IMPACT OF TAXES AND TRANSFERS ON INEQUALITY IN THE ASIA-PACIFIC REGION

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Governments that aim to adjust their fiscal policies to reduce inequality can look to several analytical tools that are being produced in Asia-Pacific countries, including commitment to equity studies and public expenditure reviews. The present paper contains a review of studies for 12 Asia-Pacific countries. Consistent with previous research on the impact of fiscal policies on inequality, the findings of the review show that policies such as targeted direct transfers, education spending and tax policies that favour direct instead of indirect taxes are most effective at inequality reduction.

Keywords: fiscal policy, inequality, redistribution, taxes, transfers

JEL classification: D63, E63, 023
I. INTRODUCTION

As countries rebound from the economic shock of COVID-19, many Governments will face constrained fiscal space or move into a period of fiscal adjustment in coming years. In the Asia-Pacific region, the fiscal policy decisions that Governments will make in the coming years are even more critical given the risks of exacerbating existing trends toward inequality. Alongside remarkable economic growth, over the past two decades income inequality had been rising in many Asia-Pacific countries (Jian and Lee, 2018). After the COVID-19 crisis, this trend is likely to accelerate further without significant government interventions. Lessons from previous pandemics and economic shocks have shown that they can widen inequality, and countries with lower health and social protection expenditures faced larger and longer setbacks in their efforts to achieve economic growth, poverty reduction and reduced inequality (ESCAP, 2021).

Fiscal policy decisions can effectively support an inclusive recovery. Reforms to address increasing constraints on fiscal space can be adjusted to promote greater spending on policies that have proven to be effective at reducing poverty and inequality in other countries while minimizing spending on policies that have lesser impact or that may even increase inequality.

Many Governments in the Asia-Pacific region already have access to reports that analyse the impact of fiscal policies on inequality, or they may learn from analyses that have been done in other countries. To identify how government fiscal policy choices can impact inequality, the present paper provides a review of fiscal policies in 12 Asia-Pacific countries as assessed using the Commitment to Equity (CEQ) methodology and public expenditure reviews (PERs).

At the national level, CEQ assessments use a common methodological framework developed by the CEQ Institute1 to analyse the distributional impact of taxes and transfers. Government fiscal data and household income data reported in national household surveys are used to estimate the impact of fiscal policies on income redistribution and poverty reduction. This approach covers only part of the fiscal system. It excludes some sector expenditures, such as public administration, public safety and transportation, that have diffused benefits which are difficult to attribute to households, as well as some revenues, such as the corporate income tax, where the incidence by household cannot be determined.

1 Led by Nora Lustig since 2008, CEQ Institute is an initiative of the Center for Inter-American Policy and Research and the Department of Economics, Tulane University, the Center for Global Development, and the Inter-American Dialogue. For more details visit www.commitmenttoequity.org.
To compliment the analysis of the distributional impact of government taxation and transfer policies in the CEQ assessment, the review in the present paper includes key findings from public expenditure reviews (PERs) and systematic country diagnostics (SCDs) in several of the selected countries (table 1). The World Bank and other institutions conduct PERs, which are non-standard assessments of government budgets that may include an analysis of efficiency and effectiveness of fiscal policies, expenditure trends in sectors and equity analysis (Freinkman and Skhirtladze, 2015). World Bank investment planning in countries is underpinned by SCDs, which are analytical reviews of country progress and opportunities for sustainable and inclusive growth. Comparing the findings of PERs, SCDs and CEQ assessments can identify elements of fiscal policies that have successfully reduced inequality and poverty, factors that limit the impact and effectiveness of redistribution and poverty reduction, and policies that may inadvertently widen disparities or poverty gaps.

Table 1. Countries covered in review of commitment to equity assessment, public expenditure review and systematic country diagnostics

<table>
<thead>
<tr>
<th>Country</th>
<th>Commitment to equity assessments (Year of fiscal/survey data)</th>
<th>Public expenditure review (Year of publication)</th>
<th>Systematic country diagnostics (Year of publication)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armenia</td>
<td>2011</td>
<td>2014</td>
<td></td>
</tr>
<tr>
<td>Cambodia</td>
<td></td>
<td>2010, 2019</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>2013</td>
<td></td>
<td>2017</td>
</tr>
<tr>
<td>Georgia</td>
<td>2013</td>
<td>2015, 2017</td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>2012</td>
<td></td>
<td>2020</td>
</tr>
<tr>
<td>Iran (Islamic Republic of)</td>
<td>2011–2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>2016</td>
<td>2018</td>
<td>2019</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>2010</td>
<td></td>
<td>2016</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>2009</td>
<td></td>
<td>2016</td>
</tr>
<tr>
<td>Turkey</td>
<td>2016</td>
<td></td>
<td>2016</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>2014</td>
<td>2017</td>
<td>2014</td>
</tr>
</tbody>
</table>
The present paper has the following three sections: evidence on fiscal policy choices that impact poverty and inequality; evidence from the reviewed studies on transfer and tax policies in Asia and the Pacific; and conclusions and policy recommendations.

