Working paper 620

# Uneven floors: targeting categorical transfers for poverty and inequality reductions

**Martin Evans**
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## Key messages

The Sustainable Development Goals commitment to raise social protection coverage is framed, in the short to medium term, in terms of poverty reduction and 'leave no one behind' principles.

The commitment to social protection floors for children, older people and people with disabilities is weakly focused on short-term poverty reduction and on prioritising the most disadvantaged and, in some countries, can present a fiscal challenge to implement in the short term.

The analysis in this paper sets out approaches to introduce elements of targeting of social floors to improve poverty reduction in the short term and allow the expansion of coverage to fewer poor people over time, supporting the progressive realisation of social protection floors.

Examples of such targeting are to focus on the older populations and on those living with severe disabilities, on children in lone-parent households and others who can be shown to be more disadvantaged than children or older people in general. Targeting using these approaches does not involve any test of income or wealth.

The costs of targeting cash transfers to sub-groups of children and older people and on people with severe disabilities are considerably lower than current estimates of immediately introducing full social protection floors and display higher cost effectiveness.

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# Contents

# Display items

## Tables



## Figures

# Acronyms/Glossary

| | |
|---|---|
| **CRC** | Convention on the Rights of the Child |
| **ECIV** | Rwanda Integrated Household Living Conditions Survey |
| **HIES** | Household Income and Expenditure Survey |
| **ILO** | International Labour Organization |
| **LICs** | low-income countries |
| **LNOB** | Leave No One Behind |
| **LSMS** | Living Standards Measurement Survey |
| **MICS** | Multiple Indicator Cluster Survey |
| **SDG** | Sustainable Development Goal |
| **UNDESA** | United Nations Department of Economic and Social Affairs |
| **UNICEF** | United Nations Children's Fund |
| **WHO** | World Health Organization |

# 1 Introduction

## 1.1 Motivation and approach

Social protection has a specific role in 'ending poverty in all its forms everywhere', in the words of Sustainable Development Goal 1 (SDG 1). Its role is 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'.[1]

The motivation for this paper lies in the language of that SDG target. The term 'nationally appropriate' is taken to include fiscal capacity and affordability (as well as administrative capabilities). The terms 'systems and measures for all' and 'by 2030 achieve substantial coverage of the poor and vulnerable' are taken together to explicitly suggest the need for prioritisation: both over time and towards the poorest in the first instance. Coverage 'for all' will thus grow as priorities allow, echoing the principle of 'progressive realisation' of economic and social rights – evolution from an original commitment to 'universality in principle' to 'universality in practice'. Another SDG principle also supports this interpretation: to 'leave no one behind', focusing on the poorest and most disadvantaged first (see Samman et al., 2021). The term 'progressive' has two complementary meanings: incremental progress and pro-poor (not 'regressive') effects.

The wording of the SDG 1 target, 'including floors', is an explicit reference to the policy set out by the International Labour Organization (ILO) of designing a set of categorical transfers to cover old age, childhood and disability (ILO, 2012). The approach this paper sets out, on targeting these transfers, aims to answer two questions:

- What data-driven evidence-based approach can help define optimally pro-poor design of categorical transfers to reduce monetary poverty and inequality?
- How can the concept of social floors use 'leave no one behind' principles to prioritise the poorest and most disadvantaged?

Prioritisation requires 'targeting' to poor and disadvantaged people, but the assumptions underlying the concept of social floors do not. Social floors do not include any 'safety net' social assistance scheme for the poorest but focus solely on transfers based on individual population characteristics, such as age, pregnancy and disability (Durán-Valverde et al., 2020). This paper focuses on how targeting can be applied to the social floors without means-testing.

Many commentators reduce policy choices on transfers to a binary one: 'selective' or 'universal'. 'Universal benefits and services are benefits available to everyone as a right, or at least to whole categories of people (like "old people" or "children") ... Selective benefits and services

1 See https://www.un.org/sustainabledevelopment/poverty/.

are reserved for people in need' (Spicker, 2014: 23). Most economic discussions on targeting consider a range of trade-offs arising from different approaches of community-level targeting, geographical targeting, means-testing, and proxy-means testing and 'self-targeting' (see Hanna and Olken, 2018). Simple typologies that align targeting solely with selectivity or means-testing do not stand the test of empirical practice. At the programme level, social protection may adopt more than one targeting approach – for instance, community targeting and proxy means-testing (such as programmes of social assistance in some countries in sub-Saharan Africa) or categorical approaches that have a 'rich test' to means-test those on the highest incomes (e.g. child benefits in South Africa). At the system level, social protection will usually mix targeting approaches in different types of programme in order to cover the population through social insurance and various non-contributory social assistance schemes, some of which may be means-tested. Much recent discussion of targeting has considered means-tested, categorical and other forms of transfer to assess efficiency and poverty-reduction effectiveness across social protection approaches (Coady and Nghia-Potr, 2020). We focus solely on categorical transfers and optimising the reduction of poverty and inequality within the concept of 'social floors'.

Social floors are one type of non-contributory 'categorical transfer'. These use a simple approach to targeting:

> in which all individuals in a specified category – for example, a particular age group or region – are eligible to receive benefits. This method is also referred to as statistical targeting, tagging, or group targeting. It involves defining eligibility in terms of individual or household characteristics that are fairly easy to observe, hard to falsely manipulate, and correlated with poverty (Coady et al., 2004: 14).

One of the characteristics of social floors is that little attention is paid to the 'correlation with poverty' suggested by Coady and colleagues (2004); more normative arguments about 'vulnerability' are preferred.

When it comes to targeting of social floors there are important arithmetic principles that cannot be avoided. They rely on *individual* population characteristics (such as age and disability), whereas poverty and inequality rely on monetary welfare measured at the *household* level. This means that population coverage based on individual characteristics is heavily mediated by the households in which they live and the proportion of the whole population who live in such households. For example, a transfer to every child of a certain age will be diluted in its effect by the proportion of households who have children of that age, household size, and the percentage of the population who live in households with children. Targeting aimed at reducing poverty can thus occur by identifying small sub-groups who will have less 'dilution' of poverty impact – that have smaller aggregate numbers of co-resident household members in households that are predominantly poor.

The other important arithmetic issue is about the relationship between the value of transfers, the size of the affected population and the overall budget. In a fixed budget, the more people who are entitled reduces the transfer value. By identifying poorer and smaller populations, the potential value of transfers is maximised alongside any improved targeting towards poorer households, and consequently can help reduce poverty.

This paper explores and exemplifies these targeting design options, and their different impacts on reducing poverty. Our argument is not that social floors are not a good idea. Far from it. Current costings of social floors (Ortiz et al., 2017; Durán-Valverde et al., 2020)[2] propose costs based on full implementation of transfers based purely on data on aggregate population size – with no appreciation of micro-data on households or individuals. As a result, these costings cannot estimate the impact on poverty or inequality. The resulting costings for social floor cash transfers (not including health) lead to potentially large and unaffordable demands, particularly for poorer countries:

> The total cost of providing the four social protection benefits (maternity, children, disability and old age) to 100 per cent of potential beneficiaries in 2020 amounts up to 8.5 per cent of GDP for low-income countries, 3.4 per cent for lower-middle-income countries, and 3.2 per cent for upper-middle-income countries (Durán-Valverde et al., 2020: 29).

These findings of unaffordability have led to the call for a 'global fund' for social protection.[3] If successful, it is highly unlikely that any global fund would be large enough to meet such shortfalls and would have to prioritise both countries and population coverage within countries. Targeting is thus central to any progress on funding the social floors agenda.

The paper is structured as follows. The remainder of this section discusses the underlying distributional issues of households and individuals and the data used for the analysis of targeting approaches. Section 2 considers different iterations of the social floors by considering sub-groups of children, elderly and disabled people that improve a poverty focus. Section 3 considers the costs of options from a primary focus on reaching the most disadvantaged first.

