelligent use of regulatory measures to allow for low risk interactions or movements of individuals is another way that governments can try and cushion the impact of the pandemic for the most affected sectors, but this approach necessarily runs up against hard boundaries in terms of the primary need to manage public health risks in the short term. Given vaccination efforts in APEC economies, there is room to hope that 2021 will see the beginnings of economic recoveries, though these may be more likely in the developed world to begin with. Nonetheless, developing economies, especially those that are recognized hubs for IT-enabled services, can potentially benefit from increased demand for their output, provided that economies work together in the interim to preserve a relatively open trading system.

Box 3.1: Policy response in the tourism sector in APEC economies

The tourism and hospitality sectors have been severely affected by the COVID-19 pandemic in APEC economies due to a drastic fall in the number of in-bound international tourists. Economies have responded via policy measures and collaborated with the private sector to promote tourism as well as help businesses remain open.

One such policy has been to promote domestic tourism to boost the hospitality industry by promotion of local destinations. For example, the Australian government has announced an AUD1.2 billion package for the tourism sector that includes creation of a new "Tourism Aviation Network Support" (TANS) Program that aims to encourage the domestic tourism sector in regions that were affected the most by the pandemic.[313] Similarly, the "See your own backyard" initiative by the New Zealand Government aims to help local tourism businesses recover and flourish after the pandemic.[314] In Southeast Asia, the Thai government announced the "We Travel Together" initiative to boost domestic tourism by subsidizing accommodation, food and air travel for local residents and also allocated US$700 million to boost domestic tourism. Its regional neighbor, Singapore, has announced a travel lane to enable visits by businesses, officials and travelers by using a bubble facility near the airports, called "Connect @ Changi."[315] Meanwhile, regional governments in Japan are using the idea of a workcation to entice the working population to visit domestic tourist attractions during their leisure time on working days.[316] In the Americas, the Mexican government has invested US$13.2 million to promote domestic travel experiences and brands with help from the private sector as well,[317] while the Chilean government has provided vouchers and discounts to lower income families and the elderly to travel across the economy and boost domestic tourism.[318]

In some cases, the hospitality sector has adjusted by turning hotels into quarantine facilities during the peak of the pandemic. For example, as early as April 2020, hotels across the United States turned into

[313] Tourism Australia, "Coronavirus (COVID-19) Information and Resources for Australia's Tourism Industry," text, May 27, 2021, https://www.tourism.australia.com/en/events-and-tools/industry-resources/resources-for-industry/coronavirus-information-and-resources-for-industry.html.
[314] New Zealand Government, "Unite against COVID-19: See Your Own Backyard," July 23, 2020, https://covid19.govt.nz/iwi-and-communities/support-your-community/see-your-own-backyard/.
[315] Connect@Changi, "Safe Business Travel in Singapore," accessed May 11, 2021, https://connectatchangi.sg/.
[316] Shibuya Kazuhiro, "'Workcations': Changing How Japanese Offices Run in the Post-COVID-19 Era," *Nippon.Com*, July 2, 2020, https://www.nippon.com/en/in-depth/d00586/.
[317] Luis Fernando Lozano, "Van por 'Buen Fin Turístico' para reactivar la industria," *Forbes México*, May 15, 2020, https://www.forbes.com.mx/negocios-buen-fin-turistico-post-covid-19/.
[318] Nanno Mulder, ed., *The Impact of the COVID-19 Pandemic on the Tourism Sector in Latin America and the Caribbean, and Options for a Sustainable and Resilient Recovery*, 2020th ed., vol. (LC/TS.2020/147), International Trade Series 157 (Santiago, Chile: United Nations: Economic Commission for Latin America and the Caribbean (ECLAC), 2020), https://www.cepal.org/sites/default/files/publication/files/46502/S2000751_en.pdf.

coronavirus wards or temporary housing for healthcare workers and infected individuals under an initiative launched by the American Hotel and Lodging Association and the U.S Travel Association.[319]

Governments are also trying to attract international tourists by collaborating with other economies to establish international travel bubbles or corridors that allow seamless travel of persons without the need for mandated quarantine in the destination economy. For instance, Australia and New Zealand have opened a travel bubble termed as the Trans-Tasman bubble from April 2021 that allows citizens to travel without the need to quarantine given the passenger has remained in the economy for 14 days and is not awaiting a COVID test result.[320] Thailand has exempted citizens of Singapore and China from the 14-day quarantine rule. Similarly, Singapore has an Air Travel Pass Program that lets visitors from other economies considered safe from a public health perspective enter Singapore without undergoing the mandatory 14-day quarantine.[321]

Another scheme to attract international tourists has been to engage with them through digital platforms to offer virtual experiences. For example, The Singapore Tourism Board has partnered with Airbnb Experiences to digitalize their services and virtually showcase the best of Singapore through an online platform powered by Airbnb.[322] The Viet Nam National Administration of Tourism has also announced virtual tours of the economy including its UNESCO Heritage Sights to facilitate visiting Viet Nam from home.[323] Similar initiatives were also taken by the Thai and Japanese tourism boards. Finally, private sector cruise companies including the Royal Caribbean, have offered a cruise voyage to nowhere for Singapore residents since November 2020.

3.4 MOVING FORWARD POST-COVID

The global supply-cum-demand shock associated with the COVID-19 pandemic reflected government policy and individual firm and consumer decisions. The economic consequences of decisions to restrict in person interactions are in part a function of the ability of consumers and firms to employ digital technologies to supply and consume goods and services. Companies that already had an online presence or were able to move activities online were better able to withstand the lockdown shock. Evidence from the case studies is consistent with this point of view, in particular the pre-existing capacity of Singapore in telehealth services, or the Philippines' previous development of ICT services.

The pandemic made even clearer than before that digitalization is a key factor affecting services competitiveness. Of course, digitalization and digital transformation of business activity is distinct from servicification of economic activity and trade in services. Some types of services lend themselves less, if at all, to digitalization; examples are travel, hospitality, and tourism. Nonetheless, increasing services-intensity of production is associated with increasing use of digital technologies in all stages of production, in turn improving productivity performance. Digitalization is a driver of extensive margin growth, helping firms, including small ones, to

[319] Will Feuer and Emma Newburger, "Empty Hotels 'keep the Lights on' by Converting into Coronavirus Quarantines, Emergency Housing for First Responders," *CNBC*, April 8, 2020, sec. Health & Science, https://www.cnbc.com/2020/04/07/empty-hotels-convert-into-coronavirus-quarantines-emergency-housing-to-keep-the-lights-on.html.
[320] Australian Government - Department of Home Affairs, "New Zealand Safe Travel Zone," accessed May 11, 2021, https://covid19.homeaffairs.gov.au/new-zealand-safe-travel-zone; Immigration New Zealand, "Travel between Australia and New Zealand," accessed June 21, 2021, https://www.immigration.govt.nz/about-us/covid-19/border-closures-and-exceptions/you-are-in-a-quarantine-free-travel-zone/you-are-coming-from-australia.
[321] Immigration & Checkpoints Authority, Singapore, "Travelling to Singapore."
[322] Singapore Tourism Board, "Airbnb Experiences and the Singapore Tourism Board Launch Partnership to Support International Tourism Recovery," October 22, 2020, https://www.stb.gov.sg/content/stb/en/media-centre/media-releases/Airbnb-Experiences-and-the-Singapore-Tourism-Board-Launch-Partnership-to-Support-International-Tourism-Recovery.html.
[323] Visit Vietnam: The Official Tourism Website of Vietnam, "Vietnam's Heritage Sites in 360 Degrees," Vietnam Tourism, accessed July 26, 2021, https://vietnam.travel/vietnam-virtual-tours.

source or provide software-enabled products and services at arms-length. Provision is also increasingly on a subscription basis, which reduces the costs and enhances access to high quality services inputs. The pandemic revealed it is also a source of resilience for firms and sectors that can apply digital technologies to business processes and products and provide these through online means.

Pre-COVID-19, it was clear that technical changes driving automation and facilitating cross-border trade in services would give rise to adjustment costs for firms and workers. But they would also create opportunities associated with the application of digital technologies that make an increasing number of services activities and tasks more tradable. The pandemic accelerated an already ongoing shift towards services and use of digital technologies. One dimension of that shift involves use of digital marketplaces (platforms). Another dimension centres on the adoption of process automation and related software tools. Both are labour saving technologies. The pandemic may have increased the pace of adoption of such technologies, driven by the contraction in labour supply confronting firms resulting from lockdown policies.

The overall employment impact of operational shifts within firms and within sectors will depend on the feasibility of use of digital technologies and the ability of workers to learn new skills and undertake new tasks. Examples include substituting waitstaff in restaurants for delivery services, or retail employees shifting to processing online sales and demand for employees in distribution centres. Traditional types of services outsourcing such as customer support (e.g., call centres; IT helpdesk services) and business process management were more resilient to the shock than travel and hospitality services, as shown above.

The extent to which the pandemic will accelerate the adoption of labour-saving automation is an open empirical question. In part, this may be affected by company decisions on how they use funds made available by governments to sustain operations during the pandemic (Karr et al. 2020). The magnitude of any negative employment effects will depend on how long it will take for in-person interactions, including cross-border travel, to become feasible again. An additional variable is the willingness of people to engage in travel for business and leisure, as set out above in the context of the general framework for understanding the impacts of the pandemic on services trade. It is likely that international travel will take time to recover and that pre-COVID-19 levels are unlikely to be attained in the short term. There has been a shift towards moving business meetings online, as well as a recognition by companies that not all the meetings that previously involved travel will be necessary in the future.

COVID-19 and its aftermath, as well as ongoing shifts to a digital economy with increased automation, made clear the importance of effective social safety nets and proactive policies to attenuate adjustment costs. There is a major role for government policy in dealing with the inevitable adjustment pressures and costs. But it is also important to create an enabling environment that supports the ability of entrepreneurs to create or expand companies that leverage the opportunities offered by the digital economy. Much of the policy agenda is domestic in nature but this can be supported through cross-border policy cooperation.

Digitalization and process automation may drive greater inequality within and across economies because of technology and skills gaps.[324] At the same time services offer significant

[324] Christopher Foster and Shamel Azmeh, "Latecomer Economies and National Digital Policy: An Industrial Policy Perspective," *The Journal of Development Studies* 56, no. 7 (July 2, 2020): 1247–62, https://doi.org/10.1080/00220388.2019.1677886.

employment opportunities for relatively unskilled workers in sectors such as tourism, logistics, health, personal care, etc. Many of these activities were severely hit by the pandemic shutdown and collapse in demand. The resulting "double whammy" illustrates a need for actions to assure equitable access to digital infrastructure and to bolster digital skills. In addition, there is a need for social insurance and support programs for sectors where shifting to digital is not feasible. The case study examples and data review show that APEC economies have been active in this area.

