

Investments in social protection and their impacts on economic growth

TAX FINANCING OPTIONS



CLIMATE-FRIENDLY JOBS

WAGES

RIGHTS

SOCIAL PROTECTION

EQUALITY

INCLUSION

A New Social Contract



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Foreword

Tax options to expand social protection

The global challenges arising from climate change, the economic and social impacts of the rapidly changing world of work, and the consequences of the COVID-19 pandemic have all underscored the undeniable case for universal social protection. The global impacts of Russia's invasion of Ukraine, causing scarcity of grain and other commodities which are key elements of global supply chains, as well as even greater increases in energy prices, make the need for social protection all the more urgent. Social protection provides vital support to people's incomes and livelihoods and helps people manage crucial transitions. Strengthening social protection can moreover equip countries to respond to shocks by stabilising aggregate demand and strengthening resilience. However, globally, social protection systems tend to be underdeveloped, and according to ILO estimates more than half of today's world population lacks access to any form of social protection, and two thirds of it are inadequately covered.

We are now at a critical turning point: a fair and inclusive recovery from this crisis requires governments to put in place adequate, comprehensive systems that are good for the people and for the economy. International labour standards, namely ILO Convention 102 on Social Security and Recommendation 202 on Social Protection Floors, provide crucial frameworks for doing this.

The lack of fiscal space is often cited by States as a reason for not extending social protection, or even for harmful cutbacks in social spending in some countries.¹ However social spending must be

seen as an investment, for the present and future. **ITUC research** published last year showcased how investing an extra 1 per cent of GDP in social protection alone can yield economic returns of up to nearly twice that amount.² States have a variety of different options to raise resources for social protection.³ At the same time, this does not lessen the need for the international financial institutions to step up on social protection, in particular for the least wealthy countries.

This report draws on the previous ITUC study's findings and examines the different means states have at their disposal to create fiscal space for social protection by simulating the impact of a range of different financing scenarios across eight countries. It finds that not only do governments have a number of tax options at hand to expand financing social protection, but fairly financing social protection through progressive forms of taxation—such as progressive income tax, corporate taxation and capital taxes—can maximise the social, employment and economic benefits of social protection. Such forms of taxation generate much better outcomes in terms of redistribution and improvement of incomes for poor households, as well as lead to increased employment and GDP. Financing social protection through regressive forms of taxation such as value-added-tax (VAT), on the other hand, can offset some of the benefits of social protection. Such taxes charge more to poorer households who devote a large share of their income to buy essential goods, but also have more generally lead to rising consumer prices and large crowding-out of investments; this in turn leads to worse employment and economic outcomes

¹ See for instance the [Results of the 2019 ILO General Survey for Social Protection Floors](#).

² ITUC (2021) [Investments in Social Protection and their Impacts on Economic Growth](#).

³ ILO, UNICEF and UN Women (2017) [Fiscal space for social protection and the SDGs: Options to expand social investments in 187 countries](#).

compared to the other financing scenarios for social protection. In other words, this study underscores that those who can afford to pay more should pay more, and that it is not only a question of fairness, but good economic sense.

Building inclusive and resilient social protection systems is a political responsibility. Financing them in a fair and equitable manner is possible: it is simply a matter of political will.

Sharan Burrow

ITUC General Secretary

1 Introduction

There is strong evidence pointing the wide-ranging social and economic benefits of social protection for countries at all levels of development. The current COVID-19 pandemic has also clearly demonstrated the importance of strong social protection systems. Countries with comprehensive systems have been able to better support their population and minimise the impacts of the global health and economic crises. Despite this, levels of investment in social protection remain short in many low- and middle-income countries.

Most countries have constrained budgets, and often need to prioritise budget allocations to respond to pressing domestic challenges. With competing priorities, it is important for national governments to understand the options that are available to finance social protection investments domestically, as well as which options perform best.

The objective of this study is to understand how different forms of domestic social protection

funding perform comparatively in terms of providing meaningful and transformative economic outcomes. The study will suggest, for different types of economies, which financing instrument is recommended to finance social protection domestically. The study will build on the methods, analytical framework, and main findings from the previous study (ITUC, 2021), which applied computable general equilibrium simulations to understand the impact of investing 1 and 2 per cent of GDP with external funding across eight different economies.

In addition to this short introduction, this report has three other sections. Section 2 provides a short background on financing social protection. Section 3 presents the modelling approach used in the study to assess the tax financing options available to most countries. Then, section 4 presents the main findings.

2 Background

Social protection has wide-ranging social and economic benefits for countries at all levels of development. In terms of economic growth, the previous analysis on eight countries showed that an investment of 1 per cent of GDP in social protection policies had a multiplier effect on GDP of between 0.7 and 1.9 (ITUC, 2021). There is also a large literature linking adequate provision of social protection to poverty and inequality reduction, improved access to health care and education, and gender equality promotion.⁴

The ambition to strengthen and extend social protection systems is reflected in numerous international agreements and international labour standards, and, by large, countries have made progress in extending their social protection coverage. However, despite a rapid increase in much needed investments during the COVID-19 pandemic, current levels of investments are still very far from guaranteeing social protection floors, which makes achieving SDG 1.3 of universal coverage by 2030 a distant future. According to the International Labour Organization (ILO, 2021), still 53 per cent of the world's population—as many as 4 billion people—are unprotected by not being effectively covered by a social protection benefit.

Gaps in the coverage, comprehensiveness and adequacy of social protection systems are linked to underinvestment in social protection, particularly in Africa, the Arab States and Asia. Whereas on average countries spend around 13 per cent of their gross domestic product (GDP) on social protection, the estimate masks astounding differences across countries from low- to high-income economies. While high-income economies devote on average 16 per cent of their GDP on social protection, upper-middle-income countries spend only half as much, at around 8 per cent of GDP. Lower-middle-income countries spend six

times less on social protection compared to their high-income counterparts, representing just under 3 per cent of GDP, and low-income countries expend 15 times less, or little above 1 per cent of GDP (ILO, 2021).

While during the COVID-19 pandemic a number of countries sought to increase their social protection coverage, the pandemic has also further increased the financing gap by 30 per cent (ILO, 2021). After factoring in the impact of COVID-19, a recent study has estimated that a total of US\$1,040 billion or an additional 3.3 per cent of GDP would have been required for low- and middle-income countries to reach universal coverage in 2020 (Durán-Valverde, Pacheco-Jiménez, Muzaffar and Elizondo-Barboza, 2020). The cost is considerably higher in low-income countries alone, projected at 8.5 per cent of GDP.

As such, closing these gaps and paving the way towards achieving universal social protection hinges on securing and sustaining the necessary investment. Often, the one argument used for not investing any further in social protection is that with increasingly competing budgets, governments simply do not have the fiscal space.⁵ To fill the financing gaps and raise the overall level of support, governments need to expand their outlays for social protection. This challenge is often referred to as expanding “fiscal space” for social protection, meaning freeing up public resources used elsewhere and or increasing the amount of available resources to use for social protection.