## 1.2 Individuals, demographics and welfare distribution

Children, older people and people with disabilities are not unambiguously identifiable as 'vulnerable' solely on the basis of such simple definitions using age and status. Normative assumptions about needs and vulnerability reflect age as a proxy for life-cycle constraints on earnings and resulting 'dependency'. Disability as a targeting category makes assumptions about

2 Such estimates include health insurance and universal healthcare provisions, which we do not consider in this paper.

3 See www.socialprotectionfloorscoalition.org/2020/12/whats-next-for-social-protection-a-global-fund-for-social-protection/ for example.

additional needs (care needs, additional costs involved in earning an income and living with a disability) as well as income vulnerability. But all these potential individual vulnerabilities are mediated by household-level factors.

Household size and household composition are important mediators of outcomes for individuals: children, older people and people with disabilities live with other people who have other characteristics. We know that household size and composition are endogenous to overall economic well-being and thus the 'vulnerability' of individual members. For example, we know that the adoption of orphans in sub-Saharan African countries is selective, and they consequently tend to live in wealthier households (Beegle et al., 2010). Similarly, older people often live with their adult children, and adult children with inter-generational responsibilities tend to have more economic resources. On the other hand, fertility tends to be higher in households with fewer economic resources – due to the level of education and access to reproductive health services and associated cultural factors, particularly among rural populations. We take such endogeneity as given and our simple arithmetic-based approach reflects a 'static' approach to simulating distribution and effects. Of course, in reality, policy-makers and analysts should consider the potential dynamic effects on co-residence (will household members leave, or new members arrive?) when considering how to design the transfers.

The key to targeting as a means to reduce poverty is to know where individual-level populations are located in the overall welfare distribution. For example, hypothetically, if elderly people live with the wealthiest of their adult children, their vulnerability from age alone may be a weak indicator of whether they are a priority when considering if they are 'left behind' in terms of material needs and poverty risk.

There is one fundamental flaw in relying solely on household-level factors, however: the de facto treatment of individuals within the household. It is accepted that sharing within households is rarely equitable and that women, children, people with disabilities and old people may receive less (or more) than a fair share. We will pursue this issue more comprehensively in a future paper on how to target though 'rules' that allow access to administration and receipt of benefit to be based on individuals within households (for instance, to primary carers of young children and to carers of people with severe disabilities). There is no such thing as 'perfect' targeting, just a commitment to reach the poorest first and a strategy to meet that commitment in the design of social floors.

We present our underlying approach of assessing distributional targeting based on addressing the following questions:

- How many? Population size of the direct beneficiary target group.
- Who do they live with? Population size of the indirect beneficiaries that are co-residents.
- Where are they in the welfare distribution?

## 1.3 Data

Our profiling and costing of social floors is based on analysis of micro-data from a nationally representative household survey. This kind of data is available in Living Standard Monitoring Surveys (LSMS and similar) and in Household Income and/or Expenditure Surveys (HIES and similar) in almost every country. Household-level income or consumption leads to a vertical ranking. In relative terms this can show 'quantile' status (the position in the overall distribution divided into equal portions – 'quintile' groups are used in this paper; the overall distribution split into five equal parts ranked from the poorest 20% successively to the richest 20%). Division into 'poor' and 'non-poor' categories can show absolute levels of need and resources.

We adopt an illustrative poverty threshold that gives a headcount poverty rate of 30% – meaning that all those with income/consumption below this level are poor, and all those above are not. The analysis also uses a 'poverty gap' measure, which is the average shortfall of income/consumption of the poor population compared to the poverty line: in other words, someone with an income of $15 who is poor against a threshold of $30 has a poverty gap of $15, or a poverty gap at '50% of the poverty line threshold'.

The analysis uses the current per-capita household 'disposable net income' as the baseline comparison for the effect of transfers. To assess the effect of the transfer, the analysis adds the transfer value to this level of income and re-computes the overall distribution. We use the baseline income to 'anchor' the comparisons to the original position – so that transfers are seen to reduce the original poverty headcount and gap, and that the distribution of the transfers, or 'benefit incidence', can be assessed on the original baseline quintile groups.

It is important to emphasise that the household survey we use is an illustrative data set to demonstrate the approach and methodology. The provenance of the data is largely irrelevant, and the simulations do *not* represent a policy proposal for transfer design even in the country where the data originated. With that said, the data is from Rwandan ECIV (Integrated Household Living Conditions Survey) for 2016–2017. This is an opportunistic choice as that data was available from research for the UKAID TaxDev project. The analysis is thus illustrative but not representative. Indeed, it is best to interpret the results as representing a worked approach of an analytical method; none of the proposals for transfer design in the following analysis should be taken to represent any suggested direction for Rwanda's social protection policy.

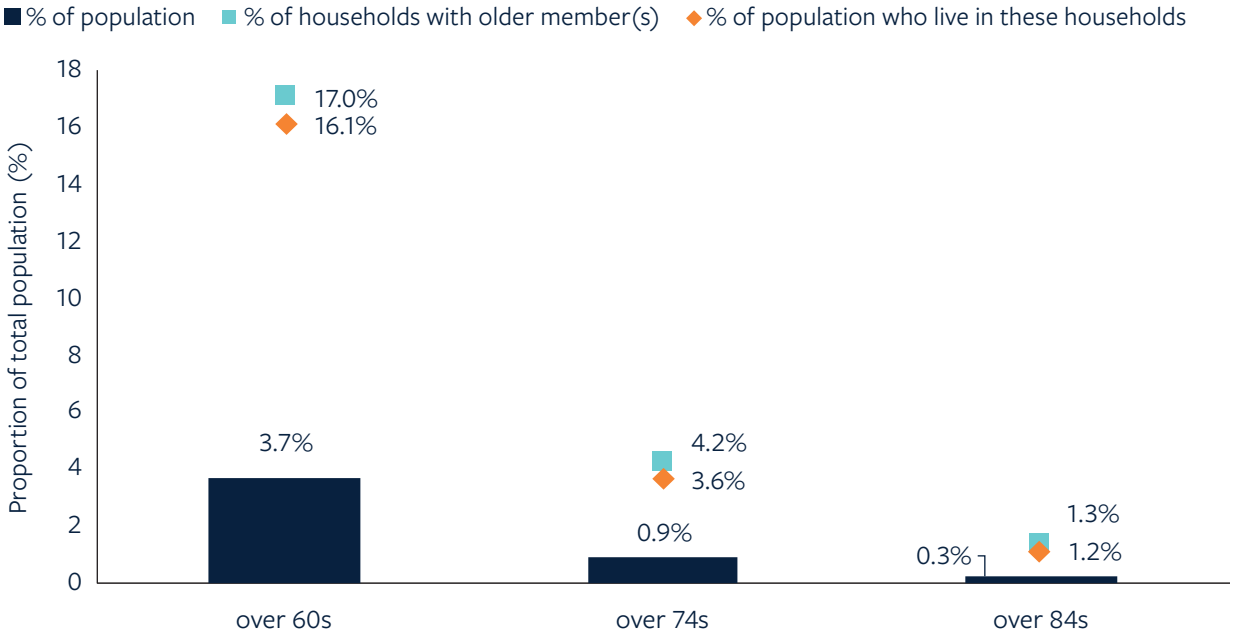
# 2 Profiling categorical populations

This section considers transfers for children, older people and people with disabilities. It considers direct and indirect beneficiaries of transfers, the distributional characteristics of these populations and then considers smaller sub-groups of poorer populations that could be considered within the larger categorical age definitions.

## 2.1 Older people

Social pensions are non-contributory transfers to older people that are not means-tested. The age of entitlement to social pensions will matter hugely both for the cost and financing of the programme and for its distributional effect.

