Policy Scenarios to Build Forward Better in Asia and the Pacific

Dawn Holland and Vatcharin Sirimaneetham
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Abstract

Based on a newly developed macroeconomic model for Asia and the Pacific, this paper examines the socio-economic and environmental implications of an illustrative policy package that helps the region build forward better from the COVID-19 pandemic. Comprising of policy actions to provide basic social services, close the digital divide and strengthen climate and energy actions, this paper demonstrates that such a package not only raises economy-wide productivity but also reduces poverty and income inequality and cuts carbon emissions to a notable extent in the long run. This paper also examines public debt sustainability under different scenarios and stress tests. Given the large fiscal needs to build forward better and combat the pandemic, the simulation results show that debt vulnerability may rise steeply in the region’s less developed economies.

**Keywords:** macroeconomic modelling, public debt sustainability, sustainable development

**JEL classification:** C54, H68, Q01
The COVID-19 pandemic has disrupted economic activities in Asia and the Pacific at an unprecedented scale, and any recovery remains tentative. As countries prioritize speedy economic recovery, the pandemic is likely to intensify the trend of excessive focus on promoting economic growth, and little attention will be paid to improving social and environmental conditions in the Asia-Pacific region. At the same time, ESCAP (2021) revealed that past episodes of adverse economic and non-economic shocks have reversed development gains that took decades to accomplish. Countries that were equipped with stronger social and physical infrastructure and those that managed to respond more swiftly and forcefully suffered less from those shocks.

Against this background, this paper seeks to address two key policy questions. First, how can the Asia-Pacific region design a coherent policy package that helps countries to build forward better? Such a package envisions a future that is both more resilient to shocks and more in line with the ambitions of the 2030 Agenda for Sustainable Development. Second, what would be the key implications of this package, both in terms of its potential benefits on social and environmental outcomes and the possible fiscal pressure that this package could create?

This paper contains three main findings, with important policy implications. First, few countries have embedded social and environmental considerations into their recovery plans to the COVID-19 pandemic. There is considerable room to incorporate such concerns into policy packages. Second, the simulation analysis, based on a newly developed macroeconomic model for Asia and the Pacific, demonstrates that a policy package to build forward better not only raise economy-wide productivity but also reduce poverty and income inequality, cut carbon emissions and improve air quality to a notable extent in the long run. This is an important finding as it shows that both green development and economic growth can be pursued simultaneously. Third, given the large fiscal needs to build forward better and combat the pandemic, debt vulnerability may rise steeply in the region’s less developed economies. To address this, Asia-Pacific countries need to step-up their efforts in exploring untapped sources of financial resources.

The paper begins by assessing the extent to which the COVID-19 policy responses introduced by Asia-Pacific countries help them to secure more inclusive and greener development (section 2). It is argued that, while some countries are leading such efforts, the Asia-Pacific region as a whole needs to step them up. To provide a glimpse into how to build forward better, section 3 proposes an illustrative policy package that is aimed at providing basic social services, closing the digital divide and strengthening climate and energy actions. Section 4 examines public debt sustainability under different scenarios and stress tests. The paper ends with conclusions in section 5.
2. COVID-19 Policy responses in Asia and the Pacific: considerable room remains to build forward better

Amid unprecedented policy responses to the pandemic, an important consideration is whether these responses help countries to build forward better. As of March 2021, the size of fiscal stimulus in developing Asia-Pacific countries amounted to $1.8 trillion, or about 6.6 per cent of GDP. The scale of the policy support rises notably when monetary injections, credit guarantees, and other financial policy support measures are included. Going forward, Asia-Pacific countries should ensure that their policy responses to the pandemic place them in a better position to advance towards the 2030 Agenda for Sustainable Development. That is, policy packages should be aimed at helping countries not only to swiftly regain economic strength but also support inclusive and green development. For example, fiscal stimulus that emphasizes renewable energy over fossil fuels would generate more jobs, especially during the construction stage, and foster greener recovery through decarbonization. At a project level, rural infrastructure and afforestation programmes help to promptly increase rural employment, including for workers who recently returned home after losing their city jobs, while also bridging the rural-urban infrastructure gap and fostering green development. One good example in this context is the Korean New Deal, which is aimed at transforming the Republic of Korea into a smart, green and safe country (box 1).
Box 1: The Korean New Deal

Announced in July 2020, the Korean New Deal is a national development strategy that aims to transform the Republic of Korea into a smart, green, and safe country (Republic of Korea, 2020). The initiative comprises three focus areas: Digital New Deal to promote digital innovation; Green New Deal to transit to low-carbon and eco-friendly economy; and Stronger Safety Net to achieve people-centered and inclusive development.

Total investment under the Deal is set at 160 trillion Korean won (about $148 billion) of which 114 trillion won will come from the treasury. Investments will be made in phases until 2025 to create new markets and boost private investment. The strategy is expected to generate around 1.9 million jobs by 2025. A total of 28 projects are being planned. Among others, these projects seek to integrate data, network and artificial intelligence infrastructure throughout the economy; digitalize education infrastructure; foster online activities and remote working; promote green transition of infrastructure and low-carbon energy; encourage green innovation; build a universal employment safety net; and train digital and green talents.

2.1. INCLUSIVE DEVELOPMENT: INADEQUATE RESPONSE TO ENHANCING GENDER EQUALITY

The extent to which socio-economic policy responses in Asia and the Pacific incorporate gender equality appears modest. As of March 2021, of the 523 policy measures introduced along the economic, social protection and labour market dimensions, only 97 of them (or about 18 per cent) can be defined as gender-sensitive (figure 1). For instance, social protection and labour market measures are gender-sensitive if they benefit women’s economic security amid notable job and income losses or address the unprecedented increase in unpaid care work. Gender-sensitive economic measures are those that provide female-dominated business sectors with support. For most countries, policies aimed at strengthening women’s economic security are more common than those addressing unpaid care (figure 2).

