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## KEY ABBREVIATIONS

<table>
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<th>Description</th>
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<tr>
<td>APEC</td>
<td>Asia-Pacific Economic Cooperation</td>
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<tr>
<td>FDI</td>
<td>foreign direct investment</td>
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<tr>
<td>GDP</td>
<td>gross domestic product</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<tr>
<td>NEER</td>
<td>nominal effective exchange rate</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<tr>
<td>PSU</td>
<td>Policy Support Unit (APEC)</td>
</tr>
<tr>
<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<td>WTO</td>
<td>World Trade Organization</td>
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KEY MESSAGES

I. New Virus, Old Challenges and Rebuilding a Better Asia-Pacific

- This year has been like no other in recent memory, with a novel coronavirus dominating lives, economic activity and policy decisions. Hundreds of thousands are dead, trillions of dollars of output have disappeared and millions of jobs have been lost.

- COVID-19 has mercilessly exploited old challenges of environmental damage and growing inequality that have not been adequately addressed. Environmental damage through deforestation, logging and mining increases our exposure to diseases by increasing human-to-animal contact. Infectious diseases with zoonotic origins, such as COVID-19, are a side effect of unsustainable practices. The frequency and severity of diseases are also affected by changes in climate patterns, with rising temperatures providing ideal conditions for the spread of pathogens and disease vectors.

- COVID-19 has been hardest on the most vulnerable in our societies. It has exposed social and economic inequalities, which have been magnified in the disproportionate impact of the crisis on the poor, women, the youth, ethnic minorities and indigenous peoples, and other vulnerable groups. Persistent poverty and barriers to access to healthcare, skills development and economic opportunities interacted with the virus, resulting in severe public health and economic outcomes.

- Meanwhile, the nature by which COVID-19 spreads and the responses to contain it have accelerated the process of digitalisation, with adoption of digital solutions no longer an option but a necessity. However, digitalisation comes with its own challenges: cybersecurity, data privacy and digital fraud, along with outdated regulations and economic structures.

- In a year like no other, the region has been compelled to rethink how it works, how it learns, and what it prioritises. The region needs to invest in green jobs and infrastructure, shift away from a fossil fuel economy, and internalise environmental and climate impact into economic production. It needs to ensure equitable access to healthcare, infrastructure, technology, and education and skills development to enable all people to contribute to and benefit from economic opportunities. It needs to maximise the potential of the digital economy through innovation and competition, but at the same time address potential adverse impact on jobs and incomes in the pursuit of an equal and inclusive society.

- Regional cooperation, particularly APEC, will have a key role in the rebuilding process. The COVID-19 pandemic has shown the importance of a coordinated and cooperative response to regional and global crises. Economies will need to share experience and information, develop trust, and build avenues for cooperation and policy coordination. APEC can be the forum where priorities and policies are discussed and commitments are made toward an inclusive, sustainable and resilient Asia-Pacific region.
II. APEC amid COVID-19: Navigating Risks and Opportunities toward Resilience

- The APEC region contracted by 3.7 percent in the first six months of 2020, a sharp reversal from the 3.4 percent growth seen in the same period in 2019. Household consumption, a reliable source of growth for APEC economies declined by 7.1 percent while investments contracted more at 11.2 percent during the same period.

- Growth in the volume and value of merchandise trade recorded bigger contractions during the period January–June 2020 compared to year-ago levels, while commercial services plunged. Trading activity in the APEC region was adversely affected by the combined impact of the temporary closure of borders, disruptions in global supply chains, and persistent trade and technology tensions that began to escalate in 2018 with the imposition of tariff and retaliatory measures.

- A key contributing factor in the continued weakness in trading activity is the proliferation of trade-restrictive measures. The period covering mid-October 2019 to mid-May 2020 saw the number of measures implemented by APEC economies that served to restrict the flow of trade go up to 57, dominating measures that facilitated trade, which totalled 21.

- Absent vaccines and therapeutics, economies have to grapple with the trade-off between continuing to impose movement restrictions at the risk of long-term economic scarring, or reopening the economy at the risk of a resurgence in infections, which in turn, could negatively feed on consumption and business sentiment and thus, hold back economic activity.

- Prolonged stay-at-home measures, mandatory or voluntary, to safeguard health amid an ongoing pandemic, have translated into significant cutbacks in consumption and investments. As a result, the APEC region is expected to contract in 2020 by 2.5 percent, equivalent to an output loss of around USD 1.8 trillion. GDP growth projections for 2021, at 5.2 percent, reflect an economic rebound for the APEC region although at a lower rate compared to earlier forecasts.

- Economies could greatly benefit from continued fiscal and monetary support measures to the health sector, households and businesses, particularly amid continuing uncertainty centred on a possible resurgence of the virus and negative spillover effects of sizeable reductions in global consumption, investment, trade and remittances.

- There are risks ahead, but there are also opportunities to build back better, stronger and more resilient economies. APEC economies could consider investing in greener technologies; strengthening supply chains, logistics management and trade relations; moving towards digitalisation; and advancing women’s economic empowerment by expanding women’s access to education, skills development, employment and credit to facilitate their full participation and contribution to economic undertakings so that economic growth is both sustainable and inclusive.
1 NEW VIRUS, OLD CHALLENGES AND REBUILDING A BETTER ASIA-PACIFIC

1.1 A YEAR LIKE NO OTHER

The year 2020 was always going to be a pivotal one for the APEC region. It is the endpoint of the Bogor Goals, the guiding vision for the Asia-Pacific crafted by the APEC Leaders in 1994 that ushered in a quarter of a century of prosperity through regional cooperation and globalisation. This year was to have been the time for APEC to take stock of past achievements as well as current challenges, and chart a way forward for the forum. It was to have been a celebration of the completion of the Bogor Goals, complemented by the unveiling of a post-2020 vision by APEC Leaders.

But in 2020 the COVID-19 pandemic happened, cancelling plans and halting activity. The novel coronavirus, first reported in Wuhan, China, has spread around the world and caused the worst pandemic in recent memory. To safeguard public health and curb the spread of the virus, APEC economies implemented various containment measures at the onset of the pandemic. Border controls, lockdowns, and other movement restrictions such as social distancing and prohibitions on large gatherings, and the rise of telecommuting effectively ground workers, consumers and businesses to a standstill, resulting in a significant cutback in economic activity.

Businesses have been severely affected, with travel, tourism, hospitality and retail facing existential threats as temporary border closures and travel restrictions have kept people at home. As profits turn into losses, firms operating in these badly affected sectors have furloughed or laid off a sizeable proportion of their workers, leading to a surge in unemployment.

The manufacturing sector has also been negatively affected, particularly during the first few months into the pandemic as shutdown of factories became necessary to curb infections. Reduced human resources and staggered work shifts implemented to reduce virus transmission, along with supply chain disruptions slowed down output. This, coupled with lower investments due to bleak prospects, resulted in an 8.2 percent decline in APEC’s average manufacturing index for the period January–August 2020 compared to the same period in 2019.