**Figure 1** Social pension floor: population coverage



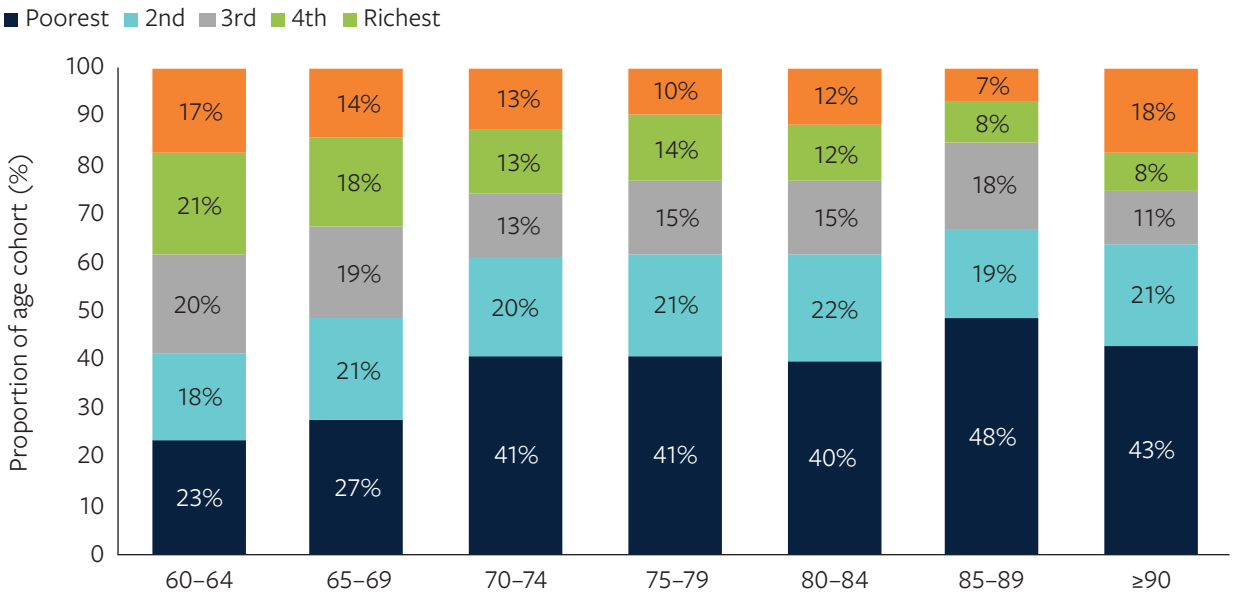

Source: Author's calculations from ECIV5

Figure 1 shows illustrative populations for social pensions and how these change for direct and indirect beneficiaries as the age for entitlement changes. A social pension at the age of 60 – such as the ILO 'social protection floors' – has the largest direct beneficiary population: 3.7% of the whole population. But the living arrangements for this group mean that 17% of all households contain someone of this age, and 16.1% of the population lives in these households. The 'dilution' of any social pension is thus considerable in its effect on poverty and inequality. When we consider entitlement at an older age, we see that direct beneficiaries fall considerably, to just 0.9% of the population aged 75 and older, and 0.3% for those aged 85 and over. Increasing the entitlement threshold to older cohorts also reduces the size of the co-resident populations and

thus reduces the dilution of the transfer: a social pension to all those aged 74 goes to 4.6% of households and to 3.6% of the population who live in them while, for the over-84s they represent 1.3% and 1.2% respectively.

The reduction of poverty and inequality are influenced by the position of older people in the overall welfare distribution. Figure 2 shows the quintile distribution of different age cohorts of older people. As the age of the five-year cohort rises, the proportion in the poorest two quintiles grows. For the 60–64 age group, 23% are in the poorest and a further 18% are in the next poorest (overall 41% in the bottom 40%). Representation in the bottom two quintiles rises from the age of 70 years and reaches over 60%, with over 40% in the poorest quintile.

**Figure 2** Quintile distribution of older population




Source: Author's calculations from ECIV5

A combination of demographics and assessment of distributional representation provides a clear picture of how priorities for a social pension floor could be considered: older cohorts are smaller and poorer on average and have less 'dilution' of any transfer effect.

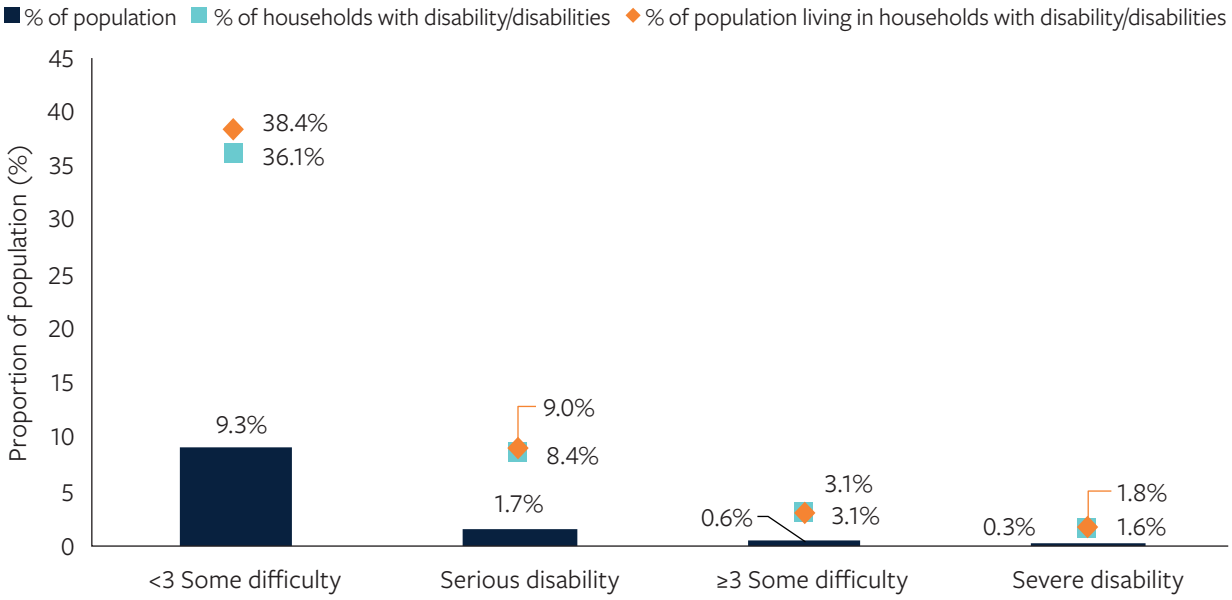
## 2.2 People with disabilities

Entitlement to a non-contributory disability benefit rests on an assessment of the level of disability (and potentially its type). We consider all forms of disability as represented by the Washington Group survey module that considers how the population (aged five and over) report 'difficulties' across visual, auditory, mobility, cognitive, speech and self-caring functions (Washington Group on Disability Statistics, 2020) Each area of functioning can be reported as having 'some difficulty', 'a lot of difficulty' and complete inability ('cannot x at all'). A person may well report multiple disabilities and different levels of disability. Our approach is as follows.

- First, we identify those who report a complete inability to function ('cannot do the activity at all') in any domain of disability. We call this 'severe disability'.
- Second, we identify the remaining population who report 'a lot of difficulty' in any domain of disability. We call this 'serious disability' but also note that some people report this level of disability in more than one domain.
- Third, we split those who solely report 'some difficulty' into two:
  - Those who report three or more domains in which they have 'some difficulty'
  - Those who report some difficulty in one or two domains.

Figure 3 shows the populations with disability using this classification.