The data review and case studies reveal the continued pertinence of the ASCR as a framework for actions to enhance the competitiveness of services activities in the APEC region. But there could also be areas in which the policy environment for services in the region may need to be reviewed and reconsidered.[325] What follows draws out several implications suggested by the COVID-19 experience for policy towards services sectors. The perspective is forward looking, to help ensure that the ASCR continues to provide a strong framework for the development of the services sector across the Asia-Pacific region.

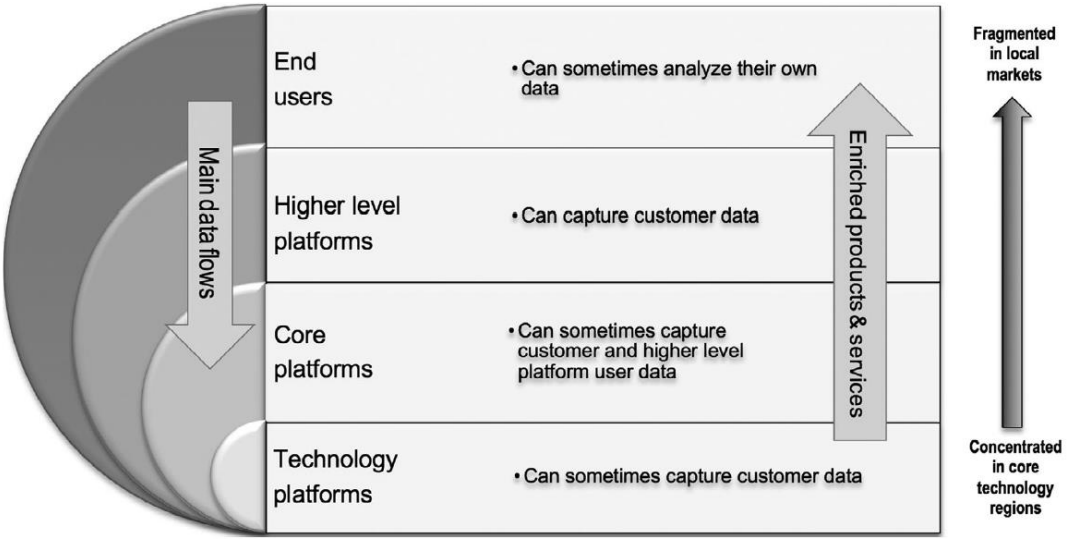
3.4.1 Supporting Services and Facilitating Trade

The Asia-Pacific region has been a powerhouse driving global manufacturing through specialization and cross-border intra-industry and intra-firm trade. It has also been a leader in global e-commerce, both business-to-business (exemplified by value chain production) and business-to-consumer. In both areas much of the trade involved tangible products (goods), motivating policy attention for trade facilitation broadly defined to span market access and actions to reduce transaction costs ("red tape"). This dual approach has covered trade liberalization, both unilateral and on a concerted basis, as well as actions to facilitate trade in line with the WTO Trade Facilitation Agreement.

The policy agenda associated with enhancing services competitiveness and facilitating trade in services differs from that pertaining to merchandise production and trade. It is associated more with structural reforms, given that the policy framework affecting services trade and competitiveness is more regulatory in nature than in the case of manufactures. This is particularly the case when it comes to digital products for which trade involves cross-border movement of data. Production and trade of digital products and services increasingly involves multiple, layered two-sided platforms (markets), where value (data) flows from end users and clients to platform owners and providers of products, tools and processes (Figure 3.30).

[325] References to the ASCR in what follows pertain to the following document, as updated by information from PSU: APEC, "APEC Services Competitiveness Roadmap Implementation Plan (2016 - 2025)" (28th APEC Ministerial Meeting, Lima, Peru: APEC, 17-18 November), http://mddb.apec.org/Documents/2016/MM/AMM/16_amm_012.pdf.

Figure 3.30: Digital platform layering and data flows



Source: Sturgeon (2021).

Cross-border movements of data are central to this economic model, as are regulatory regimes that protect consumers both as regards the quality of products purchased and the security of the associated transactions. If regulatory regimes do not meet international norms or are not regarded to be adequate (equivalent) by regulators in importing economies, potentially competitive exporters may not be able to access foreign markets. Alternatively, they may confront higher costs than competitors located in jurisdictions that have arrangements that assure the free flow of services and data. International regulatory cooperation to attenuate the costs associated with confronting different, perhaps incompatible, regulatory regimes is necessary to be able to contest services markets.

Value chains are increasingly data intensive and data dependent, with firms using data upstream as an input into design, R&D, and product innovation. Data is also integrated into the production process, as well as to improve logistics, distribution and engagement with customers and clients through data acquisition, storage, modelling, and analysis. A key feature of digital platforms and digital value chains is a high degree of interoperability across layers (despite very high complexity). There is also the ability of platform owners to monetize information on buyers and sellers that use their platforms, scalability reflecting very strong network effects of (successful) platforms, and an associated potential for dominant positions and abuse of market power.[326] An important implication for services competitiveness-related policies is to recognize the increasing role played by data as a critical input into production processes. It is also important to recognize the ability of companies to process information ("big data") into actionable knowledge that in turn drives economic performance and productivity.

Control over the data pools generated by activities on and across digital platforms resides with platform owners. But digital technologies create opportunities for local firms to benefit from the modular nature of freely available digital tools – open source, standardized code; application programming interfaces – to create differentiated services that better reflect local demand conditions. A wide range of business information and data analysis tools facilitate

[326] Timothy J. Sturgeon, "Upgrading Strategies for the Digital Economy," *Global Strategy Journal* 11, no. 1 (February 2021): 34–57, https://doi.org/10.1002/gsj.1364.

cross-border operations by helping firms coordinate activities and design and manage value chains. They enhance both resilience and responsiveness to supply and/or demand shocks. These tools and the platforms they run on are particularly important for small firms that can source them "off the shelf". They range from offering consumer financing and managing point-of-sale payment processing to distribution and logistics services. Access to such services is a major determinant of firm-level competitiveness, permitting small companies to develop services and engage in cross-border transactions that otherwise would not be able to do so.[327]

Digitalization can have significant positive effects on new entry, start-ups, and expansion along the extensive margin, as well as offering a path for existing firms to move online. However, the scope for companies to connect to and benefit from digital platforms will depend on the availability, cost, and quality of backbone ICT infrastructure; the operation (behaviour) of infrastructure providers and platform owners, and regulations pertaining to products and processes used in transactions, including consumer protection, data privacy, cybersecurity, transaction processing, and electronic payments. In some of these regulatory areas, cross-border coordination and cooperation is important to ensure companies and consumers/clients can connect to each other and transact. In practice, differences in domestic regulatory requirements, lack of transparency, and policy uncertainty may be too burdensome and complicated for small firms to deal with, excluding them from utilizing digital technologies and engaging in cross-border trade.

Salient policy areas include regulation of digital services, indirect taxation of cross-border provision of digital products, cybersecurity and data protection, policies requiring data to be stored or processed locally (data sovereignty), potential abuse of market power by dominant digital platforms, and regulation affecting the feasibility (cost) of cross-border digital payments. Many of these policy areas are particularly pertinent for micro and small companies and thus also have an important gender equality and inclusion dimension given that many small firms are owned or operated by women. In light of the overwhelming importance of small firms in all APEC economies, failure to create supportive policies for MSMEs to use digital technologies to provide goods and services will impede efforts to create sustainable and inclusive trade in the region for the future.[328] Resources specific to APEC include reports such as the "2019 APEC Economic Policy Report,"[329] "Assessment of Capacity Building Needs to Support WTO Negotiation on Trade Related Aspects of E-commerce,"[330] and "Supporting MSMEs' Digitalization amid COVID-19."[331]

The ability of companies to shift towards on-line interaction with customers illustrates the importance of considering services competitiveness as including diversification across modes of supply. The case studies make this dynamic clear, even in creative ways such as virtual tourism. Having access to more than one mode of supply may increase resilience to exogenous shocks if they are mode-specific. This was the case in the COVID-19 pandemic, which distinguishes it from other recent large shocks such as the financial crises in East Asia in 1998 and the United States in 2008, which primarily involved a reduction in aggregate demand. The

[327] Marleen McCormick and Deepak Somaya, "Born Globals from Emerging Economies: Reconciling Early Exporting with Theories of Internationalization," *Global Strategy Journal* 10, no. 2 (May 2020): 251–81, https://doi.org/10.1002/gsj.1368.
[328] Deborah Kay Elms, "Digital Trade in the Asia Pacific," Hinrich Foundation, December 23, 2020, https://www.hinrichfoundation.com/research/wp/digital/digital-trade-asia-pacific/.
[329] "APEC Economic Policy Report 2019: Structural Reform and the Digital Economy."
[330] Andre Wirjo et al., "Assessment of Capacity Building Needs to Support WTO Negotiation on Trade Related Aspects of E-Commerce" (APEC - Policy Support Unit, December 2020), https://www.apec.org/Publications/2020/12/Assessment-of-Capacity-Building-Needs-to-Support-WTO-Negotiation.
[331] John Karr, Katherine Loh, and Andre Wirjo, "Supporting MSMEs' Digitalization Amid COVID-19" (APEC - Policy Support Unit, July 2020), https://www.apec.org/Publications/2020/07/Supporting-MSMEs-Digitalization-Amid-COVID-19.

ability to use alternative modes to produce, sell, and deliver products greatly affected the magnitude and duration of the negative economic shock caused by the pandemic. One takeaway from the stark differences in impacts across services sectors is to reinforce the importance of recognizing that it makes little sense to consider "services" as a homogenous category of economic activity that is intangible. The pandemic illustrated how differentiated services are in terms of sensitivity to supply and demand shocks as a result of the (in)ability to use Mode 1 to engage in cross-border trade.

Firms in sectors where no substitution across modes was possible – i.e., physical proximity between suppliers and buyers/consumers is either required or part of the value proposition – were hit hard by the lockdowns and shift to work/consume from home. As the case studies made clear, tourism is an example of a sector where cross-modal substitution is difficult relative to ICT or higher education. The pandemic showed that specialization in such services is a risk factor that should be considered by governments in the design of social safety nets, and in decisions to pro-actively support diversification in the traditional sense. But it also made clear that many services activities can be moved online and that services can play a major role in sustaining economic activity across a range of industries. Transactions that use ICT/mobile/internet networks in some sectors permitted firms to substitute away from physical interaction to online engagement. This applied to retail outlets, restaurants, entertainment, a range of professional services, health care, education, etc. The shift to digital may not be optimal and not all activities may be feasible, but many could and did move many activities online.