More than half a year in, the pandemic is still raging: daily reported COVID-19 cases and deaths around the region have not slowed down since March (Figure 1.1). As of this writing, almost 14 million people in the APEC region have been infected with COVID-19, accounting for 32 percent of global cases and 37 percent of global deaths. Europe is battling a second wave of the pandemic, necessitating a return to lockdown measures. The experience in Europe underscores the importance of effectively controlling the spread of COVID-19 to keep the risk of resurgence at bay.

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1 Prepared by Rhea C. Hernando, Emmanuel A. San Andres, Satvinderjit Kaur Singh and Andre Wirjo, APEC Policy Support Unit (PSU).
2 Johns Hopkins University.
The APEC region’s economy is on course to contract by 2.5 percent this year, or a loss in output worth USD 1.8 trillion (see next chapter). This will be the first time that the region’s economy will contract in three decades. As of September 2020, the unemployment rate in the region averaged 4.8 percent, with more than 74 million people looking for work. APEC was formed more than 30 years ago and has seen economic recessions, financial and exchange rate crises, commodity price volatility, pandemics and terrorist attacks. Yet, in terms of economic losses, this has been a year like no other.

1.2 NEW VIRUS, OLD CHALLENGES

The COVID-19 virus is new, but it has mercilessly exposed old challenges that have not been adequately addressed. For example, the unabated damage to the environment and growing inequality have led to economic and social vulnerabilities that not only allowed the virus to spread, but also made it more difficult to manage.

1.2.1 COVID-19 and damage to the environment

The health of the environment and of its inhabitants are deeply interlinked. Environmental damage through deforestation, logging and mining increases our exposure to diseases by increasing human-to-animal contact. The proliferation of such activities has caused habitat loss and forced wildlife to encroach into human settlements, which gives rise to public

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1 Data calculated based on the GDP growth projections in the IMF World Economic Outlook (WEO) database, October 2020.
2 Based on unemployment estimates from economy sources and labour force data from World Bank World Development Indicators and Chinese Taipei’s Directorate-General for Budget, Accounting and Statistics (Chinese Taipei). The average APEC unemployment rate is weighted by labour force.
health risks. A recent study at Stanford University suggests that increased interactions between animals and humans due to deforestation can cause the emergence and spread of new diseases like COVID-19.\(^5\) The study finds that about 60 percent of infectious diseases have zoonotic origins, that is, they are caused by the crossover of pathogens from animals to humans. The frequency of such occurrences is likely to continue increasing as people destroy more habitats through unsustainable practices.\(^6\)

Historical evidence has also shown a strong association between climatic conditions and epidemic diseases.\(^7\) For example, the occurrence of malaria is notably affected by extreme climatic events: high humidity and excessive rainfall provide an optimal environment for mosquito breeding.\(^8\) Diseases associated with specific climate regions have also been arising elsewhere due to changing weather patterns. According to the World Health Organization (WHO), only nine economies had experienced severe dengue outbreaks before the 1970s, but now, the disease has grown to be endemic in more than 100 economies across several regions.\(^9\)

Similarly, rising temperatures cause ice and permafrost to melt. This not only causes floods and landslides but also releases viruses that have been preserved for thousands of years. Permafrost acts as a storage for carbon-based remains that have not decomposed, providing an environment that allows them to survive for many years. The release of these remains upon thawing exposes humans to large amounts of carbon and unknown or previously eradicated pathogens.\(^10\) A sampling of old ice caps in the Tibetan Plateau, China found 28 novel viruses which when released could pose risks to surrounding settlements.\(^11\) Moreover, the higher climate sensitivity of the Arctic means that the region is warming twice as fast as the rest of the Earth, posing significant threats not only to the environment but also to our unprepared immune systems.

Improper waste management also increases the risk of contracting diseases by creating breeding grounds for disease vectors, and polluting water and soil, which then enter food chains. About 400,000 to 1 million people in developing economies die each year due to diseases caused by mismanaged waste.\(^12\) The threat posed by mismanaged waste becomes magnified during a pandemic such as the ongoing COVID-19, as economies struggle to deal with higher volumes of medical waste. In some economies, this waste has been

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\(^6\) United Nations Environment Programme (UNEP) and International Livestock Research Institute, “Preventing the Next Pandemic: Zoonotic Diseases and How to Break the Chain of Transmission (UNEP: Nairobi, Kenya: UNEP, 2020).


\(^12\) Tearfund; Fauna and Flora International; WasteAid; and The Institute of Development Studies, “No Time to Waste: Tackling the Plastic Pollution Crisis before It’s Too Late” (Teddington, UK: Tearfund, 2019), https://learn.tearfund.org/~media/files/itlz/circular_economy/2019-tearfund-consortium-no-time-to-waste-en.pdf?la=en
disposed into the natural environment. Experts have warned that mismanaged COVID-19 waste could lead to additional infections. The ability of the coronavirus to survive on material surfaces for several days increases the chance of infection, especially in developing economies that lack proper waste infrastructure, dump their refuse openly and have lax regulations for waste pickers who scavenge for recyclable materials. Better waste management is necessary to prevent environmental damage and the spread of diseases.

1.2.2 COVID-19 and its unequal impact

COVID-19 has been hardest on the poorest and most vulnerable in our societies: the people who can least afford healthcare, have the least access to infrastructure and technology and with the most precarious hold on jobs.

![Figure 1.2. Poverty, affluence and distribution in APEC, 1990–2018](image)

Poverty and middle class headcount ratio  
Distribution of real income gains by ventile

Note:
(1) The extreme poor, poor, and middle class and up are defined respectively as people living on USD 1.90 or less, USD 3.80 or less, and USD 7.60 or more per person per day in 2011 PPP terms.
(2) Ventile groups are arranged from poorest 5% (ventile 1) to richest 5% (ventile 20). Aggregates are weighted by population. Each slice accrues to 5% of the population.
(3) Data cover Australia; Canada; Chile; China; Indonesia; Japan; Korea; Malaysia; Mexico; Papua New Guinea; Peru; the Philippines; Russia; Chinese Taipei; Thailand; the United States; and Viet Nam.

Source: World Bank’s PovcalNet database; APEC PSU staff calculations.

Decades of economic growth in APEC has resulted in improved living standards, with the relatively well-off comprising almost 70 percent of the region’s population, while the poverty rate is below 10 percent and extreme poverty has almost been eliminated (Figure 1.2). The economic pie has been significantly enlarged, but the distribution of this pie is far from equal or equitable: 14 percent of the total increase in real income over the past

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three decades accrued to the richest 5 percent of the population, while the poorest 5 percent only gained 0.3 percent. More than 50 percent of the income gains over the past 30 years have gone to the richest quarter of the population; the poorest quarter got 4 percent. This has had important implications on the distribution of health, education, and economic opportunities.

Indeed, the virus has exposed social and economic inequalities prevailing in societies, as seen in the disproportionate impact of the crisis on the poor, women, the youth, the least educated and skilled, and other vulnerable groups. The virus has been disproportionately harmful to minority groups and indigenous peoples, with persistent poverty and structural barriers to healthcare, skills development, and economic opportunities interacting with the virus, resulting in severe public health outcomes and economic fallout. Inequality in access to digital tools and infrastructure has also come to the fore as the pandemic necessitated a shift to conducting work, study, and daily transactions online. Lack of access to digital technology and skills are disadvantaging women and girls, the poor, and the least educated.

