



MEETING THE COSTS AND MAXIMIZING THE IMPACT OF SOCIAL PROTECTION IN CAMBODIA





**Executive
Summary**

EXECUTIVE SUMMARY

FINDINGS AND RECOMMENDATIONS

Cambodia's engagement in Public Finance Management reform has led to significant progress in resource mobilization and budget execution and resulted in the restoration of budget balance. In 2018, the public budget surplus was equivalent to approximately US\$150 million. This amount is sufficient to substantially close the poverty gap, if used to cover the costs of social safety nets. **This report estimates that the current surplus, before the pandemic, represents more than double the amount required to bring the share of Cambodians living in poverty below 3%.**

Analysis of household livelihoods presented here finds that:

- ❑ **For National Social Protection Policy Framework (NSPPF) schemes to allow for sizeable poverty reduction, a transfer size equivalent to 20% of the poverty line would be needed.**
- ❑ Categorical transfers require higher budgets for poverty reduction rates that are equivalent to safety net programmes that would deliver a basic *social protection floor*. **The most economically efficient use of public funds would therefore be a safety net scheme that accounts for household size, or a scheme that complements these transfers with categorical allowances.**
- ❑ While categorical transfers offer some targeting advantages over safety net schemes, they risk leaving segments of the poor without financial support. **Graduation-based interventions, which involve the transfer of assets and skills as opposed to cash alone to poor working-age households, would effectively serve these populations not targeted by NSPPF policies.**
- ❑ Graduation programmes are designed to enable extremely poor households to generate their own income streams by addressing the root causes of their economic exclusion. This report finds that the potential socio-economic impacts for the targeted groups are substantial.
- ❑ Regardless of the modalities of Cambodia's social assistance system, **the report estimates that it will cost approximately US\$80 million to reduce the incidence of poverty by half. This requires an increase in public expenditures of just below 0.5% of GDP**, bringing total social spending to 1.4% of GDP, a proportion which is still below the global average.

General equilibrium analysis presented in this report, confirms these findings and shows the wider economic benefits of social protection interventions. It also illustrates the potential benefits of skills and productive asset transfers. **Combining social transfer policies with graduation-based interventions can stimulate the local economy and boost employment.** Given the productivity and multiplier effects, income generation from graduation interventions compensate for the lower level of transfers received by some in the programme. Our macroeconomic **results show that these social protection policies, irrespective of their modalities, would not weaken economic growth processes, even if fully tax-funded.**

This set of **findings indicates that Cambodia has sufficient fiscal space to create a comprehensive system of social safety nets.** Moreover, it confirms Cambodia's ability to engage in effective redistributive policies without compromising budget balance or economic growth.

A *COVID-19 Update*, which follows, further accounts for the added complexity of the COVID-19 crisis on social protection policy progress in Cambodia and addresses how the report's findings can help address these new challenges. First, the emergency cash transfer programme follows the most economically efficient social protection modalities outlined in this report. This suggests the increased relevance of the report's findings and allows for its use beyond policy recommendations to support the evaluation of policy effectiveness. Second, the emergency cash transfer programme provides safety nets above the 20% threshold of the national poverty line identified in this report. Thus, even if temporary, this programme promises to achieve significant poverty reduction in both rural and urban settings. **For as long as it lasts, the new emergency social**

protection scheme in response to COVID-19, could lift over one million Cambodians out of poverty and improve the livelihoods of many more. This represents an unprecedented political stance and institutional progress towards more permanent and ambitious programmes, including towards the establishment of a social protection floor.

Building a modern and comprehensive social protection system requires long-term vision and strong political commitment. It necessitates a willingness to promote social cohesion, reduce inequality and guarantee every citizen a decent living condition. This study provides empirical evidence that these aspirations are within reach of the Royal Government of Cambodia and demonstrates the affordability and efficiency of tailored social assistance interventions, should they be met with political will.

CONTEXT

Cambodia has achieved impressive rates of economic growth over the past 15 years and kept income inequality in check. As a result, poverty has fallen dramatically. While half of the population was living in poverty in 2007, this figure is estimated to have fallen below 10% by 2016. **Vulnerability to shocks, however, has risen, and harder to reach pockets of poverty have also emerged. The development of social assistance has been slow and there is no effective *Social Protection Floor*¹ for Cambodians living in poverty.**

The NSPPF was approved by the Council of Ministers in March 2017 in response to these pressing needs. The proposed social assistance component of the framework consists of categorical transfers to the poor with a focus on select vulnerable groups: the elderly, people living with severe disabilities, expectant mothers and those with young children, and primary and secondary school students. The Framework demonstrates foresight and clear political commitment. However, it does not plan for the development of a national *social protection floor* or to ensure coverage of a sizeable share of the working age poor.

This prompts a series of questions, which this study seeks to answer. Does the Framework allow for adequate provision of social safety nets if fully implemented? What would be their benefit adequacy, given Cambodia's current income distribution? Could alternative measures be implemented to complement these programmes? And what are the potential costs of extending policies that improve coverage of the population living in poverty?

These questions are intrinsically linked to the programme affordability and the allocation of public resources required to support the Framework. This study, therefore, focuses on the fiscal space needed to deliver a social protection system capable of tackling poverty and protecting the vulnerable. It also analyses the economic benefits that would come from such investments. To do so, it compares the financial costs and economic impacts of the Framework's social assistance programmes both from a household perspective and from a wider economic angle. It further examines alternative pathways that may be considered as the NSPPF is rolled out.

¹ *Social protection floors* are nationally defined sets of basic social security guarantees that should ensure, as a minimum that, over the life cycle, all in need have access to essential health care and to basic income security which together secure effective access to goods and services defined as necessary at the national level (adopted at the General Conference of the International Labour Organization 2012).

COVID-19 UPDATE

NEW CONTEXT

We started this study at a time that was promising for social protection development in Cambodia. Government revenues were such that they could cover the cost of a social safety net for a large majority of the Cambodian poor. The Royal Government's adoption of the NSPPF as well as the rapid development of the IDPoor identification system opened the way for large scale safety nets implementation. Poverty incidence has fallen dramatically (this study estimated poverty was below 10% before the crisis), access to social services was rapidly progressing and economic growth was one of the fastest in the world, so much so that Cambodia became a low middle-income country in 2015.

Over the past months however, the COVID-19 pandemic spread rapidly affecting virtually every country in the world, compromising the health of more than 10 million people and claiming more than half a million lives to date. Economies contracted at unprecedented scale, and in many places, lockdown measures have affected both production and employment, household demand collapsing for many services and goods, while trade and supply chains were disrupted. The livelihoods of millions are nowadays afflicted by unemployment and income loss soaring to record high levels.

In Cambodia, the health crisis did not take the proportion feared at the beginning of the pandemic and the mortality incidence remains among the lowest in the world, with 272 recorded cases and zero deaths (13th August 2020). Nonetheless, the socioeconomic dislocations, driven by very dramatic external demand shocks due to the collapse in export markets were large. Key production sectors driving growth, were substantially hit, causing income loss at an unprecedented level. Tourism, construction, and manufacturing exports which have been the largest components and main drivers of economic growth for decades are nowadays the main recipient of the pandemic economic impact. These sectors account for over 70% of Cambodia's gross domestic product,

80% of its exports and generate the largest source of fiscal revenue. The collapse of external demand for these export goods and services as well as the slowdown in investment that affects the construction sector, have worsened employment and the income distribution, and threaten Cambodia steady progress on poverty reduction.

These sectors employ nearly 2 million workers, over 20% of Cambodia's labour force, a large share of which are low skilled and on low wages. Income loss resulting from the contraction of these sectors therefore threatens the livelihood of a significant number of already vulnerable households. Spillovers and multiplier effects from this economic shock could dramatically affect the incidence of households unable to meet their subsistence needs.

In this context, the need for emergency interventions and policy packages that mitigate economic recession and bring back the country on the path of recovery is substantial and unprecedented.

Globally, governments responded to the sudden economic recession with rescue packages for both private sector support and social protection. In many countries, these interventions include labour and income protection schemes both for transition period when employment is compromised and for those who lose their livelihood. Similarly, Cambodia engaged in a recovery plan that aims at tackling both symptoms of the crisis. Its first component aims at restoring growth and mitigating the impact on the private sector, through investment and infrastructure development as well as support for structural change in key production sectors. The other consists of the protection of the most vulnerable and most affected Cambodians by maintaining all existing social protection programmes and introducing the *Cash Transfer Programme for Poor and Vulnerable Households during COVID-19* based on the IDPoor identification system, including the *On Demand IDPoor* identification fast track update.

RELEVANCE OF REPORT OBJECTIVES AND METHODS

This report aims at providing evidence for efficient design and implementation of such social safety nets. It explores avenues to expand the current Cambodian social protection system. To do so, it evaluates and compares policy options through the review of several potential schemes providing social transfers and protecting livelihood for Cambodia's poor.

Using recent national household surveys and national account data, this study is based on the analysis of the demographic and the socio-economic characteristics of the Cambodian population, living costs and consumption patterns. We estimate the adequacy of the social transfers given these elements and evaluate the cost of a range of social protection interventions, both expanding the current system and developing new complementing strategies. We also review public financing options for these policies. We then adopt a macroeconomic

perspective on the impact that these interventions are likely to have on the local and wider economy, considering their effects on both economic growth and income distribution.

The relevance of this report was primarily grounded on the need for safety nets for a part of the Cambodian population that was not benefitting from fast economic growth as well as for population groups that were highly vulnerable to financial shocks and stresses. The new economic context resulting from the COVID-19 crisis makes this type of analysis even more pertinent and valuable as it amplifies both the need for such policies and the challenges to implement them. The report provides analytical tools and evidence to design and implement country-specific programmes which have been made even more necessary by the new socio-economic context and that are at the centre of the government rescue packages and recovery objectives.

RELEVANCE OF OUR FINDING TO TACKLE THE NEW CHALLENGES

A sudden increase in population needing social protection represents a challenge both in terms of targeting and identification of beneficiaries. It also requires an increase in financial resources which can be particularly challenging to mobilise swiftly even in non-crisis circumstances. The COVID-19 crisis is adding more complexity to such emergency policy process since government revenue is expected to fall by about 30% this year as the result of the

contraction of the economy. The simultaneous increase in funding needs and contraction of government revenue constitute a substantial policy challenge, which also makes the efficient use of public funding even more imperious.

To which extent can the report's findings help address these new challenges?

FINDINGS ON SOCIAL TRANSFERS

Initial reports on sector contraction and employment decline, even though difficult to precisely estimate at this stage, point to a significant deterioration of income and livelihood in Cambodia. In this report, we use the most recent household socio-economic surveys to analyse income distribution, as presented in Graph 1 in Section 1. Given the concentration of household just above the poverty line, this shows that a small income loss for households at the bottom half of the distribution would lead to a surge in poverty incidence.

Households who have lost their income and became poor as the result of the COVID-19 crisis might not have been enrolled in the IDPoor registry. The national poverty lines used in our methodology is based on caloric anchor. This allows us to estimate transfer adequacy independently from enrolment in the pre-existing IDPoor database. Therefore, even for larger number of poor households, the adequacy analysis of social transfers, which is a key element of policy design and efficiency, remain valid and could be used to tailor new poverty schemes.

Since April, the Royal Government of Cambodia has engaged in a substantial expansion of its poverty targeted cash transfers. The social protection programmes we analyse in this report include schemes identical to the ones currently implemented in response of COVID-19 crisis. The present report therefore analyses the potential impact of these specific interventions and show their effectiveness at tackling poverty.

Two of our findings are particularly relevant to the current policy context. First, we find that one of the most economically efficient use of public funds consists of a social protection programme that accounts for household size, as well as schemes that complement lump sum transfers with categorical allowances. The emergency cash transfer programme follows this precise strategy, making our findings even more relevant and our estimates more accurate than foreseen. Initially used for policy recommendations, our analysis could now also be

used for effectiveness evaluation.

Second, we find that a transfer size of at least 20 per cent of the national poverty line is needed for the Framework's schemes to efficiently allow beneficiaries to meet their subsistence needs. Again, the emergency cash transfer programme provides safety nets above this threshold for most beneficiary households. Even if temporary, this programme promises to achieve significant poverty reduction and improve the livelihood of over 1.5 million Cambodian poor.

For as long as it lasts, the new emergency social protection scheme could, given its size and transfer modalities, lift over a million of Cambodian out of poverty. This represents an unprecedented political stance and institutional progress towards the establishment of a social protection floor. The key questions, however, are can and will this be sustained after the COVID-19 crisis has abated.



RELEVANCE OF GRADUATION PACKAGES

In addition to analysing conventional cash transfer schemes, we investigate the potential of multifaceted social protection tools called “graduation programmes”. They are designed to enable poor individuals to generate their own streams of income, addressing the causes of economic exclusion. These support programmes combine safety nets with the transfer of productive assets and the development of skills. Over 14 million individuals currently benefit from these livelihood improvement packages in Asia, Latin America and America and more than 34 governments are nowadays integrating these programmes into their social protection frameworks.

There are several reasons why these programmes could offer a potentially relevant complement to the current recovery strategy from the COVID-19 crisis. They aim at supporting local supply and demand

simultaneously, where trade or supply chains have been interrupted, for food staples but potentially also for a range of goods and services that could be produced locally. That would be particularly valuable to answer any supply restriction due to border closures and limit on internal movements. They also create new prospects for the integration of the poor into their local socio-economic fabric, enabling them to generate new income streams. A growing body of evidence shows their effectiveness to build resilience to financial shocks and stresses. In this study, we find substantial economic benefits not only at the household level, but also from a wider economic perspective as all economic indicators improved due to their multiplier effects. Those include agricultural production, household consumption, and growth, with long lasting effects beyond the duration of the programme.

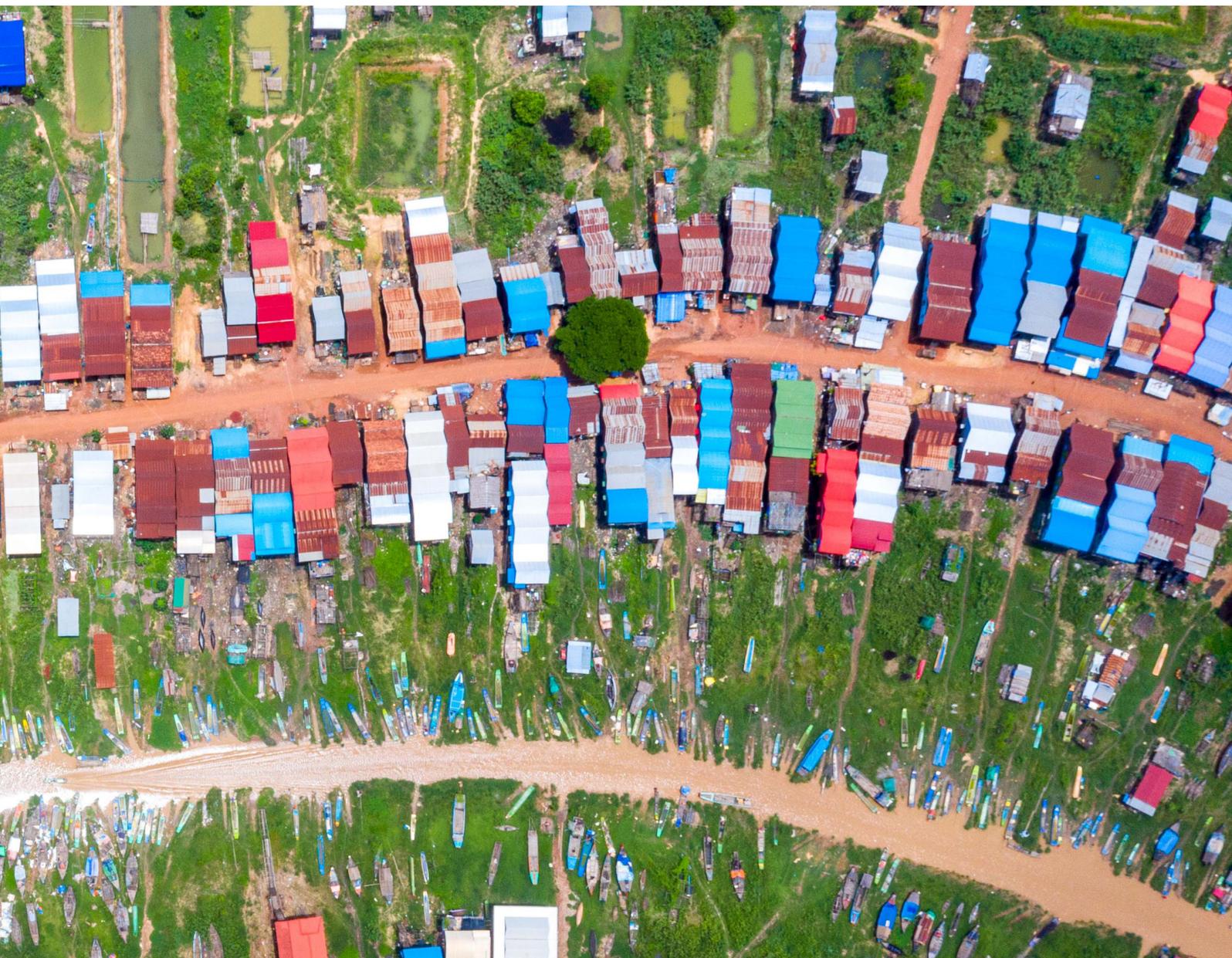


MEETING THE COSTS OF SOCIAL PROTECTION

The second Section of the report analyses the affordability of social protection schemes, based on the findings from the costing evaluation. It shows that extensive progress on revenue collection and management generated a budget surplus sufficient to cover the costs of ambitious large-scale programmes before the COVID-19 crisis. However, government tax receipts are expected to decline by approximately 30% this year due to the contraction of sectors that are major contributors to the fiscal revenues. Therefore, the fiscal space for such policies has now changed and with it their affordability under the current year budget.

Nonetheless, two elements need to be considered. First, there are options that this report review to fund these policies on other sources than the current year fiscal revenues. We present successful country

experiences to develop such space in support of social protection programmes, which could inform alternative strategies relevant to the economic recovery period. Second, given that the economic crisis is mainly due to an external demand shock as well as the contraction of the construction sector, partly due to a decline in foreign direct investment, the Cambodian economy could bounce back as rapidly as external demand, especially with the support of the government rescue package. So the current and possibly next fiscal year could remain exceptional in compromising affordability. Cambodia's experience in tax collection and revenue management should allow for effective budget restoring as the economy recovers from the COVID-19 crisis.



A MACROECONOMIC PERSPECTIVE

We use a general equilibrium model to analyse the impact of social protection schemes on the wider economy, looking at transmission channels and multiplier effects as well as measuring the effect on macro aggregates such as the GDP, trade, agricultural production, investment. We find that regardless of their modalities, the social protection programmes defined in the report would not compromise economic growth, even if fully tax-funded. These estimates are especially useful in the current context as they provide a benchmark for scaling up existing schemes.

Since the poor in Cambodia mainly consume domestic goods and services, their transfer-funded consumption is likely to stimulate their local economies and if scaled up to promote wider economic growth. In the current context of where demand is binding growth, this kind of direct support to households with this pattern of consumption is likely to help the Cambodian economy to recover and bounce back towards its pre-crisis growth path.

INEQUALITY AND SOCIAL COHESION

The COVID-19 crisis has demonstrated the importance of ambitious and adequate policies and effective governance. Countries where support policy packages have been swiftly adopted and support measures adequately designed to respond to the needs in a tailored way have been the ones that best mitigated the impact of the pandemic on their populations. While this was particularly evident for the safeguard of population health, it is now also well established for support to firms and private sector as well as social protection for affected populations be it in the form of income protection and safety nets, cash transfers and food vouchers for school pupils.

Countries that put in place efficient and generous income support are more likely to engage in a rapid recovery path because such policies support and restore distorted demand more swiftly, stimulating and boosting economic growth. The ones with the least generous social protection, wage protection schemes and unemployment insurance, appear more prone to delay economic recovery. Even when lockdown ends and social distancing eases - allowing domestic production to recover- depressed demand is likely to continue hindering economic prospects. In the case of Cambodia where the COVID-19 crisis is mainly caused by a demand shock, these emergency interventions have an especially strong potential for economic growth promotion.

The present report provides evidence that social

protection policies do not have to come at the expense of economic growth – on the contrary, holistic approach to social protection with a range of complementary schemes can promote economic progress and development. The more complex and multiple the causes of poverty, as they emerge from the current crisis, the more relevant multifaceted tools become. This report shows avenues for ambitious and innovative policy response, increasing the flexibility of schemes that are even more needed in the current context.

The COVID-19 crisis revealed how fragile economies can be. Social protection reinforces resilience and prevents inequality from widening. Without redistributive policies, unequal, socially fragmented and less resilient social fabric are likely to aggravate a crisis of unprecedented magnitude. And the longest the COVID-19 crisis is to last the more these mitigating policies will be needed to prevent social and economic effects to be durable.

In Cambodia, the COVID-19 crisis has been the catalyst for a large-scale development of its social protection schemes. Even if the emergency interventions remain limited in time and provide large scale safety nets for less than a year, they represent a political and institutional development that could pave the way for more permanent, effective and ambitious programmes. This would not only promote economic recovery but also open the way for the establishment of a social protection floor.

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Acronyms and Abbreviations

A		N	
ADB	Asian Development Bank	NIS	National Institute of Statistics
ASEAN	Association of South East Asian Nations	NSPPF	National Social Protection Policy Framework
C		O	
CBN	Cost of Basic Needs	ODA	Official Development Assistance
CGE	Computable General Equilibrium	OECD	Organization of Economic Cooperation and Development
CSES	Cambodia Socio-economic Survey		
F		P	
FFS	Farmer Field School	PPP	Purchasing Power Parity
G		R	
G20	Group of Twenty	RMS	Revenue Mobilization Strategy
GDP	Gross Domestic Product		
GNI	Gross National Income		
H		S	
HIPC	Heavily Indebted Poor Countries initiative	SAM	Social Accounting Matrix
		SDG	Sustainable Development Goals
I		T	
IFPRI	International Food Policy Research Institute	TFO	Table of Fiscal Operations
ILO	International Labour Organization		
IMF	International Monetary Fund		
J		U	
KHR	Cambodian Riel	UNDP	United Nations Development Programme
		US\$	United States Dollars
L			
LEAP	Livelihood Empowerment Against Poverty		
LMIC	Lower Middle Income Country		
LSE	London School of Economics		
M			
MEF	Ministry of Economy and Finance		
MOP	Ministry of Planning		

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Objectives

Cambodia has made great economic strides over the past 15 years. It consistently ranks among the fastest growing economies in the world and is now classified as a Lower Middle-Income Country (LMIC). Its rapid economic growth has pulled millions of Cambodians out of poverty over the past decade, thanks to substantial rural development. While half of the Cambodian population was considered to be living in poverty in 2007, this figure stood at 24 per cent a decade ago, and the incidence of poverty is likely to have fallen below 10 per cent by 2016².

Nonetheless, vulnerability to financial shocks and stresses remains high for millions of Cambodians and the need for social protection dominates the policy debate on its human development. More than a million rural households have not benefited from recent economic progress and are subsequently, unable to meet their daily subsistence needs. As prospects for further rural development are slowing, and with a high concentration of households living just above the poverty line, the need for a comprehensive social protection system is urgent and substantial (UNDP 2017). Although progress towards universal access to health services has been considerable in recent years, the development of social assistance is extremely slow, and there is no effective social protection floor for Cambodians living in poverty (aside from a small range of categorical allowances, the size of which, remain inadequate to provide sufficient financial support). Social insurance schemes are also at a very initial stage of development and the existing contributory system needs to be extended considerably to cover the working population (OECD 2017).