**Figure 3** Disability prevalence

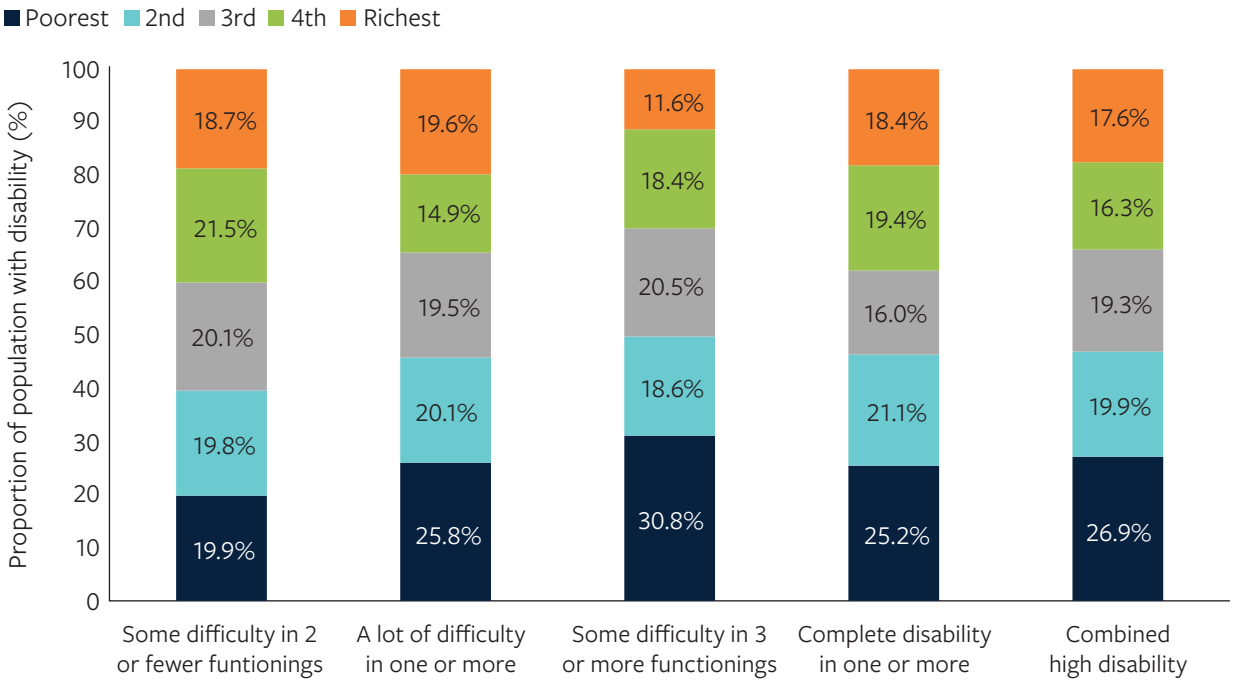



Source: Author's calculations from ECIV5

Figure 3 shows people who report 'some difficulty in two or fewer domains' as 9.3% of the population, but that 36.1% of households have one such resident member, and that 38.4% of the population live in those households. People with a lot of difficulty in at least one disability domain represent 1.7% of the population, in 8.4% of all households in which 9% of the population live. People with disability from having three or more areas of functioning in which they have 'some difficulty' represent 0.6% of the population, live in 3.1% of all households comprising 3.1% of the population. The most 'severe' disability definition affects 0.3% of the population and 1.6% of households in which 1.8% of the population live.

Policy-makers can consider which definition, or combination of definitions, best fits the capacity of health and social protection systems to recognise, assess and certify disability. When designing transfers to reduce poverty and inequality it is important to know where people with various disability profiles are in the welfare distribution.

**Figure 4** Quintile distribution of population with disabilities




Source: Author's calculations from ECIV5

Figure 4 suggests that people with greater levels of disability are over-represented in the poorer quintiles, while those who report at least two domains in which they have 'some difficulty' are roughly equally distributed by quintile (19.9% in the poorest, 18.7% in the richest). For those who report having 'a lot' of difficulty in one or more functionings, 25.8% are in the poorest quintile and 46.9% are in the 'bottom 40' (the poorest two quintiles). People who report 'some difficulty' in three or more functionings are more heavily concentrated in the poorest part of the distribution – with 30.8% in the poorest quintile and 49.4% in the 'bottom 40'. People who report complete disability in one or more functionings are also over-represented in the poorest part of the distribution – 25.2% in the poorest quintile and 46.3% in the 'bottom 40'. We know from Figure 3 that those with more serious disability or disabilities are numerically small – 2.6% of the population being defined as having a disability using those definitions.

We use an aggregated definition of 'serious and severe' disability based on combining those three different groups of people with disabilities categorised as serious, severe or having three or more lower-level disabilities. Figure 4 also shows the distribution of this combined group (the 2.6% of the population who report three or more difficulties or one or more severe difficulties or one or more areas of complete disability). People with this combined status are concentrated in the poorer parts of the distribution, 26.9% in the lowest quintile and 46.5% in the 'bottom 40'.

There are, however, some uncertainties on how disability affects the measurement of household economic welfare as the needs of people with disability will be greater than for other members of the household, but we do not consider such difference in needs in these profiles of inequality or poverty.[4]

A second issue concerns the definitions of disability that social protection systems may already use. Many low-income countries (LICs) already have social insurance schemes for industrial-related illness and injury as well as benefits and/or compensation related to sickness, invalidity or disablement. The legal, administrative and medical assessment policies these schemes employ are different from the assessment of disability that has been discussed here. It is probably best not to replicate the social insurance approach to disability for non-contributory 'floor' transfers for disability. Social floor disability transfers can be seen as compensating for the additional costs that arise from the need for care and other expenses related to disability, rather than replacing earnings. This allows a consideration of disability independent from economic activity.

## 2.3 Children

The 1989 Convention on the Rights of the Child (CRC) defines children as being below 18 years of age, i.e. minors. Most proposals for child benefits in LICs tend to prioritise infants and children of pre-school age. Transfers for children should also be considered alongside 'Childcare and Early Childhood Development Programmes'. Designing child benefits also to cover pregnant women is an important contribution to child and maternal health and nutrition.

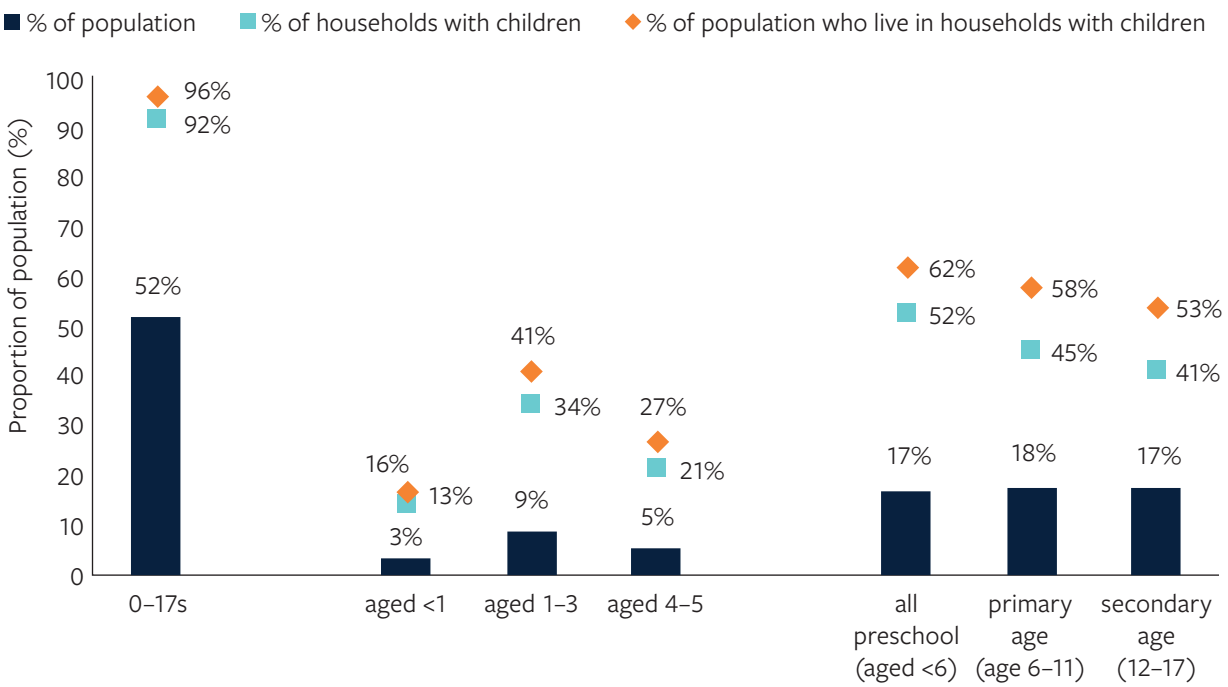
Figure 5 shows the child populations by age. If we consider the CRC definition of children as being from birth to the age of 17, they account for 52% of the total population, and are present in 92% of households, which in turn account for 96% of the population. A universal child benefit to cover all such children would thus go indirectly to nearly every person.

Figure 5 shows how using different age groups of children could form a more targeted approach. Children from birth to 12 months represent 3% of the population, live in 13% of all households in which 16% of the population live. We are unable to directly observe pregnancy in most household survey data, but a sensible estimate would be for half of all children up to 11 months[5] – another 1.5% of the population. A child allowance targeted at children from 12 months to the age of three

4 It is now commonly accepted that disability should affect how the 'adult equivalence' of consumption or income is computed – those with higher needs from disability should be weighted accordingly. But this theoretical consensus is extremely rare in practice and implementing it would disrupt decades of poverty measurement and monitoring by introducing a new approach. We do not attempt a full empirical consideration of this issue here. However, standing back from the technical measurement issues, it may be best to be pragmatic and recognise the 'problem' and implement simpler ways of adjusting poverty and inequality to 'ignore/discount' the floor transfers awarded for disability when computing household welfare as part of monitoring and evaluation of disability floor transfers.