II. FISCAL POLICY CHOICES THAT IMPACT INEQUALITY

Government policy decisions can have a range of intended and unintended impacts on inequality. Fiscal policy decisions on taxes and transfers, which are the focus of CEQ assessments, have the most observable impact on household incomes in a given year. However, the CEQ methodology does not assess whether these policies are desirable based on different goals for fiscal policies, which can include macroeconomic stability, growth and poverty reduction (Lustig, 2017). Spending decisions to invest in physical and human capital also benefit future generations and may impact the distribution of income over time (Lustig, 2018, p. lxiv). Public investments in agriculture, transportation, electrification, telecommunications and other sectors can have significant impacts on long-term growth and poverty reduction, but may have variable impacts on inequality, depending on the quality of spending, how projects are financed and which groups access and benefit from these public resources the most (Calderón and Servén, 2014; Seneviratne and Sun, 2013). Government regulations and policies can also influence inequality in terms of access to finance, labour markets and industrial production factors, such as research and development or trade terms (Blanchard and Rodrik, 2021).

Previous research on the relative impact of fiscal policies on inequality and poverty has shown that different types of policies tend to have either progressive or regressive impacts on household incomes, but the impact varies depending on the country context and policy design. Several studies have analysed the impact of different policies on inequality in the Asia-Pacific region, and the findings of these studies are summarized below.

Evidence around the impact of government transfer programmes shows that direct transfers such as social safety nets and cash transfer programmes tend to be effective at reducing inequality. Social safety nets can be an effective driver for reducing inequality when programmes are well targeted toward the poor (Claus, Martínez-Vazquez and Vulovic, 2012), and conditional cash transfers have been found in some cases to reduce inequality by raising school enrolment and improving health outcomes (Zouhar and others, 2021). Pension programmes can lead to reductions in inequality (Abdel-Kader and Mooij, 2020), but an analysis of pension programmes in 20 countries also found that many are not well targeted toward the poor (Chu, Davoodi and Gupta, 2004). Government subsidies, which act as indirect transfers
to households, have been shown to be less effective at reducing poverty and there is some evidence that energy subsidies tend to benefit upper-income households (Claus, Martinez-Vazquez and Vulovic, 2012).

Government spending on education and health, which can be seen as in-kind transfers to households, tends to be progressive. For health spending, rural/urban disparities can lead to fewer benefits for low-income groups, but spending on primary care tends to be more progressive (Abdel-Kader and Mooij, 2020; Claus, Martinez-Vazquez and Vulovic, 2012). Education spending tends to be more progressive at the primary level and sometimes at the secondary level, depending on enrolment rates at different education levels (Abdel-Kader and Mooij, 2020; Claus, Martinez-Vazquez and Vulovic, 2012; Jian and Lee, 2018).

For tax policies, direct taxes such as income tax tend to have a greater impact on reducing inequality than indirect taxes such as value added tax (VAT) and excise tax. Personal income tax can have a greater impact on inequality when tax rates are progressive and the tax base is broader with fewer exclusions (Abdel-Kader and Mooij, 2020; Jian and Lee, 2018). Corporate income tax can be progressive for domestic business owners, and it can help governments to collect taxes from foreign-owed firms (Jian and Lee, 2018), however there is some evidence from Asia-Pacific counties that corporate taxes can increase inequality when there are tax concessions and subsidies for some firms (Claus, Martinez-Vazquez and Vulovic, 2012). Property taxes based on house prices can be progressive, but the incidence can vary depending on how many owners pay taxes and whether tax costs are passed on to renters, which can make the tax more regressive (Abdel-Kader and Mooij, 2020; Claus, Martinez-Vazquez and Vulovic, 2012). Social security contributions, which can be considered a tax in pension systems that are government funded instead of pay-as-you-go, can have a regressive incidence in systems where contributions are capped, however, when they are only levied on smaller formal employment sectors, the incidence can be progressive (Claus, Martinez-Vazquez and Vulovic, 2012).

In general, VAT is assumed to be regressive, but this can vary depending on whether it is paid only by the formal sector with higher incomes, and there can be exceptions for basic goods as opposed to luxury goods. Excise tax, like other taxes on goods and services, is generally considered regressive, but can be progressive when levied on luxury goods such as cars and perfumes rather than more broadly consumed items such as kerosene for cooking and tobacco (Abdel-Kader and Mooij, 2020; Claus, Martinez-Vazquez and Vulovic, 2012).