The National Social Protection Policy Framework (NSPPF), approved by the Council of Ministers in March 2017, aims to respond to these needs. Through its approval of the Framework, the Royal Government of Cambodia recognizes that a national strategy is required to coordinate efforts and raise the efficiency of policies in tackling socio-economic vulnerability and entrenched poverty. This policy programme outlines the development of: (i) social insurance for formal sector employees; and (ii) the scaling-up and extension of social assistance for the most vulnerable and poor households.

Affordability and allocation of public resources to support this policy framework are key considerations. This study focuses on the fiscal space needed for the Government to honour these commitments and meet global objectives. The economic benefits that would accrue from such an investment are essential elements of policy impact analysis. This study, therefore, examines financial costs against economic impacts of multiple components of the social assistance system proposed by the Framework, both from a household perspective and from a wider economic angle. It also examines alternative pathways that might be considered as the NSPPF is developed and is rolled-out.

Currently, the social assistance component of the Framework consists of categorical transfers to the poor with a special focus on the following vulnerable population groups: the elderly, people living with severe disabilities and the mothers of young children and primary and secondary school pupils. The Framework does not plan for the development of a national social protection floor and would not cover a significant share of working age poor.

Would the structure of this programme allow for adequate provision of social safety nets if fully implemented? There are several reasons to consider that it may not. First, exclusive reliance on categorical transfers are likely to be insufficient to provide an adequate and comprehensive social safety net, unless they cover every stage of the lifecycle and are of sufficient size to meet subsistence needs. While the current size of NSPPF transfers remains largely insufficient to close the poverty gap, they can be increased by building on commitments and the available political will. However, the design of categorical schemes implies that several lifecycle stages are not covered (e.g. young adults are not eligible) and entire segments of the poor population remain excluded from any form of social assistance.

Given these gaps in the NSPPF population coverage, could so-called ‘poverty graduation packages’ provide answers to the unmet needs and specifically respond to the needs of the left behind poor? And nowadays, there is growing recognition of the potential offered by graduation interventions to improve the livelihood of those living in extreme poverty. Graduation Models refer to multi-faceted programmes that aim to enable their beneficiaries to ‘graduate’ out of poverty. They consist of a combination of complementary measures that each address one specific dimension or cause of poverty at the household level. What would be

²Based on the authors’ (unofficial) estimation.

the relevance of graduation interventions for Cambodia's rural poor? The country's poverty profile is characterized by stubborn pockets of poverty that despite recent economic progress, continue to prevail in remote areas, where ultra-poor households with more restricted access to productive resources are harder to reach and require tailored support to permanently exit from poverty. For these households, the potential benefits of graduation packages are substantial (UNDP 2017) and are highly complementary with categorical transfers.

The objectives of this study are threefold:

1. Estimation of the cost of the NSPPF, specifically should it be scaled up, and meet its objectives to provide adequate consumption support to the eligible population? To what extent would they be aligned to the needs of Cambodia's poor? What would be their benefit adequacy, given Cambodia's current income distribution? What alternative measures could be envisaged to complement these programmes? At what cost could they be extended, or complemented by policies that improve the coverage of those who cannot meet their subsistence needs? To answer these questions, we conduct an in-depth analysis of the costing of the NSPPF schemes, assuming different level of benefit sizes, comparing their impact on poverty and the fiscal space they would require. We use national level targets for public spending and microeconomic targets for benefit adequacy. We then proceed to a similar exercise for an extended system that would cover all poor, a basic social protection floor, providing every Cambodian household living in poverty with a monthly cash transfer.

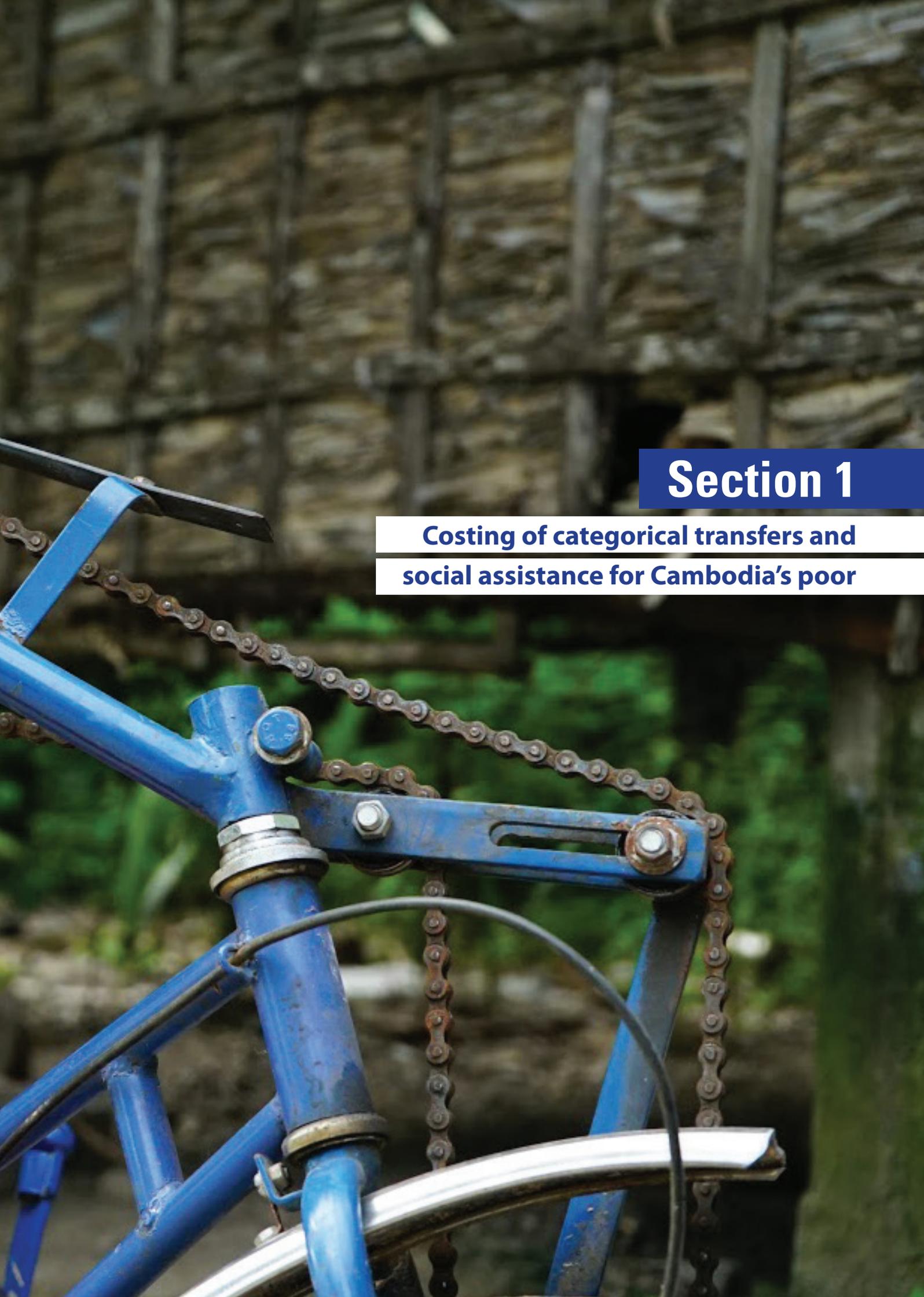
2. Analysis of the affordability of Cambodia's social assistance programmes, based on findings from the costing evaluation. The issue of affordability and fiscal space is a key determinant to consider what can be implemented and financed by domestic resource mobilization. Our objective is to discuss the current fiscal space in the government budget to cover the cost of a scaling-up of NSPPF interventions. For the first time in 2018, Cambodia achieved a fiscal surplus, sufficiently sizeable to substantially improve the efficiency of its social assistance plans. Given Cambodia's public finance, the structure and trends of its revenues and expenditures, could these programmes be implemented without foreign aid contributions? We will review the experiences of countries that successfully developed the required fiscal space to support social protection programmes.

3. Capture and estimate the potential impact of these interventions and financing strategies on the Cambodia economy. We, therefore, conduct a general equilibrium analysis of social assistance strategies. This perspective will link the first two sets of results into a macroeconomic framework. It allows capturing the domestic market responses to policy changes and their impact on the wider economy. This is especially needed to measure the impact of graduation measures on income from productive activities.

To do so, we consider various funding strategies to mobilize resources and compare the potential impact of cash transfers and graduation packages. We then analyse the extent to which, graduation packages would complement categorical transfers, responding to the unmet needs of populations potentially excluded from the NSPPF and providing them with productive assets and skills to generate their own streams of income.

The report is structured as follows: In Section 1, we use the 2016 Cambodia Socio-Economic Survey (CSES) to identify empirical answers to questions raised in the first set of objectives above. After reviewing the existing schemes and discussing their efficiency, we analyse prospects for the development of complementary programmes, referring to other country experiences as examples for policy design. Section 2 analyses Cambodia's public revenues and expenditure framework to understand the current fiscal space for these programmes and to suggest resource mobilisation strategies to support social protection policies, based on the empirical findings from Section 1. In Section 3, we adopt a macroeconomic perspective to analyse the impact that these programmes are likely to have on the Cambodian economy based on the funding strategy used to cover their costs.



A close-up photograph of a blue bicycle frame and a rusty chain. The bicycle is the primary focus, with its blue frame and brown chain clearly visible. The background is a blurred, textured surface, likely a thatched roof, which adds a sense of place and context. The lighting is natural, highlighting the metallic textures of the bike.

Section 1

**Costing of categorical transfers and
social assistance for Cambodia's poor**

Section 1. Costing of categorical transfers and social assistance for Cambodia's poor

A social assistance framework

The National Social Protection Policy Framework (NSPPF), approved by the Council of Ministers in March 2017, aims to respond to the need for a comprehensive and efficient social protection programme for the people of Cambodia. While a number of new measures have been developed in recent years to support the most vulnerable groups, the Government recognises that a national strategy is required to coordinate efforts and increase its policies' efficiency at tackling socio-economic vulnerability. The NSPPF outlines the development of both (i) social insurance for employees in the formal sector, throughout the life cycle, and (ii) the scaling-up and extension of social assistance for the most vulnerable households.

The social assistance component of the Framework consists of three main schemes that target children raised in poor households, people living with disabilities and the elderly. The first type of transfer comprises both monthly schemes for children under five years old and scholarships for primary and secondary school pupils. The second, provides a monthly disability allowance to poor people and the third, a pension for Cambodians over 65 years old, who are considered eligible for assistance, based on socio-economic criteria. The current strategy does not include social safety nets for households living in poverty outside of these specific schemes.

Would the structure of this programme allow for an adequate provision of social safety nets if fully implemented? There are several reasons to consider that it may not. First, exclusive reliance on poverty-targeted categorical transfers is considered by many analysts and practitioners as insufficient to provide an adequate and comprehensive social safety net, unless they cover all stages of the lifecycle and are of sufficient size to meet subsistence needs. Although notable progress has been made in recent years, especially in terms of access to health services, which is rapidly converging towards universal coverage targets (OECD 2017), the categorical schemes do not currently cover every lifecycle stage (e.g. young adults are not eligible) and the size of transfers remains largely insufficient, given the current poverty gap.

The Asian Development Bank (ADB) regional country comparison (ADB 2016) stresses that both the depth and breadth of Cambodia's social protection are currently remarkably low, which means that both the coverage of the population in need and the size of the transfer should increase in order for the programmes to be effective. The ADB Social Protection Indicator (ADB 2016), which assesses the effectiveness of social protection programmes for Asian countries, distinguishes between various components of

social protection programmes. Cambodia's overall score (0.6) for the latest year available (2015), was estimated at a level six times below the Asian regional average (4.0). Cambodia's score was 30 times and 40 per cent below average for social insurance and social assistance respectively. Graphs A7 and A8 in the appendix illustrate these regional disparities and Cambodia's current performance. Cambodia's social insurance system ranks 36th and its social assistance programmes came 29th out of 38 countries in Asia and the Pacific.

In a recent report, the OECD (2017) offers a complete and in-depth review of Cambodian social protection schemes, detailing their targeted beneficiaries, current coverage and transfer sizes. It confirms studies conducted by Cambodian development partners, such as the ADB (2016) and the World Bank (2019), recommending the development of both social insurance and social assistance to build an efficient social protection system for all. These reports also justify the relevance of a social protection floor that would include population groups living in poverty but not eligible to any categorical transfers.

Affordability and political will

Could Cambodia afford such social safety nets? How far would the current programmes need to be stretched to become more inclusive and more efficient?

From a macroeconomic perspective, Cambodia's public spending on social protection remains low both by regional and international standards. According to the World Bank, countries spent on average, 1.5 per cent of their GDP on social safety net programmes in 2015, the most recent year for which data have been compiled. The share of Government's budget allocated to these programmes, estimated at 0.9 per cent, is significantly below the global average. Moreover, it should also be noted that the beneficiaries of Cambodian social assistance are mostly not living in poverty (OECD 2017) as former civil servants and veterans are disproportionately represented among the beneficiaries (and predominantly non-poor). The World Bank (Vaschenko et al. 2018) distinguishes cash transfer programmes, which account for 0.6 per cent of Cambodia's GDP, while school feeding programmes amount to 0.4 per cent of this public spending. In comparison, Vietnam's corresponding share is 50 per cent higher, reaching half of the poorest quintile of the population. Despite recent progress, this level of public expenditure remains insufficient to both provide an effective safety net for the poor and support all segments of its population throughout their lifecycle with retirement schemes and universal health coverage.

Most of the world's low-income countries converge towards a universal social protection system that guarantees a basic safety net to their populations, and a large number of middle-income countries are nowadays, fully engaged in the implementation and improvements of existing programmes (World Bank 2018). Yet, few developing countries have the fiscal space, rapid economic growth and poverty reduction trends currently prevailing in Cambodia.

Establishing a social protection system requires long term vision and strong political commitment, based on the willingness to promote social cohesion, reduce inequality and guarantee that every citizen enjoys decent living conditions. It is also based on the determination to create a strong human capital basis for future welfare creation. A national social protection floor would allow Cambodia to combine its economic miracle with expanded and enhanced human development, fostering its transition to Upper Middle Income Country status.

Identification of the poor

The targeting strategy and the scale of transfers are both central determinants in assessing the costs of a national social protection policy.

Since 2008, Government has developed a large identification system of poor and extreme poor households in every province throughout the country, starting with rural populations and extending it in the past two years to urban settings. The "IDPoor" household identification system is now operational and has been implemented in waves throughout the country. Based on a mix of proxy-means testing and survey-based characterisation of households living in poverty, the system relies on a scoring system that attributes to each surveyed household, a poverty score which is used to classify them as non-poor, very poor (IDPoor 1) or poor (IDPoor 2). The results of this scoring system are reviewed locally by communities and can be appealed and consequently, adjusted to account for personal circumstances and correct for potential identification errors. According to the IDPoor database, the poverty rate is estimated to be approximately 17 per cent in 2018.

This targeting system will be used to identify and target the beneficiaries of the social transfer schemes proposed by the NSPPF. According to a review undertaken by the OECD in 2017, IDPoor faced several challenges in identifying the poorest households. Nonetheless, the system was considered relatively efficient. IDPoor has been further developed since the assessment, and it has come a long way in addressing a number of issues. However, additional efforts can deliver further improvements in targeting efficiency.

It should be noted that, in developing countries, all poverty identification systems are subject to performance issues³. Perfect accuracy cannot realistically be expected under any targeting system within economies where the level of informality is high, and incomes and asset holdings cannot be easily assessed. Proxy means testing is one of the prevailing methods to identify the poor and implement poverty targeted social policies in such contexts. Brown et al. (2018) measure and analyse the inherent limits of this method to beneficiaries' identification, which inevitably affects the performance of poverty targeted programmes. They find high inclusion and exclusion error rates in nine African countries, which rely on this identification system.

Given the purposes of this study, we use the Cambodian socio-economic Survey (CSES) conducted in 2016. This survey aims to capture the living standards of Cambodian households, and as conventional Living Standards Measurement Survey (LSMS), includes consumption and livelihood questionnaires, combined with a module focusing on productive activities and sources of income. These surveys offer a unique and extremely valuable insight on the Cambodian population's living standards. They are used to estimate national poverty lines, including thresholds for urban and rural food poverty, to calculate official poverty rates and evaluate geographical disparities in household livelihoods. Using this survey, we estimate the average consumption of each representative household in the sample and deconstruct it by types of expenditures on goods and services.

Cambodia's national poverty lines are calculated on the basis of the costs of a representative essential consumption basket, which include food and non-food expenditure. This is a standard method referred to as the Cost of Basic Needs (CBN) approach. The food component of the basket reflects the minimum cost of consumption required to cover daily calorific subsistence needs (some also refer to this as 'extreme poverty'). The national lines distinguish between the cost of this basket in the capital, Phnom Penh, in other urban and rural areas, estimating a poverty line for each of these geographic settings.

Official poverty rates have not been published since 2014, when the headcount ratio was found to be 13.5 per cent. We update these data for 2016, by accounting for changes in the prices of goods and services for this representative basket between 2011 (when these lines were last calculated) and 2016 (base year in the survey). We would like to emphasize that these are not official estimates of poverty in Cambodia.

³Making transfers universal (i.e. non-poverty targeted) or widening eligibility beyond the poverty threshold, as it is sometimes the case with scholarship or disability allowances, would allow dramatic increases in the inclusion of the poor. While, such measures are costly, they are often more likely to gain popular support and therefore easier for policymakers to justify.

Table 1**National poverty lines in Riels (KHR) for 2011 and 2016**

	Phnom Penh	Other urban	Rural	Cambodia
Poverty lines 2011	6961	4773	3842	4245
Poverty lines 2016⁴	7990	5479	4410	4873

Source: Ministry of Planning 2018 and author's calculations

We use the 2016 CSES Survey to calculate the average daily expenditure of each surveyed household based on their consumption reporting; this gives us their distance to the corresponding poverty line. These estimates combined with households' member characteristics, are used to determine poverty (and eligibility) status to social assistance interventions.

Table 2**Average per capita daily consumption per household's group and household size**

	Rural non-poor	Rural poor	Urban non-poor	Urban poor	Phnom Penh non-poor	Phnom Penh poor
Per capita daily consumption (KHR)	10,979	3,727	14,527	4,543	16,541	6,545
Average household's size	4.3	5.6	4.4	5.9	4.3	6.1

Source: Author's calculations

We calculate poverty incidence in each of these three population groups, using representative weights to aggregate results at the country level. Tables 2 provides the estimates of per capita daily consumption and the average household's size in each group. Table 3 shows the population and number of households who do not meet their subsistence needs in each group.

Table 3**Population and number of households per household's group**

	Rural non-poor	Rural poor	Urban non-poor	Urban poor	Total
Population	11,365,710	1,078,755	2,986,901	328,633	15,760,000
Number of households	2,652,897	193,485	693,365	54,509	3,594,256

Source: Author's calculations

These results indicate that the poverty incidence has substantially fallen in each population group since our initial study on poverty was conducted two years ago (UNDP 2017). Table 4 shows the differences between our poverty estimates for 2011 and for 2016. This suggests Cambodia's poverty rate fell to 8.9 per cent. For the first time, the urban poverty incidence was higher than the rural one. This could be the result of rural to urban migration by poor households, which intensified in recent years. It might also reflect the need to update the calculation of the national poverty lines to account for changes in the cost and composition of the representative basket of goods and services needed to satisfy subsistence needs, from the years it was first estimated in 2004.

⁴Calculated taking into consideration Cambodia's Consumer Price Index (CPI), which increased by 14.8 per cent between 2011 and 2016, according to World Bank data (2016).

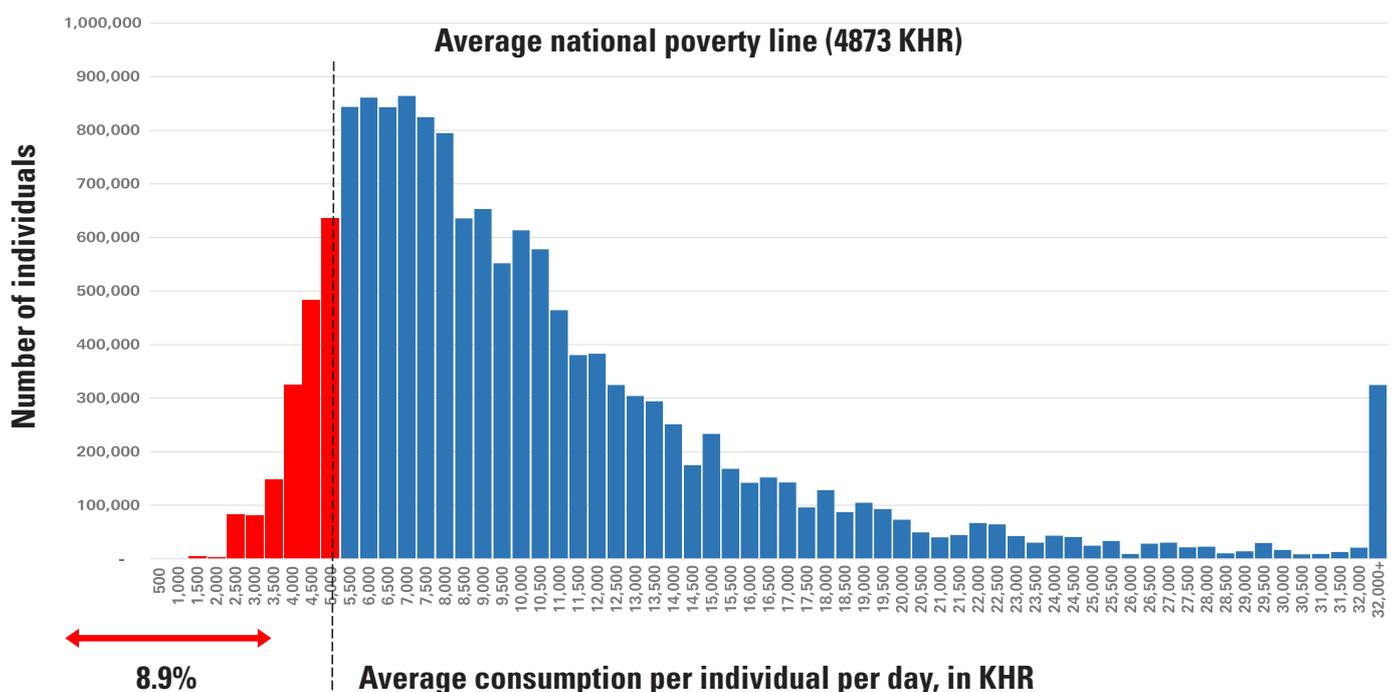
Table 4**Poverty rates by household groups**

Poverty rates in 2016 and 2011			
	Urban	Rural	Total
2016	9.9%	8.7%	8.9%
2011	13.7%	20.2%	19.0%

Source: Author's calculations

These achievements are especially remarkable given that half of the Cambodian population was considered to be living in poverty in 2007 and 24 per cent just a decade ago. As discussed in a previous study on social protection (UNDP 2017), rapid economic growth has pulled millions of Cambodians out of poverty in the span of the last decade, thanks to substantial rural development. However, most of the Cambodian population remains highly vulnerable to financial shocks and stresses. Recent rapid economic progress, and rural development in particular, would need to be sustained to prevent millions of Cambodians falling back into poverty (World Bank 2019; UNDP 2017).