5 This estimate is based on a large proportion of pregnant women claiming child benefit towards the end of the first trimester, and thus for six months before birth. If year on year fertility, pre- and post-natal mortality do not dramatically change, that represents half of current infants under 12 months of age.

**Figure 5** Populations of children by age



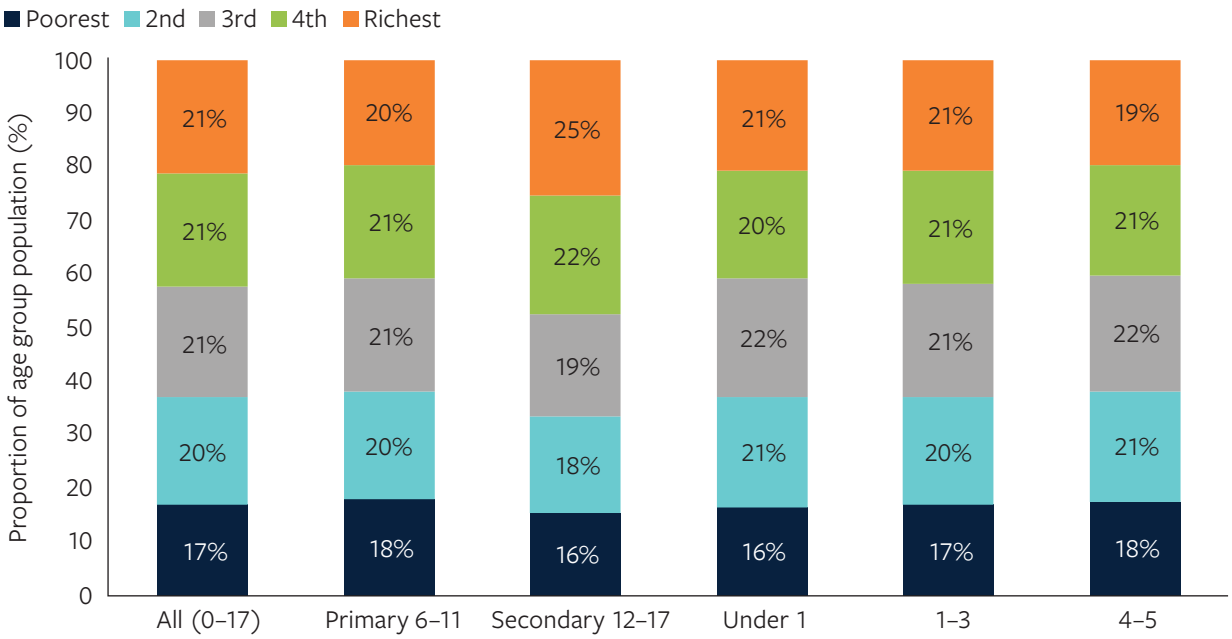

Source: Author's calculations from ECIV5

would cover an additional 9% of the population, but the proportions of households affected would rise to 34% and to 41% of the population. Why the large jump in household representation? It is important to remember that children often have siblings – which means that children directly and indirectly targeted will increase according to family size and birth spacing in households with children. The final group of pre-school children are those aged between four and five, who represent 5% of the population in 21% of households in which 27% of the population live.

Children from six to 11 years (primary school age) represent 18% of the total population, in 45% of households in which 58% of the population live, while children aged between 12 and 17 years are a further 17% of the population and represented in 41% of all households in which 53% of the whole population live.

Figure 6 shows how children of different age cohorts are spread across the quintiles of household welfare. It suggests that there is little gradient at all in children's distribution at any age and very little concentration in the lower quintiles. Only 16–18% of the youngest pre-school children (under 12 months, one to three, and four to five years) are in the poorest quintile – they are thus 'under-represented'. The age-related differences are very small between the age cohorts, with perhaps the only clear distinction in the distribution being that the oldest children (12–17 years of age) are *over-represented* in the richest quintile (25%).

**Figure 6** Quintile distribution of children by age group




Source: Author's calculations from ECIV5

## 2.4 Categorical overlaps

Older people for social pensions, people with disabilities for disability benefits and children for child benefits/allowances have quite different relationships with demographic living conditions and economic rankings. Are such classifications distinct and separate – both at individual level and in terms of household co-residence? Two key questions should be considered about potential 'overlaps':

- Do individuals fall into only one classification? While the age-related classifications are mutually exclusive, disability can occur at any age. Recent discussions on 'leave no one behind' principles stress that the 'most disadvantaged' should be prioritised in SDG approaches, which means that identifying categorical overlaps at the individual level may have two distinct advantages:
  - In cases where categorical identities do not align simply with disadvantage, multiple or 'intersectional' approaches can sometimes better identify disadvantage.
  - There are potential efficiency gains. Where simple categorical approaches suggest that populations overlap, it allows a 'collapse' of categories to gain administrative efficiency by not having two separate implementation approaches. Moreover, where large populations result from a simple uni-categorical approach, more efficient approaches to targeting can identify smaller sub-populations with greater disadvantage.

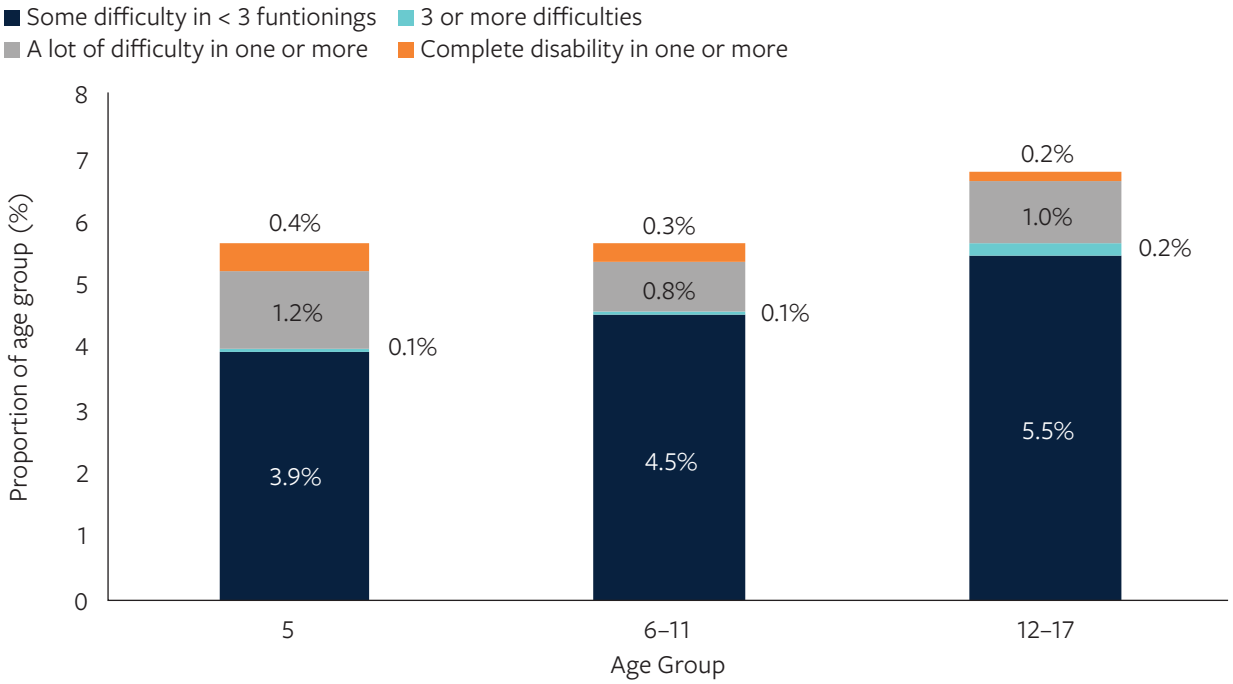
- Do the categories of individuals co-reside? Do young children live with older siblings, do children live with elderly people, and do people with disabilities live with older people and/or children? These questions supplement the approaches that can identify 'intersectionality' and 'efficiency' as identified in the previous section.