While there is no one-size-fits-all approach to extending fiscal space for social protection, investments in social protection need to be solidly grounded in domestic, primarily public financing. An effective financing framework should be consistent with the Sustainable Development

⁴ See ITUC (2021) for a literature review.

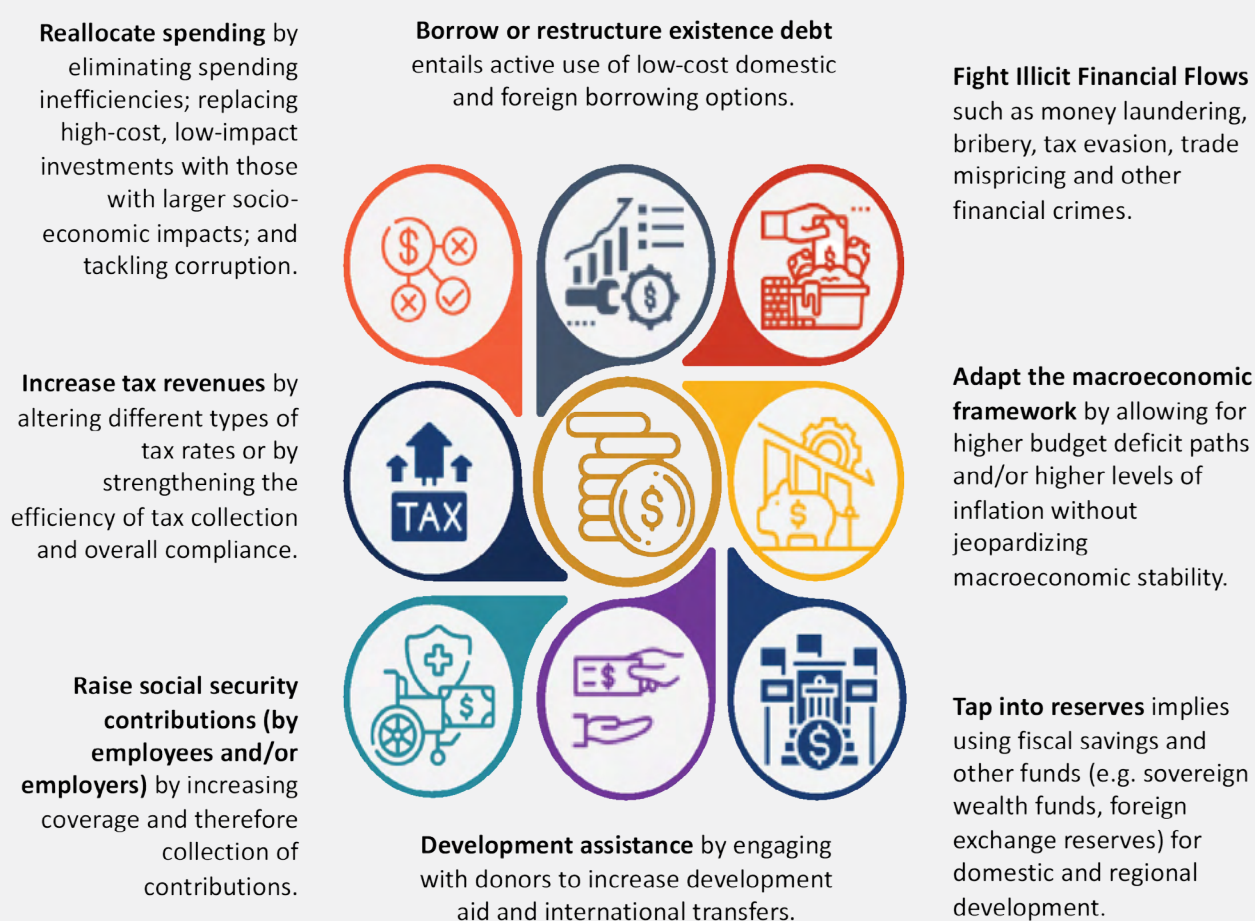
⁵ Fiscal space is defined as the resources available as a result of the active exploration and utilization of all possible revenue sources by a government (Ortiz, Cummins and Karunanethy, 2017).

Goal Target 1.3, which requires all governments to finance national social protection floors that provide income security for children, working-age adults, older persons, and essential health care services, to end poverty in all its forms everywhere by 2030. Governments can use a variety of methods to mobilise resources to ensure financial, fiscal, and economic sustainability of national social protection floors, considering the contributory capacities of different age and populations groups. As outlined in ESCAP's (2016) Policy Brief on Financing Social Protection, such methods may include efficient tax collection and enforcement of contribution obligations, but also reprioritizing expenditures and finding new revenue bases. Strategies for resource mobilization include increasing tax revenues; re-allocating public expenditures; drawing on official development

assistance; fighting illicit financial flows; tapping into reserves; borrowing/ re-structuring debt; adapting the macroeconomic framework.

Similarly, a study by Ortiz, Cummins and Karunanethy (2017) brings to light eight fundamental options countries can draw on for generating the fiscal space required to accommodate higher levels of investment in social protection. While the modelling below will focus on one of these options—increase tax revenues through changes in tax rates—, all eight options are summarised below and in Figure 1. Most often than not, social protection is financed through a combination of options, as national systems offer both tax-financed non-contributory schemes and social insurance schemes that are usually funded by workers and employers.

Figure 1:
Options to generate fiscal space for investing in social protection



Source: authors' elaboration based on Ortiz, Cummins and Karunanethy (2017)

Taxation is a key source of government revenue, especially in higher income countries, as there is a clear correlation between GDP per capita and tax revenues. This is partially explained by two things in high-income countries: broader tax base and an increased capacity to collect tax (Ortiz et al, 2019). There are several types of taxes that are used in most countries, they include income tax, corporate tax, value-added tax (VAT), import tariffs, and property tax. Table 1 below provides an overview of these and other types of taxes. Income and corporate taxes are often more progressive, such that people with higher incomes pay proportionately more. On the other hand, VAT and other types of indirect taxes are often more regressive since they do not necessarily discriminate between high- and low-income consumers.

This study focuses on scenarios which increase tax revenue through different taxes to finance domestically an increase in social protection investments. Financing by domestic taxation will affect the economy, as rising tax rates will directly affect relative prices in the economy either on goods or production factors (labour or capital). Although raising taxes is not as simple in most countries, as it typically requires significant political capital to approve such reforms, there are higher takings by increasing the rates for certain types of taxes—for example, taxes on corporate profits, financial activities, property, inheritance, imports/exports, and natural resources—or by improving the efficiency of tax collection mechanisms and overall compliance.