The differential ability of companies to engage with customers online was starkly illustrated in trends in sales, employment, and market capitalization. Companies providing internet connectivity, communications tools, e-commerce related services, and relying on "software-as-a-service" business models did very well,[332] while airlines, hospitality, and tourism saw their business collapse.[333] Companies such as Shopify (Canada); Australia's Atlassian (software developer collaboration tools); US-based Zoom (communications); and China's Alibaba are examples of companies that provide the means for SMEs that traditionally were offline only to set up and operate online storefronts and provide their services for SMEs. The shift to a more digital economy was reflected in changes in the market valuation of such companies, in turn driven by a large increase in their revenues from providing and supporting the delivery of online services by firms in a range of sectors, including small companies. For example, Kakao, a Korean internet services company, saw its valuation rise by 150%; Hong Kong, China-listed Alibaba Health Information Technology doubled in market value; while some e-commerce marketplaces in the APEC region, such as MercadoLibre (Latin America) or Sea Ltd, the holding company for Shopee serving Southeast Asian economies and Chinese Taipei rose even more, 175% and 450%, respectively.[334] Digital service providers not only experienced very rapid growth accelerations during COVID-19, they also demonstrated the ability to compete with established global incumbents such as Amazon or Alibaba by offering services that better fit local preferences and circumstances, increasing their regional market shares.

[332] Matthew Fox, "These Are the Stock Market's 5 Ecommerce Winners of the COVID-19 Pandemic, According to One Wall Street Firm," *Business Insider*, September 16, 2020, https://www.businessinsider.com/5-ecommerce-stock-market-winners-coronavirus-pandemic-stifel-2020-9.
[333] TNMT, "Airline Stock Price Performance during Major Pandemics," April 9, 2020, https://tnmt.com/infographics/airline-stock-performance-during-pandemics/.
[334] "Prospering in the Pandemic: 2020's Top 100 Companies," *Financial Times*, January 1, 2021, https://www.ft.com/content/f8251e5f-10a7-4f7a-9047-b438e4d7f83a.

A policy implication that is relevant to the ASCR is a need to better understand and consider what can be done to support modal shifts within sectors, both for local activity and for cross-border economic exchange. Modal substitution is more feasible within local contexts – e.g., the shift from Mode 2 to Mode 4 that is implied in the substitution of consumption in restaurants with online ordering and delivery at home. Such shifts were severely constrained for cross-border movement of consumers or natural persons, driving a steep fall in turnover of companies in the travel and tourism sectors. But COVID-19 also demonstrated that significant shifts could occur from Modes 2 and 4 to Mode 1 in a wide range of services, ranging from education; conferences and business meetings; many professional services; some types of health services, etc. The case studies have examined this process in detail for selected economies and sectors.

Internalizing the notion in policymaking that technological neutrality encompasses modal choice could enhance resilience to future shocks. It could also improve sustainability (by reducing the amount of business travel, for example) and inclusiveness (e.g., by ensuring small firms are able to use different modes of supply as well as large firms are). This can be done through actions to facilitate access to digital platforms, cross-border sourcing of services inputs, and sale of products to clients at home and abroad.

At economy level, the pandemic experience highlights the potential importance of doing more to consider cross-sectoral policy complementarities. The case studies present examples of economies using other policy areas—from a regulatory sandbox in Singapore, to immigration policy in Canada and Thailand—to respond to the COVID-19 pandemic in a way that was specifically geared to supporting activity in particular services sectors.

3.4.2 Ensuring the Continued Relevance of the APEC Services Competitiveness Roadmap

The ASCR—the strategic, long-term framework developed in 2016 to implement the APEC Services Cooperation Framework endorsed by APEC Leaders in 2015—identifies a concerted set of actions and mutually agreed targets to be achieved by 2025. A summary list of agreed APEC-wide actions to enhance services competitiveness is provided in Chapter 1. This subsection discusses the salience of the ASCR considering recent developments and potential steps and any updates required to ensure the continued relevance of ASCR in a post-COVID environment.

The ASCR comprises a large number of agreed actions, spanning a mix of sector-specific and cross-cutting measures. The latter include:

- Implementation of the Renewed APEC Agenda for Structural Reform (RAASR).
- Developing a set of good practice principles on domestic regulation of services sectors.
- Actions to develop an enabling environment to foster innovation in services activities.
- Actions targeting all four modes of supplying services across borders, including Mode 1 (enabling the flow of trade-related data), Mode 2 (education, travel and tourism), examining the impact of next generation trade and investment issues on Mode 3 (FDI), and Mode 4 (facilitating business travel).
- Addressing the needs of MSMEs and women pertaining to participation in GVCs and in the digital economy.

An important area of action is the development of services data and statistics to measure and support implementation of the ASCR and services trade and investment more generally. In addition, sector-specific actions span:

- Professional services
- Financial services
- Environmental services
- Education services
- ICT infrastructure and services
- Transportation services
- Travel and tourism services
- Manufacturing-related services
- Services to improve the regional food system
- Measures aimed at strengthening energy security and lowering the carbon intensity of energy services in the region.

The set of action areas is very comprehensive. It recognizes the need to focus on sector-specificities to complement cross-sectoral measures. A recent survey of APEC members implemented by PSU as an input into the ASCR mid-term review revealed strong support for the APEC-wide actions identified in the ASCR. Member economies generally indicated that most areas for action remain highly relevant, with many noting that the ASCR is more pertinent now than when it was initially developed, and that the Roadmap has become more important considering the economic repercussions of the COVID-19 pandemic.

Some members noted the importance of focusing more attention on the implementation of structural reforms to further open services sectors to cross-border competition and create a seamless APEC marketplace. This action would help support economic recovery, enhance business resilience, and drive productivity growth performance. Others noted that in their view APEC-wide action on liberalization was not as relevant. A feature of the ASCR is that liberalization and facilitation of trade in services is sector-specific, as opposed to calling for more broad-based market opening across all sectors and modes of supply. As discussed below, liberalizing trade in services in general, going beyond sector-specific trade facilitating actions, does not figure prominently in the ASCR.

Many members highlighted the need for APEC to advance greater effort to empower women and MSMEs to use digital platforms, to identify key challenges experienced during the COVID pandemic and identify priority areas for action in the context of pandemic recovery efforts. These suggestions overlap with recommendations to undertake a stock take and engage in deliberations to consider lessons from the pandemic for good domestic regulatory practices in services sectors. This would cover policies affecting data flows and ICT/internet regulation issues, including consideration of good practice in regulating digital platforms and the application of competition law and policy to digital economic activity.

Some of these issues fall under the APEC digital agenda, suggesting a need to ensure close coordination between measures aimed to boost services competitiveness and actions taken under the auspices of the APEC Internet and Digital Economy Roadmap. Several economies noted this link, exemplified by the explosive growth of e-commerce. They stressed that COVID-19 has significantly increased the relevance of collaborating on developing regulatory approaches that assure prudential oversight, consumer and security protection. But it is also important to enable trade-related cross-border data flows and facilitate access and use of digital tools and platforms by MSMEs.

Another common element of the feedback regarding the continued relevance of the ASCR was a need to bolster capacity-building activities targeting both regulatory institutions and MSMEs with a view to increasing resilience. An example is lessons for business continuity and adoption of digital technologies permitting documentation to be submitted electronically for certification and compliance with regulatory/administrative requirements associated with cross-border business activities. More rapid adoption of e-government solutions that reduce the need for physical documents and interaction associated with licensing and certification would not only reduce transaction costs and enhance transparency for firms but also help improve their resilience to shocks.

Several APEC member economies also noted the need for better quality statistics on trade in services, which is a critical input into analysis and assists governments in responding to shocks by targeting support to those activities hit hardest. The APEC pilot program to measure the regulatory environment in services trade was mentioned by a number of economies as a tool to help governments identity policy frictions and challenges confronted by businesses. Better data on trade would help to both assess the effects of services trade barriers and improve understanding of the resilience and responses of different types of services activities to major supply and/or demand shocks.

Although the ASCR is quite comprehensive and remains highly relevant, the COVID-19 experience and policy trends in recent years suggests several areas where additions and adjustments may be considered. These include measures in the following areas:

- Cooperation to reduce the level of policy restrictions on trade and investment in services. This was highlighted by some APEC members in their response to the survey for the mid-term review of the ASCR, including a call by several economies to do more to assess the implications of services trade barriers in affecting the ability of companies and households to sell and source services across borders.
- Recognition of regulatory interdependencies that impact on the ability of firms and consumers to use alternative modes of supply and undermine attainment of technological neutrality goals. An example is to expand the ASCR focus on policies affecting cross-border movement of people (Modes 2 and 4) to encompass cooperation and coordination of regulatory requirements pertaining to public health, e.g., agreeing on what constitutes essential travel/workers/activities.
- Policies to support firms, workers and communities address adjustment costs generated by exogenous shocks and more generally by technical change and regulatory measures imposed in foreign jurisdictions that restrict or distort trade and investment in services sectors.
- Learning from the experience of services businesses is an action item mentioned by several APEC economies in their responses to the PSU survey on the mid-term review of the ASCR. While APEC already has mechanisms in place for consultations, including with the private sector, through PECC, ABAC, and the Asia-Pacific Services Coalition, there is a case to reinforce them. The aim would be to strengthen mechanisms for soliciting information from businesses on lessons to be drawn from COVID-19 and what it suggests more generally in terms of managing the digital transformation of economies.

3.4.2.1 Open markets and a level competitive playing field

The overall level of services trade restrictiveness implied by policy is a determinant of services competitiveness. Performance on the OECD STRI differs by economy and sector, but there is a clear case for keeping markets open and facilitating trade in services in the context of the ASCR, falling under the structural reform agenda. Cross-border flows of services and data using ICT network infrastructure have tended to be relatively unrestricted, with transmissions untaxed.[335] In recent years, however, many economies around the world have begun to increase restrictions on services trade. This has taken different forms, including screening of inward FDI, data localization requirements, and other types of local content policies.[336]

Section 3.3.5 above looked at recent evidence on policy changes, showing that GTA data classifies numerous policy interventions in the Asia-Pacific during 2020 and 2021 as "harmful", in the sense of discriminatory. But an important dynamic is that over time, economies tend to differ in their approaches to goods and services sectors. Limiting attention to the first stage of the ASCR implementation period, i.e., 2017-2020, APEC members accounted for 52 percent of the global total of potentially harmful services trade measures observed (787/1,497), again based on GTA data and classifications. The share of harmful measures targeting goods trade is much lower at 30.5 percent of the world total (2,842/9,309).