Evidence from previous studies on the impact of taxes and transfers is useful for analysing the impact of each policy individually. The CEQ methodology provides additional evidence about the combined impact of taxes and transfers on households.
In particular, it looks at the marginal contribution of each policy within the fiscal system, which accounts for the potential interaction between different taxes and spending programmes. The analysis captures situations when a nominally progressive tax could potentially fund regressive expenditures that increase inequality or revenue from a regressive tax is used to fund programmes and transfers that ultimately reduce inequality (Inchauste and Lustig, 2017).

III. EVIDENCE FROM 12 ASIA-PACIFIC COUNTRIES

Of the 12 Asia-Pacific countries covered in the present paper, nine have CEQ assessments that quantify the impact of spending policies on inequality. The assessments show the impact of the combined fiscal system on inequality by comparing market incomes, or the distribution of household incomes before taxes and transfers, to final income after considering the impact of all measured taxes and transfers. The difference between these two measures shows the estimated change in the Gini index from the assessed fiscal policy interventions. The methodology also allows for different measurements of the impact of fiscal policies on inequality based on the way that contributory pension systems are structured that show different results when pension income is assessed as a government transfer or as deferred income.²

These studies show that the redistributive impact of taxes and transfers in a country is related to three aspects of the fiscal system: the overall size of the tax or transfer; the distribution of the transfer across households, whether progressive or regressive; and the composition of fiscal policies in the government budget. For example, a higher-income country with a larger budget will typically have more fiscal space to deploy expenditures on transfers, and tax policies will also have a broader impact (Inchauste and Lustig, 2017, p. 4).

Looking at the combined effect of all measured taxes and transfers in the nine CEQ assessments, all fiscal systems reduce inequality (table 2). Countries with higher incomes per capita also tend to redistribute a greater amount of income, with Turkey, the Russian Federation, and the Islamic Republic of Iran having both the highest gross national income (GNI) per capita during the CEQ assessment year, and also showing the largest measured impact of the fiscal systems on inequality. However, other countries with lower incomes per capita, such as Georgia and Armenia, show relatively large impacts from their fiscal systems, suggesting that other factors may account for the impact of their fiscal systems.

² See annex for additional details about the methodology.
### Table 2. Impact of fiscal policy on inequality in nine Asia-Pacific countries

<table>
<thead>
<tr>
<th>Country</th>
<th>CEQ assessment year</th>
<th>GNI per capita, PPP</th>
<th>Pension as deferred income</th>
<th>Pension as transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Market income plus pensions</td>
<td>Final income</td>
</tr>
<tr>
<td>Armenia</td>
<td>2011</td>
<td>8 310</td>
<td>29.42</td>
<td>25.22</td>
</tr>
<tr>
<td>China</td>
<td>2013</td>
<td>11 780</td>
<td>Not published in the report</td>
<td>55.58</td>
</tr>
<tr>
<td>Georgia</td>
<td>2013</td>
<td>10 420</td>
<td>Not applicable for the fiscal system</td>
<td>50.74</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2012</td>
<td>9 440</td>
<td>39.83</td>
<td>37.05</td>
</tr>
<tr>
<td>Iran (Islamic Republic of)</td>
<td>2011</td>
<td>18 010</td>
<td>43.20</td>
<td>36.50</td>
</tr>
<tr>
<td>Mongolia</td>
<td>2016</td>
<td>9 850</td>
<td>Not published in the report</td>
<td>41.83</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>2010</td>
<td>23 460</td>
<td>37.88</td>
<td>29.89</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>2009</td>
<td>7 470</td>
<td>34.37</td>
<td>31.01</td>
</tr>
<tr>
<td>Turkey</td>
<td>2016</td>
<td>26 230</td>
<td>47.10</td>
<td>36.64</td>
</tr>
</tbody>
</table>

**Source:** CEQ standard indicators (CEQ Institute, 2021).

**Note:** Market income comprises pre-tax wages, salaries, income earned from capital assets (rent, interest or dividends) and private transfers; Final income is market income, less payments for taxes and incidence of indirect taxes, plus direct transfers, indirect subsidies and the value of in-kind transfers (education and health care). Values are shown as Gini index on a score of 0 to 100 percentage points. Data on GNI per capita, PPP, is reported for the CEQ assessment year in current international dollars (World Bank, 2022).

**Abbreviations:** CEQ, Commitment to Equity; GNI, gross national income; PPP, purchasing power parity.

For some countries, the measured impact of fiscal policies on inequality varies widely depending on whether pensions are assessed as deferred income or as government transfers. Four CEQ assessments considered pensions using both...
methodologies, as the pension systems are both funded from general revenues and through social security contributions: Armenia, Indonesia, the Russian Federation and Turkey. In Armenia and the Russian Federation, where pensions are a large share of social spending and have broad coverage, the difference between the two measures is significant. For example, the fiscal system in the Russian Federation reduces inequality by 19 percentage points, the highest in the sample, when spending on pensions is assessed as a transfer, but only eight points when pensions are assessed as deferred income. This is due to the large amount of spending on contributory pensions – which also accounts for the majority of spending that impacts inequality within the CEQ assessment.