For women, the pandemic has added to existing gender inequalities that make access to education, employment and credit more challenging. Women are more likely to be employed in social sectors that necessitate face-to-face interactions so that telecommuting is not an option. Data in 2018 show that women made up 54 percent of those employed in the accommodation and food services sector. Other sectors where there are likely more women working than men include retail, travel and tourism, and hospitality. A study by McKinsey in July 2020 estimates COVID-19 having an uneven impact on employment, where 4.5 percent of women’s jobs are at risk globally compared to 3.8 percent of men’s jobs. Women are also more likely to be engaged in informal employment where health and unemployment insurance are not covered. Available data for selected APEC economies show that the proportion of women in non-agricultural informal employment ranged from 29 percent to as high as 75 percent in 2019. Aggravating women’s conditions is the fact that women in the APEC region spend more than double the time spent by men on unpaid work such as household chores, childcare, caring for the elderly and sick family members and other domestic tasks.

The youth are also vulnerable to the ill effects of the pandemic. Access to education, skills training and employment opportunities for young people have been either disrupted or curtailed due to a host of factors such as the economic downturn and insufficient digital...

19 The disadvantage of women in science, technology, engineering and mathematics is discussed in detail in Box 2.1.
21 A. Madgavkar et al., “COVID-19 and Gender Equality: Countering the Regressive Effects” (McKinsey Global Institute, July 2020).
gadgets and infrastructure necessary for online access to education materials. And the impact on the youth is not short-term. Lack of access to education and skills training gives rise to scarring effects that could adversely affect future career paths. These effects could be reflected in lower wage levels, fewer career development opportunities and diminished prospects for better jobs. Moreover, young people have to contend with limited assets, so that an economic recession could make those already under economic strain more vulnerable. For example, to avoid falling into poverty, young people may be forced to take on part-time or temporary jobs that do not give health and unemployment benefits. In addition, some have opted to drop out of school to care for sick family members, lessen household expenditures, or work to augment family income.

Inequality in opportunity has not only worsened the impact of the pandemic on vulnerable populations, it has also hampered efforts to bring COVID-19 under control. While authorities have advised people to stay at home and practice social distancing to slow down the spread of the virus, this is not an option for the poor, many of whom live in cramped spaces and earn daily wages in the informal sector. Moreover, low-income earners are less likely to be in jobs that can be done remotely and have less access to digital technology, which means that the poor’s jobs and income will be hit most severely by measures such as lockdowns or movement controls. In the absence of measures to equalise opportunities and ensure social protection floors, the pandemic will likely exacerbate already deepening inequality around the region.

1.3 NEW VIRUS, NEW TECHNOLOGY

Even before the pandemic, digitalisation has been associated with numerous benefits to its adopters. Digital technology and tools are enabling the development of many new business models that disrupt traditional practices and channels, substituting or replacing existing products or services, and leveraging new technologies. Aside from creating entirely new businesses and industries, digital technology has brought benefits to traditional firms and individuals alike, with e-commerce and open-source programmes providing alternative channels to reach business partners and customers at lower costs. Indeed, a survey by Microsoft and IDC Asia/Pacific of more than 1,500 business leaders in the Asia-Pacific region listed improved productivity, profit margins, cost reductions, customer loyalty and revenue growth as among the top benefits of digital transformation.

The nature by which COVID-19 spreads and the consequent responses to contain it have accelerated the process of digitalisation. While the benefits of digital solutions may vary between sectors and users, for many, the adoption of digital solutions is no longer an option, but a necessity. E-commerce tools and a variety of mobile money and digital

payment services are helping micro, small, and medium enterprises (MSMEs) to lock-in transactions and deliver goods and services while customers stay at home and many businesses are shuttered. Fintech lending is helping to address the liquidity crisis faced by MSMEs, especially during mandated movement restrictions that make it challenging to visit financial institutions in person. Governments are turning to digital technology to provide timely updates on COVID-19 cases and clusters as well as for contact tracing. In collaboration with the private sector, some are also exploring the use of high-frequency data collected via non-traditional channels to complement official statistics, which tend to lag vis-à-vis the situation on the ground. Households are relying on various platforms to maintain communications, access telehealth services as well as purchase meals and groceries.

But digitalisation comes with its own challenges – cybersecurity, data privacy and digital fraud being some of them – that are becoming more pressing as more people interact online. Online misinformation has been prevalent before COVID-19, but its consequences have been more deeply concerning when used to play on people’s fears, influence decisions and outcomes, and spread hoaxes. From the perspective of businesses, false reviews and negative publicity on popular platforms could lead to loss of transactions and profits. Moreover, while market dominance and market power do not always go together, practices of larger platforms may affect MSMEs negatively. For example, charging relatively steep service commissions on food delivery can cut into profits and potentially drive restaurants out of business, while the use of algorithms to determine which products are essential and non-essential has adversely affected merchants by delaying delivery of products that are misclassified as non-essential. Furthermore, although the APEC region has among the highest levels of digital connectivity, a digital divide persists between and within economies, limiting the potential benefits of digitalisation.

While digital solutions can help businesses overcome some of the restrictions arising from the response to COVID-19, businesses that are planning or undertaking cross-border e-commerce face additional challenges that may not be restricted to digital issues. For instance, businesses selling goods across the border still need to contend with import duties, while those that can receive orders digitally still have to provide the services physically, which could prove difficult given containment measures as mandated by governments to rein in the spread of COVID-19.

Moreover, it is important to acknowledge the interplay between digitalisation and the labour market. While businesses may have digitalised for short-term survival amid the pandemic, there may come a point where their reliance on digitalisation is such that they no longer need the workers that were originally replaced by technology. The second-order effects of policies put in place by governments facing a global economic slowdown such

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33 J. Karr, K. Loh, and A. Wirjo, op. cit.
as low interest rates and packages to lower the cost of digitalisation may tilt the balance further against workers.  

### 1.4 REBUILDING A BETTER ASIA-PACIFIC

The year 2020 has indeed been a pivotal one for the APEC region, but in ways unimaginable in 2019. Trillions of dollars of output have been erased. Households and firms have had to adapt to new realities, using digital technology in more permeating ways than before. Governments have also had to deploy extraordinary fiscal, financial and social measures to help households and businesses to weather the crisis. The end of the pandemic and the start of the journey towards economic recovery are far from certain, and business-as-usual is no longer an option. In a year like no other, the region has been compelled to rethink how it works, how it learns, and what it prioritises. But APEC has been here before.

In 1994, the Asia-Pacific region was on the cusp of globalisation and economic integration, when policy decisions had to be made if economies were to take advantage of the opportunities brought about by greater trade and cross-border investments. Those were not easy decisions, as any policy choice will have trade-offs and differential consequences on various sectors; indeed, strong opposition was being mounted against globalisation, liberalisation and trade as they have implications on jobs and wages, for example. It was in this context that APEC Leaders came together in Indonesia and laid out what is now known as the Bogor Goals of ‘free and open trade and investment in the Asia-Pacific no later than the year 2020’. But these weren’t the only goals identified in the 1994 declaration; the Leaders also agreed to achieve a goal ‘to attain sustainable growth and equitable development of APEC economies, while reducing economic disparities among them, and improving the economic and social well-being of our people’. Leaders knew that the road ahead was going to be difficult, and they designated APEC to be the forum where they discussed policies, achieved consensus and made commitments.