Despite their relatively small number, policy responses introduced to ensure women’s economic security are wide-ranging. In countries such as Afghanistan, Armenia, China, Kazakhstan and the Russian Federation, Governments have provided financial assistance to sectors that disproportionally employ more women than men, such as agriculture, retail trade, restaurants and hotels. Armenia, Indonesia, Myanmar, the Russian Federation and Turkey have offered financial support to pregnant women, especially those unemployed, and mothers with young children. Meanwhile, Azerbaijan, Georgia and Sri Lanka have distributed food and hygiene kits to women-headed households. In India, cash transfers were given to 200 million women with a financial

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1 While remaining low, this proportion rises from 12 per cent (57 out of 441 policy measures) as of September 2020.
inclusion account, while Turkey introduced grants for women cooperatives. To promote women entrepreneurs, Georgia eased barriers to enable more women to apply for grants. Finally, under an emergency cash programme, Pakistan raised the benefits provided to 4.5 million women.

**Figure 1**: COVID-19 policy measures that promote gender equality are uncommon

![Figure 1: COVID-19 policy measures that promote gender equality are uncommon](image)

**Source**: Authors, based on UNDP–UNW COVID-19 Global Gender Response Tracker.

**Note**: The fourth category of policy measures captured in this database on policies to address violence against women are gender-sensitive by default.

**Figure 2**: Policies to support unpaid care are lacking in many Asia-Pacific economies

![Figure 2: Policies to support unpaid care are lacking in many Asia-Pacific economies](image)

**Source**: Authors, based on UNDP–UNW COVID-19 Global Gender Response Tracker.
This is also the case for policies to support unpaid care. Australia, Cook Islands, New Zealand and the Republic of Korea provided financial assistance and/or allowed extra leave days to people who needed to take care of COVID-19-infected family members and children due to school closures. In the Russian Federation, parents who have lost their job are entitled to cash payments, while Uzbekistan prohibited the termination of employment for employees with young children. Meanwhile, New Zealand provided wage subsidies for those who are required to self-isolate, while Uzbekistan required that wages during the time of quarantine are fully paid. Finally, China arranged home-based services for elderly persons whose caretakers are in quarantine, while some Indian states provided older people with food and medication.

**2.2. GREEN DEVELOPMENT: RESPONSES FALL SHORT OF EXPECTATIONS**

Available assessments reveal that policy responses have not adequately promoted green development. Announced fiscal stimulus in all 10 Asia-Pacific countries covered in a recent study tended to have a net negative impact on climate change, biodiversity and air quality (Vivid Economics, 2021). This is because the volume of financial flows to carbon-intensive sectors, such as agriculture, industry, waste, energy and transport, exceeds the flows that benefit the environment. In these countries, while the total number of policies that foster green recovery increased from 34 as of October 2020 to 45 as of July 2021, the latest number of policies that hinder green recovery remains high at 57. In term of policy areas, promoting green infrastructure investment is a common policy measure (figure 3a). Yet, these countries also often provided subsidies, waived fees or reduced taxes for environmentally harmful activities and products, such as coal exploration and fertilizer purchase (figure 3b). Moreover, several countries gave financial bailouts without requiring limits on carbon emissions in return.

In the area of energy, much of the committed fiscal funds are directed to fossil fuels that are harmful to the environment. Since the pandemic began, about $256 billion has been approved to support energy production and consumption in various sectors in the 11 Asia-Pacific countries as of July 2021. Across these countries, the average proportion of funds committed to fossil fuels stands at 56 per cent, compared to 27 per cent for clean energy and 17 per cent for other energy (such as nuclear energy and biomass). While the share of fossil fuels has decreased from 66 per cent as of December 2020, the current level remains high. Moreover, in several Asia-Pacific countries, the majority or the entire amount of these funds is being channelled to fossil fuels without any climate targets or pollution-reduction requirements (“fossil unconditional”) (figure 4). In China, nearly half of the committed funds support the transition away from fossil fuels, but the implementation of environmental safeguards is less clear (“clean conditional”). On the other hand, about 40 per cent of the approved funds in Australia promote energy efficiency and renewable energy from natural sources (“clean unconditional”).

3 For details, see the Energy Policy Tracker Database (www.energypolicytracker.org/).
Figure 3: Policy measures in major Asia-Pacific countries are hindering green development

a. Policies to foster green recovery

b. Policies that hinder green recovery

Source: Authors, based on Vivid Economics (2021).

Figure 4: A large part of public funds is committed to environmentally harmful energy sources

Source: Authors, based on the Energy Policy Tracker.
Note: Numbers in parentheses show the amount in billions of United States dollars of public fund commitments to all types of energy.
Although outweighed by policies that are harmful to the environment, several policy responses present good examples for green development. In the area of renewable energy alone, Australia raised investments in renewable energy zones and technologies; China plans for a biomass power plant; Indonesia is subsidizing the use of biodiesel fuels and has reduced taxes for renewable energy projects; India waived charges for interstate transmission of wind and solar power, granted loans to farmers to implement solar technologies and extended financing to Sri Lanka for the construction of solar infrastructure; and Turkey has adopted a green tariff for power derived from renewable energy and plans to increase solar energy production capacity (Vivid Economics, 2021). Relatedly, China also carried out building renovations for older people to improve the efficiency of energy use. Initiatives on electric vehicles (EV) are also gaining momentum. In China, the Government extended the national EV subsidy programme, reduced permit requirements for new EVs and funded EV-charging infrastructure. India also supports the use of EVs in New Delhi and intends to increase electrification of trains and provide new charging stations for electric buses.

The region also introduced various policy responses to protect biodiversity (OECD, 2020). China has prohibited commercial breeding and trade in most wild animal species for food consumption, while Viet Nam has strengthened the enforcement of wildlife policies. Meanwhile, India allocated $800 million to provide jobs for tribal communities in forest management and wildlife protection. Finally, New Zealand launched a $900-million job programme to protect and restore habitat on conservation lands.
3. Policy scenarios to build forward better

Section 2 suggests that there is considerable room for the Asia-Pacific region to further integrate social and environmental issues into their COVID-19 policy responses. In this regard, this section proposes an illustrative policy package that can help enhance countries’ ability to withstand future shocks and achieve more inclusive and greener development. Based on model simulations, implementing such a policy package would help raise economy-wide productivity, reduce poverty and income inequalities, cut carbon emissions and improve air quality. In other words, the proposed package would help the region to “build forward better”.

3.1. THE MACROECONOMIC MODEL

The quantitative analysis in this paper is based on a new macroeconomic model for Asia and the Pacific developed by ESCAP. This is a global model and comprises 46 individual full-country models for the Asia-Pacific region, smaller models of 9 key trading partners outside of the region, plus aggregate models for the remaining world’s economies grouped into 4 regions. The individual country models are linked together via trade, remittances, financial markets, and global energy markets. The model is run on the EViews statistical software.