Maintaining open competitive markets is not just a matter of further reducing STRIs. Policies affecting trade in services and services competitiveness more generally span a mix of sector-specific measures and cross-cutting measures. They include regulation of cross-border data flows. In considering the design of regulatory policies affecting international trade in services and data flows, there is both an internal and an external dimension. Restrictive internal regulation may have negative consequences for trade and the ability of firms to connect and use digital platforms to provide services to both local customers and foreign clients.

As argued in Drake-Brockman et al. (2021), making progress on this front could be done through support for and active engagement in the exploratory market access discussions on different clusters of services that are currently underway in Geneva.[337] Coverage includes logistics, financial, tourism, environmental, and agriculture-related services. Moreover, there are ongoing plurilateral Joint Statement Initiative negotiations on E-commerce under WTO auspices. APEC members could consider strengthening market access commitments on services that enable e-commerce, such as telecommunications and computer services, and encourage trading partners to do so as well.

As important from a services competitiveness perspective is the impact of foreign regulatory regimes that impede or simply exclude domestic firms from engaging in cross-border trade. Data and digital regulation more broadly are particularly important for firms that rely on data as a core part of their business when utilizing digital platforms. The same is true for companies seeking to move their product 'to the cloud' and shift to subscription models as opposed to selling licenses for on-premise use of software tools. The APEC Index pilot program – which spans Chile; Peru; Chinese Taipei; and Viet Nam, and covers four sectors (distribution services, logistics services, computer services and telecommunications services) is important in this

[335] WTO members have agreed not to impose taxes on cross-border electronic transmissions (i.e., data flows).
[336] Simon J. Evenett and Johannes Fritz, "Arguments for an Attribute-Based Approach: Mapping Policies Affecting Digital Trade" (Global Trade Alert, April 15, 2021), https://www.globaltradealert.org/reports/68.
[337] Jane Drake-Brockman, "Digital Trade: Top Trade Negotiation Priorities for Cross-Border Data Flows and Online Trade in Services." (T20 Policy Brief, forthcoming).

regard. It is a potential mechanism that can be used to complement the broader effort by the OECD Secretariat on the STRI that spans those APEC economies that are OECD members, as well as other partners, to map out and assess the (possibly unintended) economic implications of policies that affect services trade.

International services competitiveness is also determined by other types of government policies that may generate adverse competitive spillover effects on trade and investment. An example that has become increasingly prominent in the last decade is subsidies. The overall ambit of such spillovers is likely to increase as the global economy recovers from COVID-19, given the large-scale fiscal stimulus packages put in place by many economies.

There has been a steady rise in the number of new subsidy instruments introduced by governments around the world. Over 2,000 new subsidies were introduced in 2018 and 2020. Some APEC members are among the economies that have implemented the greatest number of subsidy measures, although the global leader is the European Union. Most of the trade tensions and disputes around the use of subsidies have centred around industrial subsidies. However, services sectors in many economies tend to be granted substantial subsidies, and state-owned enterprises are sometimes prominent players. Often the support measures are not intended to affect cross-border trade but may nonetheless have indirect spillover effects on regional and global competition. Ensuring that this feature of economic policy is considered in the structural reform agenda is therefore important. A necessary condition is concerted action to collect data on applied subsidy policies. There is also a need to commission research to assess cross-border spillover effects and identify fiscal support measures that are of greatest concern from a competitive perspective.[338]

3.4.2.2 Regulatory Heterogeneity

There is relatively little focus in the ASCR on the overlap between services competitiveness and the digital economy agenda – which has its own APEC Internet and Digital Economy Roadmap. Clearly APEC Leaders recognize the importance of digitalization, and the need for innovative policymaking to sustain a robust digital economy and support post-COVID-19 economic recovery. In their November 2020 Declaration, Inclusive Economic Participation through Digital Economy and Technology was one of three priority areas of focus. They expressed the goal of fostering an enabling environment for the development of the digital economy, including opening new opportunities for MSMEs; fostering a reliable, interoperable, open, accessible and secure ICT environment; narrowing digital, skills and regulatory gaps; and encouraging development in digital infrastructure and transformation. Leaders also acknowledged the importance of cooperation in facilitating the flow of data and strengthening consumer and business trust in digital transactions.[339]

Of particular importance in reducing the costs of regulatory heterogeneity is greater focus on standardization and mechanisms to establish regulatory equivalence to assist services firms use Mode 1 as a channel to provide services. Data-related regulatory policies are one priority area as they will affect a broad cross-section of firms across many services sectors. Policies towards the cross-border flow of data, services, digital products, and providers (skilled workers; entrepreneurs) will impact on incentives to invest in new activities. There will also be effects

[338] Bernard Hoekman and Douglas Nelson, "Rethinking International Subsidy Rules," *The World Economy* 43, no. 12 (2020): 3104–32, https://doi.org/10.1111/twec.13022.
[339] "2020 Leaders' Declaration," in *APEC* (2020 Economic Leaders' Week, Kuala Lumpur, Malaysia: APEC, 2020), https://www.apec.org/Meeting-Papers/Leaders-Declarations/2020/2020_aelm.

on the ability to use the different modes of supplying services – especially policies regulating the usage and movement of electronic data on the internet across borders. In contrast to goods where border policies such as tariffs and nontariff barriers influence trade incentives, in the services context regulatory policy frameworks may matter as much as does the prevalence of explicit discrimination against foreign suppliers.

Current regulatory regimes for data flows are highly fragmented, ranging from essentially laissez-faire approaches in some economies, to more tightly regulated environments in others. Motivations include protection of privacy and citizen rights, perceived security imperatives, and concerns about market power and abuse of dominant positions by lead firms. There are broadly three types of regulation of data flows in the world today: jurisdictions with open data flow regimes; those where flows are conditional on attaining (satisfying) national standards; and regimes where data flows are subject to government control.[340] All three types of regimes are found in the APEC region.

Cooperation in a global economy where digital technologies generate a growing share of total aggregate income becomes particularly important to reduce the transaction costs of international regulatory heterogeneity for a given sector or product, and to identify how best to regulate economic activities. The trade costs of regulatory heterogeneity may be reduced through coordination and learning, leading to adoption of common norms and gradual adoption of what has been determined to constitute good regulatory practices. Cross-border coordination of regulatory/digital policies can help firms capture network externalities and scale economies. To export, firms will need to meet foreign data protection norms. To import, the same is true – absent a data protection and regulatory regime that satisfies home economies, firms may not be able to access and process data, impeding their ability compete and provide value added services to clients.

Trade agreements increasingly include specific obligations on cross-border data flows, and some jurisdictions are establishing "equivalence regimes" that determine whether foreign providers will be treated in the same way as domestic firms when it comes to access and processing of data. The APEC economies are a leader in this regard. APEC economies have innovated by negotiating plurilateral agreements to address digital policies. Examples include the Digital Economy Partnership Agreement between Chile; New Zealand; and Singapore,[341] the Digital Economy Agreement between Australia and Singapore,[342] the Japan-US Agreement on Digital Trade,[343] and negotiations between Singapore and Korea on a digital partnership agreement.[344] They address cross-border transfer of data; data localization and protections for

[340] The three major trade powers all have different cross-border data regimes—the US is open, China is controlled, and the EU maintains a conditional flow regime.
[341] New Zealand, Chile, and Singapore, "Digital Economy Partnership Agreement (DEPA)," 2020, https://www.mfat.govt.nz/en/trade/free-trade-agreements/free-trade-agreements-in-force/digital-economy-partnership-agreement-depa/.
[342] Australia and Singapore, "Australia-Singapore Digital Economy Agreement," Australian Government Department of Foreign Affairs and Trade, December 8, 2020, https://www.dfat.gov.au/trade/services-and-digital-trade/australia-and-singapore-digital-economy-agreement.
[343] United States and Japan, "Agreement between the United States of America and Japan Concerning Digital Trade," October 7, 2019, https://ustr.gov/sites/default/files/files/agreements/japan/Agreement_between_the_United_States_and_Japan_concerning_Digital_Trade.pdf.
[344] Ministry of Trade and Industry, Singapore, Ministry of Communications and Information, Singapore, and Infocomm Media Development Authority Singapore, "Singapore and the Republic of Korea Launch Negotiations on Digital Partnership Agreement," June 23, 2020, https://www.mti.gov.sg/-/media/MTI/Newsroom/Press-Releases/2020/06/22-Jun-2020-Singapore-and-the-Republic-of-Korea-launch-negotiations-on-Digital-Partnership-Agreement.pdf.

source code; encourage cooperation on compatible e-invoicing and e-payment frameworks and establish benchmarks (focal points) for regulatory reforms that support the digital economy, inclusion, and bolster the associated governance frameworks.

Although these are all important steps forward, the result is still a patchwork. Plurilateralizing these arrangements so that they cover more economies would help reduce regulatory heterogeneity costs. Targeting such cooperation to address "pain points" that are particularly important for MSMEs would help ensure greater inclusion. An example noted by Elms (2020) is regulation to assure the interoperability of cross-border payment systems: APEC economies do not have policies in place to allow regional interoperability frameworks to standardize the processing of payments.[345] One vehicle to pursue this is to build on the experience obtained with recent trade agreements among APEC economies in the various joint statement initiatives that are being discussed in the WTO. These span investment facilitation, e-commerce, MSMEs and domestic services regulation. All are highly relevant from a services competitiveness perspective – indeed, all four of these subjects figure in the ASCR. Key considerations include the importance of regulation for e-commerce and data flows, the role of FDI as a vehicle for knowledge transfers and the importance of supporting engagement in services trade by start-ups and small firms using digital platforms and the internet.

Notwithstanding the heterogeneity in approaches to data regulation, recent work at the OECD has shown there is a broad range of commonalities and elements of convergence and complementarities in ways that different jurisdictions, trade agreements and digital agreements enable data to flow across borders with trust.[346] While this is an area of policy that falls under the APEC digital roadmap, it is critical from a services trade competitiveness perspective. Making the "data flow with trust" concept a reality via additional plurilateral agreements would help small firms use the trading system to sell and source services, in the process helping to achieve several core elements of the ASCR.

The open plurilateral agreements (OPAs) that may emerge from the WTO talks differ from standard trade agreements in at least four ways.[347] First, they are open: any economy able to satisfy the membership conditions can participate, in contrast to trade agreements that generally are not open to accession by additional economies. Second, insofar as agreements address costs of regulatory heterogeneity, they do not lend themselves to quid pro quo exchange of concessions because of their focus on good regulatory practice. Third, because they are domain specific, they are limited to commitments for the issue or class of goods and services concerned. Fourth, insofar as an OPA requires only equivalent performance—not identical procedures or institutions—they permit members to produce the required outcome through their own regulatory regimes and institutions. However, there needs to be continuing reciprocal review of existing regulatory policies and their implementation, and joint evaluation of potential adaption to changes in circumstances.