The APEC region in 2020 is very different from 1994, but it is once again at an important point where long-term change could be effected to further improve lives and living standards. The region is more prosperous and interconnected than ever before, but the social consensus supporting free trade and globalisation is starting to erode. The global pandemic has highlighted persistent problems of income and social inequality, economic divisions and environmental damage. Digital technology, which can unlock unprecedented levels of prosperity and economic opportunity, brings with it challenges that impinge on privacy and security, while also giving rise to issues of access to technological tools and skills as well as the reliability of infrastructure, in turn increasing income uncertainty and deepening inequality.

Even as APEC looks back at its quarter-of-a-century of achievements in attaining free and open trade and investment, it needs to start tackling the other Bogor Goals of sustainable

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36 The International Monetary Fund (IMF) has a policy tracker focused on “Policy Responses to COVID-19” at https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19
growth and equitable development, this time with greater urgency. It begins with rethinking how the forum defines progress. APEC has taken the first step, with Malaysia as the 2020 host initiating a priority called ‘Beyond GDP’ looking at measures of inclusion, sustainability, digital economy to track the region’s progress aside from traditional metrics of GDP and trade growth.

Measurement is good, but policy action is better. If it is to achieve its goals of sustainable, inclusive and resilient growth, the region needs to invest in green jobs and infrastructure, shift away from a fossil fuel economy, and internalise environmental and climate impact into economic production and consumption. It needs to ensure equitable access to healthcare, infrastructure, technology, and education and skills development, to enable all its people – the poor, women, youth and elderly, those in rural and remote areas, ethnic minorities and indigenous peoples, and other vulnerable groups – to contribute to and benefit from economic opportunities. It needs to maximise the potential of the digital economy through innovation and competition, while also addressing undesirable impact on jobs and incomes in the pursuit of an equal and inclusive society.

Regional cooperation, particularly APEC, will have a key role in the rebuilding process. The COVID-19 pandemic has shown the importance of a coordinated and cooperative response to regional and global crises. Economies will need to share experience and information, develop trust and implement structural reforms to boost health systems and digital infrastructure while widening access to healthcare, education and social protection. Beyond 2020, much work will need to be done to ensure that APEC can once again be the forum where policy is discussed, consensus is achieved, and commitments are made toward an inclusive, sustainable and resilient Asia-Pacific region.

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39 The APEC Ministers Responsible for Trade (MRT), in their 5 May 2020 special statement on the pandemic, called for the development of a coordinated approach to collect and share information on COVID-19. In response, the forum developed COVID-19 Latest & Immediate Virtual Exchange (LIVE), a digital information-sharing platform that aims to capture the policy interventions, measures, programmes and initiatives adopted by APEC economies to address the ongoing public health crisis.
2 APEC AMID COVID-19: NAVIGATING RISKS AND OPPORTUNITIES TOWARD RESILIENCE

2.1 APEC GDP GROWTH

The COVID-19 pandemic, which swept through much of the APEC region in the early months of 2020, has been devastating in its impact. By end-October 2020, the number of COVID-19 cases in the APEC region reached more than 14 million, accounting for 32 percent of global infections, with the number of deaths at more than 400,000 people, equivalent to 37 percent of global deaths. Significantly, the COVID-19 pandemic transformed quickly from a health crisis to an economic crisis of unprecedented proportions.

To curb the spread of the virus, APEC economies mandated various forms of lockdown measures during the first half of 2020, the more stringent of which necessitated the closure of business establishments that require face-to-face interactions, largely encompassing such sectors as food and beverage services, retail, travel and tourism, hospitality and accommodation. The movement restrictions combined with fears of contracting the disease limited consumption to essential health and food products, translating into a significant downturn in overall consumer spending. Moreover, as businesses closed, with some facing permanent shutdowns as consumer demand plunged while operations costs remain unchanged, people in affected industries had to deal with job and income losses, further reducing consumption.

As a result, the APEC region contracted by 3.7 percent in the first six months of 2020, a sharp reversal from the 3.4 percent growth seen in the same period in 2019 (Figure 2.1).

![Figure 2.1. Real GDP growth (%), 1H 2019 and 1H 2020](image)

Note: Quarterly data not available for Papua New Guinea.

Source: Economy sources; IMF World Economic Outlook (October 2020); APEC PSU staff calculations.

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40 Prepared by Rhea C. Hernando, APEC Policy Support Unit (PSU).
Household consumption, a reliable source of growth for APEC economies, shrunk by 7.1 percent during the period January–June 2020 from an average expansion of 3.0 percent in January–June 2019 (Figure 2.2). Investments also contracted by 11.2 percent following a modest growth of 1.1 percent during the comparable period.

Nonetheless, government spending was up by 2.8 percent in the first half of 2020, reflecting fiscal measures implemented by economies to provide support to various sectors. At the onset of the COVID-19 pandemic, APEC economies quickly and massively rolled out fiscal measures, ranging from 1.0 to over 20 percent of GDP, depending on fiscal space, to bolster the health system, and provide targeted liquidity support to households and businesses, including MSMEs.

Figure 2.2. Growth in consumption and investments (%), 1H 2019 and 1H 2020

To strengthen health systems, governments allocated resources to boost medical supplies and equipment, provide for mass testing and contact tracing, increase salaries and ensure life insurance for health workers, and expand hospital capacity, including isolation and critical care units. Government support for households generally consisted of direct cash transfers, food subsidies, and a moratorium on credit card and loan payments. Some economies extended unemployment insurance benefits for households as well as subsidies on tuition fees, childcare services and household utilities.

Meanwhile, the support for businesses covered wage subsidies, tax relief, credit and loan guarantees, as well as capital injections to specific sectors badly hit by COVID-19, such as the aviation, tourism and services sectors. APEC economies also took significant steps to help MSMEs stay afloat by setting up special low-interest micro-lending facilities; deferring or subsidising rental and utility payments; providing tax refunds, reductions or deferments; and restructuring, refinancing or forgiving debt, among others.
2.2 INFLATION AND MONETARY POLICY

The period January–September 2020 saw lower average inflation rate for the APEC region at 1.5 percent compared to 1.9 percent in 2019 (Figure 2.3). Lockdown measures implemented at the onset of the pandemic and, later on, as economies began to gradually reopen, restrictions on the size of public gatherings and social distancing requirements in establishments such as shopping malls, restaurants and museums have resulted in a sharp decline in household spending on transport services, recreation and culture goods and services, clothing and footwear, housing and household equipment, and communications equipment.

Figure 2.3. Inflation rate (%), 1H 2019 and 1H 2020

Source: Economy sources; APEC PSU staff calculations.