The country models are characterized by a short-run Keynesian demand side and a long-run neoclassical supply side. In the model, households consume, save and supply labour, while firms produce output, hire labour and invest. Governments pursue fiscal policy by spending and taxing, while monetary authorities conduct monetary policy by setting the short-term interest rate and exchange rate policy. The balance of demand and supply, together with tax policy, global commodity prices and other imported prices, determine inflation. Higher prices constrain consumption and dampen the net trade balance. Most of the key behavioural relationships are specified in an error-correction framework, which allows us to distinguish short- and long-term relationships between variables. Annex I shows a list of selected variables in the model.

In the short run, GDP is driven by aggregate demand, which comprises private and public consumption, private and public investment and net foreign trade. Household consumption depends on real personal disposable income, financial inclusion (proxied by the share of population with a bank account) and the gap between actual and expected inflation rates. Private investment is determined by potential output, user cost of capital, financial inclusion and gross domestic income. Gross domestic income is similar to headline GDP, but also captures the
impact on purchasing power of gains and losses in the terms of trade. The relationship between the two can be approximated by deflating exports and imports by the price of domestic demand, rather than their respective trade deflators. In this way, the model better captures the constraints on investment that may result from a sharp drop purchasing power due to exchange rate shocks, commodity price shocks and other factors related to trade revenue. Public consumption and investment and policy variables are disaggregated into spending on health, environmental protection and other areas. Exports depend on external demand and relative non-commodity export prices, both of which are derived from a global bilateral trade matrix. Finally, imports depend on domestic demand, the output gap, the relative price of imported goods and oil imports.

In the long term, each country’s potential output level is driven by its aggregate supply, which is determined by the labour force, capital stock, energy use, energy efficiency, trend productivity growth and damage from climate shocks. The labour force depends on demographic factors and the labour force participation rate. The capital stock is driven by the accumulation of investment, after allowing for depreciation. The capital depreciation rate depends on global carbon emissions to capture the impact of climate change on the erosion of capital. Total energy demand depends on output, energy prices and energy efficiency. The energy mix depends on relative prices of oil, gas, coal and renewables. Trend productivity growth is modelled as a function of the global productivity frontier (which is related to global trade), inequality, air pollution and government expenditure on health. Finally, damage from climate shocks is exogenous, although in this study it is linked to spending on climate-resilient infrastructure.

Deviations of actual output from potential output will activate adjustment processes that bring the economy back to potential in the long run. Among other channels, the gap between demand and supply, or output gap, feeds through prices. For example, a positive output gap will put upward pressure on prices, resulting in slower consumption growth and a deterioration of the trade balance, so that demand falls towards available supply.

In the fiscal module, government spending is disaggregated into spending on social protection, spending on health, spending on environmental protection, fossil fuel subsidies, other government consumption, other government investment and interest payments. Government revenue is disaggregated into income tax revenue, corporate tax revenue, indirect tax revenue, taxes on international transactions, carbon tax revenue, commodity revenue and other net revenue. The fiscal deficit is financed by an increase in government debt, and debt service payments flow back onto the fiscal balance. In the model, an increase in the government debt-to-GDP ratio leads to a higher risk premium for that country. In this way, running a large fiscal deficit for an extended period of time can cause government debt to spiral and become unsustainable. Countries with a higher initial level of risk premium are more sensitive to any rise in public debt. A rise in the risk premium pushes up inflation and increases borrowing costs, which results in lower investment.

In addition to economic relationships, the model has additional channels that capture interactions with key social and environmental variables, such as poverty, income inequality, carbon emissions and air quality. Relationships between variables are econometrically estimated where appropriate, or guided by the academic literature. For example, losses associated with climate shocks are
underpinned by benchmarks contained in World Bank (2019), in which an investment in resilience valued at 1 per cent of GDP reduces annual damage by 5 per cent. Other major studies that are used for developing relationships among the variables include Botev, Egert and Jawadi (2019), Briceño-Garmendia, Estache and Shafik (2004), ECB (2017), Griscom and others (2017), IEA (2019, 2020), OECD (2019) and Wang (2015).

The poverty model assumes that income follows approximately a log-normal distribution. The cumulative density function of log income is calculated based on estimates of mean income and income inequality and evaluated at the poverty benchmarks of $1.90/day and $5.50/day. Income inequality is measured according to the after-tax Gini coefficient. It declines in response to a rise in government spending on social protection, or a rise in financial inclusion.

Carbon emissions depend on the composition of energy consumption, which in turn depends on the relative (after carbon tax) price of coal, gas, oil and renewables. Air pollution (PM2.5) also depends on the composition of energy consumption, especially the consumption of coal and oil. Air pollution feeds into trend productivity growth to reflect the relationship between pollution, health and productivity.

3.2. POLICY SCENARIOS AND KEY ASSUMPTIONS

In this section, we discuss an illustrative policy package that is designed to enhance countries’ ability to withstand future shocks and achieve more inclusive and greener development. This “build forward better” package comprises three sub-packages:

- The social services package is intended to provide universal access to health-care services and a social protection floor. This is modelled with an increase in government spending on social protection and on health, with some private sector financing (6%) of the health-care services;

- The digital access package is aimed at closing the digital divide, with provision of online learning, working and financial transactions. The package assumes spending hikes in information and communications technology (ICT) and education, partially financed by the private sector;

- The green development package is intended to strengthen climate and energy actions. The package directs spending towards electricity access, clean cooking, energy efficiency gains, climate-resilient infrastructure and biodiversity preservation, and also introduces a carbon tax and eliminates fossil fuel price subsidies.

These policy packages are introduced in the model as increases in government transfers to households, government consumption, government investment and private investment. The exact composition varies across spending areas. For example, to provide universal access to education, it is assumed that 65 per cent of the total spending increase comes from public consumption (e.g. education personnel), 20 per cent from public investment (e.g. improving Internet connections in rural schools) and 15 per cent beyond tourism); shifts in supply chains (e.g. reshoring production of essential goods); comprehensive vital statistics (e.g. to ensure timely, well-targeted cash transfers to the poor and vulnerable groups); and stronger regional cooperation to address cross-boundary emergencies.
cent from private investment. The contribution from private investment is assumed to be concentrated in development areas that are more commercially viable. For example, 60 per cent of ICT investment is expected to be financed by the private sector. In the scenarios, additional shocks are applied as needed to capture channels of transmission that are not fully specified in the model. For example, spending to preserve biodiversity is expected to reduce carbon emissions, spending in energy efficiency is expected to raise efficiency, while investment in ICT is expected to raise trend productivity levels and financial inclusion.