3.1 Impact of transfers

This section provides a review of the evidence in CEQ assessments, PERs and SCDs on the impact of transfer programmes on inequality in selected Asia-Pacific countries. Evidence shows that direct transfers, especially targeted social safety net programmes, can have a substantial impact on reducing inequality. Less spending, however, is directed toward effective social safety net programmes than toward pension programmes. Relative to the amount of spending on subsidies, the impact on inequality was limited. Education spending, measured as in-kind transfers to households with eligible children, also functions to reduce inequality in all countries, while spending on health has more mixed results.

Direct transfer programmes, as quantified in CEQ assessments, have the largest marginal contribution to the reduction of inequality of any measured policy intervention (figure 1). The largest reductions of inequality as a result of direct transfers are seen in countries with large pension programmes, such as the Russian Federation, Georgia and Armenia, however, for the Russian Federation and Armenia, this impact decreases when pensions are assessed as deferred income rather than as government transfers. Given that contributory pensions in both countries are funded through a mix of social security contributions and general revenues, the impact of these pensions systems is likely somewhere between these two results.
Old-age pension programmes with broad coverage can effectively reduce inequality, even when pensions are not explicitly targeted to lower-income groups. In Armenia in 2011, contributory pensions were the largest budget line (20 per cent of the State budget and 68 per cent of social protection spending) and accounted for more than half of the observed reduction in inequality in the overall fiscal system. Despite being universal without any targeting by income, pensions were the most effective policy instrument at reducing poverty due to broad coverage, despite the relatively small size of the transfers to each recipient (Younger and Khachatryan, 2017). In 2013, Georgia had a universal, non-contributory old-age pension system that had a significant impact on reducing poverty and inequality. The programme amounted to 42 per cent of total public spending and was entirely financed out of general revenues. Pensions were not explicitly targeted toward the poor, however 55 per cent of transfers were made to poor beneficiaries (Cancho and Bondarenko,
However, for all three countries, pensions programmes are expensive and may face sustainability issues. Reforms to limit benefits or improve targeting may be challenging given the public support for these benefits.

Social safety net policies targeted toward the poor account for a smaller share of spending on direct transfers. For example, the flagship poverty reduction programme in Sri Lanka, Samurdhi, saw declining funding between 2001 and 2012. The CEQ assessment estimated that if funding had not declined, poverty rates could have been 10 per cent lower at the time of the study. Despite the large potential impact on poverty, the small size of the transfers to each family and issues with targeting result in spending on these programmes having a relatively minimal impact on inequality (Arunatilake, Inchauste and Lustig, 2017). In Indonesia, spending on the Family Hope Programme amounts to only 0.02 per cent of gross domestic product (GDP), and the programme has a relatively modest impact on inequality commensurate with the size of the allocation. Along with other direct cash benefits in Indonesia, the programme faces challenges with targeting in that only a quarter of expenditures go to recipients below the national poverty line (Inchauste and Lustig, 2017, chap. 5).

Targeting of social safety net programmes is a challenge also seen in Armenia and the Islamic Republic of Iran. Whether either too robust or too lax, targeting can reduce the potential impact of a policy on inequality. In Armenia, the Family Benefit Programme for poor families is considered one of the better-targeted poverty programmes in the world due to means-tested targeting with criteria that exclude higher income groups. However, some poor households are also excluded, and it is estimated to reach only 22 per cent of households with incomes under $2.50 a day. As a result, the limited expenditures on this programme have only a minor impact on inequality (Younger and Khachatryan, 2017). In the Islamic Republic of Iran, the Government implements a targeted subsidy programme, which is a lump-sum transfer programme that replaced energy and bread subsidies after a reform in 2010. Initially introduced as a universal programme to help transition the country from subsidies, the Government has since aimed to target the transfer to the lower 80 per cent of income earners, but it has only succeeded in excluding a few wealthy individuals. Spending on this programme is therefore significant, with a larger fiscal footprint than the subsidies it replaced. Because of this spending, the programme has a significant impact on poverty, but it is less effective at reducing inequality than other programmes in the country (Enami, Lustig and Taqdiri, 2019).