Figure 2.4. Monetary policy rate (%), end-2019, end-March 2020 and end-September 2020

Note: The monetary policy framework in Brunei Darussalam is based on a currency board system, with the Brunei dollar anchored to the Singapore dollar at par. Hong Kong, China maintains a currency board system pegged against the US dollar. For Singapore, monetary policy is conducted through the trade-weighted exchange rate, which is allowed to fluctuate within a policy band. The operating targets for the S$NEER are expressed in the level, slope and width of the policy band, which determine the direction of monetary policy.
In part due to benign inflation conditions, monetary authorities were able to respond swiftly and significantly to mitigate the negative impact of COVID-19 on economic growth and to continue to support households and businesses amid liquidity and solvency issues. As of end-September 2020, the majority of APEC economies that use interest rates as their main policy lever moved to reduce their monetary policy rates while the rest maintained their policy settings (Figure 2.4). Similarly, the Monetary Authority of Singapore (MAS) decided to maintain a zero percent per annum rate of appreciation of the S$NEER policy band with no change to the width and the level at which it is centred throughout 2020. The MAS is signalling a more accommodative stance to complement fiscal measures deployed to support the economy amid the challenges brought by the ongoing pandemic.

Aside from lowering monetary policy rates, APEC economies also implemented conventional and non-conventional monetary measures together with macro-financial measures to maintain the flow of credit and ensure liquidity while, at the same time, boosting market confidence to keep financial markets strong, sound and stable as global uncertainty rose with the unabated rise in COVID-19 cases (Table 2.1).

<table>
<thead>
<tr>
<th>Monetary and macro-financial measures in APEC amid COVID-19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monetary measures</strong></td>
</tr>
<tr>
<td>Conventional</td>
</tr>
<tr>
<td>Reduced monetary policy rates</td>
</tr>
<tr>
<td>Lowered reserve requirement ratios</td>
</tr>
<tr>
<td>Established liquidity/credit-enhancing facilities</td>
</tr>
<tr>
<td>Expanded list of eligible collaterals for loans</td>
</tr>
</tbody>
</table>

Source: Economy sources; IMF Policy Tracker.

### 2.3 TRADE PERFORMANCE

Trading activity in the APEC region remained adversely affected by the heightened trade and technology tensions that escalated in 2018 with the imposition of tariff and retaliatory measures. Persistent tensions combined with pandemic-related temporary closure of borders, disruptions in global supply chains, and export restrictions on medical and food products resulted in a bigger contraction in the growth in the value and volume of merchandise exports and imports for the period January–June 2020 compared to the year-ago levels.

Growth in the volume of merchandise exports contracted by 6.2 percent in the first half of 2020 from a modest growth in the first half of 2019 (Figure 2.5) while the volume of merchandise imports posted a bigger decline at 7.2 percent. On the other hand, growth in the value of merchandise exports and imports recorded substantial contractions at 11.0 percent and 10.8 percent, respectively, during the same comparable period (Figure 2.6).
Note: Due to unavailability of data, APEC average trade volume growth does not include Brunei Darussalam and Papua New Guinea, while APEC average trade value growth does not include Papua New Guinea. Source: UNCTAD Statistics (trade volume); WTO (trade values); APEC PSU staff calculations.

The value of merchandise exports and imports of the rest of the world (ROW), which includes all other non-APEC economies, decreased by as much as 16.8 percent and 15.3 percent, respectively, contracting more than the APEC region (Table 2.2).

| Value of and growth in merchandise trade, 1H 2019 and 1H 2020 |
|---------------------------------|----------------|----------------|----------------|
|                                 | Jan-June 2018 | Jan-June 2019 | Jan-June 2020 |
| **Merchandise Exports**         |               |               |               |
| World                           | 9578          | 9307          | 8008          |
| APEC                            | 4657          | 4568          | 4066          |
| Rest of the World (ROW)         | 4921          | 4739          | 3942          |
| **Merchandise Imports**         |               |               |               |
| World                           | 9746          | 9493          | 8247          |
| APEC                            | 4698          | 4599          | 4104          |
| ROW                             | 5048          | 4894          | 4143          |
| **APEC’s share of the World (in %)** |         |               |               |
| Merchandise Exports             | 48.6          | 49.1          | 50.8          |
| Merchandise Imports             | 48.2          | 48.4          | 49.8          |

Source: WTO.

Compounding the contraction in merchandise trade, commercial services recorded a more sizeable decline, reflecting the toll of border closures and stay-at-home measures due to COVID-19 on the services sector, especially travel and tourism, which is one of the most affected sectors.

International tourist arrivals plunged by 65 percent during the period January–June 2020 compared to the year-ago level, equivalent to a loss of about USD 460 billion in export revenues from international tourism. Furthermore, this loss represents around five times the loss in international tourism receipts in 2009 during the global financial crisis.\(^{42}\)

In APEC, exports of commercial services fell by around 21 percent in the first six months of 2020 compared to a 1.7 percent growth a year ago, while commercial services imports turned more negative with a 22.2 percent decline during the same period (Figure 2.7).

\(^{42}\) UN World Tourism Organization, *World Tourism Barometer* 18, no. 5 (August/September 2020).
The rest of the world also recorded contractions in commercial services exports and imports during the period January–June 2020, although less than that recorded by the APEC region (Table 2.3).

### Table 2.3. Value of and growth in commercial services, 1H 2019 and 1H 2020

<table>
<thead>
<tr>
<th></th>
<th>Value (in billion USD)</th>
<th>Growth (y-o-y, in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1H 2018</td>
<td>1H 2019</td>
</tr>
<tr>
<td><strong>Commercial Services Exports</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>5477.2</td>
<td>5531.0</td>
</tr>
<tr>
<td>APEC</td>
<td>1117.8</td>
<td>1137.2</td>
</tr>
<tr>
<td>Rest of the World (ROW)</td>
<td>4359.3</td>
<td>4393.8</td>
</tr>
<tr>
<td><strong>Commercial Services Imports</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>5022.0</td>
<td>5235.3</td>
</tr>
<tr>
<td>APEC</td>
<td>1130.2</td>
<td>1124.9</td>
</tr>
<tr>
<td>ROW</td>
<td>3891.8</td>
<td>4110.4</td>
</tr>
<tr>
<td><strong>APEC's share of the World (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Services Exports</td>
<td>20.4</td>
<td>20.6</td>
</tr>
<tr>
<td>Commercial Services Imports</td>
<td>22.5</td>
<td>21.5</td>
</tr>
</tbody>
</table>

Source: WTO.

2.4 INVESTMENT TRENDS

Foreign direct investment (FDI) inflows to the APEC region went down by 3.1 percent to USD 815.1 billion in 2019 from USD 841.2 billion in 2018. However, the value of greenfield investments dropped more by 20.4 percent to USD 366.1 billion from USD 459.7 billion during the same period (Figure 2.8).

Moreover, the share of greenfield investments in total APEC FDI significantly decreased to around 45 percent in 2019 from 55 percent in 2018. These developments pose a concern since greenfield investments serve as an indicator of investors’ assessment of economic prospects, which could impact future new investments and projects.
The decline in APEC’s FDI is in contrast to the trend in global FDI, which saw a modest increase of 3.0 percent to USD 1.54 trillion in 2019 from the year-ago level. The value of greenfield projects globally, however, was lower at USD 845.9 billion in 2019, equivalent to a drop of about 14 percent compared to the level reached in 2018.