Table 2.1:
Main types of taxes and their potential efficiency and equity impact

Tax category	Basic features	Equity (progressive or regressive)	Efficiency	Administrative and compliance costs
Personal income tax	Taxes all income or profit	Progressive: people with higher income pay proportionately more	May reduce incentive to save	State should have a good system to fight tax evasion
Corporate tax	Tax on company profit. Affects owner of capital; but can be transferred to consumers via increased price	Progressive; irrespective of whether it ultimately falls on wage earners or capital owners or a combination of both, it falls disproportionately on wealthy households	Efficient means of collecting revenues particularly on personal income where the system of domestic personal income taxation is weak and easily evaded	Relatively low administrative and compliance costs, especially in comparison to personal income tax
VAT	Applicable to all market consumers. Affects consumers final price, but not production cost	Regressive; but can be made less regressive through a higher threshold, zero rating essential consumer products and higher rating for luxury items	Moderately efficient; a uniform rate makes no distinction between sectors; does not differentiate between domestic and imported goods	High administrative and compliance cost; both companies and state require a good accounting system; proportionately more expensive for small business
International trade tax	Import and export tariffs; charged at customs at the time transactions are made	Can be progressive; different rates for essential and luxury imports	Not very efficient; while can promote domestic production/industries and exports; but these may be less efficient than highly developed industries and prone to rent seeking	Relatively low administrative and compliance cost; easy to implement/collect
Excise tax	Levied on specific goods; principally borne by consumers	Generally progressive; allows for differential rates for essentials and luxury goods	Relatively efficient; creates differences between products, but only for few goods; can also correct market flaws and attain social and environmental objectives	Relatively low administrative and compliance cost; but total revenue must be more than the cost
Property tax (land, wealth etc.)	A fixed rate for a certain amount of land, based on value, paid by the owner	Progressive; paid more by those who own more or valuable land/properties	Efficient; does not distort prices; prevents speculative real estate investment; encourages productive use of land	Relatively low administrative and compliance cost; but, requires a good system to assess value; can be susceptible to undervaluation

Source: Ortiz et al (2019)

3 Modelling approach and financing scenarios

Following the previous analysis, the simulations presented in this paper are based on the static and dynamic Partnership for Economic Policy standard CGE models, PEP 1-1 and PEP 1-t (Decaluwé et al., 2013a, 2013b).⁶ In summary, CGE models rely on structural equations which attempt to capture the economy and behavioural responses from its different agents. CGE models rely on social accounting matrix (SAM) data, which captures the economic transactions between the agents in the economy. There are a number of underlying assumptions in the CGE models, including constant returns to scale and the perfect competition for firms as price takers. In the model, there are four agents: households, firms, government, and the rest of the world. Households are further disaggregated by income quintiles. The model distinguishes between three income sources: labour income (salaries and wages), capital income and transfers income. The dynamic version of

the CGE models is recursive, which means that the behavioural assumptions do not involve intertemporal optimisation. For a more detailed description of the CGE models used for this study, see ITUC (2021).

Differently from the previous analysis, where agents would not borrow or save at the world's interest rate, such that foreign savings was set to be constant and domestic savings would be the main driver of investment, the model in this paper assumes an open current account which allows capital markets to be integrated. Under this assumption any change in domestic savings will be offset by an inflow of foreign savings while the interest rate will remain constant. This makes investments less restricted such that rises in taxes would not crowd out investments as sharply through this channel.

3.1 Scenarios

Seeking to understand how different forms of domestic social protection funding perform comparatively in terms of providing meaningful and transformative economic outcomes, the analysis simulates economy-wide impacts of investing one per cent of GDP in social protection across eight different economies and structures: Bangladesh, Colombia, Costa Rica, Georgia, Ghana, India, Rwanda, and Serbia.

In addition to foreign aid, three financing scenarios are considered:

- Increase income tax progressively
- Increase corporate tax
- Increase VAT tax
- Increase capital tax

With regard to the income tax scenario, the analysis looked at the impact of adjusting the household income tax to finance social protection transfers, through a progressive taxation. This approach requires that the higher quintiles finance more of the transfers through a rise in income taxes,

⁶ Available at: <https://www.pep-net.org/pep-standard-cge-models>

meaning that the change in tax rates is scaled respectively by 0.2, 0.4, 0.6, 0.8, 1.0 for the quintiles.

With regard to the scenario for increasing capital tax, this is applied by taxing income from the factors of production that are capital. However, because of the design of the SAMs, the results for

this option are almost identical to an increase in income tax, as households own capital in the SAMs. As in ITUC (2021), the distribution of the total investment level by household quintile follows a universal distribution of transfers, where households receive the same amount irrespective of their income quintile.

3.2 Data sources

The CGE model relies on the SAM data for each country. Except for Serbia, which was developed specifically for this research using available use and supply tables based on national accounts, all

SAMs have been published. Table 5 lists the source and reference year of the SAMs used for each country. The macroeconomic versions of SAMs are also presented in ITUC (2021).

Table 3.1:
Sources and reference year of social accounting matrixes

Country	Source	Ref. year
Bangladesh	Government of Bangladesh (GED, 2019)	2017
Colombia	Colombia Statistical Office (DANE, 2020)	2017
Costa Rica	Central Bank of Costa Rica (Cicowiez, Sánchez and Muñoz, 2015)	2012
Georgia	Yerushalmi, Labadze and Galdava (2015)	2013
Ghana	Ghana Statistical Services, Institute of Statistical, Social and Economic Research (University of Ghana) and International Food Policy Research Institute (GSS, ISSER and IFPRI, 2017)	2015
India	Ministry of Environment and Forests, Government of India (Deb Pal, Pohit, and Roy, 2012)	2005
Rwanda	International Food Policy Research Institute (Pradesha and Diao, 2014)	2011
Serbia	Authors' elaboration based on supply and use tables and national account estimates from The Statistical Office of the Republic of Serbia (SORS)	2018

Data limitations

Because the SAMs are from different sources, there are country-specific limitations in modelling the scenarios:

- For Bangladesh, India, and Serbia: The SAMs contain firms' payment of corporate tax (and for Serbia, transfers from firms to government, as well). There are no transfers from firms to households. Hence, a change in corporate tax rate affects the Government budget deficit and firm's savings (and total domestic savings). However, it does not differently affect household income and consumption. This then has a similar effect as the Foreign Aid option in an economy

which is open and can run a current account deficit. For these reasons, the results for the scenario 'increase in corporate tax' are not shown below.

- For Rwanda and Georgia: The SAMs assume that households own the capital stock. Hence, the firm does not earn capital income, and does not pay corporate tax. Since capital income goes exclusively to households, the corporate tax policy shock uses the household income tax as the adjustment variable. Therefore, the results are identical to the case of capital income taxes. Because of these limitations, the results of each country are not comparable with others, only for the comparative static analysis.

4 Findings

The results in this section show the effects of funding domestically through taxation an increase in social protection transfers by 1 per cent of GDP on economic growth, employment, and household income. The results are compared to a benchmark scenario of funding investments through foreign aid.⁷

In general, financing social protection by increasing taxes does not perform better than financing through foreign aid. This is not surprising, as foreign aid does not directly crowd out domestic investments. There are, however, differing results

across the different types of taxes. While financing social protection through progressive income tax, corporate tax and capital tax can provide some positive small changes in GDP depending on the structure of the economy, financing social protection through indirect taxes generally perform poorly as they raise consumer prices, reduce real income and result in large crowding out of investments. This suggests that financing investments in social protection through more progressive direct taxes performs better than more regressive types of indirect taxes.