As illustrated in Graph 1, the concentration of households just above the poverty line is high and small changes in income could double the poverty incidence. This is particularly the case for populations in rural areas and for households with children aged 5 to 15 years old, as depicted in Graphs A1 to A6 in the appendix. The World Bank (2019) uses the example of the equivalent of the price of a bottle of water to illustrate the fact that a relatively small increase in consumer prices or a decline in incomes, would induce a minor shift in the red line representing poverty threshold, dramatically increasing the population living below this threshold.

Graph 1**Consumption distribution in Cambodia**

Source: Author's calculations

These economic risks still prevail and their impact on poverty should not be underestimated, especially since the national poverty lines refer to a very basic needs level – substantially below conventional international poverty lines (i.e. US\$1.90 a day PPP) and not accounting for multi-dimensional forms of poverty. Stubborn pockets of poverty remain in many Cambodia provinces and call for an efficient redistributive policy system and social protection floor, which is at the core of the present study.

Approach to estimate the costs and impacts of social transfer policies

This section summarizes the methodology used to analyse the fiscal space required to finance social protection policies and compare the cost of a categorical transfer based social assistance programme to those of a social protection floor - both being poverty targeted.

Box 1. The Social Protection Floor: definitions

Universal Social Protection consists in a set of policy objectives anchored in Article 22 of the Universal Declaration of Human Rights, which states that “everyone, as a member of society, has the right to social security”. It is part of the United Nations Agenda 2030, which defined the Sustainable Development Goal 1.3 as a target for all countries to ‘implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable’. International commitment to the Universal Social Protection objective is endorsed by the African Union, ASEAN, the European Commission, G20, the World Bank and OECD.

A range of policy options allow reaching Universal Social Protection coverage by combining contributory (social assistance) and non-contributory schemes (social assistance).

Social assistance: consists of the provision of **social transfers often acting as safety nets**, which focus on specific vulnerable groups or risks. They can consist of unconditional or conditional cash transfers, social pensions, food and in-kind transfers, public work or other social services interventions. These transfers are non-contributory and are publicly funded.

Social Insurance: a system of (generally compulsory) contributions to enable the provision of assistance during periods of sickness, disability unemployment and old age. Contributions can be ring-fenced (and held within a fund) or paid directly to governments.

A Social Protection Floor is defined by ILO standards (ILO 2012) as a ‘nationally-defined set of basic social security guarantees, which secure protection aimed at preventing or alleviating poverty, vulnerability and social exclusion. This guarantee should ensure at a minimum that, over the life cycle, all in need have access to essential health care and basic income security. A social protection floor should comprise at least the following four social security guarantees, defined at the national level:

- Access to essential health care, including maternity care;
- Basic income security for children, providing access to nutrition, education, care and any other necessary goods and services;
- Basic income security for persons in active age who are unable to earn sufficient income, in particular in cases of sickness, unemployment, maternity and disability;
- Basic income security for older persons.

The cost of specific social transfer programmes, consisting of categorical transfers (corresponding to the NSPPF) and a social protection floor targeting all poor households, are estimated. We compare the efficiency and impact of these various policy frameworks and discuss their implications in terms of domestic resource mobilization.

As per the ILO standards (Box 1), we define the ‘social protection floor’ as a social safety net programme that provides everyone living below the adopted national poverty line with a monthly unconditional cash transfer. Such a scheme implies a basic income security for children, older people as well as for anyone in the active age group who does not earn sufficient income, including all the vulnerable groups identified in the ILO standards. As per this definition, this social protection scheme can be considered as a safety net that covers the whole population, although it is poverty targeted.⁵

We assume that these households have access to health services (OECD 2017) and we focus exclusively on the provision of the safety nets. The cost of an improvement in their access to health services is not accounted for in the estimate of the cost of the scheme. The changes in consumption of both food and non-food are used as a proxy for households’ welfare.

The estimates of households’ distance to their corresponding poverty lines are used here to evaluate the impact that social transfers would have on their available income. To do so, we consider each household’s eligibility status under each scheme or programme, their initial consumption level, and add to it, the amount of the transfer(s) they would receive. A new distance to the poverty line is calculated, and a post-transfer poverty status determined.

It should be noted that the needs and costs of living of some vulnerable groups - such as those living with a disability for example - are typically higher than those of the rest of the population. While social transfers might increase their consumption to meet average caloric daily needs, their food

needs and the cost of non-food expenses such as housing and transport for example, could remain unmet. Therefore, the use of national poverty lines for our calculations might modestly overestimate the impact of social transfers on the welfare of some beneficiaries. The use of national poverty lines to calculate poverty incidence remain nonetheless, the prevailing method used by practitioners and researchers as it is relevant for the large majority of the population. In the present study, replacing them with alternative proxies could only be made at the cost of making subjective judgements.

This exercise allows for calculation of the impact that each programme of social transfer is likely to have on poverty incidence, estimating how many households would be lifted out of poverty and what the new poverty gap would be. It also allows estimation of the cost of each intervention given the social and demographic characteristics of the population groups.

Benefit adequacy and programme impact on poverty

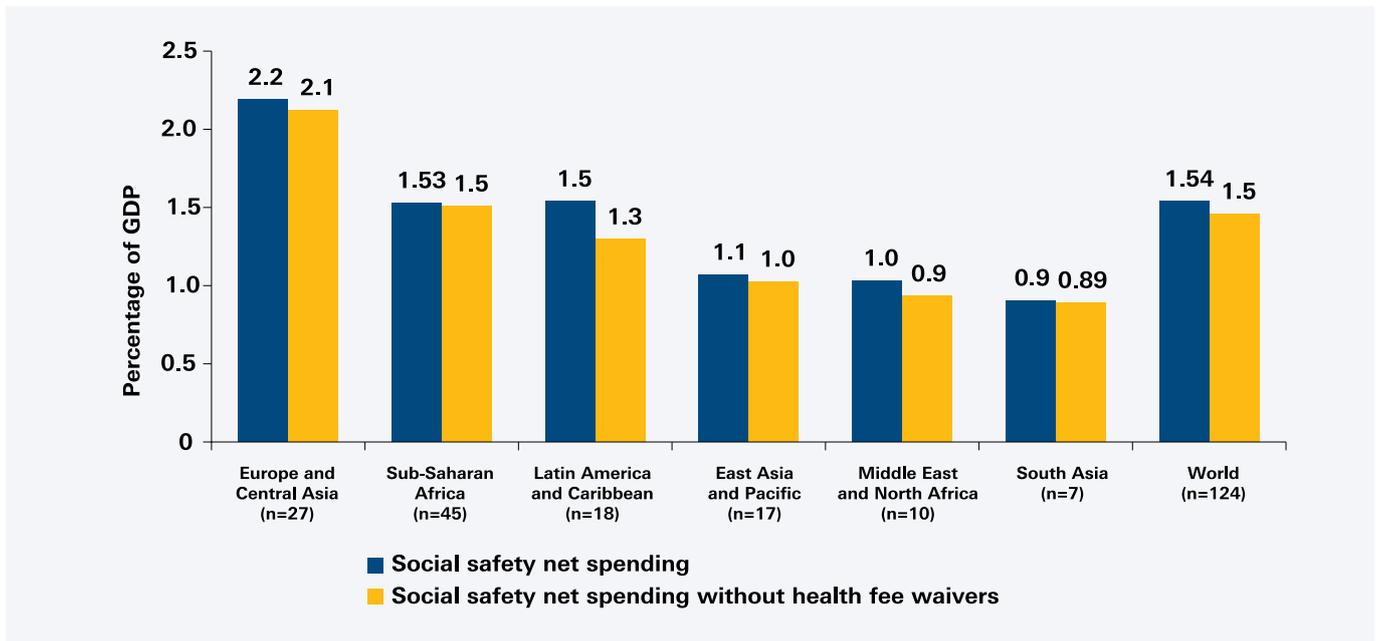
We consider two modalities of social assistance programmes, one adopting the NSPPF categorical transfer schemes and one consisting of a Social Protection Floor (SPF) social safety net targeting every household living in poverty. We then compare programmes using two reference points or targets that are relied upon throughout the report to evaluate performances and assess impact. They allow comparing the efficiency of interventions in terms of poverty reduction and provide simple reference points for discussing affordability and fiscal space in the next two sections.

The first target is a **reduction of poverty incidence by half**. The second is a **public expenditure target of a social safety net spending of 1.5 per cent of the GDP**, which corresponds to the global average level as estimated by the World Bank (2018).

⁵We do not consider non-poverty targeted transfers, which are often referred to as universalized transfers, as they are not under consideration in Cambodia.

Graph 2

Average global and regional spending on social safety nets, 2015



Source: World Bank, The State of Social Safety Nets 2018

While actual performances vary considerably across regions, and although the kind of policies and quality of programmes are not captured by a global indicator, it provides a benchmark for us to conduct our analysis and compare performance, as it is considered as an initial macroeconomic budget target for many countries aiming to achieve a minimum coverage of populations in need of protection.

What would be the additional spending needed for Cambodia to achieve this 1.5 per cent of GDP target? Cambodia's share of budget allocated to social transfers is estimated at 0.9 per cent of GDP. Although the depth and breadth of existing interventions are considered weak, Cambodia's social budget

appears to have caught up with regional averages and a further increase in expenditures corresponding to 0.6 per cent of GDP would be needed to reach the global average. In addition to the transfer budget, we need to account for policy implementation costs. World Bank country comparisons indicate that these costs vary between 10 and 20 per cent across countries. In this study, we will assume a 20 per cent administrative cost, to account for the fact that such costs are typically higher at initial stages of implementation. On this basis, the corresponding budget left to be distributed in cash transfers would amount to US\$96 million – which is our second reference point or target.

The NSPPF poverty targeted categorical transfers

In the first set of scenarios, we consider the poverty-targeted categorical transfers planned under the NSPPF, targeting four population groups: (i) the elderly, (ii) people with disabilities and (iii) families with children under 5 years old, and (iv) pupils attending primary and secondary schools (noting also that recipients must be listed as poor under the IDPoor system). The Framework does not specify the size of these transfers. For any of these interventions to be effective at answering the subsistence needs of the beneficiaries, the size of the allowance received has to be large enough relative to their baseline consumption level.

In the literature, several benchmarks are used to evaluate the benefit adequacy of social transfers. For individual-level allowance, a commonly used reference point corresponds to **20 per cent of the national poverty line** (World Bank 2018), as it is conventionally considered as a minimum to have a welfare impact. This corresponds to approximately 1,000 KHR per day in current terms.

The results of the NSPPF scenarios are presented in Table 5.

Table 5**Categorical transfer policies (NSPPF)**

	Transfer per day	New poverty head count	New poverty rate	Number of poor lifted above poverty threshold	% of poor lifted above poverty threshold	Cost per poor lifted above threshold, in US\$ per year	Total transfer budget, in million US\$ per year
NSPPF	1000 KHR for elderly + 1000 under 5 + 1000 scholarship + 1000 disab allowance	862,255	5.8%	545,134	39%	112	61.1
	1300 KHR for elderly + 1300 under 5 + 1300 scholarship + 1300 disab allowance	694,722	4.7%	712,667	51%	118	79.4
	2000 KHR for elderly + 2000 under 5 + 2000 scholarship + 2000 disab allowance	533,298	3.6%	874,091	62%	140	122.2

Source: Author's calculations

- If the NSPPF schemes were to be implemented based on a 20 per cent of the poverty line benchmark for the size of the allowance transferred (KH Riels 1,000 per day), over 545,000 Cambodians would be lifted above the poverty threshold, corresponding to a 39 per cent reduction in the number of poor. The cost of the programme would be US\$61 million per year. This represents 0.3 per cent of GDP, i.e. 50 per cent less than our public spending target – we will discuss its cost in the context of Cambodia's current fiscal space in the next Section.
- **If each of these allowances were to be raised to KH Riels 1,300 per day, Cambodia would reduce its poverty rate by half. Total public spending on social protection would come close to the proposed macroeconomic target of 1.5 per cent of GDP, by adding spending of 0.6 per cent of GDP.**
- If the size of transfers were to be doubled to KH Riels 2,000 per day, Cambodia's new poverty rate would fall to 3.6 per cent of its population. The cost per individual lifted above the poverty threshold would, however, be higher than with the other two schemes, as additional households escaping poverty are only reached with higher transfers as they are further away from the poverty threshold -it is therefore most costly to bring their consumption above the threshold.

Social protection floor (SPF)

Our next set of scenarios are based on adoption of a SPF social safety net programme that targets all households living in poverty. These scenarios follow the same principles of testing impacts for several levels of transfers and budgets. In order to estimate the extent to which, these modalities of transfers impact poverty reduction and the capacity of reaching the poorest, we first consider a policy option that consists in a monthly lump sum allowance per household independent of its size.

For household-level benefits, the prevailing measure of adequacy is the total amount of monthly transfers to household. In this case, we choose as a reference point, a transfer size that corresponds to the median monthly transfer per household in the country comparison conducted by the World Bank State of Safety Nets Report (2018). Monthly benefit levels per household vary across countries from PPP \$2⁶ (2011) in Madagascar to PPP \$468 (2011) in Argentina. We chose PPP \$ 45 (2011) as it corresponds to the median value across the programmes listed. It approximately tallies with those implemented in Indonesia and Malaysia, both lower-middle income Asian countries. For Cambodia, it amounts to KH Riels 2,800 per day (approximately US\$0.7) or US\$20 per month in 2016 terms.

⁶Purchasing Power Parity dollars meaning the real terms value globally of US\$1.

Table 6**Social protection floor transfers**

	Transfer per day	New poverty head count	New poverty rate	Number of poor lifted above poverty threshold	% of poor lifted above poverty threshold	Cost per poor lifted above threshold, in US\$ per year	Total transfer budget, in million US\$ per year
LUMPSUM	2000 KHR per household	1,017,633	6.5%	389,756	28%	115	44.6
	3000 KHR per household	769,245	4.9%	638,144	45%	105	66.9
	4000 KHR per household	602,544	3.8%	804,845	57%	111	89.3
	5000 KHR per household	508,286	3.2%	899,103	64%	124	111.6

Source: Author's calculations

We conduct a poverty reduction analysis of a scheme designed to deliver a social protection floor, starting from a slightly lower level and using progressively larger transfer sizes and total government social spending budget. The results are presented in Table 6.

- An approximately US\$20 monthly transfer to those living in poverty would allow 28 per cent of them to increase their consumption sufficiently to meet their subsistence needs.
- An allowance of KH Riels 4,000 per household per day, complementing existing social protection programmes, brings the total public spending to the targeted 1.5 per cent of GDP and reduces the national poverty level by more than half, to 3.8 per cent of the population. Therefore, if public spending was to be raised to reach the 1.5 per cent of GDP targets, i.e. increased to US\$100 million per year, the population who cannot meet their subsistence needs would fall below 4 per cent of the population. This transfer size would represent less than US\$ 1 a day in current terms – if implemented more than 800,000 Cambodians would be lifted above the national poverty threshold, while an additional 600,000 would see a significant improvement in their welfare.

Two other results are particularly revealing. First the cost per individual lifted out of poverty declines from US\$115 per year to US\$105 per year when the amount transferred to each household increases from KH Riels 2,000 to KH Riels 3,000 per day. This illustrates how sensitive the impact of the size of

the transfer would be to the initial income distribution below the poverty threshold. If the concentration of households is high at the lowest point in the distribution that corresponds to the distance between the poverty line and the transfer, a small increase in the size of the transfer can have a significant impact on poverty reduction. **Hence, for some level of transfer, the marginal cost of reducing poverty diminishes.** This would be characterized by a 'bump' in the income distribution graph – a point where the bell curve is not smooth or continuously declining. We can see from Graphs 1 and A1 in the appendix that this is the case at given points below the poverty threshold. This type of analysis is therefore, needed to improve the efficiency of programme design.

The second interesting result is that social protection floor schemes appear less costly than categorical transfers at comparable poverty reduction rates. This means that:

- Categorical programmes, provided that their transfer size is high enough, are more efficient at lifting some of the poorest out of poverty.
- Nonetheless, households with no eligible members, although equally poor, would be left out and do not benefit from any welfare improvement under these schemes. The welfare of a significant share of poor households would remain unchanged, while it would improve with an SPF social safety net scheme costing the same.

In addition to this scenario based on a lump sum monthly transfer, we consider interventions that account for the size

of the beneficiary household. The Ghana Livelihood Empowerment Against Poverty (LEAP) programme offers an example of this type of transfer modality, which would be particularly relevant in Cambodia where the average size of households tends to increase with their distance to the poverty line. Table A1 in the appendix presents the results for two sets of interventions, which base the size of the transfer on this demographic characteristic together with poverty status.

These types of transfer policies appear **particularly efficient at tackling poverty at the lowest part of the income distribution and seem more cost effective as they transfer an allowance more precisely tailored to household specific needs.**

Complementing categorical transfers with a social protection floor

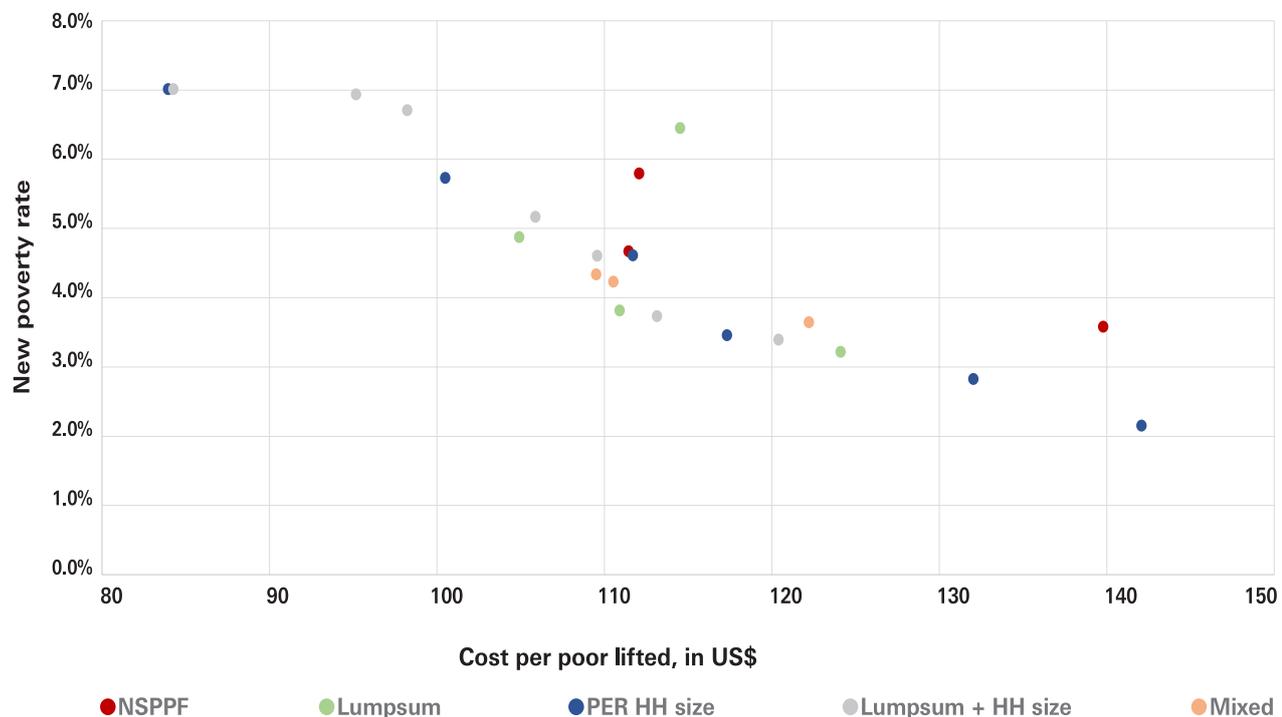
We now analyse the impact of programmes that combine social safety nets and categorical transfers (both being poverty-targeted), using the NSPPF. We use the same size of transfers for individual level benefits as in the first set of scenarios and the same monthly household allowance as in the second set. The results of this “mixed” approach are presented in **Table A1** in the appendix.

The main finding is that it would cost about US\$80 million to reduce poverty by half in Cambodia using such a programme combining social safety nets and categorical allowances.

Table A1 in the appendix describes all the scenarios considered and Graph 3 below summarizes their impact on poverty reduction, showing the number of beneficiaries lifted above the poverty threshold at each level of public spending.

Graph 3

Average cost per individual to reduce poverty, by transfer policy



Source: Author's calculations

Discussion of the results

Comparing the results of all five types of social safety net schemes reveals that:

1. The cost of halving the national poverty level from its 2016 level of 8.9 per cent varies between about US\$75-80 million, depending on the scheme considered. Taking into consideration administrative costs (20 per cent), halving poverty through social transfer programmes would increase public expenditures for social protection programmes by 0.4-0.5 per cent to a total of 1.3-1.4 per cent of GDP.
2. Increasing spending to reach the targeted global average of 1.5 per cent of GDP would allow a 60 per cent reduction in poverty incidence, taking into account administrative costs of 20 per cent.
3. Current levels of NSPPF categorical transfers do not allow for sizeable poverty reduction. To do so, a transfer size equivalent to the 20 per cent of the poverty line would need to be reached.
4. Categorical transfers require a higher budget for equivalent poverty reduction rates because they enable some households further away from the poverty line to meet their subsistence needs. This is especially the case in Cambodia where elderly people (over 65s) and young children are disproportionately represented among the poor.
5. Households with no member eligible under the categorical transfer scheme are left out of the programme. Therefore, they would not experience any improvement in their welfare, whereas they would with a SPF social safety net.

6. The marginal cost of poverty reduction is growing with the size of the programmes.

7. A total transfer budget of KH Riels 325 billion, or US\$80 million would reduce poverty incidence by half, lifting half a million Cambodians out of poverty, regardless of the programme modalities. Even if poverty had not fallen further since 2016, this would only represent 0.5 per cent of GDP and 1.6 per cent of public revenues in 2018.