Subsidies seen in the reviewed countries have limited impacts on inequality. This is the case even for subsidy programmes that are explicitly targeted to low-income households, as seen in Sri Lanka for fuel, fertilizer, water, electricity and transport. The total cost of these subsidies is six times the cost of the flagship poverty reduction programme. While these subsidies have an equalizing impact overall, higher income
families also benefit from this spending. Approximately 20 per cent of spending benefited families in the top 20 per cent by income. A significant share (more than 30 per cent) of poor populations do not have access to these subsidized services, including piped water and electricity (Arunatilake, Inchauste and Lustig, 2017). Similar constraints are seen for energy subsidies in Indonesia. Before the fuel subsidy programmes were reformed in 2015–2016, spending on fuel subsidies also had a minimal impact on inequality, but a larger role in poverty reduction. In 2009, these subsidies amounted to 0.16 per cent of GDP. However, the impact of fuel subsidies on reducing inequality was about the same as spending on direct transfers, even though the subsidy budget was 10 times larger. When the Government implemented significant fuel subsidy reforms in late 2014 and early 2015, subsidy expenditures were reallocated to programmes such as the Family Hope Programme that are more effectively targeted at the poor, and the 2020 PER highlighted that these policy changes had a larger impact on reducing inequality (World Bank, 2020).

**Figure 2. Impact of in-kind education and health spending on inequality**

![Figure 2](image)

**Source:** CEQ standard indicators (https://commitmenttoequity.org/datacenter/), November 2021 update.

**Note:** Marginal contribution values show the difference in the Gini index, on a scale of 0 to 100 percentage points, with and without the intervention; positive values show a reduction in inequality. Indonesia was excluded for data inconsistencies.

Total education spending in all countries with CEQ assessments is progressive, with significant reductions in inequality, where the impacts on inequality are broadly
correlated with the amount of public spending in the sector (figure 2). Health spending had a more variable impact, with notable cases in Georgia and Armenia where health spending results in a decrease in inequality.

In-kind spending on education is one of the largest factors reducing inequality in Indonesia, Georgia and Sri Lanka. In Indonesia, for example, while education shows the largest marginal contribution to reducing income inequality (1.9 Gini index points), the sector also accounts for a large share of public spending and 70 per cent of social spending. Interestingly, despite unregulated user fees for families to access public education services, which are also a significant cost for many families, these fees do not serve to increase inequality as the incidence of the burden of the fees is progressive. Enrolment rates for students are high for primary school but decline for lower-income students in lower-to-upper secondary school. This equates to the impact of spending in primary and lower-secondary education transfers having a much greater impact on inequality than higher levels of schooling. Indonesia is the only country in the sample where spending on tertiary education slightly increases inequality, due to the concentration of students that come from wealthy families. For other countries, while tertiary education spending is less progressive than spending on lower education levels, the net effect of spending still reduces inequality.

Even if education spending is progressive and reduces both inequality and poverty, incidence analysis cannot capture the effectiveness of these programmes. For example, in Armenia public spending on education both lowers inequality and reduces poverty, with education spending in primary and middle school being the most progressive spending for education (Younger and Khachatryan, 2017). However, the Armenia PER notes that education spending in rural areas is inefficient, where “mini-schools” produce the worst educational outcomes (World Bank, 2014). In Turkey, spending on tertiary education does not have as much impact on reducing inequality as primary or secondary education spending, however, the 2016 SCD notes that improving the quality of education at these levels is important for meeting the needs of the job market and promoting long-term growth and labour competitiveness (World Bank, 2016).

The relative importance of education and health spending compared to other fiscal policies that address inequality may be influenced by the question of efficiency. The measured fiscal incidence for in-kind spending on different government services may be higher than the actual benefits received by households, given that the quality of services is varied, and many countries have issues of wasted spending. For example, the World Health Organization estimates that as much as 20 to 40 per cent of health spending is lost due to inefficiencies (Zouhar and others, 2021).

Other types of spending, for example on roads and agriculture, can also be important for poverty reduction even as the impact on inequality is harder to estimate.
In Cambodia, growth in the agriculture sector was a driver of rural development and poverty reduction between 2006–2012. As the agriculture sector accounted for 26.6 per cent of GDP and 41.5 per cent of employment in 2015, growth in this sector had a significant impact on the national poverty headcount. Public investments in the sector were only part of the reason why the sector experienced growth – high international prices, improved technologies and crop diversification were also contributing factors (World Bank, 2019a).

3.2 Tax policies and inequality

For the countries measured by the CEQ methodology the tax systems overall do not have as much of an impact on income inequality as spending policies. This is consistent with findings from other developing countries, especially where tax as a share of GDP is lower than advanced economies (Claus, Martinez-Vazquez and Vulovic, 2012; Zouhar and others, 2021). Data from the nine countries with CEQ assessments show that revenues from indirect taxes tend to be larger than direct taxes, with only Indonesia, the Islamic Republic of Iran, the Russian Federation and Turkey collecting a greater share of revenue from direct taxes. In contrast, Armenia, China, Georgia and Mongolia all collect more than 60 per cent of their total revenues from indirect taxes.