4.1 Gross Domestic Product

Financing social protection transfers through increased income tax revenue mostly produced only modest positive changes to GDP growth rates, and substantially lower rates than sourcing funding from foreign aid. Five out of eight countries had positive growth under this scenario (Figure 2).

Interestingly, Ghana and India, two of the poorest economies, had the most significant positive effects. Yet, financing social protection via higher income taxes seems to reduce GDP levels slightly across Costa Rica, Serbia, and Georgia. As shown in Figure 2, financing social protection investments

⁷ Detailed results are also presented in the Annex.

through increases in capital taxes has a very similar effect to progressive income tax financing on GDP and the changes follow a similar trend throughout a period of 10 years.

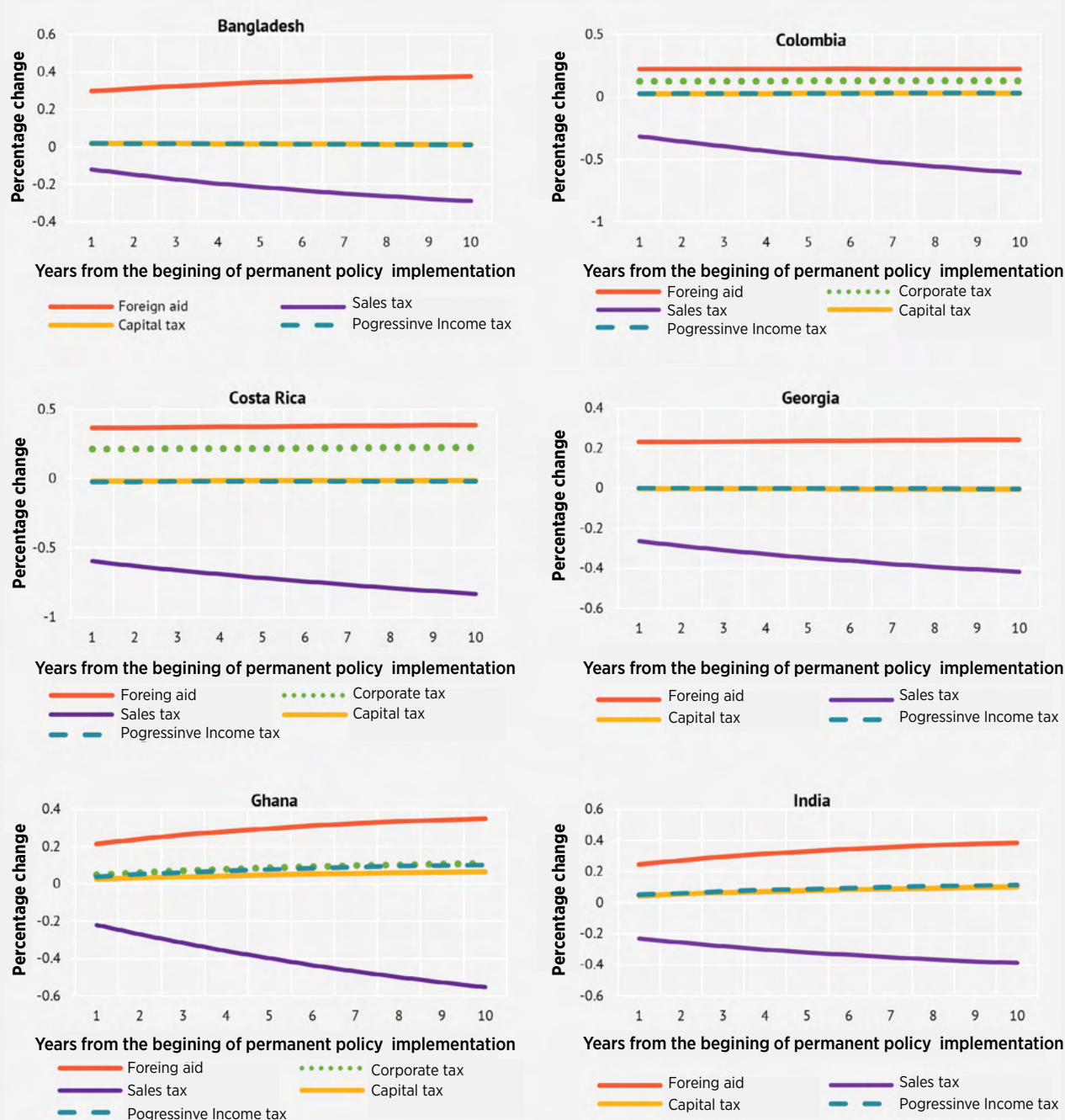
Irrespective of the economy's structure, domestic investments in social protection via VAT have a dramatic negative impact on GDP. This is because of rising consumer prices and large crowding out of investments. The largest drops are observed in

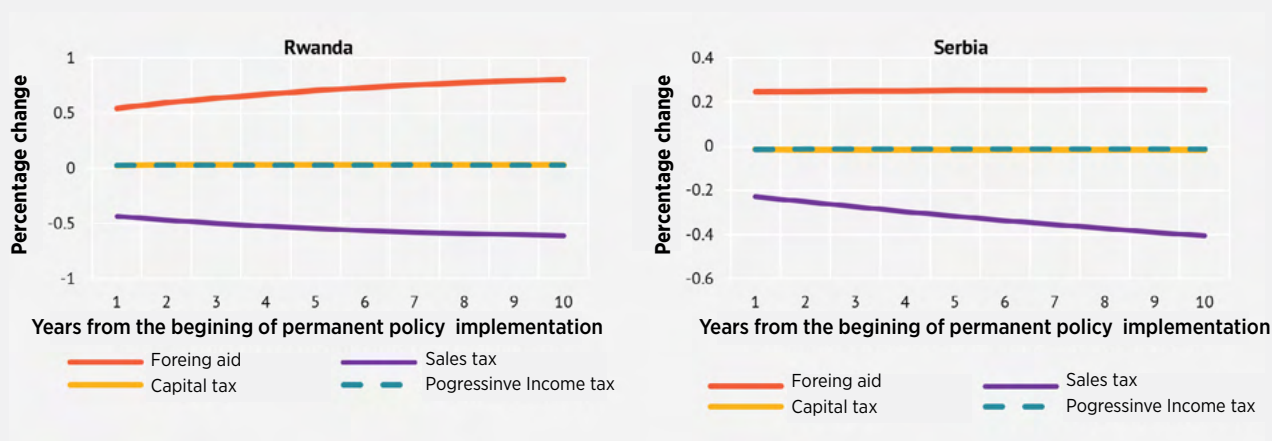
Costa Rica, where GDP would fall by 0.8 per cent in period 10.

Funding social protection through corporate taxes in Colombia, Costa Rica and Ghana have generally a better outcome than an increase in progressive income tax. In fact, the models for Colombia and Costa Rica suggest results closer to funding with foreign aid.