Cooperation may also be helpful in putting in place appropriate competition policies to address potential abuse of market power and assure a level playing field for firms seeking to use or compete with established platforms and market-leading service providers. Competition policy to prevent excessive market concentration has been found to be associated with a reduction in

[345] Elms, "Digital Trade in the Asia Pacific."
[346] Francesca Casalini, Javier López González, and Taku Nemoto, "Mapping Commonalities in Regulatory Approaches to Cross-Border Data Transfers," OECD Trade Policy Papers, vol. 248, OECD Trade Policy Papers, May 18, 2021, https://doi.org/10.1787/ca9f974e-en.
[347] Bernard Hoekman and Charles Sabel, "Plurilateral Cooperation as an Alternative to Trade Agreements: Innovating One Domain at a Time," *Global Policy* 12, no. S3 (2021): 49–60, https://doi.org/10.1111/1758-5899.12923.

the benefits of adoption of digital technologies. In practice small (developing) economies may not be able to effectively combat anticompetitive practices by large firms that dominate segments of the global market. Participating in international deliberations on the design of competition law for a digital economy can help identify good practices for domestic competition policy enforcement and areas in which joint enforcement actions should be considered.

3.4.2.3 Attenuating Economic and Social Costs

The COVID-19 experience suggests that looking forward, governments need to be more sensitive to substitution possibilities in the design of support programs and regulatory frameworks. What measures should be prioritized will depend on local conditions and the specific nature of the economic activity. However, they are likely to include matters relating to digital infrastructure for e-commerce, indirect taxes, data regulation, regulations affecting cross-border payments, and conditions (cost) of using digital platforms. Using stress testing to better understand the risk factors across industries associated with major supply and/or demand shocks clearly is salient from a public health perspective, given the prospect of new variants and new pandemics. But COVID-19 has also provided a foretaste of the longer-term types of adjustment pressures that will accompany technological changes driving automation and economies to become more digital-intensive.

Domestic policies may need to be more sensitive to the feasibility of modal substitution and the possibility that a mix of a major supply and demand shock may result not only in liquidity constraints but in insolvency and stranded assets. Regulatory requirements may affect the ability of workers to change jobs/tasks within the firm/industry. Labour market policies may, for example, constrain the ability of employers to reallocate tasks. There is a potentially important gender dimension to the reallocation and adjustment of tasks within and across firms. Female employees are likely to be more constrained in their ability to change to online delivery of tasks or to shift from providing retail services to, say, delivery services. The reason is that many environments see activities such as childcare and home education as primarily the responsibility of women, for historical reasons, even though the role of caregiver may be cumulative with that of employee.

MSMEs and women are a focus of attention in the ASCR and this is a policy area emphasized by many APEC members in the PSU survey mentioned above. However, considerations pertaining to the ability of MSMEs and women to leverage new opportunities and to deal with the repercussions of exogenous shocks are not mainstreamed in the ASCR. In other words, an MSME-lens is not applied to all the areas for action. One such area that could be bolstered is to consider the support needed to assist MSMEs bolster their capacity to acquire/access tools needed to operate online, connect to clients/partners, and use digital platforms and marketplaces.

The COVID-19 pandemic provides a rich test bed for extant support policies and mechanisms to assist firms, workers, and communities deal with adjustment costs resulting from exogenous shocks and fine-tuning policies to enhance inclusion and resilience. Undertaking ex post studies to assess both the impact of COVID-19 and what should be learned would seem to be one area for concerted APEC-wide action. For example, research could determine whether and why different types of services activities were associated with disproportionately negative consequences for women because of differential sensitivity to the supply-cum-demand shocks. Where did it prove more difficult for women to participate in/contribute to modal substitution

and engage in alternative channels of engagement to provide services? Such information would help improve targeting of assistance and support in the future.

The heterogeneous impacts across different types of services activities, both domestically and in terms of international trade, are reflected in part in differences in the ability to use digital technologies. Much depended on whether services activities that otherwise would have been provided through physical presence and international movement of suppliers and consumers could be provided via Mode 1. The pandemic experience suggests the need for greater policy focus on facilitating international trade in services through Mode 1 as a means of (i) diversification (product innovation; extensive margin growth); (ii) increasing resilience to shocks by permitting shifts across Modes of Supply); and (iii) fostering inclusion by facilitating the use of digital technologies and digital market platforms by small firms.

3.4.2.4 Learning from the Business Community

Given rising technological and market-driven headwinds confronting GVCs, economies seeking to attract GVC activities have greater incentives to identify and address policies that negatively affect international business investment. Cooperation of businesses with regulators, analysts, and researchers has the scope to develop better policy. Findlay and Hoekman (2020) suggest principles for the design and operation of such cooperation, drawing on the experience with multi-stakeholder value chain partnerships and the policy responses to COVID-19.[348] Supporting multi-stakeholder deliberations to learn from the recent experience can also help inform the design of social insurance and adjustment programs and identify priority areas for action at both the economy level and for APEC-wide cooperation.

"Value chain partnerships" can be conceptualized as tools to facilitate and frame deliberation and cooperation. They bring together the relevant government agencies that regulate value chain-based activities and the actors that operate them and are affected by policies. They also connect to the research community to assess the effects of policies on value chain operations.[349] Firms involved as suppliers and buyers can help identify and address policy barriers impeding growth in services trade or undermining services competitiveness. In turn, this can help target interventions that are priorities for MSMEs and actors with a stake in the operation of digital value chains and related expansion along the extensive margin. Effective public-private communication and collaboration is important in leveraging opportunities and fostering investment in and adoption of new digital technologies.[350] Support for such deliberation at APEC level could do much to focus policies on areas that improve inclusion by enhancing the ability of MSMEs to sell and source services across borders.

3.5 CONCLUSIONS AND IMPLICATIONS

The COVID-19 pandemic has brought with it a set of severe economic shocks for the Asia-Pacific, as well as for other world regions. Although economy experiences and responses have differed, the pandemic shock is remarkable for being truly global in scope, and commencing at broadly similar times in a wide range of economies. It combines supply and demand shocks: necessary public health restrictions make it more difficult to produce, while declining incomes

[348] Christopher Findlay and Bernard Hoekman, "Value Chain Approaches to Reducing Policy Spillovers on International Business," *Journal of International Business Policy*, November 27, 2020, https://doi.org/10.1057/s42214-020-00083-5.
[349] Findlay and Hoekman.
[350] Keith Maskus and Kamal Saggi, "Global Innovation Networks and Their Implications for the Multilateral Trading" (International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, December 2013), http://e15initiative.org/wp-content/uploads/2015/09/E15-Innovation-Maskus-and-Saggi-Final.pdf.

and changing preferences make it harder to consume. The pandemic is therefore quite different to other economic shocks that have buffeted the region in the past, such as financial crises. The economic damage will not be fully contained until the public health situation is under control in all economies, which requires widespread vaccination. The response to the pandemic has been primarily an issue of public health policy—and rightly so—but economic policies have also played their part in cushioning losses to vulnerable businesses and people, as well as in setting the groundwork for a robust recovery.

The situation of the services sector is particular in this context. Despite rapid technological change over the last three decades, many services have still traditionally required in-person contact. Necessary public health measures, as well as changing preferences, have resulted in major falls in these kinds of activities, tourism being an example. Services trade has therefore been affected more deeply than goods trade, where the supply issues were resolved relatively quickly with protection and mitigation measures, and the primary issue was a more typical demand-side shock. As such, the time is ripe to reconsider whether the structures of services trade in the region, including the ASCR, adequately prepare economies individually and jointly for the rigors of this kind of crisis, and whether any changes are required with the objective of "building back better" in the post-pandemic period.

This chapter has shown that experiences are heterogeneous within APEC, both in terms of economies and sectors. Economies with effective mitigation measures in place at a very early stage have tended to see faster recovery in their services exports, China being an example. By contrast, those with long duration outbreaks have seen durable negative impacts on their services trade. But pre-existing patterns of sectoral specialization also matter: those economies specialized in services that were or could be traded via Mode 1 have tended to see smaller falls in activity relative to those economies that specialize in services requiring personal presence. Similarly, in Mode 3 trade, some sectors have in fact seen increases in investment activity that is the precursor to sales by foreign affiliates, biotechnology being an example. A key finding, therefore, is that in a heterogeneous grouping like APEC, experiences at the economy and sector levels necessarily differ, a point that the data review in Sections 3.2 and 3.3 brings out clearly.

Given the size of the negative economic shock economies have been hit with, it is no surprise that governments have played an active role in responding, in concert with businesses, to ensure that broader social objectives of inclusion and protection are not compromised. While there is a concern as to the extent to which necessary protective measures discriminate against foreign service providers, the evidence suggests that these policies have been pursued vigorously by economies in the region. Given the relatively high proportion of women and other historically vulnerable groups in services employment, social inclusion objectives make it important to preserve employment links and incomes to the extent possible. Of course, these policies will also have to be unwound as the situation returns to normal as vaccination becomes widespread.

This responsiveness of government and the private sector is in evidence in the five case studies in Section 3.3.6. In all cases, APEC governments have adopted a pragmatic approach to regulation, both in cases specific to services, and in more general regulatory areas that can make services trade easier. For instance, Singapore's regulatory sandbox for telehealth allowed providers to build on their established experience in remote medicine and Mode 1 trade to shift further activity online. Similarly, Canada made innovative use of its immigration and public health laws to enable higher education trade to continue in a controlled way that both protected

students and providers from public health risks, but also ensured educational and income objectives.

At the same time, the case studies make clear that a number of factors affect the ability of economies and businesses to respond effectively to the pandemic. A key variable is the ability to move activity online. There have been creative examples of this, such as the use of virtual tourism. But the availability of hard and soft infrastructure is a key constraint that determines the ability of firms to innovate in this area.

Taking these insights on board, the ASCR appears as an ambitious general framework for development of the services sector in the region. Its APEC-wide actions cover many areas of services production and trade. Although the pandemic has placed great stress on the region's service providers, it would be unwise to seek to completely redesign the policy environment based on this one, historically very rare, event. Rather, the approach should be to fine tune an already comprehensive document so as to better enable economies and firms to respond to large shocks in the future, as well as to deal with regulatory issues that have received greater prominence in light of the shift to online activity during the pandemic.