Regarding the time period and length of policy interventions, the illustrative spending packages last for 10 years starting from the year 2021, so that the end-period is synchronized with the time frame of the 2030 Agenda for Sustainable Development. In general, spending increases are frontloaded, that is, assumed to be larger in earlier years. The increases in current spending are treated as permanent, whereas the rises in investment spending is treated as temporary. However, a smaller permanent rise in investment is allowed for, to offset depreciation of the new capital stock that has accumulated over the 10 years.

We propose two scenarios with different spending levels: an “ambitious” scenario, where the magnitude of the spending increase reaches the additional investment needs in different Sustainable Development Goal areas, as estimated in ESCAP (2019). Figure 5 depicts the cross-country distribution of spending hikes required in different investment areas. In the second “business-as-usual” scenario, the magnitude of spending increases is assumed to be constrained by the country’s past trend of financial resources, and is represented as a country-specific proportion of the “ambitious” spending level. On average, available data from 41 developing Asia-Pacific countries suggest that the business-as-usual spending level stands at about 38 per cent of their additional investment needs. Box 2 provides more details on this back-of-the-envelope calculation.

Figure 5: Distribution of spending increases assumed across different investment areas

Source: Authors, based on ESCAP (2019).
Note: The upper and lower limits of the enclosed box correspond to the 75th and 25th percentiles, respectively. The horizontal line within the box depicts the median. The vertical line shows the range with the uppermost (lowermost) point reflecting the maximum (minimum) values. Areas of spending include social protection (SP), health care (HC), information and communications technology (ICT), education (EDU), energy (EN), climate-resilient infrastructure (INF). The estimated cost to protect biodiversity, which is the same for all countries, is not depicted separately but included in the “total” box.
Box 2: The “business-as-usual” level of spending: a back-of-the-envelope calculation

We estimate the proportion of additional investment needs that a country may afford by assuming that its financial resources will continue to increase at the pace observed in recent years. First, a country’s level of financial flows is calculated as the sum of eight types of flows that can be used for development purposes. These include government revenue excluding grants, net official development assistance (ODA) and official aid received, net fiscal borrowing, domestic credit to the private sector, net foreign direct investment (FDI) inflows, net flows of private non-guaranteed external debt, net portfolio investment and personal remittances received. The average values during the period 2015-2019 are used. Then, the projected increase in annual financial flows is calculated, based on respective growth rates of these flows during the period 2016-2019. Finally, a country’s “business-as-usual” level of spending is determined as a ratio of its projected increase in financial flows per year and its additional investment needs per year.

For example, if country A’s financial flows stood at 80 per cent of its GDP on average during the period 2015-2019 and these flows grew by 5 per cent per year on average during the period 2016-2019, then the projected increase in financial flows would be 4 per cent of GDP per year. Given this, if country A’s additional annual investment needs for the building-forward-better package are estimated at 10 per cent of GDP, then the business-as-usual spending level is about 40 per cent of its investment needs.

Based on 41 developing Asia-Pacific countries with available data, this methodology suggests that, on average, the business-as-usual level stands at about 38 per cent of the ambitious spending level that would meet estimated investment needs to reach the SDGs. Across Asia-Pacific subgroups, the business-as-usual ratio is lowest for South and South-West Asia (at about 22 per cent) and least developed countries (about 24 per cent) (figure below, left panel). This is driven by both larger investment needs in these countries (figure below, right panel) and smaller financial flows. In contrast, in East and North-East Asia, the business-as-usual spending level stands at almost 80 per cent of the ambitious spending level, partly these regions are already more advanced towards the SDGs.

Note: The five Asia-Pacific subregions include East and North-East Asia (ENEA), North and Central Asia (NCA), Pacific island developing countries (PIC), South and South-West Asia (SSWA), and South-East Asia (SEA). The three country groups classified as countries in special situations include least developed countries (LDC), landlocked developing countries (LLDC), and small island developing States (SIDS). See annex II for a list of countries that comprise Asia-Pacific subgroups.
Box 2: (continued)

Clearly, the estimated business-as-usual levels of spending should be viewed as tentative for several reasons. First, they could be overestimated due to double counting, e.g. corporate profits earned from an FDI-financed project also contribute to government revenue. Second, they could be underestimated as there are other types of financial flows not captured here that can be used for development purposes, e.g. revenue from State-owned enterprises and donations from foundations. Third, the projected increase in financial flows is based on each country’s past trend but this may change given changing global and country situations.

There is considerable uncertainty regarding how financial inflows to Asia-Pacific economies will recover after the COVID-19 pandemic is over. Finally, in going forward, if countries manage to utilize their financial resources for development purposes more efficiently, then the SDGs may be achieved with fewer financial resources than suggested by the ambitious scenario. For example, if more FDI, portfolio investments and domestic credits are channelled towards sustainability-oriented industries and firms. Another example could be the issuance of diaspora bonds to better leverage private remittances for development.

Note: 

a These and other types of financial flows are used to assess the country-level financing landscape for development. See UNDP (2019).

b The COVID-19 pandemic has dampened financial flows into the region, e.g. government revenue amid commodity price falls, FDI flows due to shrinking domestic demand and excess production capacity, portfolio inflows amid capital flight to safe havens, workers’ remittances as a result of lockdowns and economic recessions in host countries and potentially ODA owing to weaker fiscal conditions in donor countries.

c For some policy options, see UN Global Compact (2019).
4. Policy simulation results: sizeable socioeconomic and environmental benefits

This section shows the economic, social and environmental effects of the *build forward better* package(s). Section 4.1 discusses the results at a regional level for Asia and the Pacific for the combined package and its three sub-packages. Section 4.2 demonstrates the subgroup results for Asia-Pacific subregions and country groups classified as countries in special situations.