Figure 2:

Simulated impacts on gross domestic product (GDP) growth, by tax scenario and country





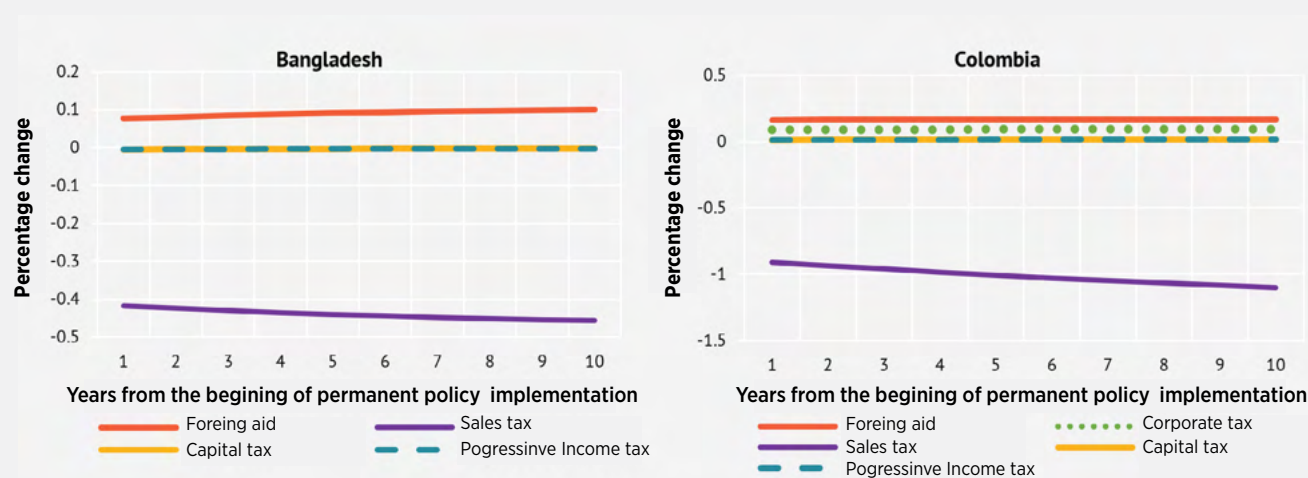
Source: authors' elaboration – PEP CGE Dynamic Models. Note: GDP is measured in real terms, at market prices

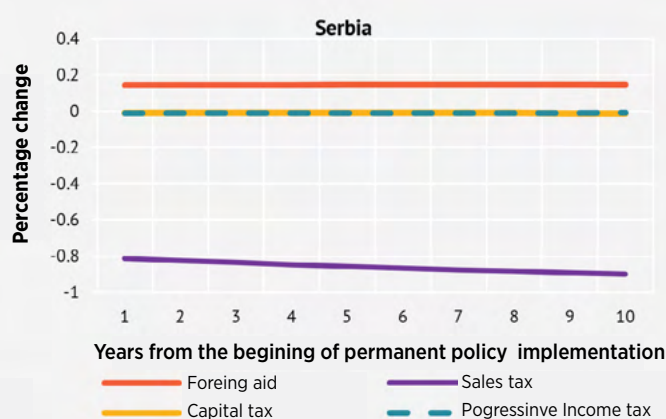
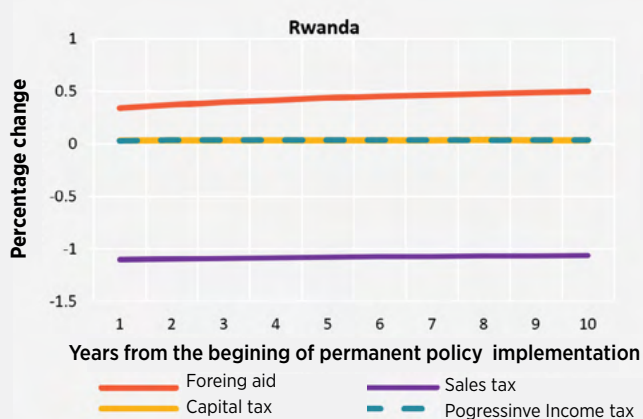
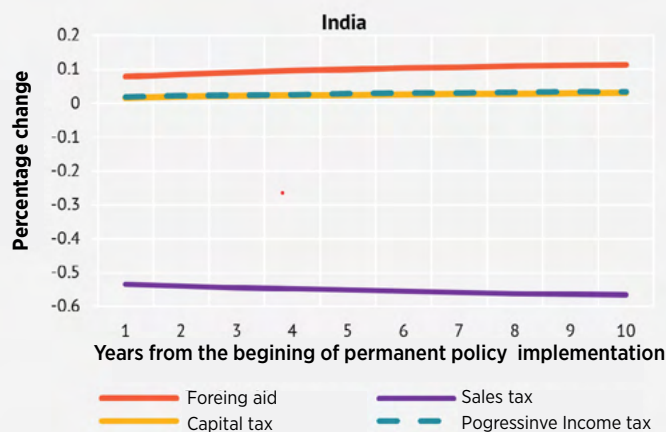
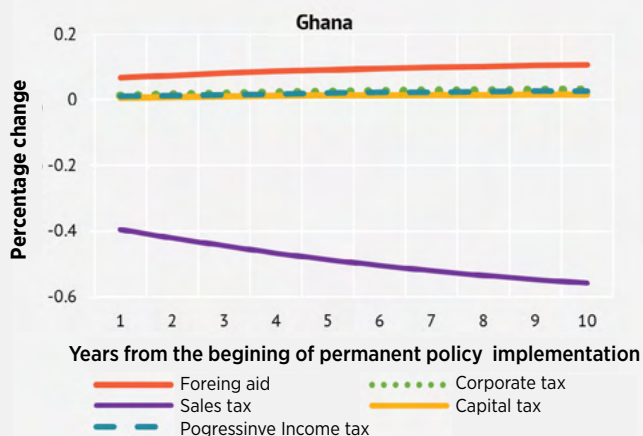
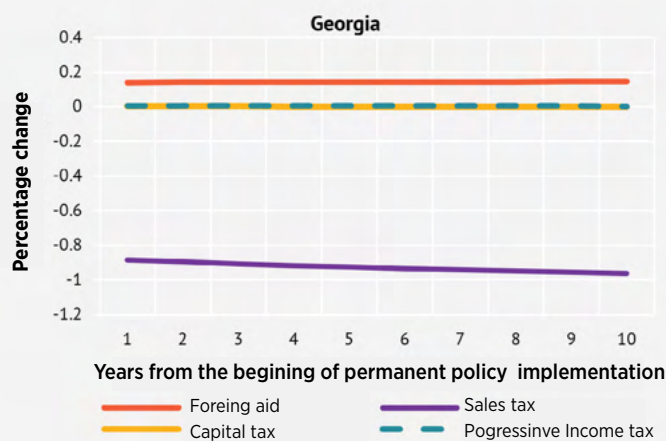
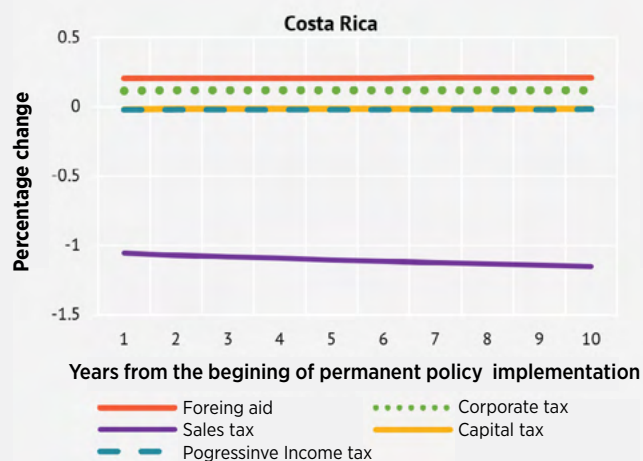
4.2 Employment

Except for Costa Rica, Serbia and Bangladesh, investments in social protection transfers through funding from an increase in progressive income tax can generate positive, but modest surges employment in the future (Figure 3). For most countries, changes in employment follow the trend observed in the economic growth. If transfers are funded through corporate taxes, then the effects of social protection on employment are slightly better.