8. Doubling this budget would only reduce poverty incidence by another 25 per cent

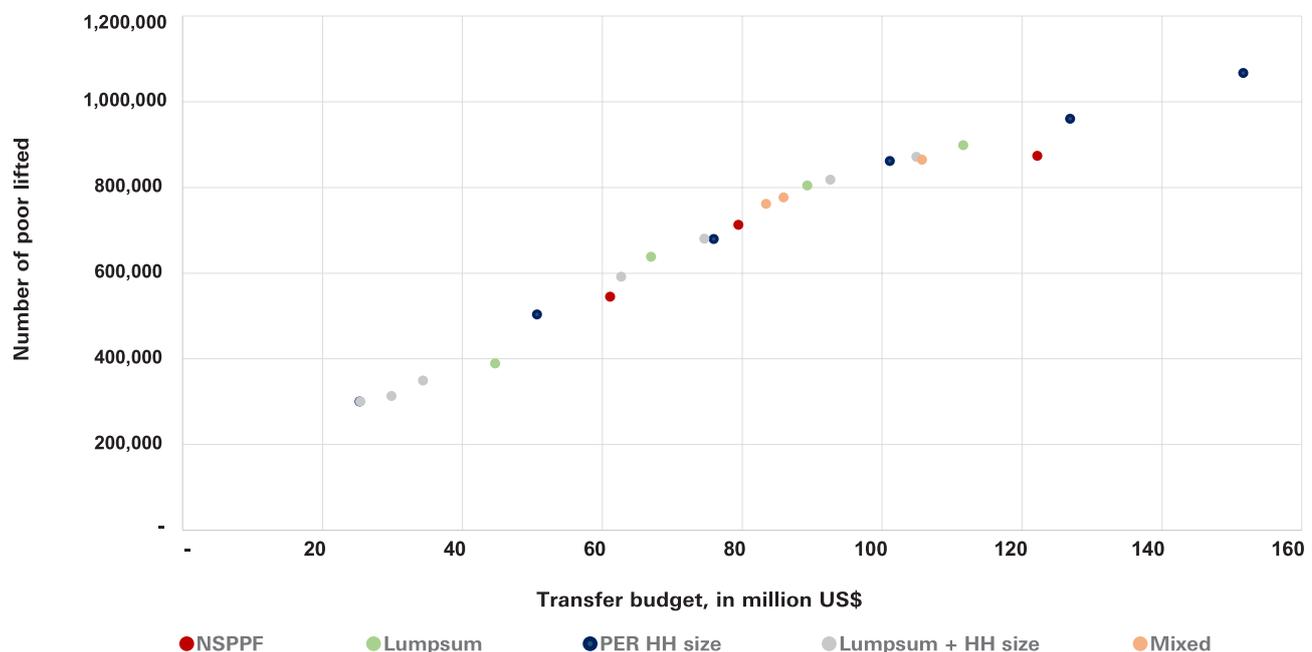
9. The most efficient use of such funds would be under a scheme that accounts for household size or complement lump sum transfers with categorical transfers as can be seen in Graph 4 below.

10. The average consumption of the poorest quintile is such that the transfer needed for them to meet their subsistence needs would be at least 3 times larger than the first quintile.

A lesson from an ILO-sponsored comparison of country experiences (Ortiz et al. 2017; Ortiz et al. 2015) is that a fragmented system of poverty-targeted individual level allowances implies higher administrative costs, especially if the schemes are managed by different ministries each in relation with the targeted population of the transfers (as it is often the case in countries without or before the development of social assistance). Their efficiency is also reduced by overlapping programmes and gaps in the coverage of population in need of assistance.

Graph 4

Public spending to reduce poverty, by transfer policy



Source: Author's calculations

The relevance of graduation packages

Our findings show that categorical transfers are potentially efficient at providing the specific population groups targeted by the NSPPF with consumption support and present a number of cost benefits compared to SPF safety net schemes (especially if those do not account for household size). For those typically less able to engage in productive activities, such as the elderly, the disabled and mothers of young children, they offer an alternative and a good complement to a social protection floor approach. The size of the transfer they provide needs to be sufficiently large relative to the poverty lines (i.e. a consumption threshold that allows subsistence needs to be met).

Nonetheless, for adults of working age with no severe disability, who comprise a significant share of the poor, they do not offer any financial support except through the allowance that could benefit children or other more vulnerable household members. There is nowadays, a growing recognition of the potential offered by so-called graduation packages for this population excluded from conventional poverty-targeted categorical transfers.

Based on the idea that cash alone might not be sufficient to enable beneficiaries to promote their livelihoods, graduation packages combine complementary measures that address specific dimensions or causes of poverty at the household level. Market imperfections and constraints on productive activities impede inclusive development and hinder the inclusion of the poor in Cambodia's economy. Transfers of productive assets to the rural poor are particularly, likely to favour their inclusion in rural development, while also helping to sustain the recent rapid growth of the sector. Similarly, the transfer of skills and professional training is highly relevant to address human capital constraints, which have long been recognised as holding

back Cambodia's rural production and economic development. Experience gained in similar operating environments and a new body of empirical evidence support the growing recognition of the graduation approach as an efficient tool to close the poverty gap.

In 2017, according to Alevaro et al. (2018), 99 programmes were implemented in 43 countries based on graduation models. With 14 million individuals benefiting from these livelihood improvement packages in Asia, Latin America and the US, their rapid expansion of these interventions illustrates the growing recognition of the efficiency of enabling poor households to generate their own streams of income and become gradually independent of social assistance. By tackling economic exclusion and developing poor households' productive activities, these packages offer promising prospects for policymakers. Nowadays, more than 34 governments are engaged in these programmes, and are integrating them into their social protection frameworks.

Given their specificities, and on the basis of existing research on their impact, graduation interventions might offer an adequate answer to the unmet needs of a significant share of Cambodia's population that are not targeted by any current scheme. While there will always be a need for conventional forms of social protection for some, the potential of interventions that provide productive human and physical capital to those who can be integrated into the local economy is substantial.

If graduation-based interventions were to complement Cambodia's National Social Protection Framework, would they effectively address its weaknesses? Section 3 aims to answer questions on complementarities between programmes and analyses the extent to which, poverty can be tackled efficiently and durably by policies that enable and protect according to needs and capabilities.





Section 2

Fiscal space

Section 2. Fiscal space

Effective public finance management and budget surplus

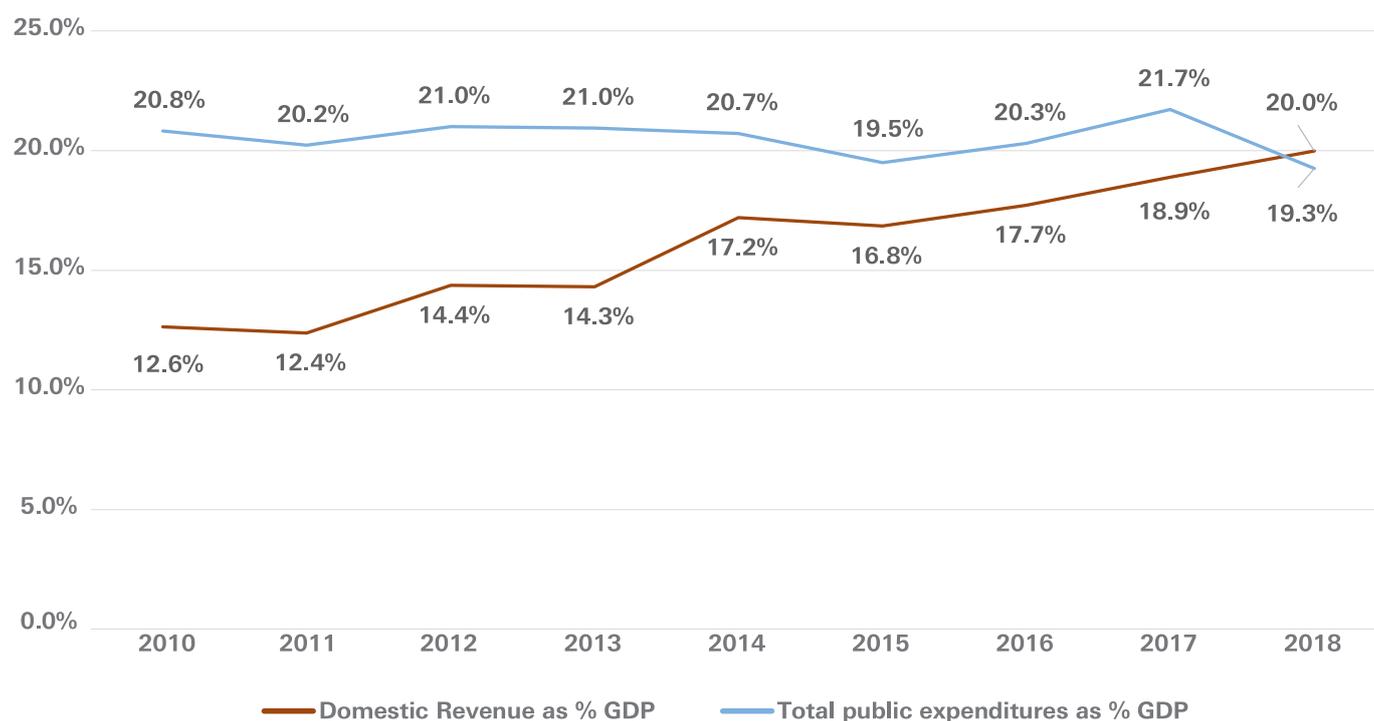
In the fiscal year 2018, the public budget registered a domestically-generated surplus for the first time. This was the result of a long and progressive public finance management effort aimed at increasing (especially fiscal) revenues, and a prudent public spending strategy.

Key public sector management institutions were destroyed during the long period of conflict and civil war, and urgently needed to be restored to address high poverty prevalence in the country and poor public services. Government financial management was dysfunctional and tax revenue was among the weakest in

the Asian region. Thanks to the Public Financial Management Modernization Project (2013-2017), the Ministry of Economy and Finance successfully designed a Revenue Mobilization Strategy (RMS) to improve tax collection efficiency and steadily restore budget balance. While public expenditures followed the same trend as GDP growth during the 2010-2018 period, with a tax-to-GDP ratio of about 20 per cent, domestic revenues rose from 12.6 per cent to 19.3 per cent during the same period (Graph 5). This represents a substantial achievement given that deficit represented 40 per cent of total public expenditure in 2010. The capacity building in government agencies was proven especially effective and the project considered largely successful.

Graph 5

Cambodia: Domestic revenue and public expenditure as a percentage of GDP, 2010-2018



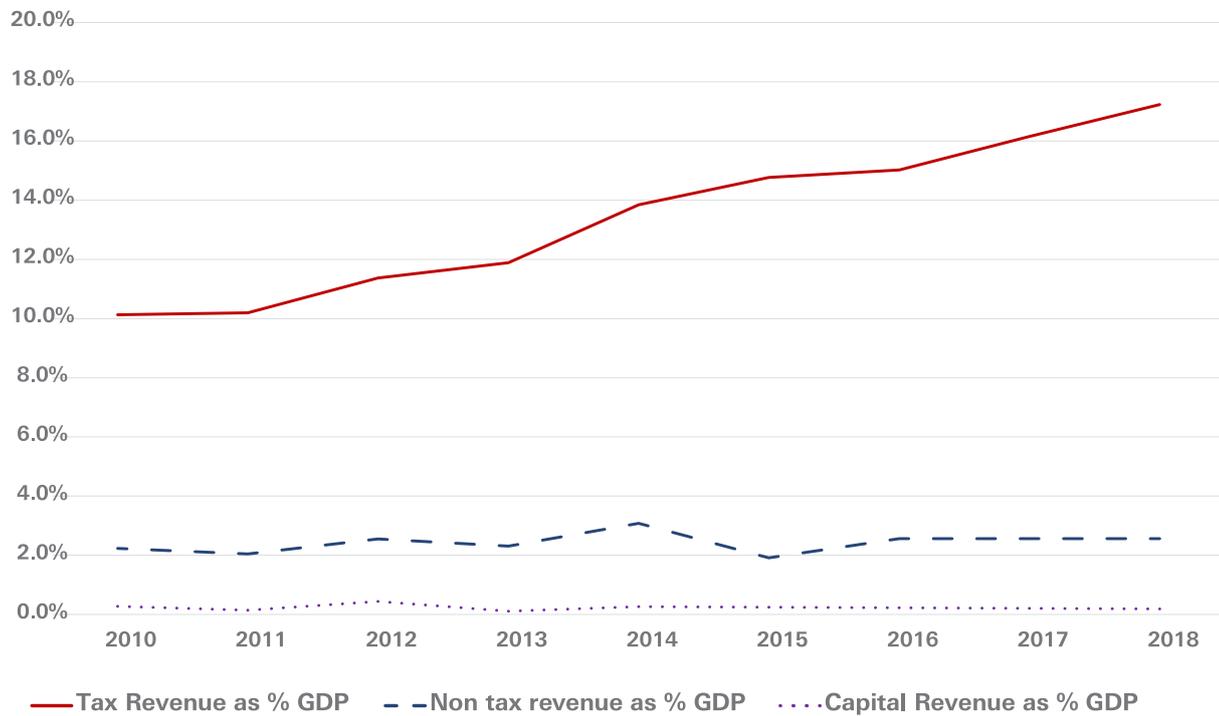
Sources: Ministry of Economy and Finance of Cambodia, author's calculations

Most of the increase in domestic revenue resulted from rising tax collection. The trends reflected in Graph 6 illustrate this sustained and robust effort to improve both tax compliance and non-tax revenue. In eight years, tax revenue more than tripled in absolute terms, while its share to GDP increased from 10 per cent in 2010 to over 17 per cent in 2018⁷.

⁷The government has also been recently increasing efforts to enhance efficiency and transparency in the management of non-tax revenue, which includes income derived from state properties, state enterprises and provision of public services.

Graph 6

Cambodia: Domestic revenue by sources as a percentage of GDP, 2010-2018

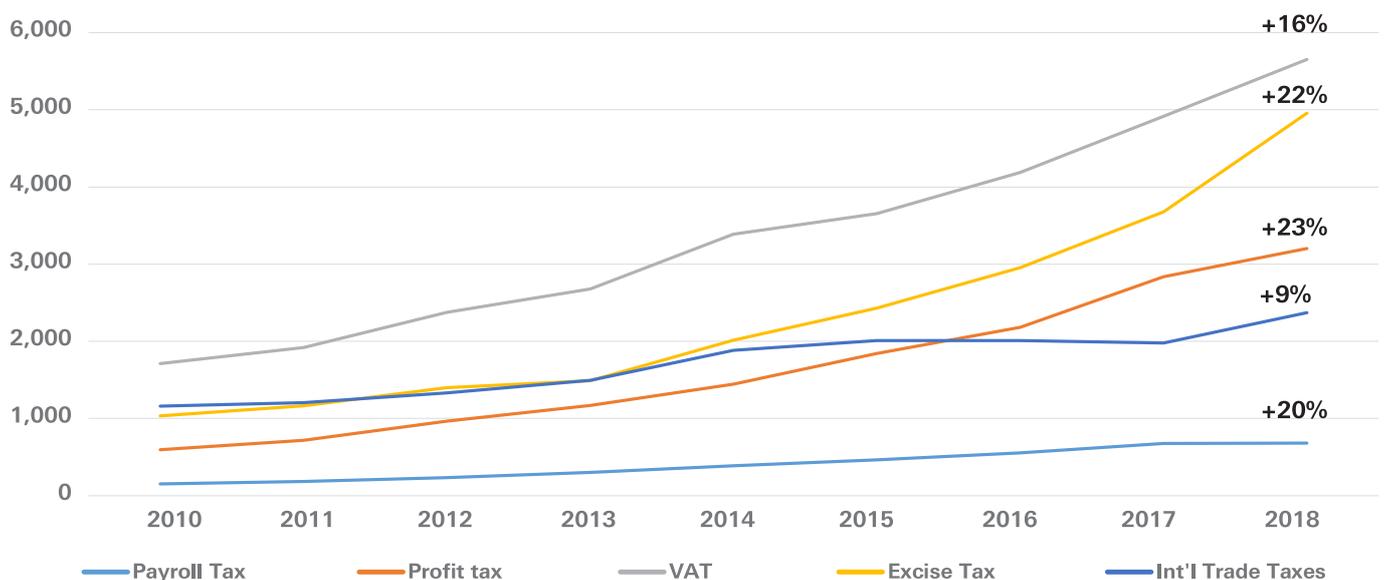


Sources: Ministry of Economy and Finance of Cambodia, author's calculations

As illustrated in Graph 7, all sources of tax revenue increased at a strong pace over the 2010-2018 period, between 9 and 22 per cent on average per year.

Graph 7

Cambodia: Fiscal revenue by sources, 2010-2018



Sources: Ministry of Economy and Finance of Cambodia, author's calculations

Initial reporting for the first term of 2019 confirmed these trends, with tax revenues for the first two months increasing by 19 per cent compared to the same period in 2018. Although this could be subject to monthly fluctuations, these results are particularly positive and these trends confirm that the institutional, administrative and human capacities are now quite effective at mobilizing resources and keeping the revenue in pace with economic growth, improving tax compliance and collection, combined with relatively prudent management of available resources through cautious budget execution⁸.

The public budget surplus in 2018 is equivalent to about US\$150 million. This amount, if used for social safety nets, could bring the poverty incidence below 3 per cent of the total population of Cambodia. This represents more than double the amount needed to reduce poverty by half, from its 2016 level of 9 per cent. Moreover, while data are not yet available, it is highly likely that poverty incidence in 2019 has already further reduced from the 2016 level, requiring more modest government support through social assistance.

These results indicate that Cambodia has increased fiscal space to provide the poor with a basic safety net, potentially bringing the poverty level below the regional average. This presents the debate on affordability under a different light, confirming Cambodia's transition to middle-income status, allowing for redistributive policies without compromising economic growth.

A few low- and middle-income countries experienced a similar fiscal position, and chose to dedicate their budget surpluses to the development of a social security system to protect the most vulnerable segment of their population. Brazil, Botswana and Namibia for example, were among the recent success stories of countries with voluntary and ambitious social protection strategies based on effective public finance management and strong political will to transform the social contract with their citizens. It is remarkable that while both Brazil and Botswana raised their revenues mainly from mineral-based taxation, Cambodia, which could not rely on such windfalls, nonetheless, managed to generate budget surplus to a level that could significantly contribute to the creation of a comprehensive social protection programme.

While economic growth has been solid and sustained over the past decade, allowing Cambodia to secure fiscal and non-fiscal revenues and balance its budget, it is useful to consider various options to secure public funding for social protection should it become a permanent feature of its policy landscape. While the NSPPF 2016-2025 was approved by the Council of Ministers in March 2017, funding still needs to be identified and channelled towards these programmes. As discussed in Section 1, the levels of transfers need to be substantially increased for it to be efficient

and meet the needs for the targeted populations. For these reasons, it is useful to consider the various financing options available to the Government to engage in durable and efficient social protection programs.

Even though current and prospective budget surpluses could allow for coverage of such policies, there is an additional range of options that could contribute to the expansion of funding dedicated to social assistance. ILO (Ortiz et al. 2017; Ortiz et al. 2015; Durán-Valverde et al. 2012), the World Bank (2019) and the OECD (2017) have analysed these options either specifically for Cambodia or through reviewing country experiences to identify successful strategies. They mainly consist of (i) decreasing debt service, through debt renegotiation or cancellation, and (ii) increasing revenues, through tax or ODA resources⁹. We review here, their relevance in the case of Cambodia.

Raising additional tax revenue – via an equitable tax structure

While tax collection has more than tripled in absolute value over the past eight years, prospects for further improvement at a similar pace although desirable, should not realistically be expected in the near future. However, even if effective tax rates were to remain constant, future economic growth would imply a relatively proportionate increase in total fiscal revenue, allowing for the public budget to grow at the same pace. Without further tax rate increases, the fiscal space for social protection should keep pace with the country's economic growth.

Should tax rate increases be opted for to allow for redistributive policies, it should be done keeping in mind some key determinants for equity in taxation and effectiveness in poverty reduction.

- **Direct taxes:** Unlike indirect taxes, these can more easily allow for an equitable tax structure, as they can be designed to be progressive by income level and, similarly for property taxes, these can only be applied above certain wealth levels. Profit and income taxes can be applied at different rates at different segments of the distribution, unlike value added taxes on goods and services. Income and profit taxes but also property taxes can allow financing redistributive policies in an effective way to reduce income inequality. In Section 3, we will analyse the impact that an increase in direct tax revenue could have on poverty and inequality should this option be selected by government to finance social transfers.
- **Indirect taxes:** For an increase in such taxes (i.e. value added tax) not to worsen further income inequality, it should be applied to superior goods and services, predominantly consumed by

⁸However, the IMF in its 2018 Article IV Consultation stressed risks to the public budget balance: rising pressure on expenditures, in particular from public wage increases, on one side and a contraction in the rise of future tax revenue due to import tariffs reduction consecutive to regional free trade arrangements as well as eroding potential gains from the Revenue Mobilization Strategy (RMS) on the other side. The next phase of the RMS currently being prepared by the Ministry of Economy and Finance for 2019-2023 aims to address these risks.

households at the higher end of the income distribution. An increase in the value added tax on rice for example, is more likely to exacerbate burden on the poor and worsen inequality given the disproportionate weight in household expenditures that rice places on the bottom income quintiles, even if the revenue generated is used to redistribute to the poor. A tax on luxury goods and services such as expensive cars or high technology products, will not have such an impact on inequality. Indirect taxes are typically considered less equitable than direct taxes on income and profits, which allow for a progressive redistribution of wealth – these differences have been found to be even more pronounced in developing economies (Kenny and Sandefur 2018).

It should be noted that some countries opted to increase taxes on specific goods such as alcohol and tobacco to increase revenues for social protection. Moldova, Armenia and the Philippines are among countries that implemented such excise taxes to raise their revenues. In Panama, Algeria and Mauritius, tobacco taxes were proven effective to generate new revenues that were channelled towards social protection programmes. It also represents a way to fight unhealthy practices, such as drinking and smoking. In Cambodia, consumption of these goods represents 2 per cent of the average annual household's consumption (NIS 2017).

In the case of Cambodia, direct taxes can prove especially efficient given the current income distribution. Indirect taxes might lead to the poor contributing more to tax revenues than they receive in social transfers, as has been observed in developing countries (Kenny and Sandefur 2018).

In the next section, we analyse scenarios based on the increase of direct tax or direct tax compliance, investigating their potential impact on poverty and income distribution but also on the economy more broadly, given that they allow for stimulation of consumption and a redirection towards goods and services that are produced domestically (as opposed to superior goods that are predominantly imported).

- **Import and export tariffs:** The scope for raising tariff rates is constrained by trade liberalization and the implementation of regional free trade arrangements. In addition, as for indirect taxes, the impact of import tariffs on the cost of imported goods consumed by the poor should be taken into consideration by targeting non-essential goods. However, opportunities exist to increase import tariffs for specific products that compete with national production while monitoring the impact on the price in the national market. Algeria implemented this policy, increasing tariffs for pharmaceutical products that were competing with their own domestic production – which might suggest similar opportunities in sectors relevant for Cambodia.

Setting up or increasing export tariffs on agricultural commodities produced by smallholder farmers may also have a negative effect on the poor. Export tariffs on mineral and energy commodities would not be relevant in the case of Cambodia as the country is resource poor.

It is especially important to consider the potential economic impact of any increase in tariffs. Competitiveness, foreign direct investment, exports (textiles in particular) and trade balance are key elements for the stability of the Cambodian economy, which must be accounted for in any decision to modify trade policy. The textile industry has been an engine for formal employment and exports for many years and is a key catalyst for economic growth in Cambodia. The substantial mobility of foreign capital in this industry makes Cambodia vulnerable to changes in its attractiveness to foreign investors and foreign firms. Given the impact of tariffs on competitiveness, other options to mobilize resources should be considered first to mobilize resources for social protection programmes. Instead, the establishment of a contributory social insurance for employees, including foreign firms' workers, could allow for the development of an essential part of Cambodia's future social protection system.