4.1. REGION-WIDE RESULTS FOR ASIA AND THE PACIFIC

Delivering the *social services package* will help reduce poverty and income inequality in Asia and the Pacific. This package affects socioeconomic variables through several channels (figure 6). As expected, an increase in health expenditure and decline in inequality helps lift labour productivity, which translates into higher GDP and potential output levels, lower unemployment and higher real personal disposable income (figure 7). Under the *ambitious* spending level scenario, the potential output level could be up to 1.5 per cent above the baseline in the long term. Driven by the decline in income inequality and higher household consumption amid stronger social protection floors, the number of poor could fall by about 70 million people when measured at $5.50 per day. Under the *business-as-usual* spending level scenario, the estimated impact on poverty reduction is much smaller at 14 million people. Finally, despite its notable positive impacts, implementing the social services package could push up the government debt-to-GDP ratio by up to 15 percentage points in the long run. Box 3 shows the public debt impact under alternative financing scenarios.

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5 The Gini income efficient is chosen to proxy inequality in this context mainly because there is reasonably large literature that suggests how it relates to other key variables in the model. The Gini index should be viewed as a narrow measure of inequality, as more comprehensive indicators, such as the dissimilarity index that measures inequality of opportunities, are available (ESCAP, 2018).
Figure 6: Social services package: illustrative channels of impacts

Source: Authors.

Figure 7: The social services package reduces poverty and income inequality

Source: Authors.
**Box 3: Do financing options matter?**

The main simulation results presented in this paper assume that increased fiscal spending is entirely financed by an increase in government debt, and that sovereign risk premia on borrowing rise as the government debt-to-GDP ratio increases. Among other impacts, higher risk premia will constrain investment (thus limiting potential output and employment) and push up inflation (thus lowering real personal disposable income). Additionally, we carried out two alternative scenarios. First, public spending increases remain entirely debt financed, but the risk premia are fixed. Second, only half of public spending increases are debt financed, while the other half is financed through upward adjustments in personal and corporate income tax rates.

As expected, the largest potential output gains among the three scenarios are expected when risk premia are not impacted by the rise in government debt (2.7 per cent above the baseline). Assuming risk premia do rise, financing half of the spending packages via tax increases would lead to higher net returns (2.3 per cent) compared to the main scenario assumption of 100 per cent debt financing (1.5 per cent) (see figure below). The magnitude of poverty reduction mirrors these potential output gains, with close to 120 million fewer poor people under the fixed risk premium scenario, about 95 million fewer people under the 50 per cent debt financed scenario and about 70 million fewer people under the main financing assumption. Finally, the rise in the government debt-to-GDP ratio is more modest under the 50 per cent debt financed scenario, as part of the increased fiscal burden is borne by tax increases rather than incurring new debt.

**Figure:** Social services package: impacts across different financing options

<table>
<thead>
<tr>
<th>Potential output level (percentage change)</th>
<th>Number of poor people (million persons)</th>
<th>Government debt-to-GDP ratio (percentage point change)</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Graph 1: Potential output level" /></td>
<td><img src="image2.png" alt="Graph 2: Number of poor people" /></td>
<td><img src="image3.png" alt="Graph 3: Government debt-to-GDP ratio" /></td>
</tr>
</tbody>
</table>

- **100% debt financed, fixed risk premium**
- **50% debt financed, varying risk premium**
- **100% debt financed, varying risk premium**
Among other channels, an increase in ICT investment raises economy-wide productivity, which in turn pushes up potential output and personal income (figure 8). Higher ICT investment also helps improve access to finance through greater use of online financial services. Together with higher educational attainment, better access to finance helps raise household consumption by reducing liquidity constraints and inequality. Finally, reduced inequality, lower unemployment and higher household income lead to lower poverty.

The digital access package also improves social outcomes notably. In terms of the magnitude of impacts, the potential output gain under the digital access package (close to 4.5 per cent above the baseline, figure 9) is much larger than that of the social services package due to more favourable productivity enhancement. Nonetheless, its impact on income inequality and poverty (about 65 million fewer poor persons) is more comparable as spending under the social services package disproportionally benefits the poor. Meanwhile, the government debt-to-GDP ratio is estimated to decrease in the initial years before picking up afterwards. This stems from the assumption that a significant share of investment in ICT is undertaken by the private sector. In the long run, the government debt ratio is expected to be only about 3.5 percentage points above the baseline. Compared with the social services package, the digital access package puts less pressure on public debt burden because its output gains are larger while the share of public spending in total spending is also smaller.6

**Figure 8**: Digital access package: illustrative channels of impacts

![Diagram of digital access package](image)

*Source: Authors.*

6 In this analysis, greater engagement by the private sector not only helps save fiscal spending, but also contributes positively to the fiscal balance through higher government revenue.
Figure 9: The digital access package also improves socioeconomic outcomes

Not surprisingly, the green development package is estimated to produce sizeable environmental benefits. The package comprises larger spending on energy access and efficiency, climate-resilient infrastructure and biodiversity preservation, as well as introducing a carbon tax (at $40 per metric ton) and abolishing fuel price subsidies, with varying channels of impacts (figure 10). The most notable results include:

- **First**, a fall in carbon emissions by more than 30 per cent under the ambitious spending level scenario (figure 11), driven by such factors as a higher share of renewable energy in the energy mix amid cheaper renewable energy prices and higher costs of fossil fuel, greater energy efficiency and a decline in total energy use;
- **Second**, a notable improvement in air quality, underpinned by greater use of clean energy and clean cooking and the shift in the energy mix away from coal and oil;
- **Third**, about 6 per cent gain in the potential output compared with the baseline, which

Source: Authors
is larger than those under the social services and digital access packages. Contributing factors include energy efficiency gains, lower carbon emissions (thus slowing climate change and lower capital depreciation rate), less damage to the infrastructure from climate shocks (more than 30 per cent lower), fewer lives lost from climate shocks (close to 5 per cent lower) and greater labour productivity amid better air quality and a healthier population. These positive effects more than offset the negative effect of shrinking energy demand due to a newly introduced carbon tax that pushes up energy prices and the user cost of capital;

- **Fourth**, a cut in the public debt ratio by about 5 percentage points due to cancellation of fuel subsidies, carbon tax revenue and stronger economic growth. This contrasts with social and digital packages where the public debt-to-GDP ratio is estimated to rise in the long term.