Domestically financing social protection expansion through increases in VAT reduces employment over time; this trend is consistent across all structures and economies. The negative effect is more pronounced in Ghana, whereby year 10 total employment would reduce by 0.6 per cent in comparison to year 9. In all other economies the negative effect remains relative constant.

Figure 3:
Simulated impacts on total employment, by tax scenario and country





Source: authors' elaboration – PEP CGE Dynamic Models

4.3 Household income distribution

With all financing scenarios and in all countries, extending social protection tends to benefit poorer households' income the most, despite the fact that transfers are universal. This is even the case in the case with VAT, which is regressive, however

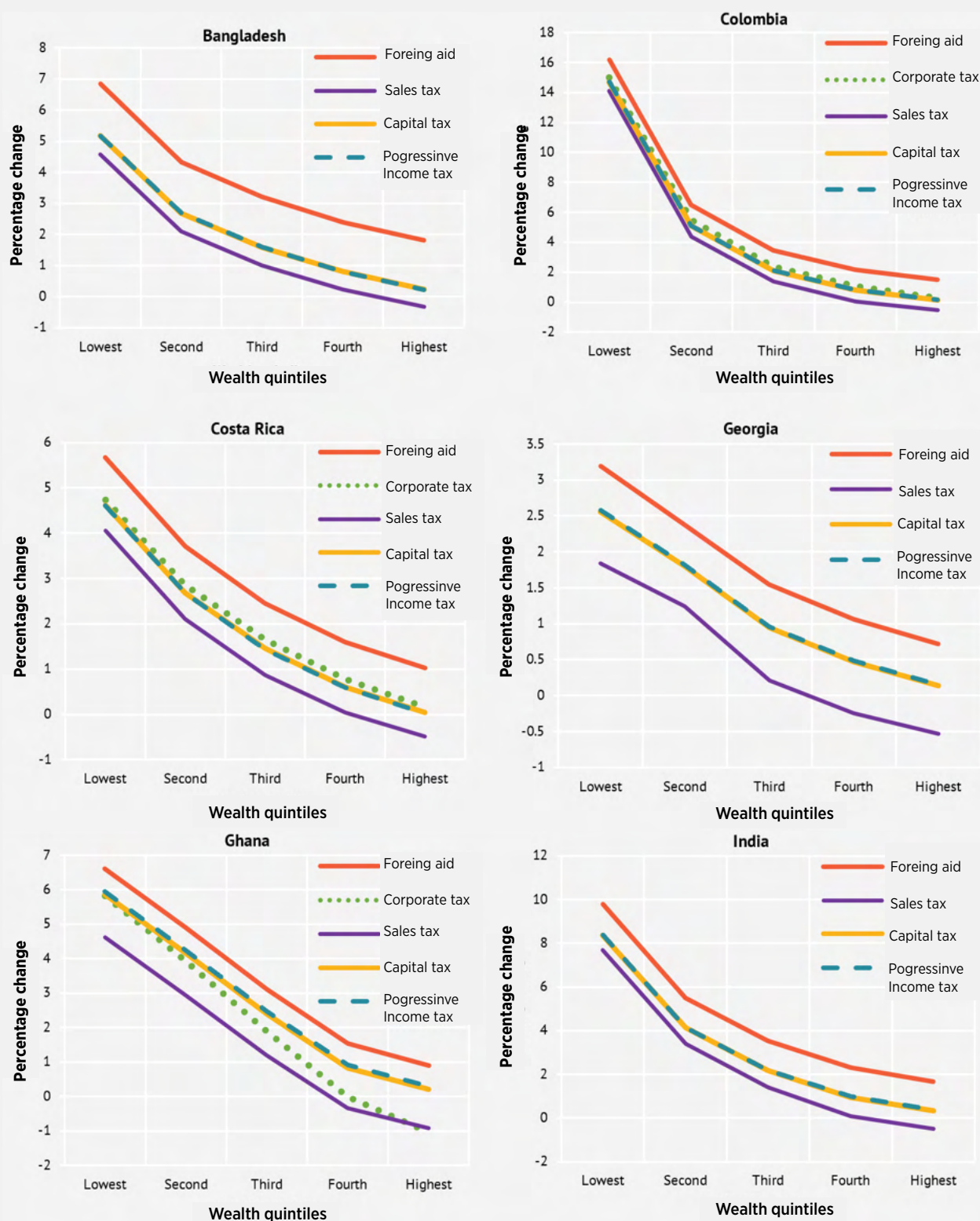
the benefits are less as compared to other more progressive types of financing. However, the rate at which changes to income decrease across quintiles varies according to the structure of the economy and levels of inequality. The level of

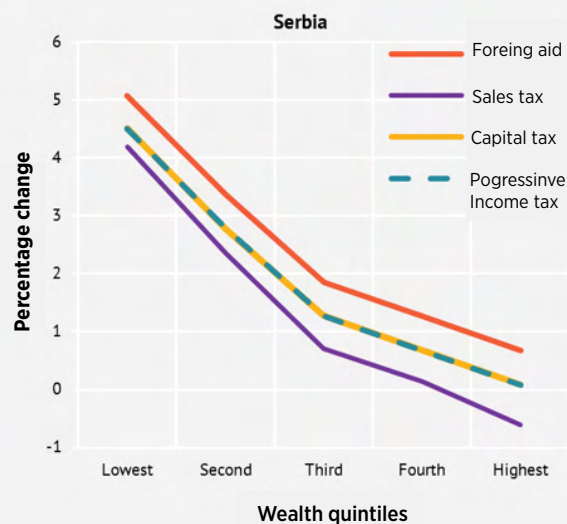
household income amongst the lowest and mid-quintiles increases across all countries as an effect of financing social protection through progressive

income taxation. On the other hand, the rise in VAT tends to generate negative changes to the incomes of households in the top quintiles.

Figure 4:

Simulated impacts on household income, by income quintiles, tax scenario and country





Source: authors' elaboration – PEP CGE Dynamic Models. Note: these results are for the impact in year 10.