Figure 3. Impact of direct and indirect taxes on inequality


Note: Marginal contribution shows the change in the Gini index from market to final income on a scale of 0 to 100 percentage points. Indonesia was excluded for data inconsistencies.
Consistent with previous studies on the incidence of taxes on different income groups, the CEQ assessments find that the relative contribution of indirect taxes increases inequality in Armenia, Georgia, Indonesia, the Islamic Republic of Iran, the Russian Federation and Sri Lanka. In China, while indirect taxes remain regressive, the overall fiscal system adjusts the net effect of the tax to reduce inequality. Conversely, direct taxes reduce inequality in all countries except Indonesia, where direct taxes are nearly neutral to inequality in part because only 0.5 per cent of households pay personal income tax and are too few to be captured in the household survey. As a generally observed trend, the impact on inequality increases with the amount of revenue collected from direct taxes (figure 3).

The most common direct taxes in the reviewed countries are personal income taxes and social security contributions. Personal income tax structures are usually progressive, except for flat taxes in Georgia and Mongolia. Despite the potential for social security contributions to be regressive where there are limits on contributions, the net effect for countries with contributions, such as Armenia, China, the Russian Federation and Sri Lanka, is to reduce inequality. Even so, personal income tax tends to have a greater impact on reducing inequality than social security contributions. In Armenia, tax reforms were introduced in 2013 to eliminate the social security tax and replace it with personal income tax while also eliminating personal tax deductions, which could improve the progressivity of the Armenian tax system.

For indirect taxes, the VAT in Sri Lanka in 2009–2010 and Georgia in 2013 both had a significant impact to increase inequality. In Sri Lanka, VAT rates (0, 12 and 20 per cent) depended on whether the good or service was considered a luxury. The effective rate of VAT was lower than the official tax rates, it generated revenues of 3.4 per cent of GDP and its marginal contribution increased inequality by 0.63 Gini index points. Similarly, in Georgia, a standard 18 per cent tax is added to all sales of goods and services and imported goods, although there are some exemptions. Tax collections from VAT amount to 10.6 per cent of GDP, which also resulted in an increase in inequality by 1.03 Gini index points. In Indonesia, while overall indirect taxes increase inequality, the VAT is progressive and reduces inequality. Instead, the excise tax on tobacco is the most significant factor in the inequality of indirect taxes – which is a common finding across all countries the separately evaluated tobacco excises, including Armenia, Sri Lanka and Turkey.

Several countries reviewed in the present paper have low revenue-to-GDP ratios compared to other countries in their income groups, making tax reforms to increase collections an important prerequisite before expanding equitable or redistributive policies. Many countries may initially expand taxes on revenues that are easier to collect. For example, in contrast to corporate taxes that may be hard to collect where Governments cannot identify retained corporate earnings, taxes from excises are easier to collect because they are levied on a few large businesses, and import
tariffs can be collected as goods transit the country’s border (Abdel-Kader and Mooij, 2020). Yet excise taxes were found in the CEQ assessments to be highly regressive and to increase inequality for most countries.

Due to the risk that increased tax collection, in particular VAT and excise tax, will result in higher inequality and poverty rates, one option is for countries to package tax increases alongside cash transfer programmes to mitigate the impact on the poor. In the Philippines, a 2016 tax reform that increased corporate income tax, excise tax and VAT rates was assessed as likely to increase poverty rates due to higher prices on goods that are often consumed in greater amounts in low-income groups, such as sweetened beverages and petroleum products. To offset the impact of these taxes, the reform was accompanied by a new unconditional cash transfer programme that was launched in 2018 (World Bank, 2019b).

As Governments look to increase tax revenues to fund social spending, many countries are also working to strengthen tax systems by improving the collection of existing taxes. For example, in Cambodia, revenue collections across all taxes increased from 12.7 per cent of GDP in 2012 to 16.1 per cent in 2016 through reforms that strengthened taxpayer registration and services, including online tax payments, better tax auditing, more qualified tax collectors and a revised information technology system (World Bank, 2019a). In Indonesia, tax reforms on tax administration and tax policy, including a tax amnesty programme to expand the tax base and electronic invoices and e-filing of taxes are estimated to have increased revenues by 0.6 per cent of GDP in 2018 (World Bank, 2020). In Armenia, the Government identified reducing tax exemptions for the VAT as an avenue to improve tax revenues (World Bank, 2014). As Governments make efforts to increase collections, often by strengthen VAT collections, these efforts can unwittingly increase taxes on the poor, as well as increase inequality in the tax system. Reviewing the incidence of taxes as Governments implement reforms can help them to identify whether strengthening collections for different taxes can have unintended consequences for income redistribution.