### 2.4.1 Age and disability

Identifying children with disabilities can require distinct and separate approaches as very young children may not be at a developmental stage to fulfil adult functionings such as walking, talking and self-care. UNICEF and the Washington Group have developed child-disability measurement approaches that are included in surveys in middle-income countries,[6] but are not in the data for this analysis. We are therefore unable to identify disability for the under-fives.

Figure 7 shows the relationship between disability (as defined above) and child-age cohorts. It shows that 6–7% of school-age children report some degree of disability. The largest proportion is of children who report one or two difficulties in functioning, with more severe disability (the combination of three or more difficulties, a lot of difficulty in one or more, or complete disability in one or more) represented in 1.2–1.4% of children. Are these children also more represented in poorer populations? Figure 8 shows the quintile distribution of children with disabilities – defined broadly as 'any level of disability' and from the combination of more severe disabilities. It suggests that there is more of a distribution in the poorer quintiles for children with disabilities than for all children.

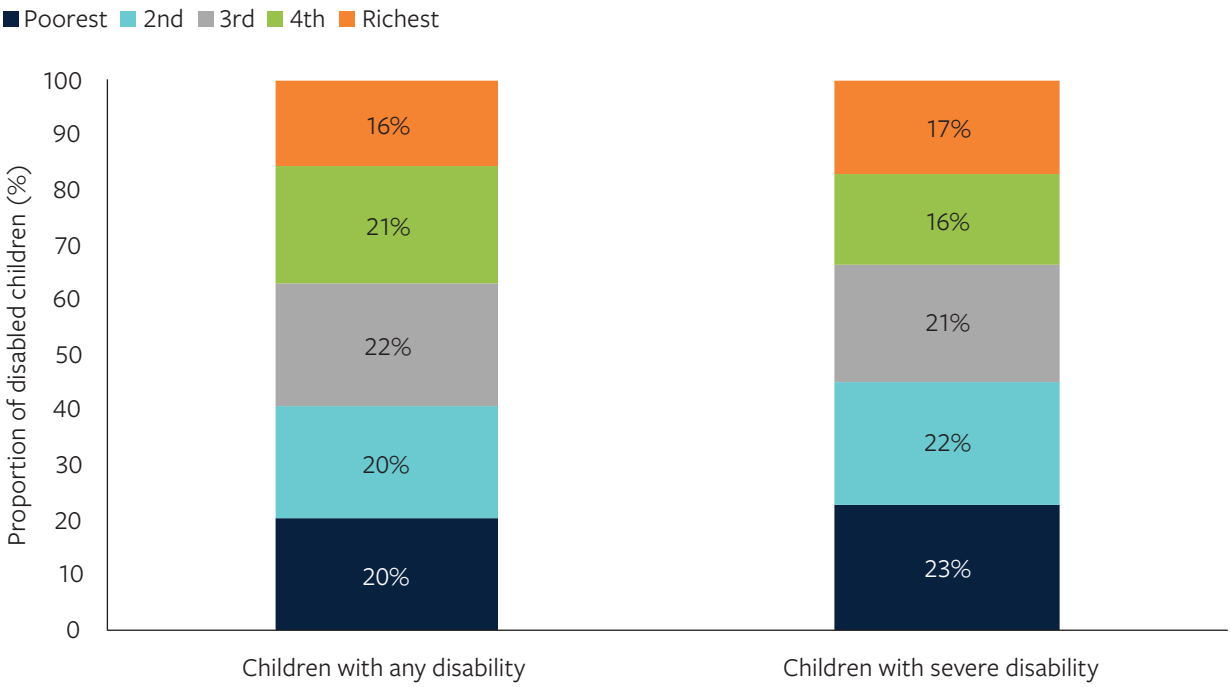
**Figure 7** Children with disabilities




Source: Author's calculations from ECIV5

6 See latest estimates of child functioning from Multiple Indicator Cluster Surveys (MICSs) https://data.unicef.org/topic/child-disability/module-on-child-functioning/.

**Figure 8** Quintile distribution of children with disabilities



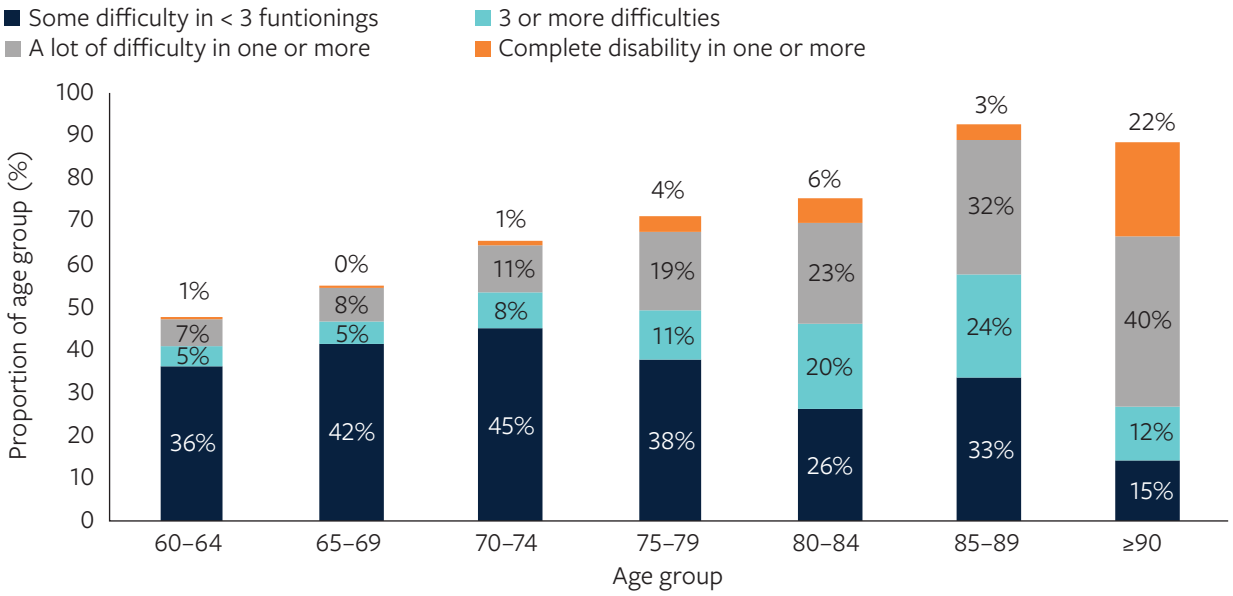

Source: Author's calculations from ECIV5

This suggests that disability-related targeting of child transfers would reach both a smaller and, on average, poorer group of beneficiaries. Cash transfers alone without services to children with any level of disability will, however, be weak in terms of equalising their ability to participate fully in education and to have equal chances of gaining qualifications – policy therefore needs to consider higher costs of equipment and in-school support services alongside a pure 'cash transfer' approach that can ease access and living standards issues.

Figure 9 takes a similar approach to consider older people with disabilities, but the age-related gradient of disability also suggests that being older and being disabled is highly correlated and increasingly overlaps as people age. Of people over the age of 70 more than half have disabilities, with both the overall level and the concentration of disability into serious and severe levels increasing considerably. The five-year age cohorts from 74–79 years of age see the combination of serious and severe disability rising from 24% to 49% for the 80–84-year-olds, to 59% for the 85–89-year-olds and 76% for those aged 90 and over. There is thus a clear case for considering disability and social pensions to be overlapping categories for older people. Policies to reflect this could be a simple conflation of categorical entitlement after a certain age, or that social pensions have an automatic increase over a certain age to reflect disability.