**Figure 10**: Green development package: illustrative channels of impacts

![Diagram of Green development package](image)

*Source: Authors.*
In combining the three sub-packages, the “build forward better package” can help improve social and environmental outcomes while building resilience. The combined package would lead to lower poverty, reduced income inequality, lower carbon emissions and better air quality (figure 12). Under the ambitious spending level scenario, almost 180 million people in the Asia-Pacific region would escape poverty. This impact is large, considering that over the 4-year period during 2015-2019, the number of poor in the region decreased by about 209 million people. Yet, the poverty reduction impact would be much smaller at 55 million people under the business-as-usual spending level scenario. Meanwhile, under the ambitious spending level scenario, carbon emissions would be nearly 30 per cent below the baseline. This means that
the emission level in 2040 would be 9 per cent above the actual 2019 level, compared to about 52 per cent in the baseline scenario.

Investing in inclusive and sustainable development would bring about significant positive economic outcomes as well. As a result of stronger domestic demand and higher total factor productivity, the actual and potential output levels are estimated to be up to 10-12 per cent higher than the baseline while the unemployment rate is cut by 2 percentage points. Inflation is likely to increase, but only temporarily because of the elimination of fuel subsidies and introduction of a carbon tax. On the external front, imports pick up, as part of increasing domestic demand is met through imports. Finally, the package would likely push up the public debt-to-GDP ratio by about 10 percentage points in the long run under the ambitious spending level scenario. While the magnitude of the public debt increase seems modest given the sizeable investment needs, it is important to note that the package also includes elimination of fuel subsidies and introduction of a carbon tax. These are considered bold, yet attainable, policy moves in the context of Asia and the Pacific.

Figure 12: The building forward better package offers notable socioeconomic and environmental benefits

In countries where existing fuel subsidies are very large, implementing the building forward better package would result in a lower public debt ratio. These countries include Azerbaijan, the Islamic Republic of Iran, Kazakhstan, Mongolia, the Russian Federation, Turkmenistan and Uzbekistan.
4.2. RESULTS FOR ASIA-PACIFIC SUBGROUPS

This section presents a snapshot of results on the building forward package across Asia-Pacific subgroups. These subgroups include five Asia-Pacific subregions and three country groups classified as countries in special situations, namely, least developed countries, landlocked developing countries, and small island developing States. In general, the variation of results across different subgroups is driven by factors such as different spending levels being assumed (see box 2 for more details), initial socioeconomic and environmental conditions (such as the extent of fuel subsidies), and how countries react differently to assumed policy shocks.
The building forward better package offers notable social benefits across Asia-Pacific subgroups. The package is expected to reduce poverty incidence across the five subregions by up to 13-21 per cent relative to the baseline under the ambitious spending level scenario. In term of size, the impact is most significant in South and South-West Asia, with almost 126 million fewer poor people (figure 13). This is as expected, given that this subregion accounted for about 70 per cent of all poverty in Asia and the Pacific in 2019. Yet, under the business-as-usual spending level scenario, the number of poor people could decrease by only 35 million people amid wide financing gaps in the subregion. Meanwhile, reduction in income inequality is estimated to be larger in Pacific island developing countries, least developed countries and small island developing State. In these country groups, the costs to deliver the social services package, which directly reduces income inequality, constitute around 60 per cent of their total investment needs.

Regarding environmental impacts, the building forward better package would help cut carbon emissions the most in the landlocked developing countries, at nearly 35 per cent relative to the baseline. This is not surprising, considering that this country group largely comprises carbon-intensive Mongolia and North and Central Asian countries, which tend to be disproportionately affected by introduction of a carbon tax and cancellation of fuel subsidies.

Finally, on economic effects, sizeable potential output gain is expected in the least developed countries. This is mainly driven by large spending hike, which could help cut the unemployment rate by almost 4 percentage points and boost household consumption by over 15 per cent. Yet, amid expanding domestic demand and energy price increases, the inflation rate could be up to 6.3 percentage points above the baseline. Under the business-as-usual spending level scenario, the estimated inflationary pressure is much more modest, but economic benefits are also notably smaller.
Figure 13: The impacts of the building forward better package vary across Asia-Pacific subgroups

Number of poor people

<table>
<thead>
<tr>
<th></th>
<th>ENEA</th>
<th>NCA</th>
<th>PIC</th>
<th>SSWA</th>
<th>SEA</th>
<th>LDC</th>
<th>LLDC</th>
<th>SIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million persons</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Average change</td>
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</table>

Gini coefficient

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<th>LLDC</th>
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<tbody>
<tr>
<td>Average change</td>
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</table>

Carbon emissions

<table>
<thead>
<tr>
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<th>NCA</th>
<th>PIC</th>
<th>SSWA</th>
<th>SEA</th>
<th>LDC</th>
<th>LLDC</th>
<th>SIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage change</td>
<td></td>
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</table>

Inflation rate

<table>
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<th>PIC</th>
<th>SSWA</th>
<th>SEA</th>
<th>LDC</th>
<th>LLDC</th>
<th>SIDS</th>
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</thead>
<tbody>
<tr>
<td>Percentage point change</td>
<td></td>
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</table>

Household consumption

<table>
<thead>
<tr>
<th></th>
<th>ENEA</th>
<th>NCA</th>
<th>PIC</th>
<th>SSWA</th>
<th>SEA</th>
<th>LDC</th>
<th>LLDC</th>
<th>SIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage change</td>
<td></td>
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</table>

Potential output level

<table>
<thead>
<tr>
<th></th>
<th>ENEA</th>
<th>NCA</th>
<th>PIC</th>
<th>SSWA</th>
<th>SEA</th>
<th>LDC</th>
<th>LLDC</th>
<th>SIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage change</td>
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</tr>
</tbody>
</table>

Source: Authors.

Note: The five Asia-Pacific subregions include East and North-East Asia (ENEA), North and Central Asia (NCA), Pacific island developing countries (PIC), South and South-West Asia (SSWA), and South-East Asia (SEA). The three country groups classified as countries in special situations include least developed countries (LDC), landlocked developing countries (LLDC), and small island developing States (SIDS). See annex II for a list of countries that comprise Asia-Pacific subgroups.
5. Public debt sustainability analysis: looming vulnerability

It is abundantly clear that, while a policy package to build forward better can notably improve economic, social and environmental outcomes in Asia and the Pacific, the package also incurs a large fiscal cost. The public debt-to-GDP ratio is likely to increase in most countries in the long run, despite measures on environmental tax and subsidies to create fiscal space. This insight, combined with the large urgent fiscal needs to address the COVID-19 pandemic, indicates that fiscal sustainability could be at risk for many countries.