IV. CONCLUSIONS AND POLICY RECOMMENDATIONS

In the Asia-Pacific countries reviewed in the present paper, fiscal policies contributed to reductions in inequality, although the relative impact of tax and spending policies varied both with their size and their distribution across the population. Direct transfer programmes, especially pensions, were the most significant factors in the redistributive effect of fiscal policy systems. The impact of these programmes varies based on the size of the programme, however, so Governments that look to expand social protection programmes and social safety nets will also need to identify the most effective ways to expand fiscal space.
Across the reviewed countries, the structure of tax policies was a contributory factor but not a deciding factor in the magnitude of redistribution in the overall fiscal system. For that reason, Governments may pursue tax policies with other goals in mind, including balancing other priorities for the tax system, such as price distortions and externalities. Tax compliance in developing countries raises challenges for Governments, especially in economies with high rates of informal employment and underdeveloped capital markets, and therefore investments to strengthen tax administration may yield higher revenues. Tax reforms can also be pursued when they are combined and justified by proposals to use revenues towards more progressive and redistributive spending, such as health and education programmes.

Examining the impact of existing fiscal policies on inequality is important to help to prioritize and recalibrate current spending, but Governments can work to reduce inequality by identifying gaps in the social protection system that may have been exposed by the COVID-19 pandemic. For example, informal workers and women with care responsibilities may not have been covered in formal unemployment or other benefit programmes.

Countries that already have sizable social spending can often improve its impact by shifting spending from programmes that are less progressive toward programmes that are better targeted towards poor and marginalized groups. For example, the Targeted Subsidy Programme in the Islamic Republic of Iran is a sizable budget items that has limited targeting toward poorer groups, and shifting a portion of the spending toward more targeted policies can increase the distributive effect of social spending. Countries that already have effective targeting mechanisms can link those targeting systems to additional programmes. This was seen in Armenia, where a successful means-based targeting mechanism used in the Family Benefits Programme was expanded for health benefits in 2014. In the Philippines, the targeting system for a conditional cash programme, the National Household Targeting System for Poverty Reduction, is expanding to improve targeting for other programmes.

Fiscal distribution analyses, such as the ones conducted using the CEQ methodology, can be helpful tools for Governments to review their existing mix of policies and prioritize expanding taxes and spending that promote greater redistribution. These studies can also be complemented by additional analysis to understand the long-term impacts of spending on inequality. For example, expanding access to education for low-income groups may result in raising earning potential and returns to labour that generate benefits and redistribute income within a society beyond the impact of the in-kind transfers assessed in the CEQ approach. Countries can consider a mix of policies that increase the redistributive impact of spending in a given fiscal year, balanced with investment decisions that promote more equitable societies over time.
Annex: Methodology and data sources

The paper contains a review of the findings of CEQ assessments, which use fiscal incidence analysis to examine the combined impact of taxes and transfers on the distribution of income for a given fiscal system at one point in time. The methodology for CEQ assessments is described in the Commitment to Equity Handbook (2018)\(^3\) as well as annex 1A.1 of chapter 1 of The Distributional Impact of Taxes and Transfers: Evidence from Eight Developing Countries (2017). The present annex provides an overview the CEQ methodology and provides definitions for key concepts and data used in the paper.

The CEQ methodology combines household survey data alongside disaggregated government budget data on spending and revenues to estimate how much income redistribution and poverty reduction is accomplished through fiscal policies. The CEQ methodology and the paper use the Gini coefficient as the main measure of inequality. A measure of the distribution of income across a population, the Gini coefficient expressed as a percentage (Gini index) ranges from perfect equality (0 per cent), to perfect inequality (100 per cent).

The CEQ approach looks at all available data on taxes and transfers, analysing the combined impact of the entire fiscal system. Using household survey data, a CEQ assessment maps taxes and transfers to individuals and households, either based on information provided with survey data or estimates of the incidence of taxes and transfers across income and demographic groups. The actual amount of taxes and transfers, especially for direct transfers and direct taxes, that are identified in household survey data often differs from what is in official budget data, meaning that researchers must use a set of assumptions to scale public revenue and spending data to match the incidence of taxes and transfers observed in households. This is also true for indirect taxes and indirect transfers, which cannot easily be mapped to individual households and therefore are mapped to individual households based on the estimated actual incidence, rather than statutory incidence. The CEQ methodology encourages researchers to give precedence to data on taxes and transfers found in household surveys, unless there are valid and documented reasons to believe that certain transfers or taxes are underreported in survey data compared to administrative data. Benefits to individuals and households from in-kind education and health spending are based on per-beneficiary costs from administrative data, while the actual benefits to households may vary depending on their own estimation of the value of these free or subsidized services.