The forward-looking review of the ASCR's APEC-wide actions in Section 3.4 suggests the following steps and updates for member economies to consider moving forward:

- **Rationalization of policies affecting digital trade**: The ability to substitute towards Mode 1 trade was a key determinant of business success during the pandemic. APEC has initiatives on digital trade and data flows, and can build on the synergies between the ASCR and these initiatives. Clearly recognizing the links between these two areas and developing a joint work stream will help in the development of concrete initiatives in the future.
- **Further de jure and de facto market opening**: There is a case for a broader approach to liberalization of services policies on the basis of concerted unilateralism, which has a long and successful history in APEC. The sectoral approach of the ASCR is appropriate and helpful for highlighting particular priorities identified by economies, but a broader approach to liberalization would help lay the groundwork for keeping trade flowing in a wide range of sectors when crises hit. At the same time, it is important to leverage the COVID-19 experience to support the use of sensible regulatory flexibility and forbearance to facilitate trade while not sacrificing other social objectives, such as public health. Convening regional regulators both through existing channels and potentially through new ones could help share experiences in this area, and convene a broader constituency in favor of reform.
- **Dealing with regulatory heterogeneity**: Part of increased openness to Mode 1 trade is finding creative ways of dealing with regulatory heterogeneity in a way that preserves important social objectives, but also facilitates trade. APEC has procedures and fora for cooperation at the regulatory level, and they provide a strong basis for building on successful programs that encourage trade even in heavily regulated sectors; APEC Architects and APEC Engineers are examples. Broadening this kind of approach beyond professional qualifications could bring important benefits to the region. As a first step, economies could identify candidate sectors, in the knowledge that modalities may well differ from sector to sector.
- **Attenuating social costs**: Economists have long recognized the case for supporting vulnerable people in times of economic change brought about by increased trade. But the pandemic makes clear the need for social safety nets on a broader basis. It also highlights the importance of addressing the social benefits and costs of technological

change, in particular as more activity shifts towards Mode 1 trade. Convening a specific dialogue mechanism within APEC on social protections to deal with the challenges of digitalization, trade, and automation would help build the stock of regional best practice and share experience more widely.

- **Learning from the business community**: The modern services economy is complex, involving a wide range of actors. While APEC has an established consultation process with business through ABAC, there is a case for economies to work with the private sector to develop more elaborate structures in particular sectors of interest, focusing in particular on the value chain dimensions of modern services trade. In the first instance, economies could identify one value chain as a pilot, so that this approach—which is broader in membership than ABAC, but more focused on a single sector—could be tested at scale with the participation of all relevant stakeholders.

Given that many APEC economies have performed well in global context in terms of the public health aspects of the crisis, the region is well placed to learn from the pandemic experience with a view to developing regulatory structures and joint initiatives that help service providers recover from the massive negative shock they have experienced, while also laying the groundwork for strong and inclusive growth over the medium term. The ASCR is an important part of this framework. It is comprehensive and wide ranging, but economies could consider adding APEC-wide actions in the five areas identified above with a view to making it even stronger, and continuing to support the development of a competitive services sector in the region.

4. SUMMARY AND RECOMMENDATIONS

APEC has made good strides in advancing ASCR since its inception in 2016. At the level of overarching targets, it can be observed that certain services sectors in the region have become less restrictive. APEC's services value added as a share of GDP continued to outperform the world on average. At the level of APEC-wide actions, many accountable fora have undertaken activities to support the implementation of the roadmap, as elaborated in section 2.3. These activities range from organizing information sharing workshops and commissioning studies on specific topics of interest, to developing principles and undertaking pilot programs with regards to specific initiatives. Policy guidance and recommendations arising from these activities are beneficial in making services sectors in the region more competitive. Many also have desirable spillovers into other APEC-wide actions. Among individual APEC economies, analysis of IAPs and subsequent updates provided by economies as part of their structural reform plans under RAASR indicated that many have included priorities and actions with potentially positive implications on services sector (see section 2.4).

In a way, the positive observations are supported by analysis of the quantitative indicators. For example, comparison of OECD STRI scores for the years 2016 and 2020 shows that for APEC on average, services sectors such as logistics, architecture, engineering and commercial banking have become more open. Improvements have also been observed in some indicators such as the number of economies and firms participating in the CBPR and PRP Systems (used to monitor action #9) as well as international tourism arrivals and receipts (used to monitor action #12).

Progress notwithstanding, more work has be done to further support implementation of ASCR and specific APEC-wide actions. Backtracking or lack of progress have been observed for some indicators such as APEC's share of world commercial services export (used to monitor overarching target #2). Mixed performance has also been observed for some indicators – for example, even as OECD STRI shows some sectors in the APEC region becoming less restrictive, it has also shown other sectors such as road freight transport, accounting and telecommunications becoming more restrictive. Other examples include the World Bank's percentage of SMEs having their own website (used to monitor action #17) and UNESCO's percentage of women's R&D participation in STI fields (used to monitor #19), where some economies have registered improvements, while others have regressed. There are also instances where analysis of multiple indicators used to monitor the same action led to different conclusions. This indicates that while progress has been positive from the perspective of one indicator, it was not so from the perspective of another indicator. Such cases show that more efforts may be needed in certain fronts to guarantee overall progress.

The need to redouble efforts is indeed noted by fora and economies in their response to the survey questionnaire circulated as part of the mid-term review. Depending on individual APEC-wide actions, suggestions identified by economies and fora include: 1) agreeing on concrete actions to take forward various initiatives identified/developed as part of the ASCR implementation; 2) developing activities which are in line with fora's ongoing initiatives and at the same time, can contribute to the ASCR implementation; 3) ensuring that efforts are cross-referenced against other relevant APEC initiatives; 4) organizing more targeted capacity building activities aimed at aiding members to adopt and operationalize specific

recommendations; 5) enhancing cross-fora collaboration and engagement with various stakeholders, including the private sector.

Moving forward, APEC economies could consider the following recommendations to further advance services work in the next phase of ASCR:

Accelerate implementation of specific APEC-wide actions: Several strategies can be considered to accelerate the implementation of specific APEC-wide actions. Initiatives such as "Addressing the Unfinished Business of the Bogor Goals: Final Push on Services," proposed by Chile during its host year in 2019, can provide the impetus to nudge things towards the right direction.[351] For this specific initiative by Chile, the identification of certain APEC-wide actions as priority areas, as well as champion economies arguably provides motivation to accountable fora and economies to deliver significant, tangible outputs within the year. Linking APEC-wide actions with the work plan of accountable fora could also go a long way in ensuring progress as it is highly likely that activities related to the APEC-wide actions would feature prominently in their discussions and deliberations.

Update set targets and outputs in each APEC-wide action and clearly associate activities with them: Each APEC-wide action has specific targets and outputs associated with it. While the relationship between activities and established targets are clear in some cases (e.g., actions #3, #4 and #7), this may not always be so. Additionally, it is observed that some accountable fora may not have a clear mechanism to keep track of identified targets and outputs. For better monitoring, accountable fora should update set targets and outputs accordingly, and clearly indicate in the matrix of actions how its various activities would help the fora in achieving the designated targets and outputs. Doing so would also allow fora to keep track of their progress in realizing set targets and outputs and therefore, plan and make adjustments accordingly. In cases where the original targets and outputs have been achieved, there is room for accountable fora to discuss and agree on the next targets and outputs. Indeed, the ASCR was conceived to be a living document which can be updated on a regular basis to quickly respond to the changing landscape and priorities.

Respond to COVID-19 decisively and concretely: COVID-19 and its implications on services as elaborated in Chapter 3 should stimulate efforts to ensure that existing actions are fine-tuned, new actions introduced and targets and outputs duly updated. As further elaborated in Section 3.5, steps and updates which economies and fora should consider include: 1) rationalization of policies affecting digital trade;[352] 2) further de jure and de facto market opening; 3) dealing with regulatory heterogeneity; and 4) attenuating the social costs.

Leverage cross-fora collaboration and capture all relevant activities: Assigning each APEC-wide action to accountable fora helps in strengthening ownership. However, the cross-cutting nature of APEC-wide actions means that assigning ownership may lead to certain activities outside the purview of the accountable fora to be left out as contributions. For example, the 2019 APEC Economic Policy Report (AEPR) on Structural Reform and the Digital Economy highlights key concepts, opportunities, and challenges arising from the digital economy; and provides a series of recommendations to maximize these opportunities while

[351] Chile, "Addressing the Unfinished Business of the Bogor Goals: A Final Push in Services."
[352] A PSU report entitled "Assessment of Capacity Building Needs to Support WTO Negotiation on Trade Related Aspects of E-commerce" reviews wide spectrum of laws and regulations affecting e-commerce in APEC economies and proposed areas where capacity building activities can focus on. See Wirjo et al., "Assessment of Capacity Building Needs to Support WTO Negotiation on Trade Related Aspects of E-Commerce."

overcoming the challenges. This flagship product of the EC should arguably be included as an activity under action #9. However, DESG is the accountable group for this action, not the EC.

Despite the intent to reflect this cross-cutting nature as seen in some APEC-wide actions being allocated to multiple fora, more should be done to ensure that all relevant activities are captured accordingly, while keeping the process simple and less burdensome for fora and economies. As a proof in point, analysis of the survey results conducted by PSU as part of the ASCR MTR showed that several fora indicated that they can contribute to APEC-wide actions that they are currently not accountable for, with some pointing to relevant ongoing and past projects to support their case. For example, CTI noted that the proposal to 'review measures facilitating essential movement of people across borders' could contribute to APEC-wide action #2, where HRDWG is the accountable group. The Digital Symposium project led by Australia covered best practices on several issues critical to optimizing the benefits of the digital economy and could be relevant in advancing APEC-wide action #9. EC and GOS members each collectively identified 13 other APEC-wide actions which they could potentially contribute to.

There are certainly opportunities to leverage cross-fora collaboration, in particular when the deliverables generated under a particular APEC-wide action have wide applications beyond the purview of the accountable fora. For example, the non-binding principles on domestic regulations can be applied across many services sub-sectors. Therefore, it would be beneficial if the forum responsible for its development can share it with other fora such as those focusing on specific services sectors (e.g., transportation and finance). Furthermore, while certain challenges may be specific to a particular sector, the fundamental approach to overcoming most challenges may apply across sectors. For example, although issues pertaining to licensing of drivers may be specific to transport/logistics sector, the approach to minimizing/overcoming them may not be so. In this regard, there are opportunities for various fora to share experience on how they overcome certain issues such as licensing and qualifications.