5 Conclusion

As governments face limited fiscal space and increasingly competing budgets, this report sought to complement recent findings on the economy-wide impact of investing in social protection (ITUC, 2021) by assessing how investing in social protection through different types of taxes fares in terms of key economic indicators across different countries. Through the incidence and distributional impact of transfers and taxes, financing social protection through different types of taxes directly impacts the distribution and redistribution of income and wealth, which will reverberate in the economy, and which will affect employment and GDP.

Our results show that, overall, the simulated impacts of investing in social protection through indirect taxes (such as taxes on consumption, sales, trade, etc.) perform worse across all countries. Indirect taxations cause an additional rise in output prices and thus overall consumer prices, thereby lowering real income and crowding out consumption and investment, which offset any positive impact from social protection transfers. This finding is also highlighted by Ortiz et al (2019) who point out that rising indirect taxation poses

the risk of worsening income inequality given the disproportionate weight that consumption taxes place on the bottom income quintiles of society. Given the regressive nature of universal indirect taxes, an increase in this type of tax could be sensible only if it targets luxury goods that are mostly used by the better-off, instead of targeting any type of goods and services.

On the other hand, our findings show that financing social protection investments through progressive income taxation marginally impacts employment and GDP growth rates. More specifically, at the macro level, progressive income tax can generate positive, albeit modest changes in employment and GDP growth rates in five of the eight countries observed. Additionally, at the micro level, we find that the level of household income amongst the lowest and mid-quintiles increases substantially. As such, governments should move away from indirect taxes, including consumption/sales and value added taxes (VAT), and seek progressive taxation such as income, capital and corporate taxes as means of increasing fiscal space and enabling additional funds for social protection investments.

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Annex

Table 0.1:

Simulated impact on total household income from investing 1 per cent of GDP in social protection through different types of taxes, by income quintiles, year 10

Countries	Quintiles	Foreign aid	Income tax	Corporate tax	Sales tax	Capital tax
Bangladesh	Lowest	6.855	5.173	6.855	4.580	5.172
	Second	4.326	2.688	4.326	2.095	2.687
	Third	3.208	1.591	3.208	0.997	1.590
	Fourth	2.402	0.803	2.402	0.224	0.802
	Highest	1.811	0.226	1.811	0.321	0.225
India	Lowest	9.787	8.388	9.787	7.698	8.354
	Second	5.509	4.159	5.509	3.404	4.126
	Third	3.533	2.203	3.533	1.399	2.170
	Fourth	2.306	0.982	2.306	0.098	0.949
	Highest	1.684	0.370	1.684	0.501	0.337
Ghana	Lowest	6.617	5.947	5.822	4.612	5.861
	Second	4.898	4.240	3.920	2.934	4.156
	Third	3.120	2.478	1.890	1.201	2.395
	Fourth	1.533	0.909	-0.016	0.329	0.829
	Highest	0.903	0.293	-1.034	0.922	0.214
Rwanda	Lowest	7.754	5.968	5.966	5.142	5.966
	Second	5.874	4.117	4.115	3.313	4.115
	Third	3.976	2.253	2.251	1.475	2.251
	Fourth	2.451	0.752	0.749	0.005	0.749
	Highest	1.869	0.185	0.183	0.528	0.183
Georgia	Lowest	3.197	2.576	2.561	1.841	2.561
	Second	2.377	1.813	1.800	1.245	1.800
	Third	1.545	0.962	0.949	0.214	0.949
	Fourth	1.062	0.488	0.474	0.244	0.474
	Highest	0.716	0.152	0.139	0.531	0.139
Serbia	Lowest	5.078	4.513	5.078	4.200	4.511
	Second	3.362	2.782	3.362	2.367	2.781
	Third	1.860	1.273	1.860	0.712	1.271
	Fourth	1.267	0.680	1.267	0.133	0.679
	Highest	0.679	0.084	0.679	0.604	0.082
Colombia	Lowest	16.199	14.703	15.011	14.114	14.700
	Second	6.491	5.110	5.466	4.376	5.107
	Third	3.468	2.114	2.377	1.360	2.112
	Fourth	2.163	0.821	1.059	0.048	0.818
	Highest	1.491	0.157	0.274	0.540	0.155
Costa Rica	Lowest	5.673	4.606	4.735	4.062	4.623
	Second	3.712	2.673	2.858	2.105	2.690
	Third	2.460	1.439	1.651	0.866	1.456
	Fourth	1.599	0.590	0.787	0.035	0.607
	Highest	1.030	0.028	0.166	0.494	0.044

Source: authors' elaboration – PEP CGE Dynamic Models

Table 0.2:

Simulated impact on employment from investing 1 per cent of GDP in social protection through different types of taxes, across a period of 10 years

Countries	Tax type	Year after permanent policy implementation									
		1	2	3	4	5	6	7	8	9	10
Bangladesh	Foreign aid	0.077	0.081	0.085	0.088	0.091	0.093	0.095	0.097	0.099	0.100
	Corporate tax	0.077	0.081	0.085	0.088	0.091	0.093	0.095	0.097	0.099	0.100
	Sales tax	-0.417	-0.424	-0.430	-0.435	-0.440	-0.444	-0.448	-0.451	-0.454	-0.457
	Income tax	-0.005	-0.005	-0.004	-0.004	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003
India	Foreign aid	0.079	0.085	0.091	0.096	0.100	0.104	0.107	0.109	0.112	0.114
	Corporate tax	0.079	0.085	0.091	0.096	0.100	0.104	0.107	0.109	0.112	0.114
	Sales tax	-0.535	-0.540	-0.544	-0.548	-0.552	-0.555	-0.558	-0.561	-0.564	-0.566
	Income tax	0.018	0.021	0.024	0.026	0.028	0.030	0.031	0.032	0.033	0.034
Ghana	Foreign aid	0.067	0.075	0.081	0.087	0.092	0.096	0.099	0.102	0.105	0.107
	Corporate tax	0.013	0.017	0.019	0.022	0.024	0.026	0.027	0.029	0.030	0.031
	Sales tax	-0.395	-0.422	-0.446	-0.468	-0.488	-0.505	-0.521	-0.536	-0.548	-0.560
	Income tax	0.010	0.014	0.016	0.019	0.021	0.023	0.024	0.025	0.027	0.027
Rwanda	Foreign aid	0.344	0.372	0.397	0.418	0.436	0.451	0.465	0.476	0.486	0.494
	Corporate tax	0.034	0.035	0.035	0.035	0.036	0.036	0.036	0.036	0.036	0.036
	Sales tax	-1.104	-1.097	-1.090	-1.084	-1.079	-1.075	-1.072	-1.069	-1.066	-1.064
	Income tax	0.035	0.035	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036
Georgia	Foreign aid	0.141	0.141	0.142	0.143	0.143	0.144	0.144	0.144	0.145	0.145
	Corporate tax	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.001
	Sales tax	-0.884	-0.896	-0.907	-0.917	-0.927	-0.935	-0.943	-0.950	-0.956	-0.962
	Income tax	0.005	0.005	0.005	0.004	0.004	0.004	0.004	0.004	0.004	0.004
Serbia	Foreign aid	0.145	0.145	0.146	0.146	0.146	0.147	0.147	0.147	0.147	0.148
	Corporate tax	0.145	0.145	0.146	0.146	0.146	0.147	0.147	0.147	0.147	0.148
	Sales tax	-0.811	-0.823	-0.834	-0.845	-0.855	-0.865	-0.875	-0.883	-0.892	-0.900
	Income tax	-0.009	-0.009	-0.009	-0.009	-0.009	-0.009	-0.009	-0.009	-0.009	-0.009
Colombia	Foreign aid	0.165	0.166	0.166	0.166	0.166	0.166	0.166	0.166	0.166	0.166
	Corporate tax	0.091	0.091	0.091	0.092	0.092	0.092	0.092	0.092	0.092	0.092
	Sales tax	-0.909	-0.935	-0.961	-0.984	-1.007	-1.028	-1.047	-1.066	-1.084	-1.100
	Income tax	0.012	0.013	0.013	0.014	0.014	0.015	0.015	0.015	0.015	0.016
Costa Rica	Foreign aid	0.204	0.204	0.205	0.205	0.206	0.206	0.206	0.207	0.207	0.207
	Corporate tax	0.115	0.116	0.116	0.117	0.117	0.117	0.117	0.118	0.118	0.118
	Sales tax	-1.058	-1.071	-1.083	-1.095	-1.106	-1.116	-1.126	-1.135	-1.144	-1.152
	Income tax	-0.022	-0.022	-0.022	-0.022	-0.022	-0.022	-0.022	-0.022	-0.021	-0.021