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\(^3\) The most recent version of the CEQ Handbook was published in 2018, but some of the CEQ assessments reviewed in this paper use the earlier 2013 methodology that was published as a working paper. See table 1 for the version of the CEQ methodology used in each study.
As the CEQ methodology looks at types of government expenditures and revenues that can be mapped to individuals and households, this approach excludes some types of spending and taxes where the benefits are more diffuse and cannot be attributed to individuals or households. Types of spending that are excluded from this analysis include defence and public safety spending, and spending on roads, communications and other infrastructure spending. Revenue sources that are excluded include non-tax revenues, as well as corporate taxes and sometimes property taxes, depending on their incidence. As a result, the CEQ assessment only covers a portion of government expenditures and revenues, usually around half of public spending. In addition, because the analysis relies on public data on government spending and revenues, it may not cover some types of off-budget spending that could impact household incomes.⁴

CEQ assessments look at fiscal distribution by looking at the impact of direct and indirect taxes and transfers on individuals and households by different income concepts. Four income concepts are used in the CEQ methodology:

- Market income, which is also known as original income before taxes and transfers;
- Disposable income, which is market income less direct taxes and with the addition of direct transfers;
- Consumable income, which is disposable income less indirect taxes and with the addition of indirect subsidies;
- Final income, which is consumable income plus the estimated value of in-kind transfers for education and health, less any user fees associated with these services.

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⁴ One exception is the Mongolia CEQ assessment, which does look at off-budget spending for electricity, heating, and housing (mortgage interest) subsidies.
Definitions of income concepts

Within this framework, social insurance contributory pensions present a methodological challenge in terms of whether to calculate the income received from these pensions as government transfers or as deferred income. Some contributory pension systems as are pay-as-you-go, where benefits received in retirement are tied to contributions into the pension system made throughout working-age years. In this case, these contributory pensions are not assessed as a transfer, but instead as deferred income, where income from contributory pensions is assessed as part of a household or individual’s market income and contributions into the pension system are assessed as savings. However, some contributory pension programmes are not clearly tied to individual contributions or are funded from general government revenues. In these cases, an argument can be made to treat contributory pensions as a government transfer, and contributions into the system as a tax. Across the literature for fiscal incidence analysis, there is no consensus on which method is more appropriate, therefore the CEQ methodology encourages researchers to present results from both methods for countries where there are contributory pension programmes.

The impact of taxes and transfers on equity and poverty within a given fiscal system is calculated within the CEQ methodology by generating estimates of inequality and poverty rates at each of the income concepts (market, consumable, disposable, final). The CEQ method of measuring fiscal redistribution allows for the impact of multiple taxes and transfers to result in the reranking of individuals and households within the income distribution when moving from market to final income. The reranking is important for determining whether a fiscal intervention is equalizing, given the interaction with other interventions within a fiscal system, as it can result in progressive policies being equalizing or regressive policies being equalizing – a situation that is known as Lambert’s conundrum.5

To measure the impact of an individual policy on equality within a given fiscal system, the CEQ methodology calculates the marginal contribution for each fiscal intervention that is assessed. The marginal contribution is the difference between the inequality of a fiscal system (for example, as measured as a calculated Gini index) without a given intervention compared to the inequality with the intervention.

In the figures presented the paper, the impact of the marginal contribution is also compared to the amount of spending on each transfer or revenue collected from each tax. The data used to make the comparisons are taken from the CEQ database (Tabs 4 and 27) by mapping related taxes and transfers to the marginal contribution (market to final income), based on the categories below:

<table>
<thead>
<tr>
<th>Marginal contribution</th>
<th>Taxes and transfers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct taxes and contributions</td>
<td>Total direct taxes</td>
</tr>
<tr>
<td>Indirect taxes (without indirect effect)</td>
<td>Total indirect taxes</td>
</tr>
<tr>
<td>Value added tax (without indirect effect)</td>
<td>Value added tax</td>
</tr>
<tr>
<td>Contributions to pensions</td>
<td>Social security contributions</td>
</tr>
<tr>
<td>Other Contributions</td>
<td>Other direct taxes</td>
</tr>
</tbody>
</table>

5 The CEQ Handbook references the work of Peter Lambert on the question of whether knowing the progressivity or regressivity of a certain fiscal intervention is enough to know whether it is equalizing or equalizing within a given fiscal system of multiple interventions. Lambert shows that this is not the case, even without reranking, if taxes are regressive when compared to original income, but not regressive in comparison to post-benefit incomes. This situation results in a case where a fiscal system is more equalizing with the addition of a regressive tax than it would be without it, even without counting the impact of progressive transfers. See Peter Lambert (2001). The Distribution and Redistribution of Income, 3rd ed.: Manchester University Press.
## Marginal contribution

<table>
<thead>
<tr>
<th>Marginal contribution</th>
<th>Taxes and transfers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct transfers</td>
<td>Direct transfers</td>
</tr>
<tr>
<td>Contributory pensions</td>
<td>Contributory pensions</td>
</tr>
<tr>
<td>Indirect subsidies (without indirect effect)</td>
<td>Subsidies</td>
</tr>
<tr>
<td>Education</td>
<td>Education</td>
</tr>
<tr>
<td>Health</td>
<td>Health</td>
</tr>
</tbody>
</table>

### NOTE ON CONTRIBUTORS

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REFERENCES