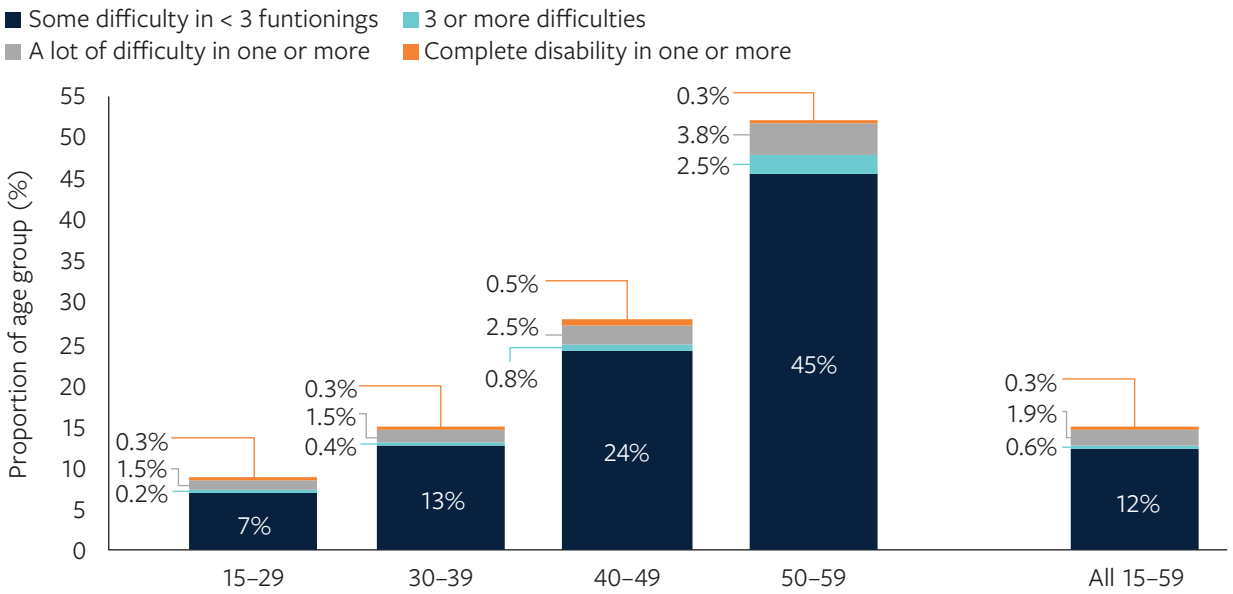
We also need to consider disability among the 'working-age' population from 15 to 59 years of age inclusive to allow consistent comparison with employment statistics (there is thus a small overlapping age group of older children aged 15–17 who have been defined both as 'children' and as 'working age' in our estimates).

**Figure 9** Older people with disabilities




Source: Author's calculations from ECIV5

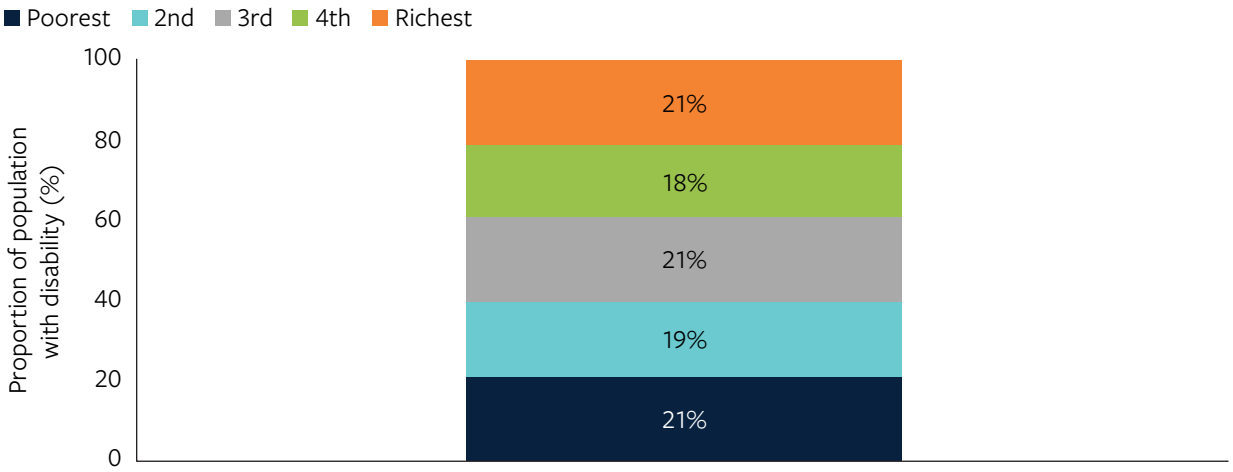
**Figure 10** Disability in working-age population




Source: Author's calculations from ECIV5

Once again, with very small samples of people with serious and severe levels of disability (for those with three or more difficulties, a lot of difficulty in one or more functionings and those with complete disability in one or more) we profile them as a single combined group when considering where they are in the welfare distribution. Figure 11 shows the proportion of this combined population with disabilities by quintile. There is little evidence of a pro-poor distribution of this sub-category of people with one or more disabilities.

**Figure 11** Quintile distribution of working-age population with serious disability status

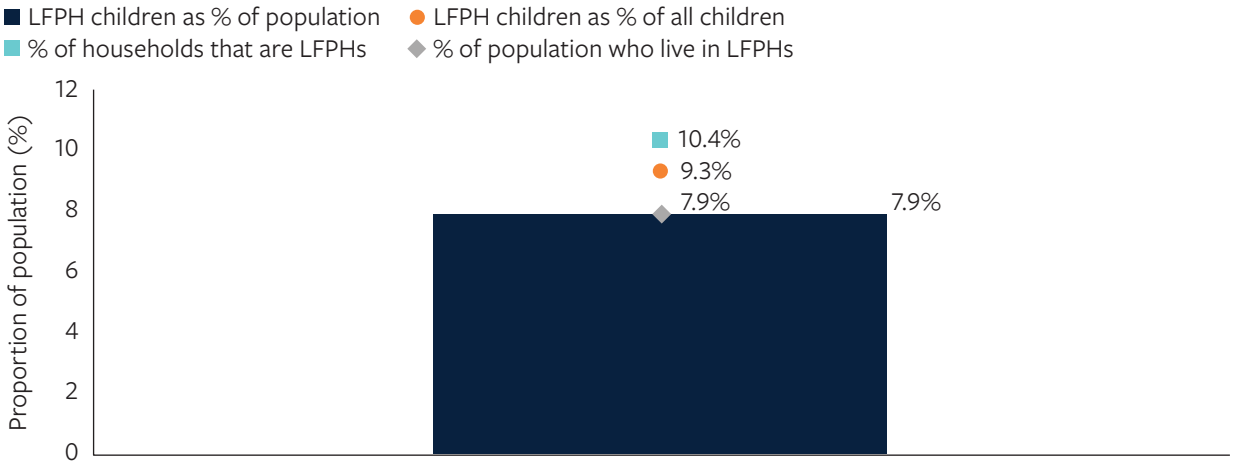



Source: Author's calculations from ECIV5

## 2.4.2 Categorical sub-groups

So far, we have only considered overlaps across the main categories for social floor transfers. An alternative approach to improve targeting is to consider sub-groups, i.e. smaller, more disadvantaged populations among children, elderly and people with disabilities. To illustrate that approach we take the example of children who, as Figure 6 showed, have no clear over-representation in the poorer parts of the welfare distribution. We use a gender lens to identify children who live in 'lone-parent', women-headed households. We adopt a definition that defines such households as having no adult men (aged 18 and over) and that have children (aged 17 and under). The other definitions of lone parent can be drawn from marital status and co-residence, but we use a simple and easily understood version purely based on household composition.