Source: authors' elaboration – PEP CGE Dynamic Models

Table 0.3:

Simulated impact on the GDP growth rate from investing 1 per cent of GDP in social protection through different types of taxes, across a period of 10 years

Countries	Tax type	Year after permanent policy implementation									
		1	2	3	4	5	6	7	8	9	10
Bangladesh	Foreign aid	0.297	0.311	0.323	0.334	0.344	0.352	0.360	0.367	0.373	0.378
	Corporate tax	0.297	0.311	0.323	0.334	0.344	0.352	0.360	0.367	0.373	0.378
	Sales tax	-0.120	-0.148	-0.173	-0.195	-0.215	-0.233	-0.249	-0.264	-0.277	-0.289
	Capital tax	0.018	0.018	0.018	0.017	0.016	0.016	0.015	0.014	0.013	0.012
	Income tax	0.018	0.018	0.018	0.017	0.017	0.016	0.015	0.014	0.013	0.012
India	Foreign aid	0.244	0.271	0.294	0.313	0.330	0.344	0.357	0.367	0.376	0.384
	Corporate tax	0.244	0.271	0.294	0.313	0.330	0.344	0.357	0.367	0.376	0.384
	Sales tax	-0.232	-0.257	-0.281	-0.302	-0.320	-0.337	-0.352	-0.366	-0.378	-0.388
	Capital tax	0.043	0.054	0.063	0.071	0.078	0.084	0.089	0.093	0.097	0.100
	Income tax	0.049	0.061	0.071	0.080	0.088	0.094	0.100	0.105	0.110	0.113
Ghana	Foreign aid	0.215	0.241	0.263	0.281	0.297	0.311	0.323	0.333	0.342	0.350
	Corporate tax	0.048	0.060	0.070	0.079	0.086	0.092	0.098	0.102	0.106	0.110
	Sales tax	-0.221	-0.270	-0.316	-0.359	-0.399	-0.435	-0.469	-0.500	-0.528	-0.553
	Capital tax	0.024	0.032	0.038	0.044	0.049	0.053	0.057	0.060	0.062	0.064
	Income tax	0.039	0.051	0.061	0.070	0.077	0.084	0.089	0.094	0.098	0.101
Rwanda	Foreign aid	0.543	0.593	0.636	0.673	0.705	0.732	0.755	0.775	0.792	0.807
	Corporate tax	0.029	0.030	0.030	0.031	0.031	0.031	0.031	0.031	0.031	0.031
	Sales tax	-0.433	-0.469	-0.498	-0.524	-0.545	-0.563	-0.578	-0.591	-0.601	-0.610
	Capital tax	0.029	0.030	0.030	0.031	0.031	0.031	0.031	0.031	0.031	0.031
	Income tax	0.030	0.030	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031
Georgia	Foreign aid	0.230	0.232	0.234	0.235	0.237	0.238	0.240	0.241	0.242	0.243
	Corporate tax	-0.002	-0.003	-0.003	-0.003	-0.004	-0.004	-0.004	-0.004	-0.005	-0.005
	Sales tax	-0.264	-0.287	-0.309	-0.328	-0.346	-0.363	-0.378	-0.393	-0.405	-0.417
	Capital tax	-0.002	-0.003	-0.003	-0.003	-0.004	-0.004	-0.004	-0.004	-0.005	-0.005
	Income tax	0.001	0.000	-0.001	-0.001	-0.001	-0.002	-0.002	-0.002	-0.003	-0.003
Serbia	Foreign aid	0.248	0.249	0.250	0.251	0.252	0.253	0.254	0.255	0.255	0.256
	Corporate tax	0.248	0.249	0.250	0.251	0.252	0.253	0.254	0.255	0.255	0.256
	Sales tax	-0.227	-0.251	-0.274	-0.296	-0.317	-0.336	-0.355	-0.373	-0.389	-0.405
	Capital tax	-0.015	-0.015	-0.015	-0.015	-0.015	-0.015	-0.015	-0.015	-0.015	-0.015
	Income tax	-0.013	-0.013	-0.013	-0.013	-0.013	-0.013	-0.013	-0.013	-0.013	-0.013
Colombia	Foreign aid	0.225	0.225	0.225	0.226	0.226	0.226	0.226	0.226	0.225	0.225
	Corporate tax	0.127	0.128	0.128	0.128	0.129	0.129	0.129	0.129	0.130	0.130
	Sales tax	-0.317	-0.358	-0.396	-0.433	-0.467	-0.498	-0.529	-0.557	-0.583	-0.608
	Capital tax	0.026	0.027	0.027	0.028	0.029	0.029	0.030	0.031	0.031	0.032
	Income tax	0.026	0.027	0.028	0.029	0.030	0.030	0.031	0.031	0.032	0.032
Costa Rica	Foreign aid	0.365	0.368	0.371	0.373	0.376	0.378	0.380	0.382	0.383	0.385
	Corporate tax	0.211	0.213	0.215	0.217	0.218	0.220	0.221	0.222	0.223	0.225
	Sales tax	-0.596	-0.629	-0.660	-0.689	-0.716	-0.742	-0.766	-0.789	-0.811	-0.831
	Capital tax	-0.018	-0.017	-0.017	-0.017	-0.016	-0.016	-0.016	-0.015	-0.015	-0.015
	Income tax	-0.023	-0.022	-0.022	-0.021	-0.021	-0.020	-0.020	-0.020	-0.019	-0.019

Source: authors' elaboration – PEP CGE Dynamic Models

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