ODA and external debt restructuring

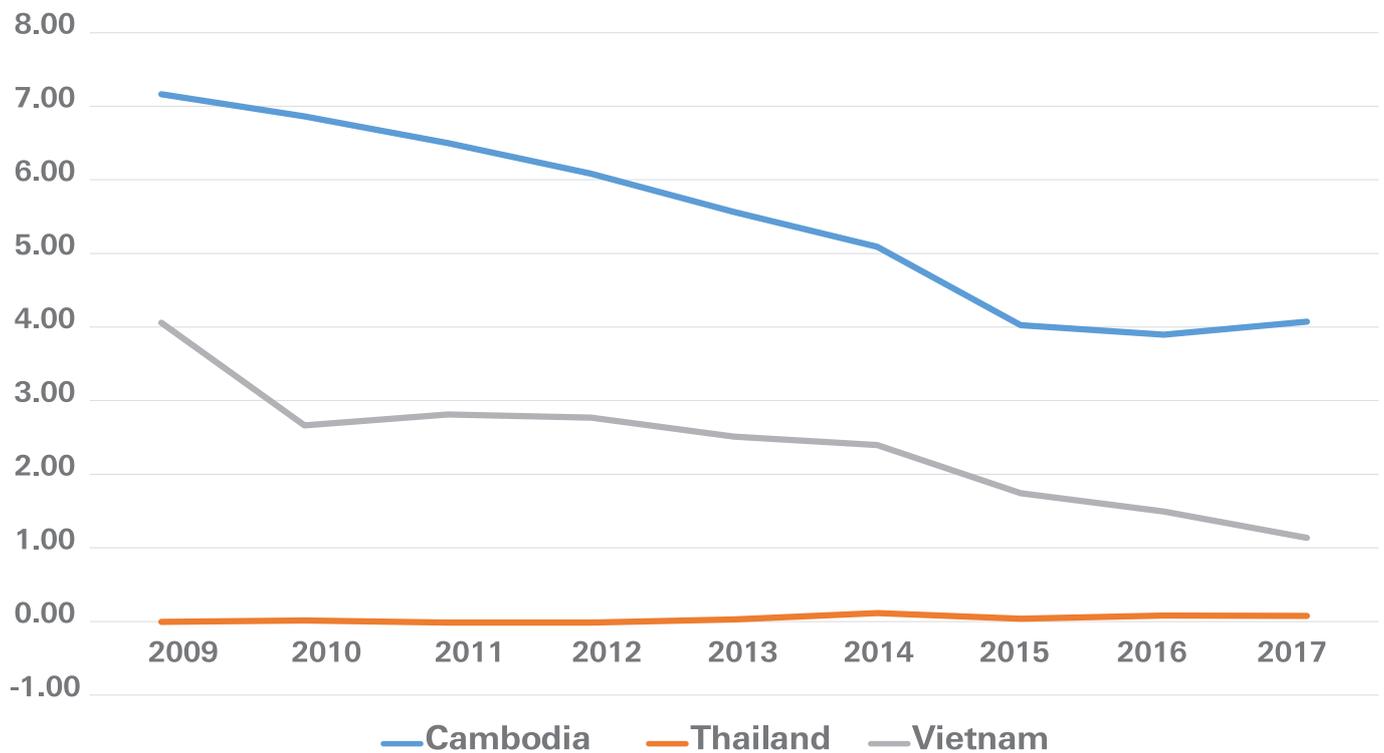
ODA contributed to the funding and development of the social protection system for many countries, especially at their early stages of planning and implementation; ILO (Ortiz et al. 2017; Durán-Valverde et al. 2012) reviews multiple examples for successful policy processes and development partnerships along this line.

Over the past years, ODA had been declining in Cambodia (Graph 8) as a result of the country transitioning to middle-income status. The country has significantly reduced its dependence on aid. This is a considerable achievement for a country where ODA represented over 7 per cent of GNI a decade ago. Nonetheless, one option for future financing could involve a joint fund to which, multilateral or bilateral development partners could contribute towards. The development of a social protection floor could be considered as an adequate framework to reach the Cambodian SDGs, achieving national poverty reduction, health and nutrition targets and tackling stubborn poverty pockets within the poorest provinces. For these reasons, the financing of social assistance in a coherent and effective programme of social assistance transfers could be particularly appealing for Cambodia's development partners, especially if their contribution is proportionate to the government's – thereby, also playing an incentive role in domestic resource mobilization.

⁹Budget reallocation is also an option that enabled the financing of social protection policies in these countries. It is beyond the scope of this study to suggest what such budget reallocation could be in Cambodia.

Graph 8

Net ODA received as a percentage of GNI, 2009-2017

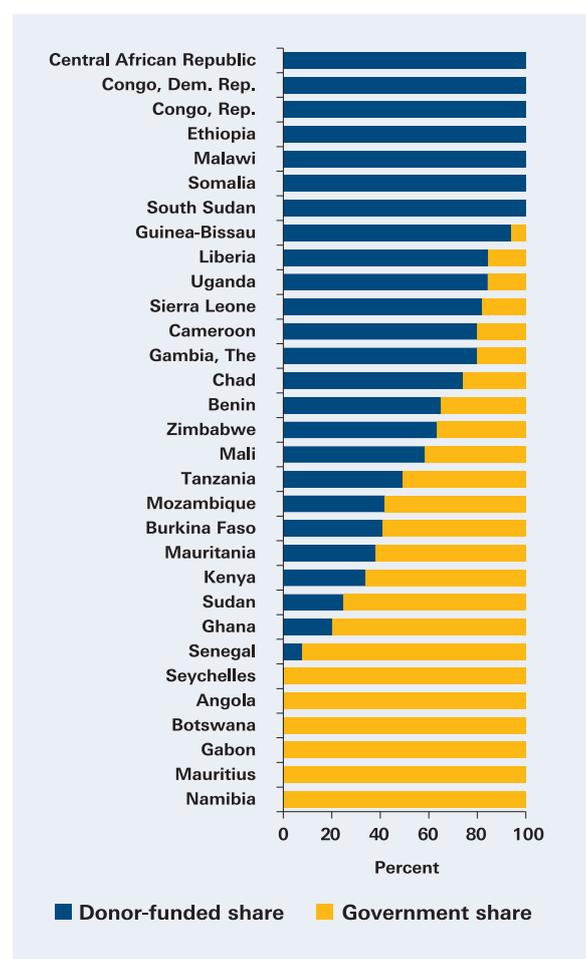


Source: World Bank indicators, accessed 30/04/2019

There are, however, trade-offs to consider when considering such options. The literature findings on aid dependency and negative impacts on the economy and domestic institutions is substantial. Nonetheless, some countries like Mozambique, Namibia, Senegal and Lesotho have managed to successfully implement a hybrid strategy of funding for their social protection based on ODA contributions (Ortiz et al. 2017; Ortiz et al. 2015; Durán-Valverde et al. 2012). Senegal for example, limited the contribution of ODA in volume and in timing, during the initial phase of development of its social protection interventions. Ethiopia successfully managed to integrate multiple development partners to the development of its large and comprehensive safety net programmes, both in terms of technical assistance and finance support to the ministries in charge of their implementation. Such funding strategies could be an option for Cambodia to accelerate the development of its programmes in their first phase. In the next section, we will analyse and evaluate the impact of such a hybrid mode of financing through a joint social protection fund. In particular, we will discuss potential trade-offs between different sources of funding.

Graph 9

Share of donor-funded safety nets in Sub-Saharan African countries



Source: World Bank State of Social Safety Nets (2018)

Table 7

Cambodia: external public debt, end of 2016

	U.S dollar (U.S. millions)	Share of total External Debt	In percent of GDP
Total	6,457	100	31.9
Multilateral	2,088	35.9	10.3
Bilateral	4,369	64.1	21.7

Sources: Cambodia authorities and World Bank estimates

Over 64 per cent of Cambodia's external debt stock is owed to bilateral partners, a share that has been constantly growing for the past decade. Among them, China holds more than 70 per cent of the bilateral debt stock, according to the IMF. Several large investment projects have been agreed between the two countries since then, financed by new loans from the largest Asian investor in the world. The Russian Federation and the US are the next two largest creditors of Cambodia's bilateral debt. The share of the multilateral debt stock has been consequently declining reaching 10 per cent of GDP in 2016 (Table 7), with the World Bank and the Asian Development Bank as Cambodia's main holders of the US\$2 billion stock owed.

¹⁰It should be noted that some countries also opted for debt conversion (Ortiz et al. 2015; Durán-Valverde et al. 2012).

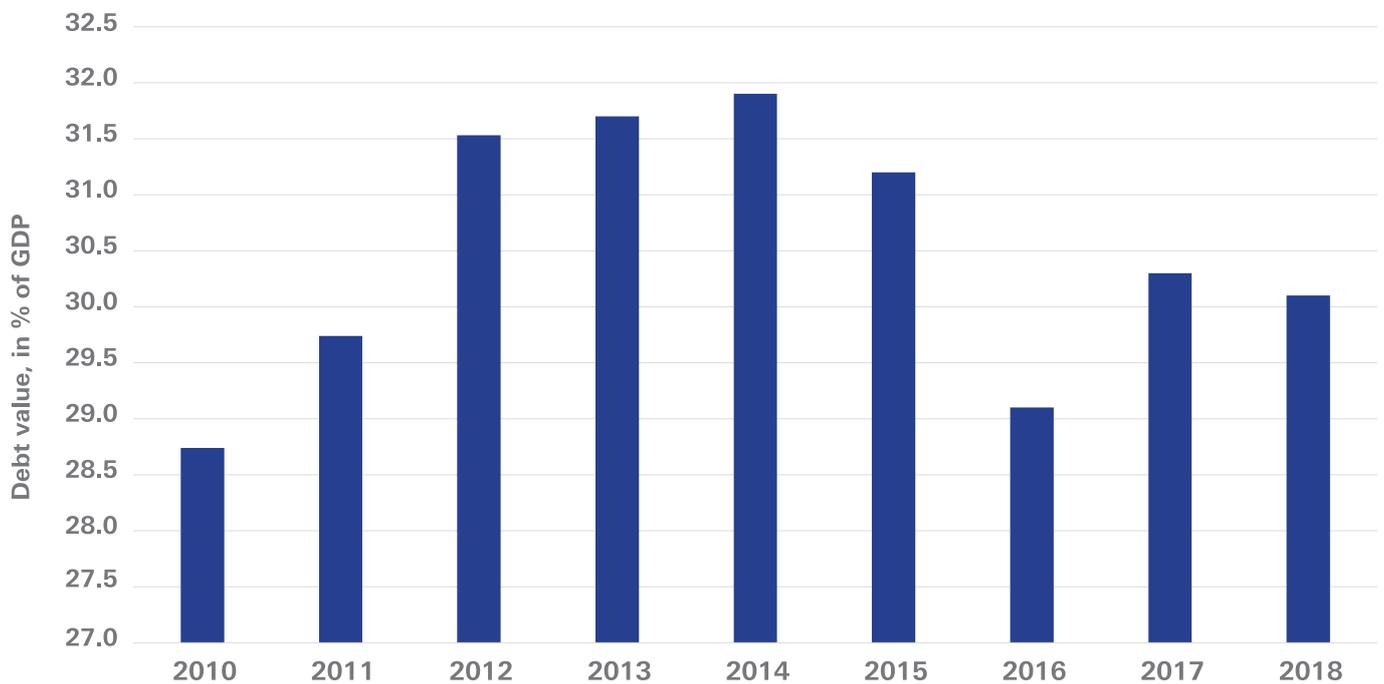
¹¹Under the IMF and the World Bank Heavily Indebted Poor Countries (HIPC) initiative, 32 low income countries signed such agreements from 1996. Paris and London Clubs Agreements followed, allowing highly indebted countries to break free from a debt service that was considered as distorting for their budget, preventing them from allocating funding to high priority social sectors. Cambodia did not benefit from the HIPC initiative.

Along the same lines, debt restructuring has been a key component of the financing strategy for social protection systems over the past 15 years. The two predominant modalities that these countries opted for to restructure their sovereign debt were: debt relief and debt renegotiation¹⁰ - i.e. either a reduction of the debt stock or a reduction in its annual service repayment. The first option consists of an agreement (essentially bilateral) for cancelling debt.¹¹ The second option consists of renegotiating the terms of the sovereign debt, a process, which over 60 countries engaged in from 1990 and during the consecutive decade (Bai and Zhang 2012). The ILO (Ortiz et al. 2017; Ortiz et al. 2015) and the World Bank (Vaschenko et al. 2018) review debt restructuring processes of countries, which chose this option to free up resources to support their social protection systems. In a review of lessons learnt from countries that successfully created fiscal space to support the development of their social protection system, Durán-Valverde et al. (2012) stress that all eight of the selected cases engaged in a debt restructuring process. Although renegotiation and debt relief took place in different political and economic contexts, they were systematically part of the effort made to free up domestic resources to support social policies. Botswana, Bolivia, Lesotho and South Africa all drastically reduced their debt repayments, dividing by half their service ratio to exports from their 1995 levels, while Costa Rica, Thailand and Brazil achieved more modest but still sizeable and efficient results.

The ratio of external public debt-to-GNI is considered relatively low in Cambodia especially compared to countries like Malaysia, Mongolia, Nicaragua, Lao and a number of Eastern Europe countries for example but remained above those of neighbouring Vietnam and Thailand. With an external public debt estimated at US\$6.45 billion, the IMF (2017) classified Cambodia's risk of debt distress as low.

Graph 10

Cambodia national public debt as a percentage of GDP, 2010-2018



Sources: IMF Country Report 2018

In 2015, Cambodia benefited from a US\$90 million debt cancellation from China. It is unclear whether further cancellations could be expected in the near future, especially given the recent growth in Chinese lending to Cambodia.

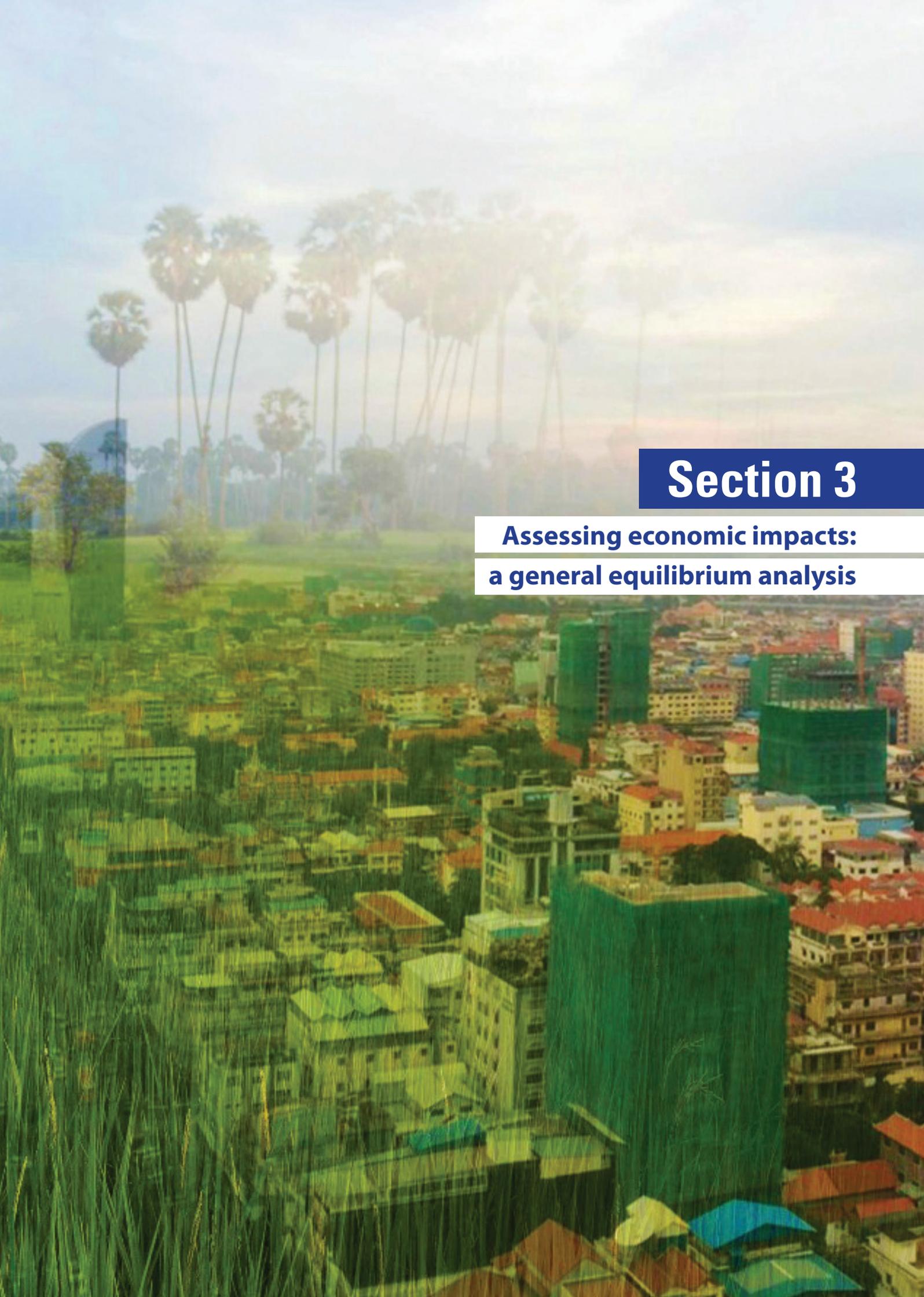
One outstanding bilateral creditor is the US, with which negotiations have been protracted and unproductive. The amount owed is disputed by the two countries as is the legitimacy of the loan contracted, which the Government of Cambodia claims no responsibility for. Although Cambodia stopped repaying its debt to the US, one potential agreement could involve the creation of a joint fund to which both countries would contribute towards the funding of social spending. Vietnam for example, signed such an agreement with the US, which has allowed some 600 education scholarships for Vietnamese students to be trained in the US. This type of innovative agreement could be part of a debt relief initiative, although its impact would remain limited in scale and time.

The Russian Federation and multilateral partners could also be considered as options for Cambodia to renegotiate its public external debt. Whether the creation of a social protection fund like the one described in the first part of this subsection, could offer a suitable framework for such an agreement, remains to be seen.

It is worth noting here that while debt cancellation might seem a less obvious, simple or likely option for Cambodia, it would represent a decrease in dependency to development partners, while ODA funding would increase it.

In the next section, we analyse the potential impact of a reduction in external public debt, whether through cancellation and reduction in the stock, or through a change in the terms and service repayment.



An aerial photograph of a city, likely in a tropical region, featuring numerous palm trees in the foreground and a dense urban area with various buildings in the background. The sky is a clear, bright blue. The text is overlaid on the right side of the image.

Section 3

**Assessing economic impacts:
a general equilibrium analysis**

Section 3. Assessing economic impacts: a general equilibrium analysis

In Section 1, we analysed the various policy options for the development of Cambodia's social assistance system, discussed benefit adequacy and estimated the potential cost. We analysed the impact of social transfer modalities on poverty reduction, estimating how many households would be able to meet their subsistence needs if provided with either household or individual-level allowances. We found that the current policy framework although potentially efficient to address the needs of specific vulnerable groups, is likely to leave entire segments of the poor population without financial support. Since these populations are typically of working age and underemployed but work capacity, graduation packages appear to be an adequate intervention to enable them to generate their own streams of income to meet their consumption needs. As such, they represent a valuable complement to the categorical transfers planned in the NSPPF.

While section 1 provided an estimate of benefits of cash transfers, it cannot provide empirical evidence of the impact such packages could have on employment and income generation. To do so, we need a model that accounts for both households' income and consumption, including domestic production and trade, market supply and demand. Therefore, in this section, we develop a general equilibrium model of the Cambodian economy. This empirical simulation tool allows for the analytical linking of findings from sections 1 and 2, as it includes all domestic agents, i.e. households, firms and government institutions. While Section 2 analyses programmes' affordability, we discuss here, financing strategies, and compare how various modes of public resource mobilization would affect the Cambodian economy.

In this section, we study the impact of a **social safety net programme on the wider economy and on poverty and households' welfare according to the modes of financing explored in Section 2**. This programme would target households living below the poverty threshold, providing them with a monthly cash transfer. The general equilibrium framework does not allow us to define the modality of this programme beyond the total flow of public spending that is distributed to eligible households. The modality of the programme, whether beneficiaries are individuals or households, as well as the exact value of the transfer per eligible beneficiary, cannot be modelled in the framework. From a macroeconomic perspective, the impact on the economic aggregate would, therefore, be the same for categorical transfers as per the NSPPF and a social protection floor as defined in Section 1, as long as the beneficiaries belong to an extreme poor household group. The results from the simulation of the social safety net programme, therefore, reflect the potential impact on macroeconomic aggregates such as

production by sector, trade, prices or employment per category of labour. These results would remain unchanged whether the social protection scheme relies on individual/categorical transfers or on household allowances, as long as the beneficiary group is properly identified in the model – here rural and urban poor household groups. In order to understand the impact at the microeconomic level, we use microsimulations, which are described in detail in a following subsection. These microsimulations complement the macroeconomic results with estimates at the household level, assuming a programme where every poor household is eligible. In this sense, it is closer to the social protection floor described and analysed in Section 1.

Since the results from Section 1 demonstrated the clear relevance of graduation packages to complement the categorical transfers of the NSPPF, we focus our analysis on their potential role to answer the needs unmet by existing policies and to enable a significant share of Cambodia's poor to generate sufficient income to meet their subsistence needs.

A general equilibrium framework to represent the Cambodian economy

Computable General Equilibrium (CGE) models are economic models that use empirical data together with a theoretical general equilibrium structure to understand how an economy may react to changes in policy, technology or other external factors. CGE models are standard simulation tools for empirical ex-ante analysis. These models solve numerically, the new levels of supply, demand and prices on domestic markets that are likely to result from a change in policy or from an external economic or financial shock. They are widely used to analyse the aggregate welfare and distributional impacts of policies whose effects would be transmitted through multiple markets and economic agents. The range of measures that can be simulated is large and includes changes in taxes, subsidies, trade policies and redistributive measures, including transfers to households and social policies. Examples of their use may be found in areas as diverse as international trade, fiscal reform and development planning, and increasingly, environmental regulation.

A CGE modelling framework consists of:

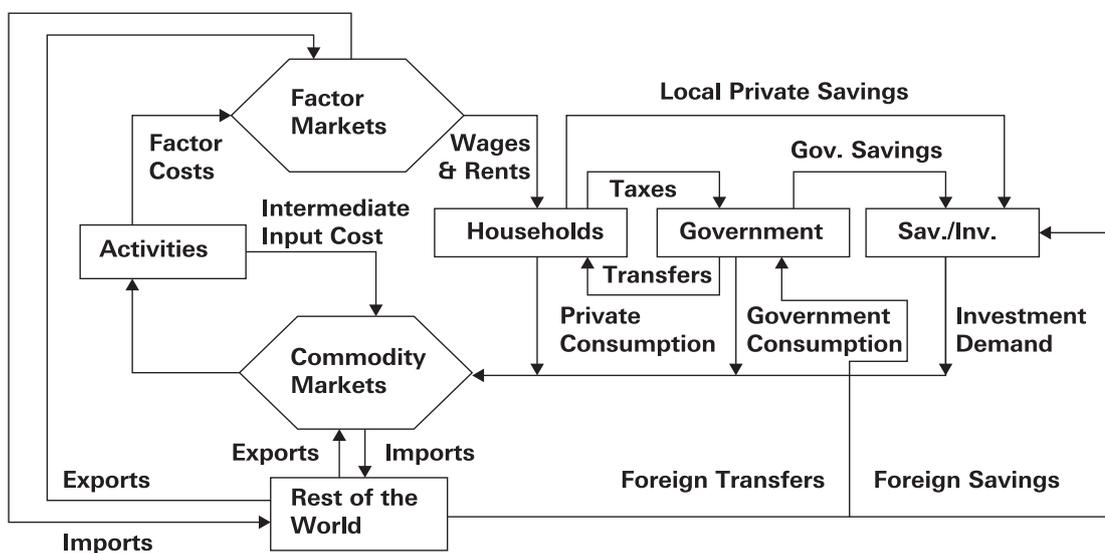
1. A Social Accounting Matrix (SAM), which is a dataset that represents financial flows and economic transfers between all agents during a given period of time, typically a year. The domestic markets for goods, services and factors are represented, as well as households, private sector firms, government institutions

and non-governmental organizations operating in the country during the chosen period of time, through their economic and financial activities. This matrix provides a snapshot of the whole economy of a country (or even the whole world) at a given point of time. It distinguishes a number of sectors, commodities, production factors and types of households and includes an input-output table that reflects the consumption of inputs and production factors by each industry, and therefore, reflects the technology used. Sector coverage ranges from relatively simple representations of capital, labour and intermediates to highly-detailed representations of specific sub-sectors.