Latest data reveal that global FDI went down sharply by 49 percent in the first half of 2020 to about USD 399 billion compared to the level fetched in 2019, as lockdown measures and gloomy economic prospects resulted in a significant moderation in investments. Global FDI flows are on course to decline by 30-40 percent in 2020, and by a further 5-10 percent in 2021. A recovery is expected in 2022; however, a second wave of the pandemic in some economies could delay the return to growth in FDI. 43

2.5 TRADE AND INVESTMENT MEASURES

A key contributing factor in the continued weakness in trading activity is the proliferation of trade-restrictive measures. The period covering mid-October 2019 to mid-May 2020 saw the number of measures implemented by APEC economies that served to restrict the flow of trade go up to 57, dominating those that facilitated trade, which totalled 21 (Figure 2.9). Except for the period mid-October 2018 to mid-May 2019, trade-restrictive measures have largely outnumbered trade-facilitating measures since the second half of 2017.

The initiation and/or resumption of anti-dumping and countervailing investigations comprised the main measures that restricted trade during the period (Table 2.4). However, there was also an increase in tariffs, quotas and other restrictions during the same period.44


Meanwhile, 24 investment measures were implemented by APEC economies who are also G20 members for the period mid-October 2019 to mid-May 2020, with more investment-facilitating measures than restrictive measures (Table 2.5). Simplified foreign investment rules together with measures that facilitate easy entry of foreign investments made up the majority of investor-friendly policies during the period.45

2.6 NEAR-TERM OUTLOOK, RISKS AND OPPORTUNITIES

Stay-at-home measures, both mandatory (governments implementing lockdown, quarantine, social distancing and other movement control measures to rein in COVID-19 infections) and voluntary (schools, businesses and individuals opting to shift online to safeguard health), have substantially reduced consumption and negatively affected economic output.

Absent vaccines and therapeutics, economies have to grapple with the trade-off between continuing with movement restrictions at the risk of long-term economic scarring, or reopening of the economy at the risk of a resurgence in infections, which in turn, could negatively affect consumption and business sentiment and thus, hold back economic activity. As mentioned in the theme chapter, other economies, particularly in Europe, are already experiencing a second wave of the pandemic that necessitated the re-imposition of sharp lockdown measures, with severe economic repercussions. APEC economies should take heed of Europe’s experience and remain vigilant to ward off any resurgence. The region also needs to continue or increase fiscal and monetary support measures, depending on policy space, to bolster health systems while augmenting household incomes and keeping businesses solvent.
The sharp reversal of household consumption, APEC economies’ reliable driver of growth for many years, is the main factor behind the region’s economic contraction for 2020 by 2.5 percent, equivalent to an output loss of around USD 1.8 trillion (Figure 2.10).

The projected slowdown in the APEC region for 2020 is in tandem with the global economy, which is expected to contract by 4.4 percent this year, while economic output for the rest of the world will sharply decline by 6.8 percent.

Trade activity will continue to be lethargic this year as COVID-19 drags down drivers of growth, with the World Trade Organization (WTO) projecting a drop of 9.2 percent in the volume of world merchandise trade (as of October 2020), although this is less than the April 2020 forecast of a 12.9 percent contraction. On the other hand, the United Nations Conference on Trade and Development (UNCTAD) anticipates global FDI to fall by as much as 40 percent in 2020, bringing the value to less than USD 1 trillion for the first time since 2005.

The World Travel and Tourism Council (WTTC) projects substantial travel and tourism job losses in 2020, translating into reductions in the sector’s contributions to GDP. The WTTC’s optimistic scenario suggests job losses of 98.2 million, decreasing global GDP by around USD 2.7 trillion in 2020. This upside scenario assumes that lockdown measures will begin to ease by June 2020, facilitating domestic and short-haul/regional travel while intercontinental travel resumes in August 2020.

However, even the downside scenario looks far-fetched, with assumptions of lifting travel restrictions by September 2020 to allow for domestic and short-haul/regional travel and intercontinental trips by November 2020. This worst-case scenario projects job losses in 2020.

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Figure 2.10. GDP growth, actual (2019) and projected (2020–2022) (%)

Source: Economy sources; IMF World Economic Outlook (October 2020); APEC PSU staff calculations.


travel and tourism to reach 197.5 million for the whole year 2020, representing a 60 percent reduction compared to the levels in 2019, translating into GDP losses of around USD 5.5 trillion, 62 percent lower than a year ago.

The projections by the WTTC are in line with the UN World Tourism Organization’s estimates of 100–120 million jobs at risk globally because of COVID-19 and a loss of USD 910 billion to USD 1.2 trillion in international visitors’ tourism-related spending.\(^49\)

GDP growth projections for 2021 reflect an economic rebound for the APEC region and the world at 5.2 percent, although lower compared to earlier forecasts. The lower projection reflects uneven growth across economies, with those that have managed to rein in the pandemic and reopened earlier expected to turn in better output outturns, while other economies, particularly where COVID-19 cases are either rising or resurging, are projected to grow at a slower pace (Table 2.6).

Economies could greatly benefit from continued fiscal and monetary support to the health sector, households and businesses. Managing the spread of the virus remains essential, to allow a gradual return to economic activity, with workplaces and businesses adopting health measures to reduce transmission even as they start to reopen. Another positive could emanate from progress in the development of vaccines and therapeutics to fight COVID-19.

There are already initial signs of recovery. Within the APEC region, economies that were able to rein in the spread of the virus early on and reopened their economies after a short lockdown were able to bounce back, either reverting to growth or reducing the magnitude of economic contraction by the second quarter of 2020.

In terms of trade and investments, the WTO projects the volume of merchandise trade to recover to a growth of 7.2 percent in 2021, while global FDI flows are expected to rebound in 2022.\(^50\)

Meanwhile, manufacturing activity in the APEC region shows that the APEC average manufacturing index has improved to 49.6 points as of August 2020 from a low of 36.6 points in April 2020 when factories shuttered to stem the spread of COVID-19.

However, the economic repercussions of COVID-19 are expected to reverberate, at least over the medium term. The IMF projects that, following an economic rebound in 2021, the global economy will grow at a slower average pace of 3.5 percent well into the medium term, dialling back progress toward improving living standards and alleviating poverty across the world.

The World Bank estimates that an additional 88 to 115 million people will fall into extreme poverty in 2020, living on less than USD 1.90 a day, with the number of extremely poor rising further to 150 million in 2021 due to the economic fallout from COVID-19.\textsuperscript{51}

The path toward stronger and steadier economic growth is strewn with obstacles that could trigger a deeper contraction if policymakers are unable to manage the ongoing health and economic crisis. The resurgence of COVID-19 remains the most dominant and dangerous downside risk of all, as that could overwhelm public health systems, re-introduce sharp lockdowns that could exacerbate the damage on affected businesses and industries, and plunge entire households into poverty due to job losses and shutdowns of businesses and MSMEs. So far in 2020, unemployment rates among APEC economies have increased between 1–10 percent from the levels in 2019, translating into more than 74 million unemployed persons (up from 58.9 million unemployed in 2019).