This section assesses the sustainability of public debt levels across developing Asia-Pacific economies during the period 2020-2030. A public debt trajectory is generally considered sustainable if a country can meet its debt service obligations without substantial changes in its revenue-expenditure structure, given the current debt level, prospective borrowing, and financing cost. Based on the same macroeconomic model described in section 3 above, the analysis examines three policy scenarios, which assume public spending at the following levels: (a) that required to deliver the build forward better package (i.e. ambitious spending level); (b) that of the size of the COVID-19 fiscal stimulus; and (c) that combining the first two scenarios. Also considered are various stress tests, including the realization of selected fiscal contingent liabilities. Table 1 provides more details about these scenarios, stress tests and contingent liabilities.

Not surprisingly, public debt ratios will increase as Governments combat the pandemic and invest in sustainable development. For developing Asia-Pacific countries as a whole, the government debt-to-GDP ratio is projected to rise steeply from 51 per cent of GDP in 2019 to about 74 per cent of GDP by 2030 (figure 14). The pandemic alone would push up the debt ratio to 70 per cent in 2030, or 10 percentage points above the pre-COVID-19 baseline expectations.

Across Asia-Pacific subgroups, the fiscal impact of the building forward better scenario varies significantly. In North and Central Asia and the landlocked developing countries, carbon tax revenue and fiscal saving from fuel subsidy cancellation would result in lower government debt-to-GDP ratios. In contrast, the public debt ratios are estimated to rise to a varying degree in other subgroups. In the least developed countries, under the ambitious spending package the government debt ratio would be expected to surge from 35 per cent in 2019 to 90 per cent by 2030, given that implementing the building forward better package would require a considerable increase in fiscal spending. Similarly, the public
debt rise is likely to be significant in South and South-West Asia, reaching 91 per cent of GDP by 2030, up from 59 per cent in 2019.8

Table 1: Public debt sustainability analysis: scenarios, stress tests and contingent liabilities

<table>
<thead>
<tr>
<th>Scenarios</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Building-forward-better (BFB) package</td>
<td>A combination of the social services, digital access and green development packages (see section 3 for more details).</td>
</tr>
<tr>
<td>2. COVID-19 fiscal responses</td>
<td>Increased public spending to cope with the pandemic, based on differences in the projected government debt-to-GDP ratio in the October 2019 and October 2020 editions of the IMF World Economic Outlook databases.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stress tests</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Slower economic growth</td>
<td>Real domestic demand growth in the baseline scenario is reduced by 1 standard deviation in 2021 and 2022.</td>
</tr>
<tr>
<td>2. Weaker exchange rate</td>
<td>One-time 20 per cent nominal depreciation of the domestic currency in 2021.</td>
</tr>
<tr>
<td>3. Higher interest rate</td>
<td>Nominal interest rate increases by 200 basis points in 2021.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contingent liabilities</th>
<th>An increase in the liabilities is assumed to be equivalent to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Financial sector</td>
<td>10 per cent of each country’s bank assets: applied to all Asia-Pacific countries with available data from the World Bank’s Global Financial Development database.</td>
</tr>
<tr>
<td>2. Natural disaster</td>
<td>Average contingent liability due to natural disasters in Asia-Pacific countries in Bova and others (2016): applied to Asia-Pacific countries rated at “high” or “medium” risk in Kopits, Ferrarini and Ramayandi (2016).</td>
</tr>
<tr>
<td>5. Public-private partnership (PPP) projects</td>
<td>35 per cent of each country’s PPP capital stock: applied to all Asia-Pacific countries with available data from the World Bank’s World Development Indicators database.</td>
</tr>
</tbody>
</table>

Source: Authors.

8 In SIDS, the high government debt-to-GDP ratio is driven primarily by Singapore, which has a stronger sovereign credit risk rating and lower risks to public debt sustainability than other economies in this country group.
Figure 14: Public debt vulnerability is rising noticeably

Policy scenarios

Developing Asia-Pacific region

East and North-East Asia (excluding Japan)

Pacific island developing countries

South and South-West Asia
Figure 14: (continued)

South-East Asia

Least developed countries

Small island developing States

Source: Authors.
Note: In North and Central Asia and landlocked developing countries, the government debt-to-GDP ratios are projected to decrease so their debt trajectories are not shown here.
Public debt sustainability in the region is highly vulnerable to slower-than-expected economic growth. Under the economic growth shock, which assumes that real domestic demand growth rates in 2021 and 2022 are one standard deviation below the baseline, the public debt ratio in developing Asia-Pacific region rises by another 10 percentage points, to 84 per cent in 2030 (figure 14). In Pacific island developing countries, the sensitivity of public debt to economic growth is even more pronounced. In general, the region’s public debt trajectory is also quite sensitive to the exchange rate shock, which assumes a 20 per cent nominal currency depreciation in 2021. This is especially the case in South and South-West Asia where the impact of the exchange rate shock is greater than the economic growth shock. Finally, it appears that public debt sustainability in the region is not highly sensitive to the interest rate shock in which nominal interest rates are 200 basis points above the baseline in 2021.

Among other fiscal contingent liabilities, bank bailouts pose the greatest risk to public debt sustainability. In developing Asia-Pacific region, bank bailouts, where the size of fiscal support is assumed at 10 per cent of each country’s bank assets, could increase the public debt ratio under the combined COVID-19 and building forward better scenario by about 9 percentage points (figure 15). Such an impact is even larger, at almost 12 percentage points, in East and North-East Asia given the subregion’s sizeable banking sector. Across all Asia-Pacific subgroups, the public debt impact of bank bailouts is larger than the impacts of contingent liabilities arising from natural disasters, operations of subnational governments and State-owned enterprises and State guarantees for public-private partnership projects. Yet, in Pacific island developing countries, where the debt impact of a bank bailout is more modest (at about 4 percentage points), contingent liability due to natural disasters and State-owned enterprises can pose some risk. This is also true for the liability arising from public-private partnership projects in the least developed countries.

---

9 Under this alternative scenario, the real GDP growth rate in developing Asia-Pacific is 2.7 and 2.4 percentage points below the baseline values in 2021 and 2022, respectively.

10 In the model, a weaker exchange rate increases the servicing cost of foreign debt, raises inflation, reduces potential output and worsens the terms of trade, largely offsetting any competitiveness gains. The net impact on GDP and thus the government debt-to-GDP ratio varies across countries.