2. An algebraic model, consisting in a set of equations reflecting the relationship between the different economic agents, calibrated on the basis of the flows captured in the social accounting matrix. These equations could, for example, represent the behaviour of households through their budget constraints or the profit maximization of firms in each industry given the technology and the supply of production factors at the period of activity.

Figure 1

Economic blocks and financial flows within a CGE model (Lofgren et al. 2001)



The combination of the SAM and the algebraic model allows for the simulation of a large range of public interventions or policies, identifying and tracing their multiple impacts throughout the economy.

We develop a general equilibrium model to represent the economy of Cambodia, which is very similar to the one we used for our initial study on social protection (UNDP 2017). Its theoretical framework is borrowed from the International Food Policy Research Institute (IFPRI) standard CGE Model (2001) and adapted to analyse social protection schemes that include graduation packages. The main differences on IFPRI CGE models are described in the next subsection, where we explain how we modified the conventional structure linking households to production.

Our baseline year is 2016, for which we have both detailed national accounts and a national socio-economic household survey – CSES which we used in Section 1 to estimate the cost of social safety net programmes.

We also use data from the Ministry of Economy and Finance (MEF), to estimate direct and indirect taxes on goods and services, excise duties and import tariffs collected that year. The Table of Fiscal Operations (TOF) provides us with Government revenues and expenditures, consumption and investment (MEF 2019). Data on trade are extracted from the World Bank (2018) and IMF (2018) databases, together with macroeconomic indicators for public and private savings and investment, remittances and financial transfers abroad.

In 2016, the OECD published the first input-output table for Cambodia (OECD 2016). Up until this publication, there were no estimates of the intermediate consumption of goods and services used by the Cambodian production sectors, at a two-digit industry level. This table provides a detailed valuation of what is used for production by each sector: it provides technical coefficients for intermediate consumption and production factors for each productive activity in Cambodia in 2011. We use these technical coefficients to estimate intermediate consumption by production sectors.¹²

¹²Technical coefficients are estimated every few years for non-OECD countries, as they only vary, at the macroeconomic level, with sizeable structural and technological changes. It is common practice to apply these coefficients on new production levels from year to year until new ones are calculated.

The 2016 CSES provides us with a detailed account of household employment, earnings, and savings. It also reports on productive assets and production factors, such as land, labour and capital. The consumption component of the survey provides a detailed recording of all goods and services bought, with their amount and frequency. This survey, therefore, allows us to create detailed income and expenditure accounts for each of the household groups in the SAM.

Given the objectives of our study, we create five groups of households based on their geographical location and distance to their corresponding poverty lines. The first three groups consist of urban poor, urban non-poor and rural non-poor households. Since our study also aims to analyse the impact of graduation-based interventions, we create two rural poor household groups. One group will receive cash transfers under the social protection programme scheme, as described in Section 1. The other group would be eligible either for the same allowance as the first group or they would receive a graduation package, depending on the programmes that the simulation aims at replicating. This distinction between rural poor groups 1 and 2 allows us to differentiate the benefit received by each household under the scheme studied. The details of what each household group receives under each scheme will be explained in the following subsection.

This SAM is disaggregated into 22 production sectors, 21 commodities, 7 production factors, 3 taxes and 5 households' groups, while institutions include the government and its public administrations as well as the 'rest of the world' (Table A2 in the appendix).

Linking the targeted households to their local economy: a modelling innovation

As standard CGE models aggregate production factors from all households by type at the sector level, their structure prevents tracing the impact of the transfer of productive assets to beneficiaries' households on their own productive activities. As a result, it is not possible to trace the impact of an increase in workers' productivity beyond its impact on the aggregated labour supply. Similarly, the transfer of productive assets to targeted households cannot be captured through its impact on the household specific income, beyond the pooled factor income at the sector level and for the production that it contributes to. As can be seen in Figure 1, there is no arrow linking 'households' and 'activities' in the CGE framework. However, one of the policies we aim to analyse relies on graduation packages that consist of a combination of cash, skills and productive asset transfers.

In order to account for numerous impacts of graduation packages on the beneficiary productive activities, innovatively, this study created an agricultural production account and productive factors that are specific to households in our targeted group, disaggregating agricultural production, unskilled agricultural labour and

agricultural capital. This new methodology allows us to adapt the CGE's macroeconomic framework to run microsimulations that are based on the characteristics of the main targeted household group, accounting for their productivity and factor endowment, for their sources of income and their reliance on rural markets.

We describe this methodology in detail in UNDP (2017). Similarly, in the present study, we create a household group composed of rural poor, for whom we create a specific agricultural production function, based on specific production factors that include labour, capital and land. With this new modelling framework, targeted households' participation in productive activities can be simulated in two ways: (i) their contribution to the rural labour market and to the production of goods and services, aggregated with the contribution from households in other groups; and (ii) their own production of agricultural goods, whether marketed or home consumed, represented and accounted for separately, produced from the labour and capital they already possess or receive through the transfers. By disaggregating production activities specific to the targeted households, this study is able to trace and measure the impact of graduation packages on household income and consumption, while also accounting for impacts on the local economy.

The present model allows production generated by the graduation packages, using both human capital and physical transfers to be marketed or home consumed. Most importantly, their impact on beneficiary incomes can now be identified, traced and measured.

This extension of the CGE framework combined with (a) a disaggregation of household groups that matches our targeting strategy; and (b) micro-simulations that account for the distance of every poor household to the poverty line. This allows investigation of the poverty impact at the household level as well as the potential macroeconomic effects of graduation packages.

Simulating the impact of social transfers and graduation packages

We consider two types of interventions: the first consists of social transfers and the second, graduation packages, as described in Section 1. **The modalities of the social transfers are not accounted for in the general equilibrium framework**, instead we use the estimate of the budget needed to reduce poverty by half – US\$80 million (as given above in Section 1). Since we adopt a general equilibrium framework here, the fact that transfers are individual or at household level, does not influence the results of the simulations. However, we use a system of microsimulation, described below, to capture the microeconomic impact on household consumption.

As discussed in Section 2, the Government of Cambodia can rely on either domestic or foreign resources to finance these programmes, i.e. through either (i) increase in direct taxes'

collection or (ii) development aid or debt restructuring. From a government expenditure perspective, foreign aid and debt relief have the same impact on the fiscal space: they both provide or free up resources that can be channelled towards social safety net programmes. In the general equilibrium framework, these two sources of public funding are modelled in similar ways and generate almost identical impacts. As for the direct tax revenue assumed here, it can be achieved either through an increase in official tax rates or through an improvement in collection and tax compliance, which are the modalities discussed in Section 2.

Both funding strategies present advantages from economic and political perspectives, which we quantify and discuss below.

We also consider an additional set of scenarios based on a mix funding strategy – the public budget would be raised in equal parts from both sources.

Table 8 below, describes the seven scenarios that we consider in this section. In order for them to be comparable, Scenarios 1 to 6 assume the same level of public spending: US\$80 million in transfers and a further US\$16 million for administrative costs, which brings the total public spending on social safety nets relatively close to the 1.5 per cent of the GDP target and corresponds to the average estimated cost of halving poverty incidence. Scenario 7 explores the second-year impact of programmes that include a graduation component – as such, it does not require any additional public spending.

Table 8

Components of policy interventions by scenario

	Intervention	Funding strategy	Shares of total funding
Scenario 1	Social safety net programme	Foreign assistance through ODA or debt restructuring	100%
Scenario 2	Social safety net programme	Direct taxes	100%
Scenario 3	Social safety net programme	Mix of foreign assistance & direct taxes	100%
Scenario 4	Social safety net programme & Graduation Packages	Foreign assistance through ODA or debt restructuring	50% 50%
Scenario 5	Social safety net programme & Graduation Packages	Direct taxes	50% 50%
Scenario 6	Social safety net programme & Graduation Packages	Mix of foreign assistance & direct taxes	50% 50%
Scenario 7	Second period for programmes that include graduation packages- i.e. Scenarios 4, 5 and 6		0%

Scenarios 1, 2 and 3 consist of social transfers to urban and rural households whose daily consumption does not meet the subsistence needs. So, each household in the urban and rural poor household groups in the model receives the same level of cash transfer. The administration of the programme requires an additional 20 per cent of the total cost of the transfers. The production of this service is entirely based on existing Cambodian administrative services, estimated and modelled in the data and in the CGE framework.

Scenarios 4, 5 and 6 include graduation-based programmes, and assume that the total public budget for rural households is shared equally between rural poor households in Groups 1 and 2. Those in Group 1 receive the same cash transfer as the urban poor, while households in Group 2 receive a graduation package. The total value of this package is equal to the transfer received by households in Group 1. It consists of a monthly allowance (40

per cent of the transfer size), a capital transfer which represents 40 per cent of the annual total transfer received at the beginning of the period and professional training inputs, the value of which, represents 20 per cent of the annual transfer.

We describe our model hypotheses in greater detail, in the two sections below, covering scenarios 1-3 and scenarios 4-6 respectively.

Scenario 7 investigates the second-year impact of programmes that include a graduation package. It, therefore, does not require any additional public funding. We assume here, that the human and physical capital accumulated in the first year of programme implementation continues to contribute to the following year's production by beneficiary households. These effects need to be accounted for in programme evaluation as they represent one of

the main justifications for the adoption of such interventions. Estimating the second-year impact of such programmes allows for capturing of their efficiency beyond the first year of implementation. As it is the case with any investment, a longer perspective is needed, which we adopt in scenario 7. Estimated second-year impacts will be taken into account when programme effects are compared.

For each of these seven scenarios, we analyse the impact of the social protection programmes from two perspectives: (i) household consumption and income distribution, which includes poverty incidence and (ii) the local and wider economy, analysing effects of new demand on production, trade and economic growth.

Microsimulations and poverty impacts

In order to refine the analysis of the impacts of each scenario on poverty incidence, a microsimulation tool was designed, based on the initial consumption of every household in the CSES for 2016. We estimate households' distance from the poverty line (the consumption threshold) and determine their poverty status. Household representativeness weights are then used to aggregate income, expenditure and transfers received from other households and from abroad at country level.

Each simulation provides new estimates of total consumption, in real terms, for each household group. The microsimulation tools allow us to apply these changes to the whole distribution, for each household in the survey. The distance of each household to the poverty line will, therefore, be modified, and with it, a new poverty gap and poverty headcount can be estimated at the group level. These microsimulations use consumption and income results from each scenario to estimate microeconomic impacts at the household's level, computing a new ex-post consumption.

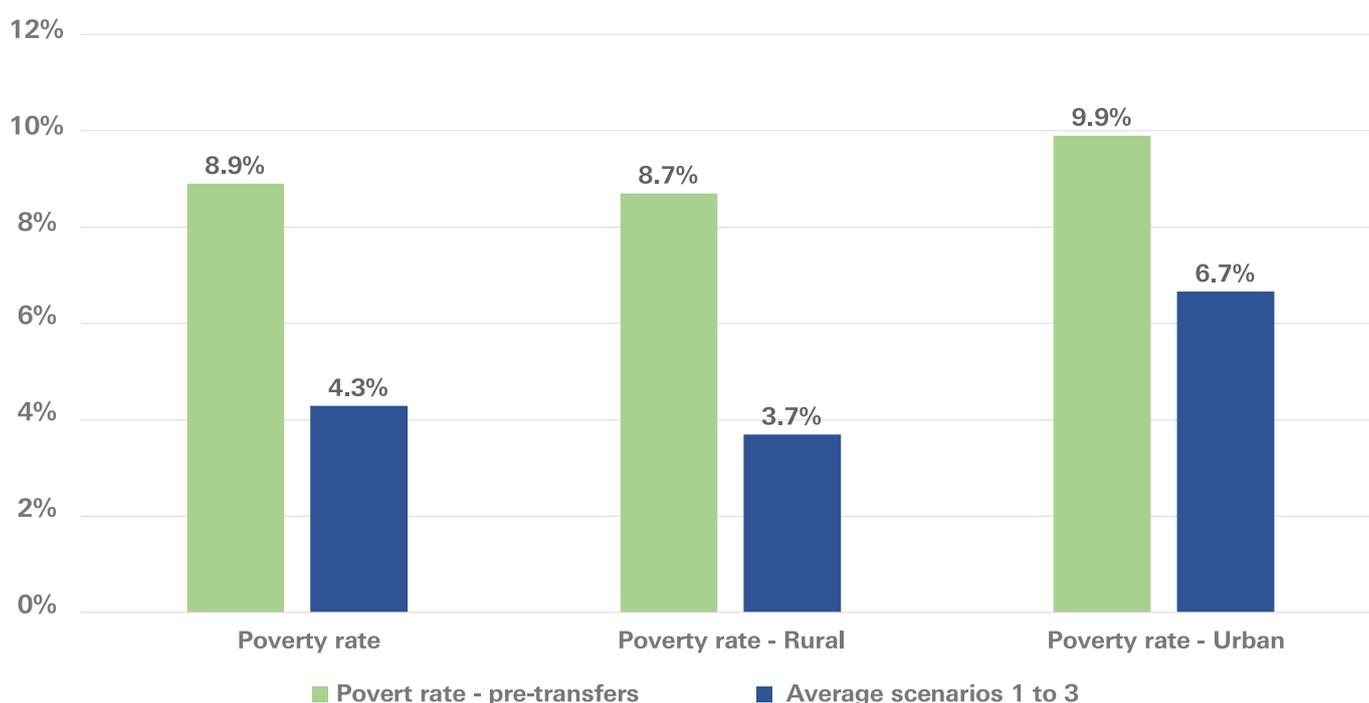
This methodology allows results to be refined at the microeconomic level, providing a precise and detailed evaluation of graduation models, beyond average per capita changes at the household's group level. This tool combined with the targeting strategy embedded in the Social Accounting Matrix and the CGE model, through the definition of household groups and the creation of a production function for the targeted households, provides estimates of the impact of interventions on the distribution of consumption across all households and allows for comparison of the benefits and trade-offs between interventions to be made.

Microsimulation results for social safety net programmes: Scenarios 1-3

The results of the simulations of social safety net programmes (scenarios 1 to 3) show quite similar impacts on income distribution and poverty incidence as those obtained in Section 1.

Graph 11

Poverty rates pre and post-transfers (Scenarios 1 to 3)

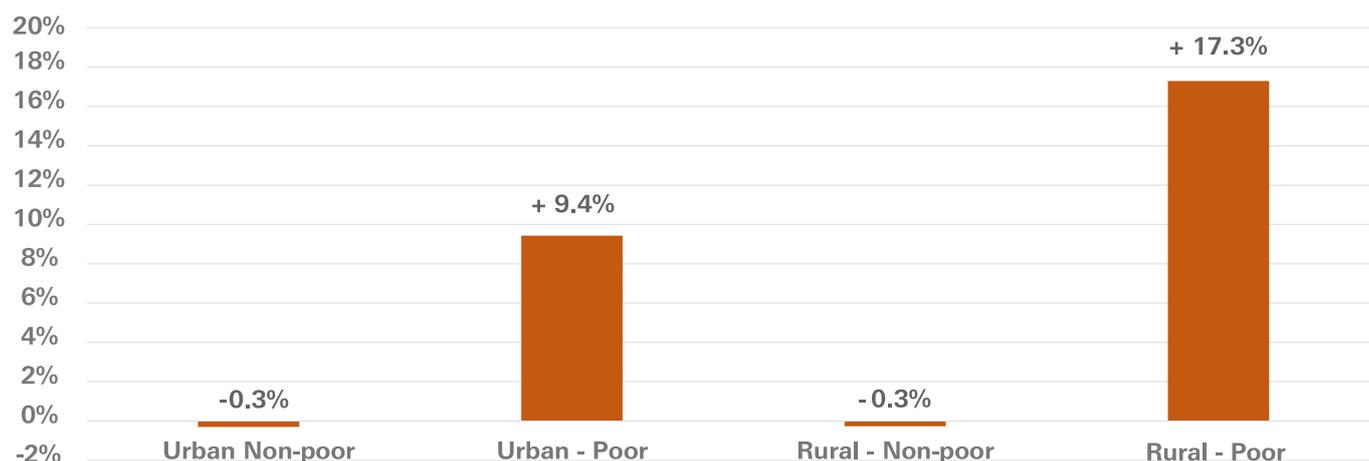


Source: Author's calculations

Here, the national poverty rate is halved, shrinking from 8.9 per cent to 4.3 per cent. A stronger impact is observed in rural areas, where poverty incidence falls to 3.7 per cent whereas, it is only reduced to 6.7 per cent in urban areas (Graph 11). The rural poor experienced a significant increase in their consumption, by 17.3 per cent, compared to 9.4 per cent for the urban poor. Conversely, the impact on non-poor remains minimal, with a contraction by 0.3 per cent (Graph 12).

Graph 12

Average impact of social safety net programmes on household consumption



Source: Author's calculations

Since the total amount of transfers represent a very small change at the macroeconomic level, the impact on GDP and other macroeconomic aggregates remains very modest (with the GDP increasing by less than 0.1 per cent).

The three scenarios only differ in their mode of funding. When transfers are paid for by direct taxes, the income of non-poor, both rural and urban, diminishes respectively by 0.6 per cent and 0.5 per cent, as would be expected from such a domestic funded redistribution policy. Social transfers from non-poor to poor households, which we observe in surveys and in macroeconomic indicators on savings and domestic private transfers, are affected in proportionate terms. Therefore, the post-transfer income of the poor is slightly smaller in the scenario (2) assuming a tax funded strategy. It is intuitive that when transfers are paid for by foreign aid or debt restructuring, their impact on income would be different. In one case, resources are taken from non-poor households to be redistributed, in the other, the funding is not taken from within the economy.

The redistribution of income induces a shift in demand for goods and services which benefits the local economy. The Cambodian poor tend to consume more products produced domestically than non-poor households. Therefore, income redistribution, through direct taxes, implies a change in demand for local goods, a small change in the terms of trade, with less imports and also less exports as domestic products are now redirected towards domestic markets.

From a political economy perspective, reliance on foreign aid raises issues in relation to dependency. If Cambodia has the domestic resources and fiscal space to cover the cost of such programmes, as Section 2 findings indicate, then no further increase in taxes would be required and social protection could be developed to the standards of this middle income country.

If a mixed funding strategy were to be adopted, for example, during the initial development and implementation phase, the impacts would be relatively beneficial economically. As the results from Scenario 3 illustrate, such a funding strategy would not impact non-poor households, while still stimulating the local economy. From a political economy perspective, this option would increase ownership and reduce dependency should aid continue to decline as it has in recent years. One option for this mix strategy could be to create a social protection fund where donors or development agencies could match domestic resources, as has been done in Senegal for example (World Bank 2018). This funding strategy could be adopted during the initial development phase and until Cambodia strengthens its capacity to mobilise domestic resources and to implement these programmes.

Graduation packages as part of social protection programmes: Scenarios 4-6

Rationale for graduation

The categorical transfers from the NSPPF aim to provide financial assistance to poverty-targeted population groups characterized by their demographic situations, whether they suffer from a severe disability, need support to raise and educate children or are above 65 years old. While such transfers would be efficient at targeting these vulnerable groups, they leave gaps in the life-cycle and entire demographic groups would be excluded from the programmes while in need of financial support to meet their subsistence needs. The relevance of so-called graduation packages for these population groups is substantial, since they are designed with the objective of enabling extremely poor individuals to generate their own streams of income. Graduation Models refer to multi-faceted programmes that aim at enabling the poor to ‘graduate’ out of poverty. They consist in a combination of measures that address one specific dimension or cause of poverty at the household level. Their five ‘building blocks’ are: (i) targeting the poor, (ii) supporting their consumption, (iii) transferring productive assets, (iv) providing skills and vocational trainings and (v) supporting their savings through financial training and services (Arevalo et. al. 2018; Hashemi et. al. 2016).

A growing number of countries nowadays, integrate this approach to their social protection strategy. In their review of graduation-based policies and programmes (Arevalo et al. 2018), the Partnership for Economic Inclusion consortium identified 99 graduation programmes implemented in 2017, benefiting more than 14 million individuals in 43 countries - among them, 34 governments engaged in graduation-based social policies. Through funding, leadership and involvement in graduation-component’s implementation, countries in Asia, Africa and Latin America have integrated this approach to their national social protection systems. This rapid development testifies to the efficiency of these livelihood improvement models to enable income generation for the poor who lack access to physical and human capital. Growing popularity among policymakers can be explained by the recognition of their economic benefits and of the fact that poverty graduation implies future independence from social assistance thanks to a diminution of the size of future populations in need of financial support.

In Cambodia, what would be the impact of a national programme that would combine the existing categorical transfers in the NSPPF with graduation-based interventions? Scenarios 4, 5, 6 and 7 respond to this question.

Modelling choices and hypothesis

The transfer of productive assets is allowed by the modelling innovation previously described. Our modelling framework leaves the choice of the type of productive asset open to participants. In the Cambodian context, there is no justification for limiting asset transfers to livestock, as is often the case in graduation programmes. Crop production also represents a substantial opportunity for poverty reduction and livelihood promotion in Cambodia. The sector has been a key driver of the recent substantial rural development and livelihood improvements. Supporting capital accumulation, land and labour productivity increases and technology adoption is a key determinant to sustain and foster its progress. If a multi-faceted programme is to be scaled-up to reach hundreds of thousands Cambodian rural households, initial endowment in productive resources needs to be accounted for. Since access to land and productive asset ownership are likely to vary among beneficiaries, the choice of asset transfer should to be flexible to respond to specific needs. So, while there is a clear rationale to transfer a chicken or a goat to a landless household, there is an equally strong rationale for allowing participants sufficient flexibility to choose over a larger range of productive assets depending on their existing land access and subsistence activities. Therefore, the interventions modelled here allow participants to opt for agricultural equipment or livestock of their choice. Since crop production and livestock are aggregated in the production technology data used (i.e. in the input-output table), they are also aggregated in our general equilibrium model. For that reason, the choice of productive assets by beneficiaries will not affect their impact at the sector level: in both cases they will increase the capital stock used to produce agricultural goods.