In addition, an intensified level of uncertainty surrounding the path of the pandemic, as well as spillover effects on consumption, investment, trade and remittances from reduced global economic activity will also impact on near-term economic growth.

As mentioned in the previous chapter, the COVID-19 pandemic has shown that, although everyone is affected in some ways, the magnitude of the impact differs across sectors of society. There is a disproportionate impact on the poor, women, the youth, and the low and unskilled, while indigenous groups, the disabled and other vulnerable groups face additional challenges.\textsuperscript{52}

While this pandemic has laid bare the economic and social divisions in society, it has also magnified the gender and digital divides that have held back women from fully contributing to economic growth. The shift to telecommuting and online learning has made more urgent the need to upgrade digital skills and technological knowledge to be able to maintain productivity while working at home and fully participate in economic undertakings.

There are risks ahead, but there are also opportunities to build back better, stronger and more resilient economies. There are many pathways toward resilient and sustainable economies, but implementing structural reforms remain the common ingredient among these pathways, and reforms should commence now. It may not be feasible for economies to carry out all needed structural reforms all at once, and rushing into reforms may prove to be detrimental over the long run. Economies need to look into the proper sequencing of structural reforms, mindful of the level of its economic development as well as the phase and pace of its technological development.


\textsuperscript{52} See discussion in the first chapter of this report.
APEC economies could consider investing in greener technologies and eco-friendly business models that facilitate less waste and more environment-friendly production and consumption processes. The region could also work toward ensuring that trade and investment measures facilitate the flow of products and services while strengthening supply chains, logistics management and trade relations.

There is also much to be gained from encouraging increased participation of women in the economy. An IMF study finds that closing the gender gap in labour force participation increases GDP by 10–80 percent; among economies with the largest gaps between female and male employment rates, closing the gender divide adds 35 percent to GDP, on average.\(^5^3\) Implementing structural reforms to ensure women’s access to education, skills development and social protection as well as equalising opportunities for employment and entrepreneurship is imperative because including women adds another set of skills, ideas and perspectives to economic and financial undertakings, boosting overall productivity and macroeconomic growth.

The pandemic has also introduced severe disruptions in global supply chains and amplified challenges in logistic management as economies imposed temporary border restrictions. Economies could re-examine existing logistics and warehousing methods to ensure that they are up-to-date, especially in being accommodative of additional safety measures due to COVID-19. Supply chain data management systems need to be upgraded to be able to capture accurate information on transactions and supplier performance to better prepare against supply disruptions due to pandemics or disasters.

The move towards digitalisation is crucial. For example, technology could make global value chains more resilient by utilising digital supply networks and end-to-end systems that could be accessed remotely when needed. Algorithms could also be used to allow intelligent procurement, based on demand trends and commodity pricing, with adequate buffers and inventories to account for possible shortages and avert losses.\(^5^4\)

Moreover, the new normal compels schools, work and businesses to use more digital platforms. Therefore, investing in new technologies and stronger digital infrastructure should form part of government spending in the near term.

Equally important is the upskilling and/or reskilling of workers to equip them with digital skills. Building back better requires that harnessing digital skills should start from a young age. It means integrating technological knowledge and skills in education curriculums, allocating resources for continuous educators’ training and upskilling, and encouraging girls’ engagement in Science, Technology, Engineering and Mathematics (STEM) fields.

In APEC, women’s participation in STEM programmes has remained persistently low, with the proportion of female graduates from STEM fields pinned at below 35 percent for almost two decades. It is important to include women in this field because gender diversity paves the way for different approaches to problem solving, innovative technologies and scientific research, boosting knowledge and widening perspectives (Box 2.1).

Box 2.1. Women’s participation in STEM

The COVID-19 pandemic made it necessary for entire households to stay at home to stem the spread of the virus. Employed parents had to telecommute while school-age children availed of online learning. The shift to digital platforms required two important things: reliable internet connection and relevant digital skills.

According to The APEC Women and the Economy Dashboard Report 2019, women in the region are almost at par with men in terms of enrolment in primary, secondary and tertiary education as well as in literacy, maintaining gender parity in education from 2008–2018.\(^{55}\)

However, women’s participation in STEM fields has remained persistently low for almost two decades. Available data reveal that the estimated proportion of female students graduating from STEM programmes in the APEC region has been pinned at below 35 percent from 2000 to 2018 (Figure 2.11). This hampers women’s ability to work in high-value sectors with potentially higher salaries and to participate fully in an increasingly digitalised economy. This dire situation needs urgent action, mainly from the government, and in partnership with the private sector, including science-based and research and development organisations as well as international organisations.

Figure 2.11. Proportion of female graduates in STEM programmes in APEC (%)

Note: Data not available for China; Japan; Papua New Guinea; and Russia. Some figures were carried over to other years to calculate the APEC average.
Source: UNESCO Institute for Statistics; APEC PSU staff calculations.

Recognising that increasing women’s engagement in STEM fields needs to start with girls finding STEM interesting, APEC economies have launched programmes to ignite interest in STEM. They include: integrating STEM in all levels of education and allocating resources to improve teaching and learning

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methods; advancing gender equality in STEM education and careers; and maintaining networks of women in STEM to build and sustain interest in STEM and promote STEM-related initiatives (Table 2.6).

APEC is moving toward the right direction in encouraging girls and women to pursue an education and career in STEM fields. The key is to sustain this interest by dedicating government resources to the further development of STEM education, including training teachers on effective methods to impart STEM knowledge, and collaborating with the private sector, including science-based and research-oriented institutions and research and development businesses, to launch innovative and fun programmes centred on STEM learning.