Ensure better synergy between ASCR and other APEC initiatives: The cross-cutting issues covered by many of these initiatives means that there are bound to be common elements of interest across them, hence the need to coordinate efforts. The ASCR recognizes and has attempted to minimize such instances. For example, APEC-wide action #11 made clear that works on developing air, sea and land transportation should be in line with the APEC Connectivity Blueprint. Action #12 noted that works on developing the travel and tourism sector for sustainable and inclusive growth should build on the work of the APEC Tourism Strategic Plan. The ASCR Implementation Plan has encouraged economies to implement unilateral reforms as part of their structural reform action plans under RAASR, and noted that reporting on individual economy actions should be incorporated into existing reporting processes (e.g., reporting on progress under RAASR).

Despite these efforts, there is a wider room to improve synergy, particularly if one considers the fast evolving landscape, and the fact that APEC has introduced additional initiatives since the endorsement of the ASCR and its Implementation Plan. In 2020, APEC Leaders proclaimed the APEC Putrajaya Vision 2040, a new vision to chart the future of the region over the next two decades by pursuing three economic drivers, namely: trade and investment; innovation and digitalization; and strong, balanced, secure, sustainable and inclusive growth.[353] It is critical that ASCR be realigned to help realize this vision. Specifically on digitalization (which has been shown to be one approach to support modal shifts by many firms in the services sector as

[353] "APEC Putrajaya Vision 2040," in *APEC* (2020 Economic Leaders' Week, Kuala Lumpur, Malaysia: APEC, 2020), https://www.apec.org/Meeting-Papers/Leaders-Declarations/2020/2020_aelm/Annex-A.

elaborated in Chapter 3), it is important to improve the synergy between the ASCR and the APEC Internet and Digital Economy Roadmap (AIDER) as works on the 11 focus areas identified in the latter would have implications on the competitiveness of the services sector in the region. On inclusion, considering the critical role of services sector in contributing to inclusion, synergy between ASCR and the APEC Action Agenda on Advancing Economic, Financial, and Social Inclusion in the APEC Region, as well as the La Serena Roadmap for Women and Inclusive Growth should be explored and enhanced. On structural reform, just as the ASCR made reference to RAASR, and the APEC Structural Reform Ministers called economies to implement unilateral reforms aimed at further improving the services sector as part of their RAASR individual action plans, synergy between services and structural reform initiatives in APEC should be continued in the form of the next phase of ASCR implementation and the new APEC structural reform agenda (to be endorsed at the upcoming SRMM in June 2021).

Enhance engagement with the private sector: The private sector is a critical stakeholder of the ASCR. They are, after all, the beneficiaries, the providers, and the users of services. The ASCR Implementation Plan has acknowledged this by noting that the views of PECC, ABAC, the Asia-Pacific Services Coalition (APSC), and other private sector entities would be incorporated in monitoring and evaluating progress of ASCR implementation. Many have done so where the opportunities arose. For example, ABAC and PECC have been able to provide their inputs by virtue of their status as APEC official observers. More specifically, ABAC contributed written inputs to the 2018 version of the consolidated matrix of actions. In 2019, ABAC and the APSC invited GOS to participate in a public-private dialogue on "The Impact of New Technologies – Implementing the APEC Services Competitiveness Roadmap in the Digital Era" held on the sidelines of ABAC II in Jakarta, Indonesia. In the same year, ABAC wrote to the GOS Convenor to propose expanding the APEC Trade Repository to cover services rules and regulations. Despite these engagements, more can be done to provide opportunities to the private sector to share their thoughts on how ASCR implementation can be further enhanced. These can include having a standing agenda item in GOS and other accountable fora meetings where the private sector can provide their perspectives and experiences on the ASCR implementation; and working with the private sector to develop other modes of engagement in particular sectors of interest, focusing in particular on the value chain dimensions of modern services trade. Indeed, ABAC has prepared a report to provide inputs to the ASCR MTR (Box 4.1). At the same time, fora and economies could also focus on sharing the tangible impact of their initiatives to businesses.

Continue to improve services data and statistics: As the saying goes, we cannot improve on what we cannot measure. Despite the limitations of monitored quantitative indicators, some of which are elaborated in 0, they show where APEC currently stands in relation to its aspiration as described in the roadmap and the implementation plan. In other words, these monitored indicators show if various activities undertaken by fora and economies have led to improvements in situation or otherwise. As such, improving the state of services data and statistics in the region would go a long way in facilitating the monitoring of the roadmap implementation. This initiative would also better equip policymakers to plan and make more evidence-based decisions. Some indicators have received increased coverage. As an illustration, the OECD STRI as of this review's writing covers 14 APEC economies, compared to only 11 when the ASCR Baseline Indicators report was published back in 2017. Despite having only one data point since ASCR's inception (2016), the World Bank/WTO STRI covers 19 economies as opposed to its earlier version which covers 16 economies. While some quantitative indicators saw increased coverage, other indicators remain far from ideal. For

example, most economies do not yet have a centralized database for statistics such as foreign affiliate trade in services (FATS) and value of bilateral trade in services.

Undertake complementary, measurable, concrete activities: In some cases, the linkage between activities taken by the accountable fora and the indicators are direct and clear. This is particularly so where the indicators are used to monitor the implementation of specific initiatives under the purview of the fora such as ABTC (by BMG) and CBPR (by DESG). It is thus more straightforward for the accountable fora to undertake activities or redouble efforts with the intent to improve on the indicators if analysis has shown that more can be done. In many cases, however, the linkage between activities and indicators is indirect. By their nature, activities such as information-sharing workshops do not automatically lead to improvement in the indicators without follow-up actions. This suggests that between the activities undertaken by the accountable fora and the indicators, there needs to be supplementary follow-up, concrete activities to support economies in undertaking tangible, measurable reforms that can eventually be reflected as improvements in the indicators. The need for these follow-up activities is further underscored by the observations that despite the activities taken at the level of APEC-wide actions, there continues to be a wide range of gaps among individual economies for specific indicators such as the OECD STRI.

Box 4.1. Summary of ABAC's inputs to the ASCR MTR

To contribute to the ASCR MTR, ABAC has prepared a report to provide business assessment of the roadmap implementation to date, as well as recommendations on how to adjust the roadmap moving forward.[354]

ABAC recognizes that there are major success stories associated with the roadmap, pointing to the endorsement of the APEC Non-Binding Principles for Domestic Regulation of Services Sectors, the completion of the pilot APEC index and the launch of the Virtual ABTC as illustrations. Observing that implementing the various APEC-wide actions would always require close coordination among fora, it indicates that more can be done to avoid the silo mentality and therefore to enhance cross-fora collaboration.

ABAC emphasizes the need to ensure strong interlinkages between APEC initiatives and processes in multilateral fora such as WTO, noting the close connection between APEC Non-Binding Principles and WTO Joint Initiative on Services Domestic Regulation. It also calls for increased participation by APEC economies in other WTO initiatives such as the WTO Negotiations on E-commerce and WTO Moratorium on Customs Duties on Electronic Transactions.

ABAC offers 40 recommendations - which are specific to the 19 APEC-wide actions – to enhance the ASCR and help the region move closer to achieving its objectives. Finally, ABAC proposes 8 new initiatives (covering areas such as essential services, health services, e-services, built environment-related services, creative services, and mining services) and extends a business partnership aimed at bringing the roadmap objectives into realization for the consideration of APEC economies.

[354] ABAC, "2021 Mid-Term Review APEC Services Competitiveness Roadmap 2016-2025 - Business Assessment of Outcomes and Recommended Roadmap Adjustments: Research Report for the Services Taskforce," April 29, 2021, https://www2.abaconline.org/assets/ABAC_Report_-_MTR_ASCR.pdf

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ANNEX A - ASSESSMENT INPUTS

A.1. Baseline indicators

Following the endorsement of ASCR in 2016, baseline indicators were identified in collaboration with accountable fora to help monitor and evaluate its implementation. These indicators were compiled in the ASCR Baseline Indicators Report, which was welcomed by SOM in 2017.[355] Issues concerning the indicators such as variations in update frequency, delays in release, and changes in methodology mean that a single uniform approach cannot be applied across all monitored indicators. To ensure that this review analyzes as many indicators as possible, PSU has adhered to the following general rules:

1) An indicator is deemed to have a baseline if 2014, 2015, or 2016 data are available. Data from the latest available year will be used as the baseline.
2) An indicator is deemed to have no baseline if the latest available year is before 2014.
3) An indicator's progress is compared against the baseline if post-2016 data is available.

PSU made exceptions for some indicators for various reasons, including:

1) Update frequency (e.g., the World Bank Enterprise Survey is only conducted in the same economy once every few years. In the case of APEC economies covered, there is an approximately seven-year interval between surveys).
2) Data patchiness (e.g., while data from the latest available year is usually compared against those in the baseline year, data patchiness means that data from earlier available years may be used instead (i.e., 2018 instead of 2019). This was the case for UNESCO intra-APEC inbound students).

For indicators that either have no baseline or where progress cannot be assessed, PSU has, where possible, compared APEC's performance with other regional groupings such as the OECD. The approaches taken vis-à-vis specific indicators are further elaborated in the discussions on individual APEC-wide actions in section 2.3.

[355] Pasadilla, Wirjo, and Gonzales, "APEC Services Competitiveness Roadmap (ASCR) Baseline Indicators."