We modelled professional training inputs from existing systems of Cambodian education services in the CGE framework. While the training provided by graduation packages usually includes a component similar to existing education services, focusing on numeracy and literacy skills, they can also aim to provide professional and managerial skills training, which costing and economic impact require a specific modelling approach. Existing cost-benefit analysis and research results of the impact of this training component are still scarce and estimates of their effect on labour productivity or production technology is nearly non-existent. Farmers Field Schools (FFS) could however, provide us with a comparable example to what could be achieved by these professional training modules. The case of FFS piloted in Bangladesh by the Government in partnership with the Danish Government has been documented and rigorously evaluated by Danida (2011) and offers a reasonably close example for the graduation packages we seek to simulate in the present study. We, therefore, use their cost benefit calculation to calculate the cost of providing our beneficiary households with professional training for a period of one year, and base our impact on yields on their econometric estimates. We assume that the production of these specific services requires an equivalent funding per beneficiaries of the FFS in Bangladesh, but that the production function (intermediate inputs, labour and capital factors and technology) is the equivalent to this of existing education and training services in Cambodia.

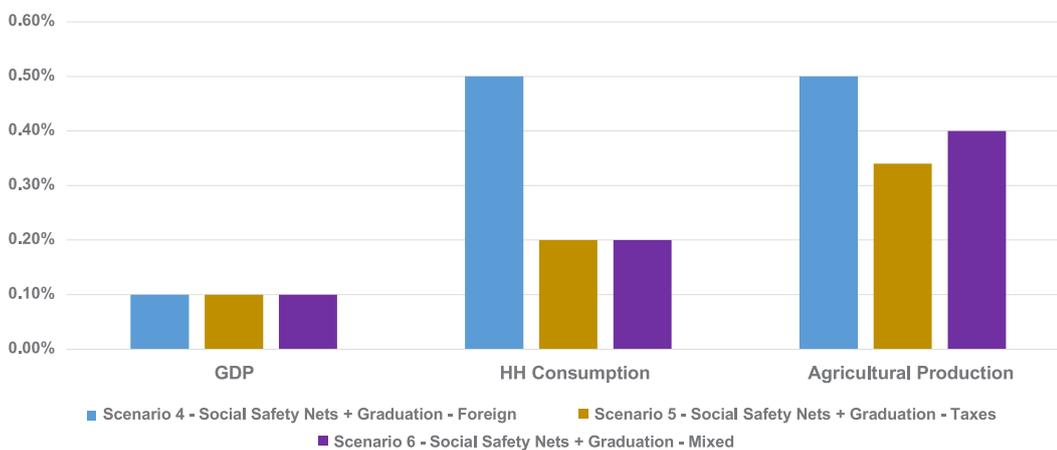
Existing research on graduation packages in Bangladesh shows that beneficiaries tend to allocate more time to their own productive activities when they receive productive assets. Banerjee et al. (2015) estimate that the corresponding adult labour supply from participants increases by 17.5 minutes per day on average across all country case studies. For Blattman et al. (2014), working hours improved by 17 per cent on average, as a result of non-cash transfers. To reflect this behaviour and in accordance with quantitative estimates in existing research, we assume that beneficiaries who receive productive assets dedicate an additional hour and a half on average every week to their own agricultural production of crops and livestock, which is a moderately low assumption given the range of these research findings.

Micro-simulation results for graduation packages

Scenarios 4, 5 and 6 have the same impact on Cambodia's GDP, which increases by 0.1 per cent in the first year of implementation. The substitution of social transfers with graduation packages improves domestic production, particularly in the agricultural sector (Graph 13). The transfer of physical and human capital to poor households enables them to participate in their local economy and produce new goods to meet the new demand generated by the cash transfers. We find that graduation packages stimulate the local economy and improve employment and income from labour and capital.

Graph 13

Impact on selected economic aggregates (Scenarios 4 to 6)

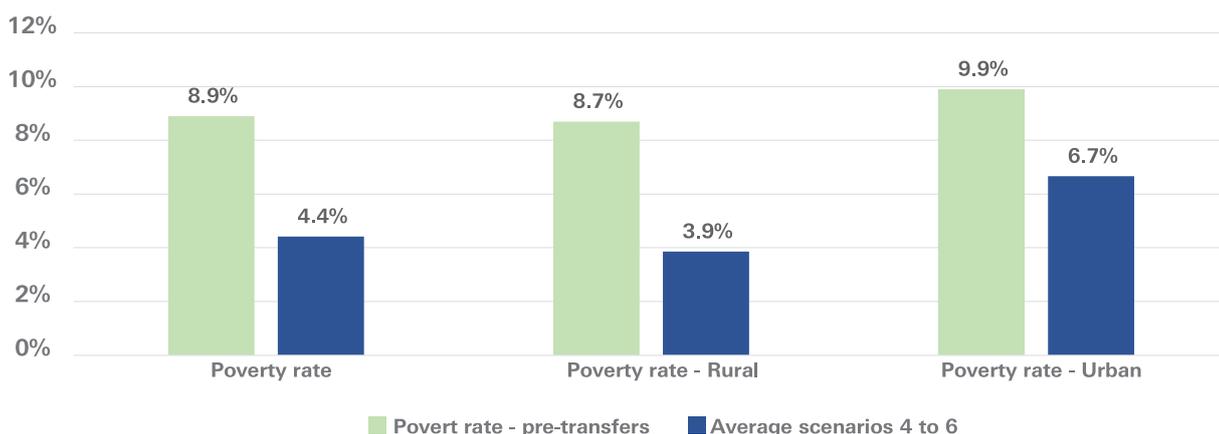


Source: Author's calculations

As shown in the graph 14 below, the national poverty rate is halved, falling from 8.9 per cent to 4.4 per cent. A stronger impact is generated in rural areas, where poverty falls to 3.9 per cent whereas it is only reduced to 6.7 per cent in urban areas. The rural poor experienced a significant increase in their consumption, by 17.3 per cent for Group 1 (who benefited from a cash transfer only) and by 14.5 per cent for Group 2 (who benefitted from a graduation package), compared to 9.4 per cent for the urban poor (Graph 15). Conversely, the impact on the non-poor remained minimal, with a 0.3 per cent contraction.

Graph 14

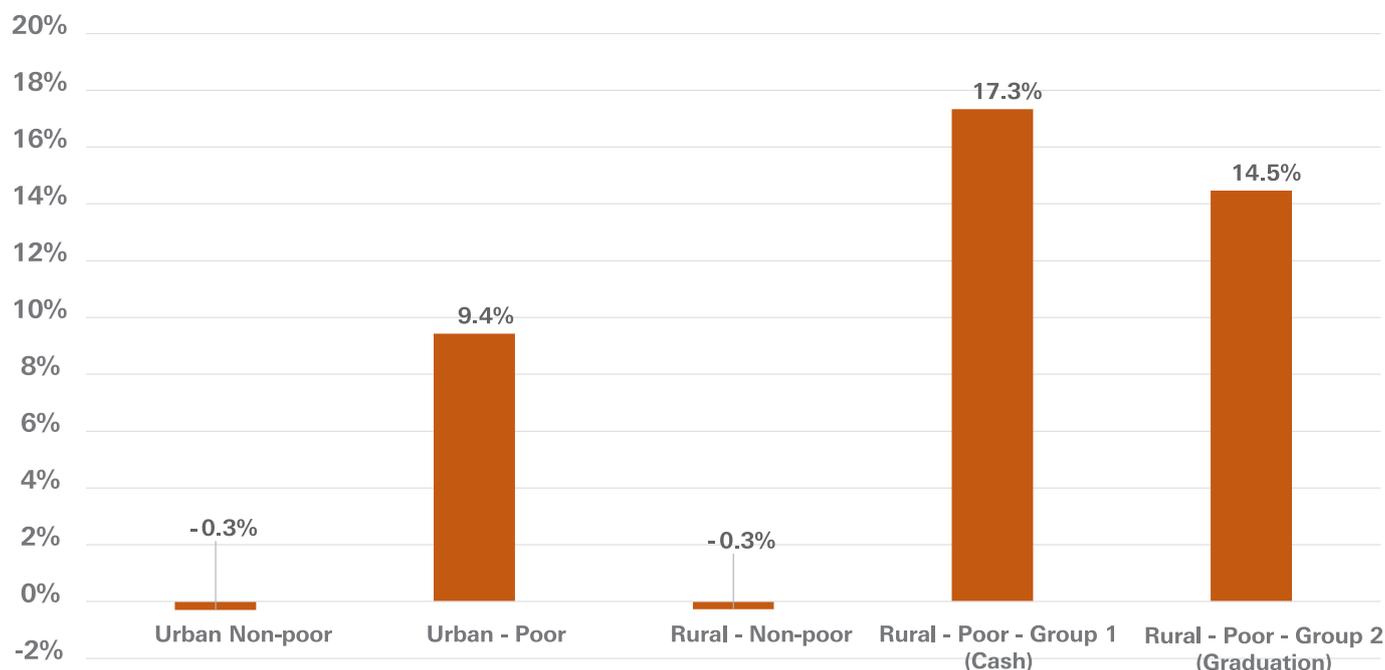
Poverty rates pre and post-transfers (Scenarios 4 to 6)



Source: Author's calculations

Graph 15

Average impact of Graduation packages on household consumption



Source: Author's calculations

When transfers are paid for by direct taxes (scenario 5), the income of non-poor, both urban and rural, experiences a stronger reduction, respectively by 0.6 per cent and 0.5 per cent (Table 9), than when the social policy is funded by foreign aid or debt restructuring, as expected.

Table 9

Increase in household consumption - Scenarios 4 to 6

Transfer per day	Scenario 4 - Social Safety Nets + Graduation - Foreign	Scenario 5 - Social Safety Nets + Graduation - Taxes	Scenario 6 - Social Safety Nets + Graduation - Mixed
Urban Non-poor	0.0%	-0.6%	-0.3%
Urban - Poor	9.7%	9.2%	9.4%
Rural - Non-poor	0.0%	-0.5%	-0.3%
Rural - Poor - Group 1 (Cash)	17.6%	17.1%	17.3%
Rural - Poor - Group 2 (Graduation)	14.8%	14.1%	14.5%

Source: Author's calculations

With regard to the graduation packages, two results need to be highlighted. First, only 40 per cent of the income increase for their beneficiaries come from the cash transfer they received for consumption support. The remaining part results from income generation from their new productive activities. This confirms the effectiveness of this holistic approach at enabling productive activities, generating new streams of income and allowing inclusion of participants in the local economy.

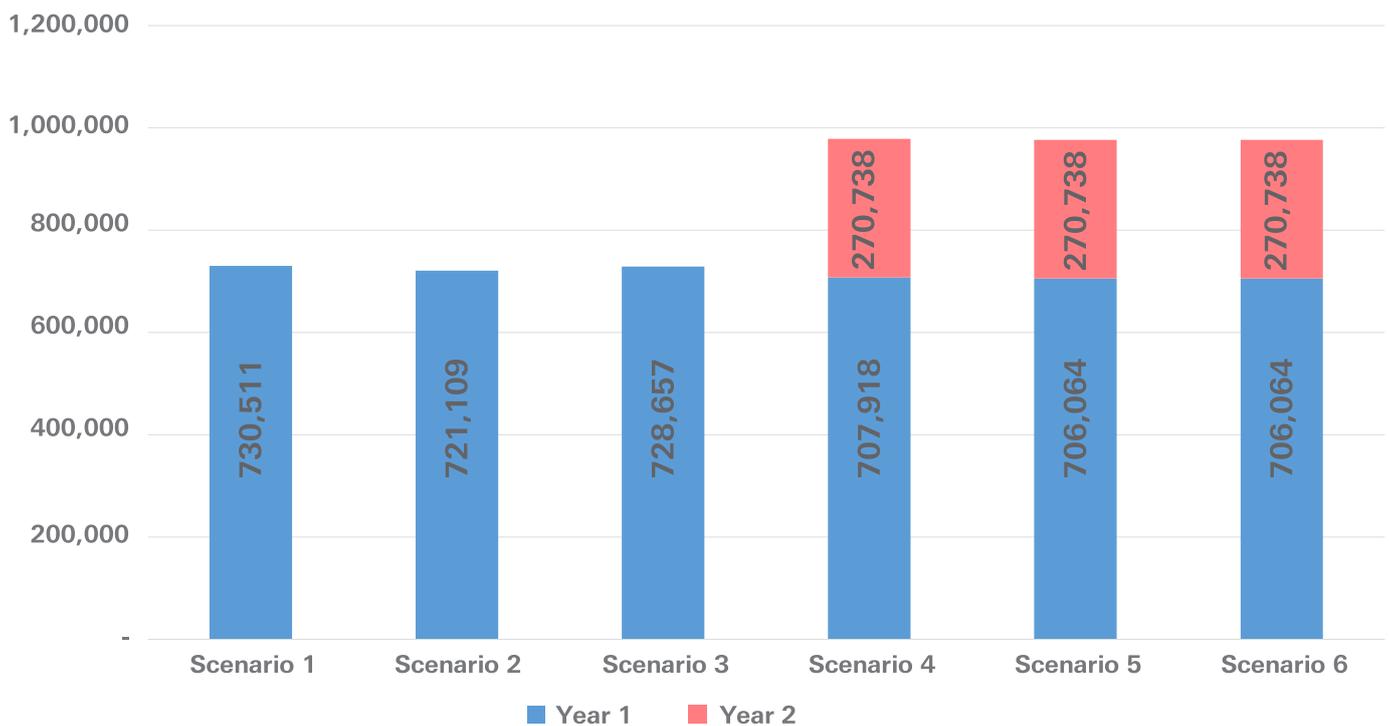
When aid funded, the total household income increases to an equal level as with cash transfers only, which shows that **the economic multiplier effect is such that income generation from graduation interventions compensate for the lower level of transfers received by some in this programme.**

Lasting effects: Scenario 7

The second notable result relates to the long lasting effect of productive assets and professional training. As shown in scenario 7, the cumulative impact of the graduation packages on income exceeds the one generated by social transfers only. Taking a long-term perspective, the impact of combined cash and graduation packages are greater than cash transfers alone.

Graph 16

Number of targeted poor lifted out of poverty over years 1 and 2



Source: Author's calculations

The long term benefits of graduation are particularly appealing to policy makers as they drive reductions in the population in need of social protection over time. These should be considered as part of a long-term strategy, aimed at shifting programmes from an assistance to an enabling focus that unleashes the productive capacity of eligible beneficiaries.

While these general equilibrium findings strongly corroborate results from microeconomic studies and field experiments conducted in a large number of countries around the world, it would be valuable to empirically test the microeconomic impact in Cambodia. Along these lines and in collaboration with Cambodia's National Social Protection Council, UNDP Cambodia is currently designing a pilot study to evaluate the extent to which graduation packages would benefit rural households living in poverty. This field experiment will focus on understanding the determinants of the decision to invest by rural households who receive cash transfers and analysing behavioural elements that influence the use of cash transfers by their recipients.

Conclusion



Conclusion

This study estimates the cost of social assistance programmes for Cambodia's urban and rural poor. It analyses the fiscal space needed to undertake these interventions, comparing options for policy financing. It then conducts a general equilibrium assessment of the impact that such measures are likely to have on the Cambodian economy.

Our quantitative analysis of household livelihoods suggests that poverty incidence in Cambodia has fallen below 10 per cent in 2016. Whichever social assistance programme Cambodia chooses to implement, we estimate that it will cost approximately US\$80 million in current terms to halve the incidence of poverty, allowing 500,000 Cambodians to meet their subsistence needs.

Comparing the cost and benefits of the NSPPF categorical transfers to a basic social protection floor, we find that categorical transfers require higher budgets for equivalent poverty reduction rates. The most economically efficient use of public funds would in fact be via specification of a social protection floor that accounts for household size or a scheme that complements lump sum transfers with categorical allowances.

For the NSPPF categorical schemes to be efficient, a transfer size of at least 20 per cent of the poverty line would be needed. This requires an increase in public expenditures for social protection programs below 0.5 per cent of the GDP, bringing it to a total of 1.4 per cent of GDP, which remains lower than the global average.

Given Cambodia income distribution, doubling this budget increase would only reduce poverty incidence by another 25 per cent. The average consumption of the poorest quintile is such that the transfer required for them to meet their subsistence needs would be at least 3 times larger than for the first quintile. We find that the representation of the elderly and young children increases in the poorest quintiles. For that reason, the NSPPF's schemes appear more efficient at supporting the needs of households further away from the poverty line compared to a social protection floor arrangement of equal cost.

While the NSPPF's categorical transfers present a number of targeting benefits compared to SPF safety net schemes, they nonetheless are likely to leave segments of the poor population without financial support. Given their specificities, graduation-based interventions could provide a compelling response to the unmet needs of those not targeted by any NSPPF policy. Our macroeconomic analysis shows the multiple economic benefits of such graduation schemes. They create new prospects for those who can contribute to Cambodia's economic growth processes, enabling them to generate new income streams and to become

independent from social safety net schemes. Our simulations show benefits not only at the household level in terms of poverty reduction but also from a wider economic perspective as all the economic indicators are improved with a mix of conventional schemes and graduation packages. Their economic multiplier effect is such that income generation from graduation interventions compensate for the lower level of transfers received by some in this programme. This also shows the longer time horizon benefits of providing these population groups with access to productive physical and human capital. While there will always be a need for conventional forms of social protection for vulnerable households, the potential of interventions that provide productive human and physical capital to those who can be integrated into the local economy, seems substantial.

Our macroeconomic analysis also shows that, regardless of their modalities, these social protection programmes would not compromise economic growth, even if fully tax funded. There are two reasons for this: first the cost of the policy we model remains relatively low and second, Cambodian poor mainly consume domestic goods and services and therefore their transfer-funded consumption is likely to stimulate local economies.

Cambodia's engagement in Public Finance Management reform has led to significant progress in resource mobilization and budget execution, restored budget balance and generated a significant surplus. The public budget surplus in 2018 is equivalent to approximately US\$150 million. This amount, if used for social safety nets could nearly close the poverty gap. It represents more than double the amount needed to bring the share of Cambodian's living in poverty below 3 per cent.

These results indicate that Cambodia has sufficient fiscal space to provide its poor with a basic safety net, potentially bringing its poverty level below the regional average. This presents the debate on affordability under a different light, confirming Cambodia's transition to middle-income status, which can engage in redistributive policies without compromising the country's economic growth.

Establishing a social protection system requires long term vision and strong political commitment, based on the willingness to promote social cohesion, reduce inequality and guarantee decent living conditions for all citizens. It is also based on the determination to create a strong human capital basis for future welfare creation. This study provides empirical evidence that such objectives are within reach of the Cambodian government, it demonstrates the affordability and efficiency of tailored social assistance interventions, should they be met with political will.

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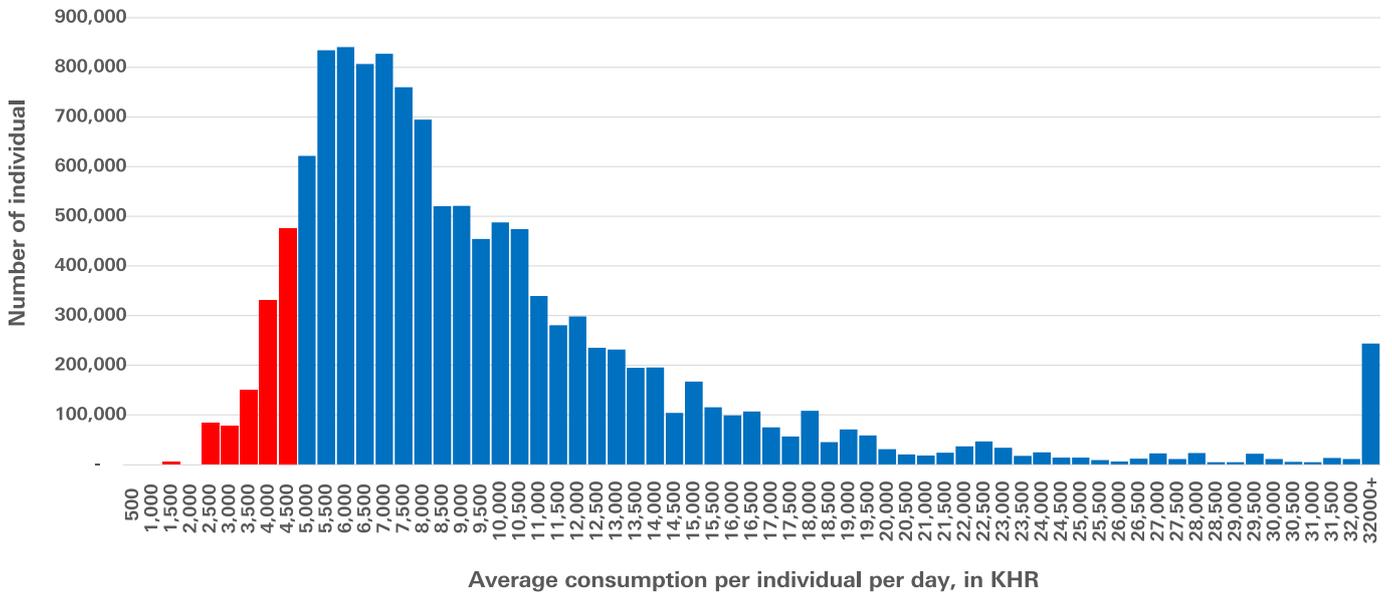
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Appendix