11 The impact is also notable in small island developing States but this is driven by Singapore.
Figure 15: A banking sector crisis could put great pressure on fiscal burden

Source: Authors.
6. Conclusions

In this paper, we first show that policy measures in response to the COVID-19 pandemic by Asia-Pacific economies fell short on integrating social and environmental issues. While the extent of such an integration as of mid-2021 seemed to improve relative to late 2020, currently less than a fifth of policy measures along the economic, social protection and labour market dimensions are considered gender sensitive. Also, more than half of committed public funds on energy production and consumption still benefit the harmful fossil fuels.

Against this background, we then proposed an illustrative policy package that would help achieve resilient, inclusive and green development. The package comprises actions to ensure access to health care and social protection, close the digital divide, and strengthen climate and clean energy actions. In the long run, such a package could reduce the number of poor people by almost 180 million, cut carbon emissions by about 30 percent, and boost the potential output level by nearly 12 percent. Yet, given the large fiscal needs to finance this policy package and combat the pandemic, the analysis shows that public debt sustainability is at risk in many Asia-Pacific economies, especially in South and South-West Asia and those classified as least developed countries. The analysis also suggests that slower-than-expected economic growth, which is likely as economies tentatively recover from the pandemic, would add more pressure on public debt situations.

This quantitative analysis involves at least two important policy implications. First, contrary to doubts among some policymakers and analysts, this paper provides quantitative evidence that green development is good for economic growth. Asia-Pacific economies that have not fully integrated climate and clean energy actions into their COVID-19 policy responses should actively do so. Second, as the socioeconomic and environmental benefits under the ambitious level of spending are estimated to be far greater than those under the business-as-usual level, Asia-Pacific countries need to step up their efforts in exploring untapped sources of financial resources to meet large fiscal needs (see chapter 5 in ESCAP (2021) for selected fiscal and financing policy options).
References


### Annex

#### Annex I: List of selected variables in the macroeconomic model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Brief description</th>
<th>Historical Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air quality</td>
<td>PM2.5 air pollution, mean annual exposure (micrograms per cubic meter)</td>
<td>World Bank (World Development Indictors)</td>
</tr>
<tr>
<td>Capital stock</td>
<td>Capital stock, Constant prices, National currency</td>
<td>Penn World Table</td>
</tr>
<tr>
<td>Carbon emissions</td>
<td>Territorial carbon dioxide emissions, MtCO2</td>
<td>Global Carbon Atlas</td>
</tr>
<tr>
<td>Financial inclusion</td>
<td>Account ownership at a financial institution or with a mobile-money-service provider (% of population ages 15+)</td>
<td>World Bank (World Development Indictors)</td>
</tr>
<tr>
<td>Net carbon revenue</td>
<td>Estimate of carbon revenue less carbon subsidies, National currency</td>
<td>International Energy Agency</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross domestic product, Constant prices, National Currency</td>
<td>UN Statistics Division</td>
</tr>
<tr>
<td>Government consumption</td>
<td>General government final consumption expenditure, Constant prices, National Currency</td>
<td>UN Statistics Division</td>
</tr>
<tr>
<td>Government debt</td>
<td>General government gross debt, National Currency</td>
<td>IMF (World Economic Outlook database)</td>
</tr>
<tr>
<td>Government investment</td>
<td>Public gross fixed capital formation, Constant prices, National currency</td>
<td>IMF (World Economic Outlook database)</td>
</tr>
<tr>
<td>Government revenue</td>
<td>General government revenue, National currency</td>
<td>IMF (World Economic Outlook database)</td>
</tr>
<tr>
<td>Household consumption</td>
<td>Household consumption expenditure (including Non-profit institutions serving households), Constant prices, National Currency</td>
<td>UN Statistics Division</td>
</tr>
<tr>
<td>Inequality</td>
<td>Gini index of inequality in equivalized household disposable (post-tax, post-transfer) income</td>
<td>Standardized World Income Inequality Database (SWIID)</td>
</tr>
<tr>
<td>Inflation</td>
<td>Consumer Prices, period average</td>
<td>IMF (World Economic Outlook database)</td>
</tr>
<tr>
<td>Interest rate</td>
<td>Monetary Policy-Related Interest Rate</td>
<td>IMF International Financial Statistics</td>
</tr>
<tr>
<td>Poverty</td>
<td>Poverty headcount ratio at $5.50 a day (2011 PPP) (% of population)</td>
<td>World Bank (World Development Indictors)</td>
</tr>
<tr>
<td>Private investment</td>
<td>Private gross fixed capital formation, Constant prices, National currency</td>
<td>IMF (World Economic Outlook database)</td>
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<tr>
<td>Unemployment rate</td>
<td>Unemployment Rate (ILO definition)</td>
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Annex II: Countries in Asia-Pacific subgroups

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subregions</strong></td>
<td></td>
</tr>
<tr>
<td>East and North-East Asia</td>
<td>China; Hong Kong, China; Japan; Macao, China; Mongolia; and Republic of Korea.</td>
</tr>
<tr>
<td>North and Central Asia</td>
<td>Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Russian Federation, Tajikistan, Turkmenistan, and Uzbekistan</td>
</tr>
<tr>
<td>Pacific island developing</td>
<td>Fiji, Kiribati, Micronesia (Federated States of), Papua New Guinea, Samoa, Solomon Islands, Tonga, and Vanuatu.</td>
</tr>
<tr>
<td>countries</td>
<td></td>
</tr>
<tr>
<td>South and South-West Asia</td>
<td>Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Maldives, Nepal, Pakistan, Sri Lanka, and Turkey.</td>
</tr>
<tr>
<td>South-East Asia</td>
<td>Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Philippines, Singapore, Thailand, Timor-Leste, and Viet Nam</td>
</tr>
<tr>
<td><strong>Countries in special situations</strong></td>
<td></td>
</tr>
<tr>
<td>Least developed countries</td>
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</tr>
<tr>
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<tr>
<td>countries</td>
<td></td>
</tr>
<tr>
<td>Small island developing States</td>
<td>Fiji, Kiribati, Maldives, Micronesia (Federated States of), Papua New Guinea, Samoa, Singapore, Solomon Islands, Timor-Leste, Tonga, and Vanuatu</td>
</tr>
</tbody>
</table>
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