Table A.1: Summary of Indicators by Overarching Target and APEC-wide Action

Overarching target	Indicator	Latest available year	Accessed
1	[OECD] STRI in selected services sector	2020	Apr 2021
	[World Bank/WTO] STRI in selected services sector	2016	Oct 2020
2	[WTO] Share of world's commercial services export	2019	Jan 2021
3	[WTO] Trade in commercial services	2019	Jan 2021
	[World Bank and economy sources] Services value-added as a percentage of GDP	Varies (from 2016 to 2019)	Jan 2021
APEC-wide action	**Indicator**	**Latest available year**	**Accessed**
1	[World Bank] Percentage of small and medium-sized firms that export directly or indirectly	Varies (from 2010 to 2019)	Apr 2021
	[World Bank] Percentage of small and medium-sized firms that export directly	Varies (from 2010 to 2019)	Apr 2021
2	[OECD] STRI in accounting, architecture, engineering, and legal sector	2020	Apr 2021
	[World Bank/WTO] STRI in accounting, accounting, and legal sector	2016	Oct 2020
	[Economy sources and survey] Cross-recognition of educational standards and professional qualifications	Varies depending on sources	Mar 2021
3	[Group update] Development and implementation of an optional APEC-wide online lodgment for ABTC applications	2021	May 2021
4	[OECD] STRI in selected services sector	2020	Apr 2021
	[World Bank/WTO] STRI in selected services sector	2016	Oct 2020
5	[OECD] STRI in selected services sector	2020	Apr 2021
	[World Bank/WTO] STRI in selected services sector	2016	Oct 2020

6	NIL		
7	[OECD] STRI in selected services sector	2020	Apr 2021
	[World Bank/WTO] STRI in selected services sector	2016	Oct 2020
8	[UNESCO] Inbound internationally mobile students by economy of destination	2019	Apr 2021
	[Economy sources and survey] Cross-recognition of educational standards and professional qualifications	Varies depending on sources	Mar 2021
	[Survey] Mobility of educated workers within region	2019	May 2021
9	[Group update] Cross-border data flows and privacy (Number of economies and firms participating in APEC Cross-Border Privacy Rules (CBPR) and Privacy Recognition for Processors (PRP) Systems)	2020/2021	Apr 2021
	[UNCTAD and economy sources] Status of online protection laws	2020	Dec 2020
10	[OECD] STRI in commercial banking and insurance sector	2020	Apr 2021
	[World Bank/WTO] STRI in commercial banking and insurance sector	2016	Oct 2020
	[Survey] Number of transactions or cross-border sales between ARFP-participating economies	2021	May 2021
11	[OECD] STRI in logistics and transport sector	2020	Apr 2021
	[World Bank/WTO] STRI in logistics and transport sector	2016	Oct 2020
	[ICAO] Air services agreements*	2021	Nov 2020
12	[World Bank/UNWTO] International tourism arrivals	2019	Apr 2021
	[Group update] State of APEC Tourism Report	*NA*	*NA*
	[Passport Index and economy sources] Intra-APEC visa restrictions	2020	Oct 2020
	[World Bank] International tourism receipts	2019	Apr 2021
	[WTTC] Travel and tourism GDP (direct contribution)	2019	Jan 2021
	[WTTC] Travel and tourism employment (direct contribution)	2019	Jan 2021
13	[Various] Availability of trade in services statistics	Varies depending on individual indicators	Mar 2021
14	[FAO] Prevalence of undernourishment^	2018-2020 period	Aug 2021

15	[APERC] APEC share of renewable energy	2021	May 2021
	[APERC] APEC energy intensity ratio	2021	May 2021
16	[World Bank] Ease of doing business score	2019 (DB2020)	Jan 2021
	[OECD] STRI in selected services sector	2020	Feb 2021
	[UNESCAP] Intra-APEC Regional Trade Agreement/Free Trade Agreements (RTA/FTAs) with investment chapters	2020	Mar 2021
	[Economy sources] Intra-APEC Double Taxation Agreements (DTAs)*	2020	Mar 2021
	[UNCTAD] Intra-APEC Bilateral Investment Treaties (BITs)	2020	Mar 2021
	[Survey] e-transparency	2021	May 2021
17	[World Bank] Percentage of SMEs having their own website	Varies (from 2010 to 2019)	Apr 2021
	[World Bank] Percentage of SMEs using e-mail to interact with clients/suppliers	Varies (from 2010 to 2019)	Apr 2021
	[World Bank] Percentage of SMEs with a checking or savings account	Varies (from 2010 to 2019)	Apr 2021
18	[ITU] Percentage of individuals using the internet	2019	Jan 2021
	[ITU] Fixed broadband subscriptions per 100 inhabitants	2019	Jan 2021
	[ITU] Active mobile-broadband subscriptions per 100 inhabitants	2019	Jan 2021
19	[UNESCO] R&D expenditure as a percentage of GDP	Varies (from 2015 to 2018)	Jan 2021
	[UNESCO] Increasing percentage of women participation of R&D in STI fields.	Varies (from 2013 to 2018)	Jan 2021

Note: *Source of indicators have been updated. ^New indicator (see Table 2.2 for details)
Source: Compilations by APEC-PSU.

Table A.1 provides a summary of the latest available year for each monitored indicator. Note that several indicators are used to monitor more than one APEC-wide action, and therefore have been listed multiple times in the table (e.g., OECD STRI, World Bank/WTO STRI).

Since the publication of the ASCR Baseline Indicators Report prepared by PSU in 2017, some of the proposed baseline indicators have undergone changes. These changes can generally be divided into two types. The first type of changes pertains to revisions to the methodologies underlying the indicators. One example is the World Bank's percentage of small and medium-sized firms that export directly or indirectly. In the previous version of the indicator, a surveyed firm would be considered an exporter if it exports at least 1 percent of its sales. However, the World Bank's new classification now only considers a firm an exporter if it exports at least 10 percent of its sales.[356] Another example of changes to methodology are visa information reflected in the Passport Index. In light of COVID-19, the Passport Index has incorporated information related to COVID-19 restrictions in its database, hence masking the underlying visa requirements in the absence of such temporary restrictions.[357] While these changes pose challenges in measuring progress towards the ASCR, PSU nonetheless perceives these changes positively as they reflect the effort of data sources to improve the indicators over time and to adjust them to new realities.

The second type of changes pertains to data availability. In these cases, the data source might have stopped updating some indicators, or have not given clear indication of future updates. For example, although the World Bank/WTO released the 2016 update of its STRI (which differs in methodology from the previous update), the World Bank/WTO have not released newer data. The full list of changes/modifications since these indicators were last analyzed in 2017 are shown in Table A.2 below.

Table A.2: Changes/Modifications to Indicators

APEC-wide action	Indicator	Changes/modifications
1	[World Bank] Percentage of small and medium-sized firms that export directly or indirectly	Surveyed firms would be considered exporters only if at least 10 percent of its sales are exported, up from the previous threshold of 1 percent.
2, 4, 5, 7, 10, 11	[World Bank/WTO] STRI in selected services sector	There has been no indication that newer data would be released since the 2016 update.
11	[WTO and ASEAN] Air services agreements	There has been no indication that newer data would be released since the last update.
12	[Passport Index and economy sources] Intra-APEC visa restrictions	Incorporation of information related to COVID-19 restrictions have masked the underlying visa requirements in the absence of such temporary restrictions.
13	[International Trade Centre] Tertiary inward and outward flows	There has been a change in classification within tertiary sub-sectors. The current classification includes: (i) Electricity, gas,

[356] World Bank, "Enterprise Surveys - World Bank Group," April 19, 2021, https://www.enterprisesurveys.org/en/custom-query.
[357] Passport Index, "Passport Index - Global Mobility Intelligence," April 19, 2021, https://www.passportindex.org/.

		steam and air conditioning supply; (ii) Water supply; sewerage, waste management and remediation activities; (iii) Construction; (iv) Wholesale and retail trade; repair of motor vehicles and motorcycles; (v) Transportation and storage; (vi) Accommodation and food service activities; (vii) Information and communication; (viii) Financial and insurance activities; (ix) Real estate activities; (x) Professional, scientific and technical activities; (xi) Administrative and support service activities; (xii) Public administration and defense; compulsory social security; (xiii) Education; (xiv) Human health and social work activities; (xv) Arts, entertainment and recreation; (xvi) Other service activities; (xvii) Activities of households as employers; undifferentiated goods-and-services-producing activities of households for own use; and (vii) Activities of extraterritorial organizations and bodies.
14	[FAO] Prevalence of food inadequacy	Prevalence of food inadequacy is no longer available in FAO website.
16	[UNCTAD] Intra-APEC Double Taxation Agreements (DTAs)	The list of double taxation agreements between economies is no longer available in UNCTAD website.

Source: Compilations by APEC-PSU

PSU has responded to these changes/modifications in various ways to ensure the validity of analyses conducted in this report. Where the changes/modifications are applied retroactively (e.g., World Bank's percentage of small and medium-sized firms that export directly or indirectly), PSU has collected revised data that use the new definition as the basis for analysis between the baseline and the latest available year. Where information related to COVID-19 might have masked the underlying data (e.g., Passport Index's intra-APEC visa restrictions), PSU has employed Wayback Machine to access data just prior to the incorporation of COVID-19 information.[358] Where the original source no longer updates or provides the data (e.g., UNCTAD's intra-APEC DTAs), PSU has, to the extent possible, replaced it with other sources or indicators.

A.2. Consolidated matrix of actions

In line with its mandate to support Senior Officials in monitoring and encouraging action to implement the ASCR, GOS has regularly circulated the consolidated matrix of actions for completion by accountable APEC fora. The matrix aims to capture the activities to support implementation of specific APEC-wide actions that the fora have undertaken or are currently undertaking. For the purpose of the MTR, PSU has referred to the version of the matrix circulated in February 2020 as well as earlier versions of the matrix tabled as documents in earlier meetings.

[358] https://archive.org/web/

Furthermore, PSU has referred to additional sources including the APEC Project Database (PDB) and reports arising from the projects to supplement information provided in the matrix.

A.3. Individual economy actions

The ASCR implementation plan noted that when APEC Structural Reform Ministers met in 2015, they encouraged economies to implement unilateral reforms aimed at further improving the services sector as part of their structural reform plans under RAASR. Therefore, PSU has reviewed the RAASR individual action plans (IAPs) and subsequent updates to identify the actions that individual economies had undertaken to advance the services sector.

A.4. Survey questionnaire

PSU has prepared survey questionnaire to support the conduct of the MTR. The objectives of the questionnaire are as follows: 1) to obtain fora update on targets and outputs identified in the ASCR Implementation Plan and subsequent documents where applicable; 2) to obtain fora update on some indicators identified in the ASCR Consolidated Matrix of APEC-Wide Actions; 3) to supplement/complement the list of activities captured in the ASCR Consolidated Matrix of APEC-Wide Actions; 4) to get a sense of fora's plan to further support the realization of specific APEC-wide actions and more broadly, ASCR; and 5) to understand fora's plan to adapt specific APEC-wide actions in responding to the impact and implications of COVID-19. The survey questionnaire has been circulated to the relevant accountable fora as indicated in Table A.3 below.

Table A.3: Accountable Fora and Related APEC-wide Actions

Accountable fora	Related APEC-wide actions
Business Mobility Group (BMG)	3
Committee on Trade and Investment (CTI)	1, 4, 5, 6, 7, 13
Digital Economy Steering Group (DESG)	9
Economic Committee (EC)	4, 5
Energy Working Group (EWG)	15
Finance Ministers' Process (FMP)	10
Group on Services (GOS)	4, 5, 6, 7, 10, 13
Human Resources Development Working Group (HRDWG)	2, 8
Investment Experts' Group (IEG)	16
Policy Partnership on Food Security (PPFS)	14
Policy Partnership on Science, Technology and Innovation (PPSTI)	19
Small and Medium Enterprises Working Group (SMEWG)	17
Telecommunications and Information Working Group (TELWG)	18
Transportation Working Group (TPTWG)	11
Tourism Working Group (TWG)	12

Source: Compilations by APEC-PSU