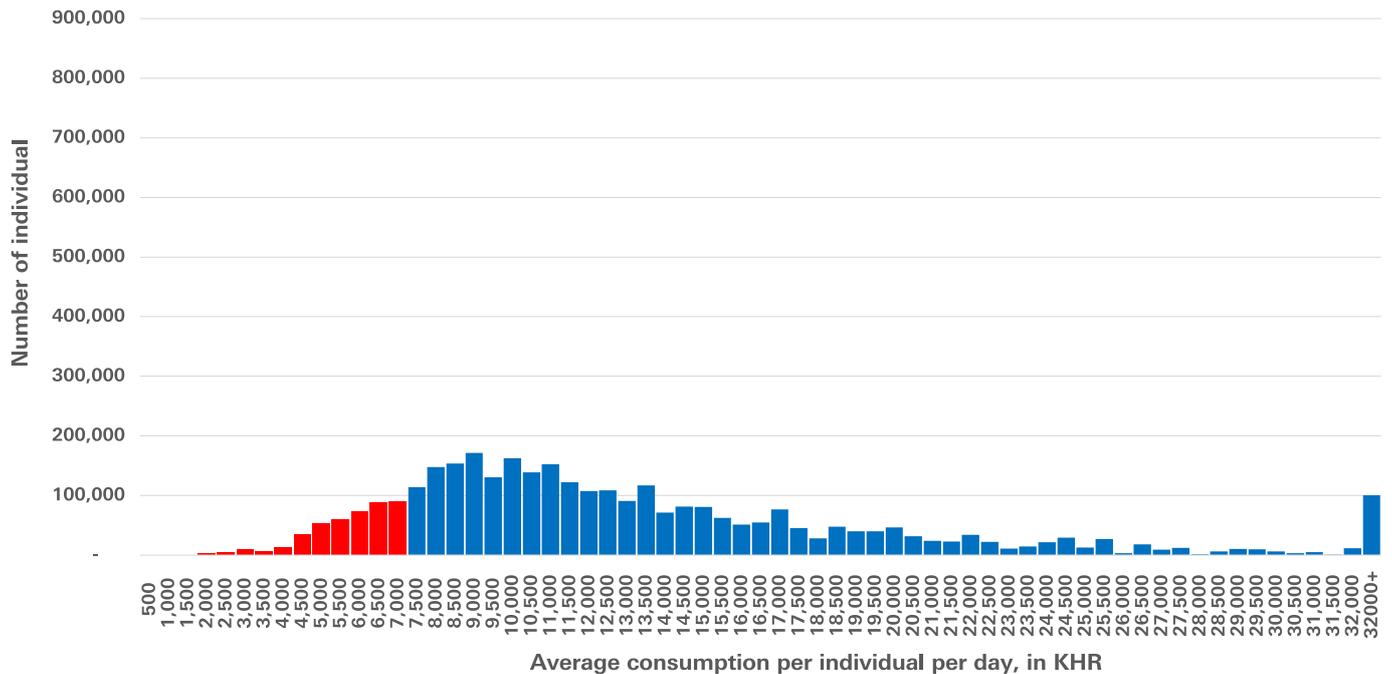
Graph A1

Distribution of consumption in rural areas



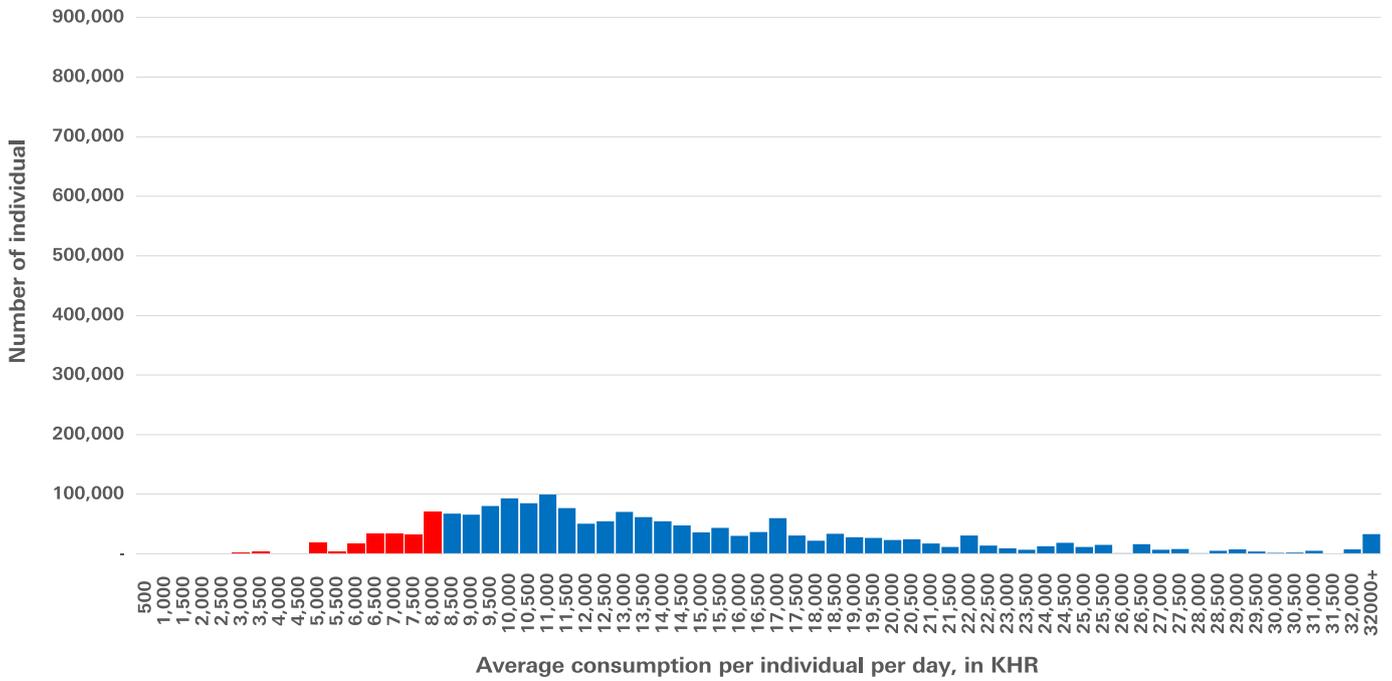
Graph A2

Distribution of consumption in urban areas



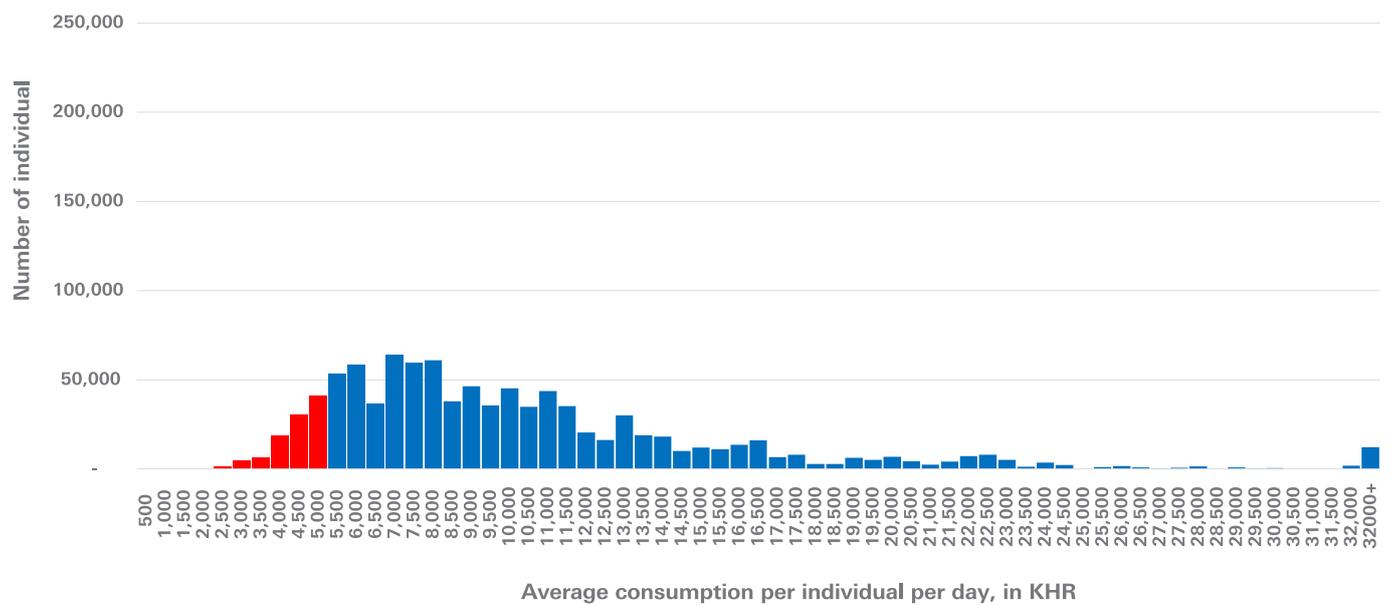
Graph A3

Distribution of consumption in Phnom Penh



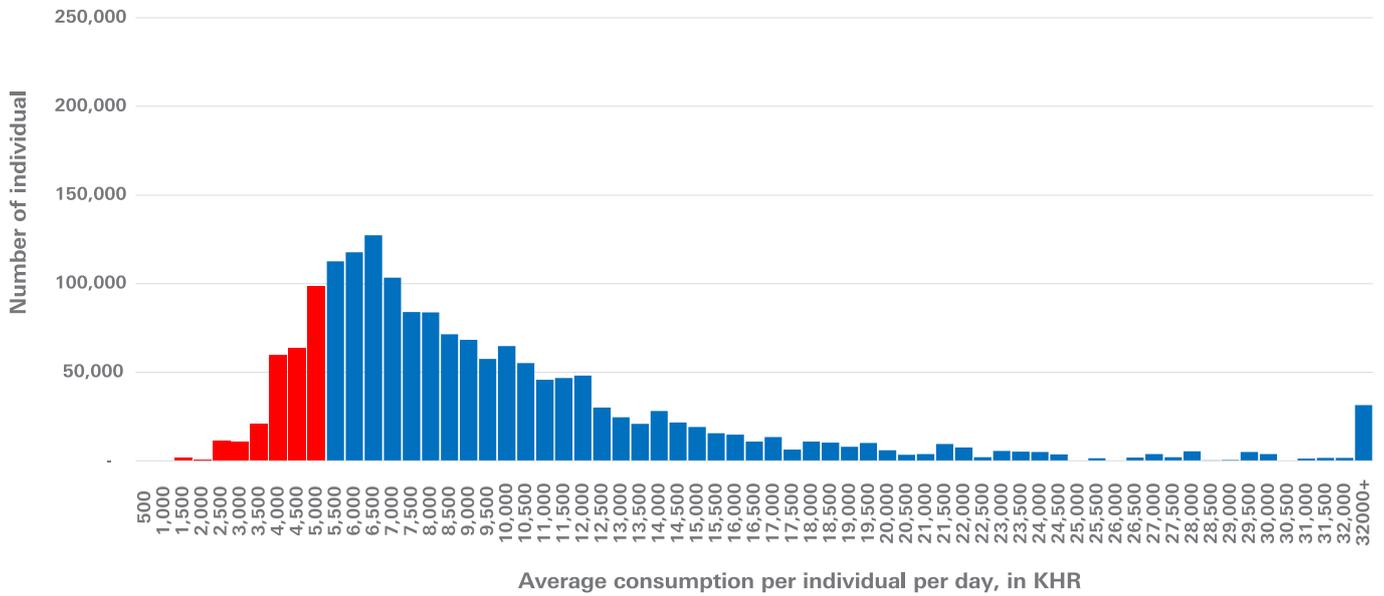
Graph A4

Distribution of consumption – over 65 year olds



Graph A5

Distribution of consumption – Children under 5 years old



Graph A6

Distribution of consumption – Children 5 to 15 years old

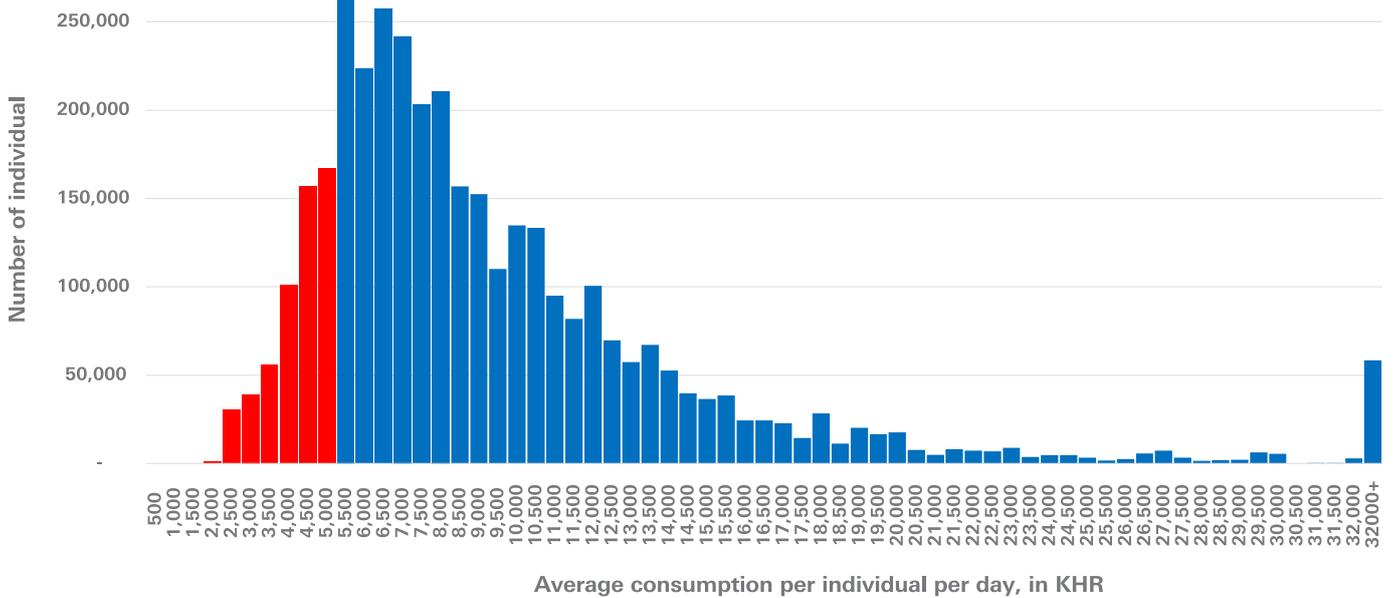


Table A1

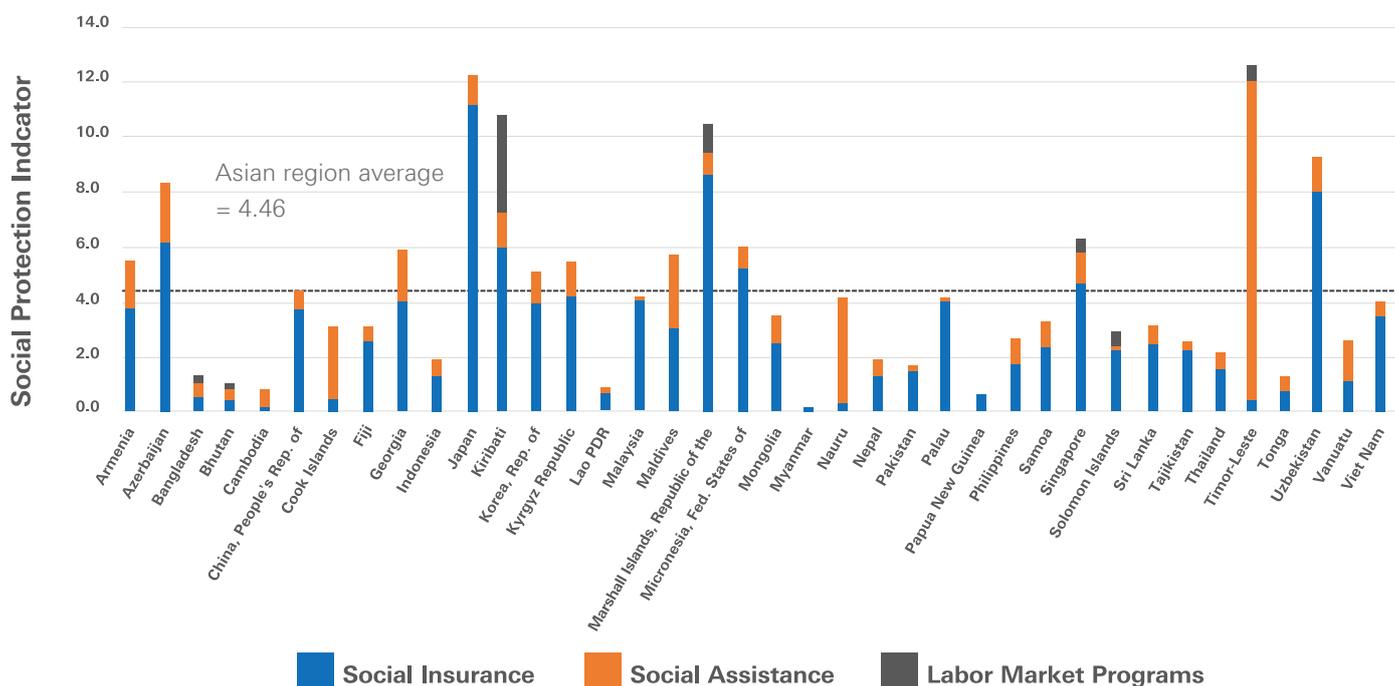
Modalities and impact of social safety net interventions in Section 1

	Transfer per day	New poverty head count	New poverty rate	Number of poor lifted above poverty threshold	% of poor lifted above poverty threshold	Cost per poor lifted above threshold, in US\$ per year	Total transfer budget, in million US\$ per year
NSPPF	1000 KHR for elderly+1000 under 5+1000 scholarship +1000 disab allowance	862,255	5.8%	545,134	39%	112	61.1
	1300 KHR for elderly+1300 under 5+1300 scholarship +1300 disab allowance	694,721.64	4.7%	712,667	51%	111	79.4
	2000 KHR for elderly+2000 under 5+2000 scholarship +2000 disab allowance	533,298	3.6%	874,091	62%	140	122.2
LUMPSUM	2000 KHR per household	1,017,633	6.5%	389,756	28%	115	44.6
	3000 KHR per household	769,245	4.9%	638,144	45%	105	66.9
	4000 KHR per household	602,544	3.8%	804,845	57%	111	89.3
	5000 KHR per household	508,286	3.2%	899,103	64%	124	111.6
PER HH SIZE	200 KHR per hh member	1,106,359	7.0%	301,030	21%	84	25.3
	400 KHR per hh member	903,514	5.7%	503,875	36%	100	50.6
	600 KHR per hh member	727,747	4.6%	679,642	48%	112	75.9
	800 KHR per hh member	545,641	3.5%	861,748	61%	117	101.1
	1000 KHR per hh member	446,758	2.8%	960,631	68%	132	126.8
	1200 KHR per hh member	339,970	2.2%	1,067,419	76%	142	151.6
LUMP + HH SIZE	600 KHR per hh up to 3 members then 200 for additional member	1,106,359	7.0%	301,030	21%	84	25.4
	800 KHR per hh up to 3 members then 200 for additional member	1,093,733	6.9%	313,656	22%	95	29.8
	1000 KHR per hh up to 3 members then 200 for additional member	1,057,884	6.7%	349,505	25%	98	34.3
	2000 KHR per hh up to 3 members then 300 for additional member	815,639	5.2%	591,750	42%	106	62.7
	2000 KHR per hh up to 3 members then 500 for additional member	726,724	4.6%	680,665	48%	110	74.6
	2000 KHR per hh up to 3 members then 800 for additional member	588,942	3.7%	818,447	58%	113	92.6
	2000 KHR per hh up to 3 members then 1000 for additional member	536,077	3.4%	871,312	62%	120	104.9

	Transfer per day	New poverty head count	New poverty rate	Number of poor lifted above poverty threshold	% of poor lifted above poverty threshold	Cost per poor lifted above threshold, in US\$ per year	Total transfer budget, in million US\$ per year
MIXED	1000 KHR per hh + 1000 for elderly + 1000 under 5 + 1000 scholarship + 1000 disab allowance	645,810	4.3%	761,579	54%	109	83.4
	2000 KHR per hh + 1000 for elderly + 1000 under 5 + 500 scholarship + 1000 disab allowance	630,186	4.2%	777,203	55%	111	85.9
	2000 KHR per hh + 1000 for elderly + 1000 under 5 + 1000 scholarship + 1000 disab allowance	542,517	3.7%	864,872	61%	122	105.7

Graph A7

ADB Social Protection Index, 2015

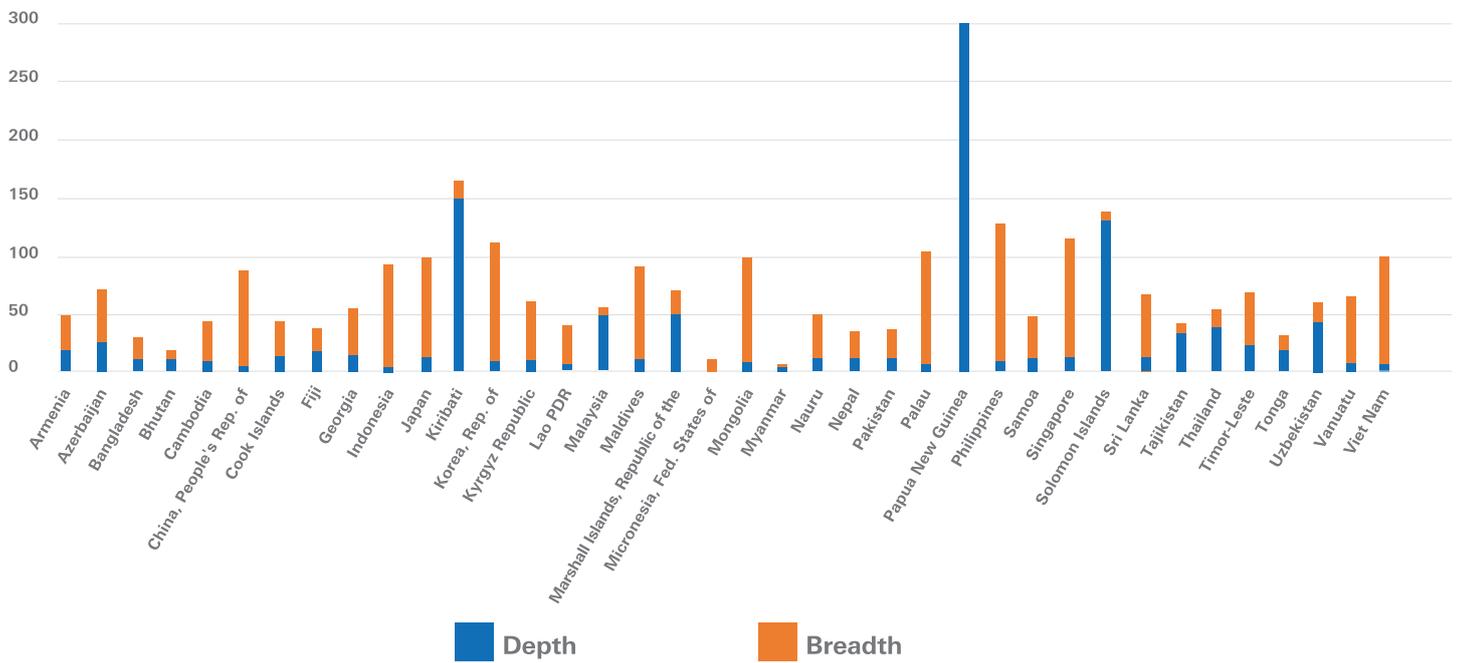


Asian Development Bank, SPI online database, accessed on 04/05/19

Note: Calculated as the ratio of total social protection expenditures to total potential beneficiaries for the numerator and GDP per capita is the denominator

Graph A8

Social Protection Index – Breadth and Depth, 2015



Source: Asian Development Bank, SPI online database, accessed on 04/05/19

Note: Breadth represents the ratio of actual beneficiaries to potential beneficiaries of social protection programmes. Depth is based on the average expenditure per actual beneficiary.

Table A2**Social Accounting Matrix accounts**

Main accounts	Description of disaggregated accounts
Production activities	Agriculture, hunting, forestry and fishing Agricultural production by households in Group 2 Mining Food products, beverages and tobacco Textiles, textile products, leather and footwear Wood, metal, rubber & other materials Petroleum products Machinery & equipment Computer and electronic equipment Motors, vehicles & transport equipment Other manufacturing Electricity, gas and water supply Construction Wholesale and retail Hotels & restaurants Transport and trade services Posts & telecommunications Real estate services, financial intermediation Public administration Education services Health services
	Other services
Commodities	Agriculture, hunting, forestry and fishing Mining Food products, beverages and tobacco Textiles, textile products, leather and footwear Wood, metal, rubber & other materials Petroleum products Machinery & equipment Computer and electronic equipment Motors, vehicles & transport equipment Other manufacturing Electricity, gas and water supply Construction Wholesale and retail Hotels & restaurants Transport and trade services Posts & telecommunications Real estate services, financial intermediation Public administration Education services Health services Other services

Main accounts	Description of disaggregated accounts
Factors	Agricultural labour
	Agricultural labour- targeted households
	Non-agricultural labour
	Agricultural capital
	Agricultural capital-targeted households
	Non-agricultural capital
	Land
Households	Urban non poor
	Urban poor
	Rural non poor
	Rural poor – not targeted
	Rural poor- targeted
Other institutions	Enterprises
	Enterprises- targeted households
	Government account
	Rest of the world account
Taxes	Activity taxes
	Institution taxes
	Import taxes
Others	Savings and investment account
	Changes in stocks



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