Table 2.6. Selected STEM initiatives in APEC

<table>
<thead>
<tr>
<th>APEC economy</th>
<th>Selected STEM programs/initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>National STEM School Education Strategy 2016-2026, to coordinate STEM-related activities and improve STEM education, with focus on foundation skills; developing mathematical, scientific and digital literacy; and promoting problem solving, critical analysis and creative thinking skills.</td>
</tr>
<tr>
<td>Brunei Darussalam</td>
<td>STEM and Innovative Design, to help students understand the basics of STEM and serve as a starting point towards establishing a STEM literate society.</td>
</tr>
<tr>
<td>Canada</td>
<td>PromSciProgram, to grant financial support for organizations working with young Canadians to promote an understanding of science and engineering, including mathematics and technology.</td>
</tr>
<tr>
<td>Chile</td>
<td>STEM and Gender Advancement programme, to promote women and girls in STEM by supporting key stakeholders in the design and implementation of science, technology, and innovation policies for gender equality.</td>
</tr>
<tr>
<td>China</td>
<td>China STEM Education 2029 Innovation Action Plan, to equip all students with scientific thinking and the ability to innovate.</td>
</tr>
<tr>
<td>Hong Kong, China</td>
<td>STEM as part of the education curriculum, to nurture students’ creativity, collaboration and problem solving skills, as well as to foster their innovative and entrepreneurial spirit.</td>
</tr>
<tr>
<td>Indonesia</td>
<td>STEM integration in education curriculum, to train teachers on STEM disciplines and to bolster STEM learning in schools.</td>
</tr>
<tr>
<td>Japan</td>
<td>STEM student and networking initiative, to develop female scientists and engineers to serve as a support network for female science and technology students.</td>
</tr>
<tr>
<td>Korea</td>
<td>The “4th Basic Plan 2019-2023”, to promote gender equality in STEM fields and establish a society where the true potential of scientists and engineers can be fully realized.</td>
</tr>
<tr>
<td>Malaysia</td>
<td>STEM initiative, to raise a generation of future innovators and technopreneurs to inculcate a STEM mindset in every student.</td>
</tr>
<tr>
<td>Mexico</td>
<td>Experiments-Mexico, to include girls in STEM learning and to improve teaching and learning methods in STEM subjects.</td>
</tr>
<tr>
<td>New Zealand</td>
<td>National Science Challenges, to bring together the economy’s top scientists to work collaboratively across disciplines, institutions and borders to tackle the biggest science-based issues and opportunities facing New Zealand.</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>Boosting Education Standards Together (BEST), to increase the number of female teachers necessary to enhance girls’ learning and participation in mathematics and science.</td>
</tr>
<tr>
<td>Peru</td>
<td>Diversity Peer Learning, to educate girls aged 8–11 years old on science by learning and working with well-recognized scientists from Peru and the world.</td>
</tr>
<tr>
<td>The Philippines</td>
<td>STEM-PII, to build and sustain interest in pursuing STEM education and careers and develop curricular innovations and train teachers of STEM subjects.</td>
</tr>
<tr>
<td>Russia</td>
<td>National Research Strategy 2018-2024, to allocate resources to support early-career scientists, and establish 900 new laboratories, including at least 15 world-class research centers with a focus on mathematics, genomics, materials research and robotics.</td>
</tr>
<tr>
<td>Singapore</td>
<td>STEM integration in education curriculum in all levels of education, starting from pre-school, to build curiosity, foster creativity and develop skills.</td>
</tr>
<tr>
<td>Taiwan</td>
<td>National STEM School Education Strategy 2016-2026, to coordinate STEM-related activities and improve STEM education, with focus on foundation skills; developing mathematical, scientific and digital literacy; and promoting problem solving, critical analysis and creative thinking skills.</td>
</tr>
<tr>
<td>Thailand</td>
<td>STEM Educational Programme, to develop various STEM-related education programs and vocational training specializing in science, technology, engineering and mathematics, targeting different school age groups.</td>
</tr>
<tr>
<td>United States</td>
<td>STEM Education Strategic Plan 2019-2024, to ensure lifelong access to high-quality STEM education and to make the economy into the global leader in STEM literacy, innovation, and employment.</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Build-it program, to support women’s participation in technology and engineering programmes through leadership forums, academic initiatives, and scholarships and to build a network for women in the STEM community.</td>
</tr>
</tbody>
</table>

Source: Economy sources; compiled by APEC PSU staff.

2.7 CONCLUSION

The COVID-19 pandemic has exposed economic, social and digital divides as well as magnified the gender divide. Everyone is affected by the ongoing health and economic crisis, but not to the same magnitude. The closure of businesses, particularly MSMEs, has increased the risk of entire households falling into extreme poverty. Unemployment rates among APEC economies have surged due to the economic fallout from COVID-19, while consumption, trade and investments, the major sources of growth for the region, have reversed to contractions that are bigger than expected.

On a micro level, the poor, women, the youth, the low-skilled, the disabled, indigenous groups and other vulnerable sectors of society have to contend with a whole range of issues
that are threatening their lives and livelihoods. Job and income losses have become a reality for those working in businesses that require face-to-face interactions as their workplace shut down. Young people in poorer households have to choose between going to school and engaging in informal employment to help the family. Working women face lower productivity as they carry a disproportionate burden of unpaid care work. There exists a whole segment of society with insufficient digital skills needed to participate in an increasingly online world, accelerated by COVID-19.

Moreover, the risk of resurgence remains high with the virus still raging on around the globe. Some economies reopened only to have to re-impose lockdown measures while others have had to recalibrate or slow down plans for economic reopening. Economies have to grapple with the trade-off between imposing prolonged restrictions to rein in the spread of the virus at the risk of long-term economic scarring on one hand, or reopening the economy at the risk of a resurgence of COVID-19, which turn could negatively feed back into consumption, investment, trade and remittances.

Added to this is the risk of significant negative spillover effects from reduced global demand that could hold back economic activity for longer than expected. Consequently, the progress made in improving living standards, strengthening social safety nets, resolving supply chain inefficiencies, and advancing women’s economic empowerment could be severely held back, if not reversed.

Nonetheless, the COVID-19 pandemic has also presented opportunities to rebuild better and stronger. Toward this end, regional cooperation should take a more decisive role by being a venue that brings economies together to re-assess priorities and policy responses as well as to advance structural reforms.

In the short term, APEC economies need to continue deploying fiscal and monetary support measures so that health systems remain able to cope with continued, and for some economies, resurging or rising cases of infections. Households need to be supported with cash transfers, unemployment benefits, subsidies on food, utilities and others, and/or deferment of loan and credit card bill payments so as not to fall into poverty. Businesses, including MSMEs need continuous flow of credit, restructuring of loans or debt forgiveness, wage subsidies and other credit support mechanisms to stay afloat and reopen with the economy.

Much work is also needed in the medium term to ensure a firmer recovery. What is imperative and appropriate could vary among economies at different stages of economic and technological development, but structural reforms need to be introduced, implemented and enforced now.

Structural reforms could pave the way for investments in more environment-friendly technologies, the impact of which could extend to many generations. APEC economies could strengthen supply chains, including leveraging on technology to build more efficient logistics and data management systems. Trade relations remain an important ingredient to ensure continued flow of trade, particularly during a pandemic when the supply of medical and food products is essential. Related to this, a pandemic planning toolkit should be in place to facilitate well-coordinated and well-targeted responses during a pandemic.
The shift towards digitalisation is inevitable, so economies should allocate the funds needed to build more reliable technological infrastructure and reskill/upskill the population with digital skills to participate in the economy and to re-ignite innovation toward higher productivity and greater economic output.

The pursuit of inclusive growth needs to remain a priority, and crucial to this goal is the advancement of women’s economic empowerment by expanding their access to education, skills development, employment and credit to facilitate their full participation and contribution to economic undertakings.

Past episodes of health, economic and financial crises have shown that APEC could get back on the recovery path and rebuild better through reforms that ensure stronger health, economic and financial systems. Although the suddenness, scale and severity of the COVID-19 pandemic have resulted in loss of lives and livelihoods that has been unprecedented, the swift action of APEC economies have helped mitigate the impact, especially on the vulnerable sectors of society. As the APEC region navigates the risks brought about by the pandemic, it also needs to take advantage of the opportunities this presents. Regional cooperation should take a central role in regional recovery. Toward this end, APEC’s new post-2020 vision could serve as a guide for the 21 APEC member economies to build a more resilient, open, inclusive and innovative APEC region.