**Figure 12** Children in lone female-parent households

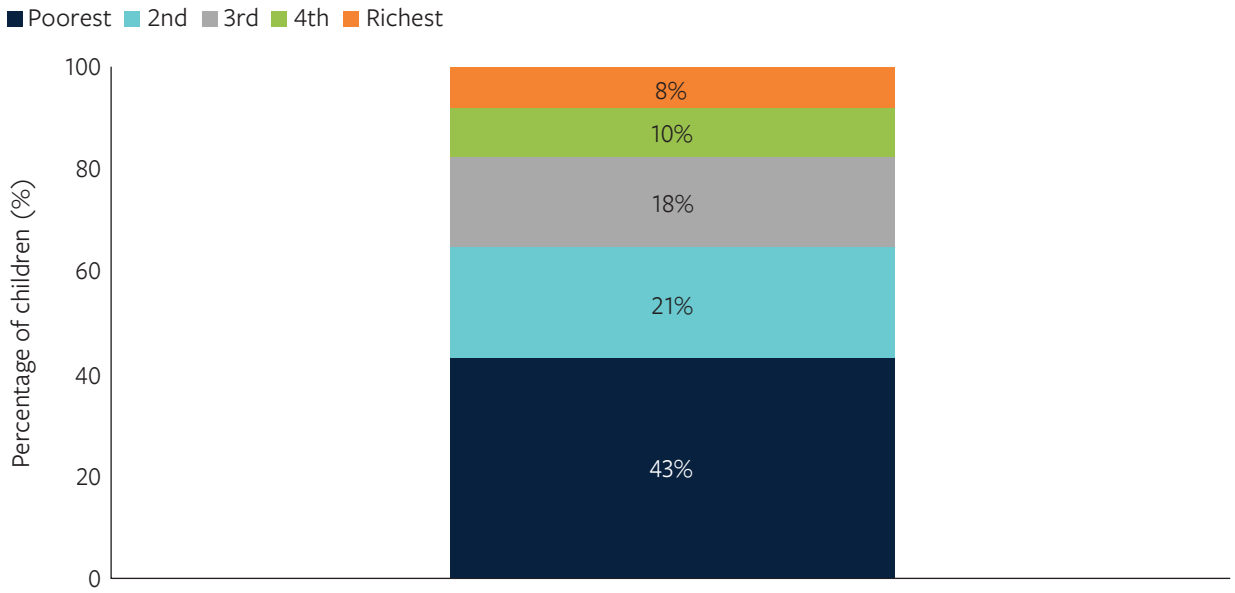



Note: LFPH, lone female-parent household.

Source: Author's calculations from ECIV5

Figure 12 shows that 7.9% of children (of all ages) live in lone-parent households, which accounts for 10% of all households and that 7.9% of the total population live in such households (which are smaller than average). Figure 13 shows that these children are hugely over-represented in the poorest quintiles: 43% in the poorest and a further 21% in the second poorest. This means that focusing on these children rather than all children could provide a less costly and more poverty-focused approach with which to start to build a universal child benefit system.

**Figure 13** Quintile distribution of children in lone female-parent households



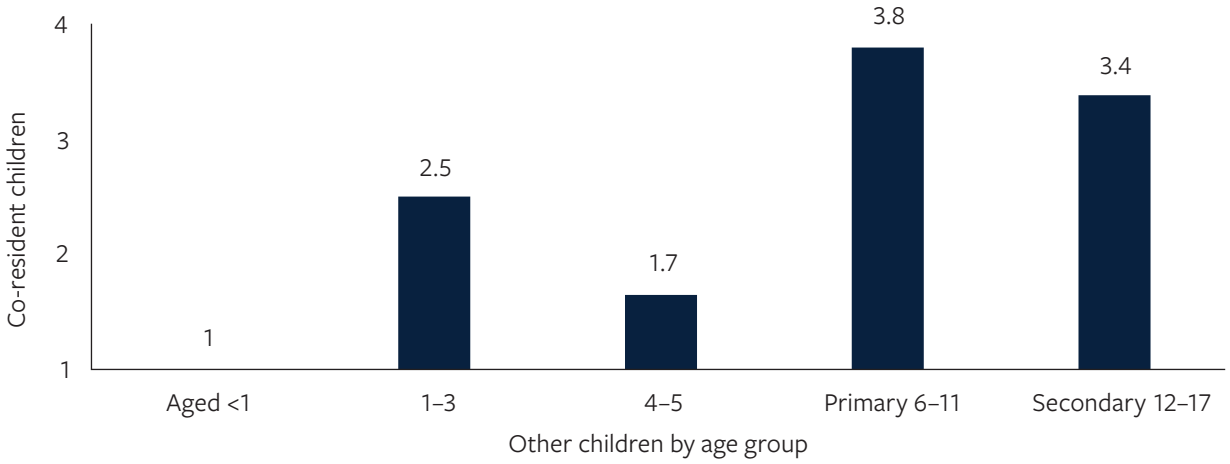

Source: Author's calculations from ECIV5

## 2.4.3 Co-resident overlaps

The final approach to pro-poor targeting of categorical transfers is to consider co-residence patterns more generally. In a country with high fertility and thus large family size we have already seen the likelihood of transfers targeted on children to have large populations of indirect beneficiaries (see Figure 5). We could restrict the age-related entitlement to smaller cohorts, but any age group of children will largely live with others outside that cohort. This will lead to 'diluting' the impact of transfers as the number of children benefiting indirectly will often be higher than the target group. Of course, it is a positive policy outcome if those resources are shared within households to those 'non-targeted' children, but it will reduce the specific effectiveness of focusing higher income solely on younger children – or on other age cohorts.

Figure 14 illustrates the 'dilution' of cohort-specific transfers to children using infants under 12 months as the 'direct' targeted group. It shows the average number of children who are older and who live in households with a child under 12 months of age. For every such child there are on average 2.5 infants aged one to three, and 1.7 aged four to five. Among older children, 3.8 children of 'primary school age' and 3.4 of 'secondary school age' on average live in the same household as a small baby.

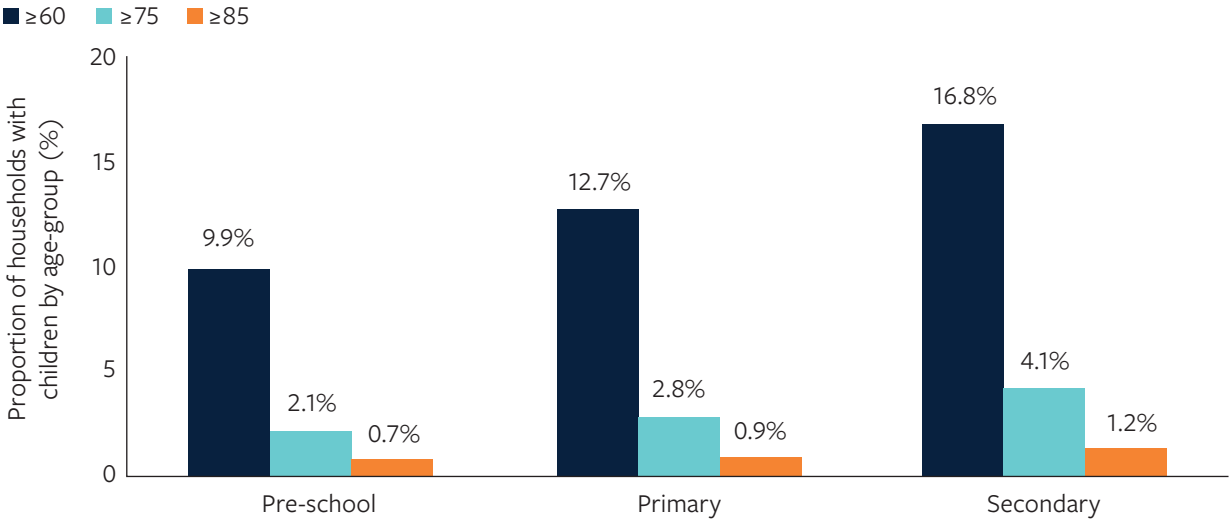
**Figure 14** Co-resident children living with infants aged <1




Source: Author's calculations from ECIV5

Figure 15 shows the percentage of households with children by age group that also contain older people by their age group. There is a simple 'demographic' relationship across age cohorts when they co-reside: the older the child the more likely they are to co-reside with older people – a result of inter-generational fertility. The percentage of households with children that also have members aged 60 or over thus grows according to children's age – from 9.9% of all households with pre-school children to 12.7% of households with primary age children to 16.8% of households with secondary age children. The same relationship is seen for older cohorts of elderly people, but the percentages are much smaller – as children grow up, their co-residing 'grandparents' are less likely to remain alive. This means that distinct age targeting is best done at the extremes of age: the co-residence of babies and people aged over 85 will be very small indeed, while having categorical transfers for teenagers and those aged 60–65 will have large co-resident overlaps.

**Figure 15** Children and elderly: age cohort overlaps from co-residence

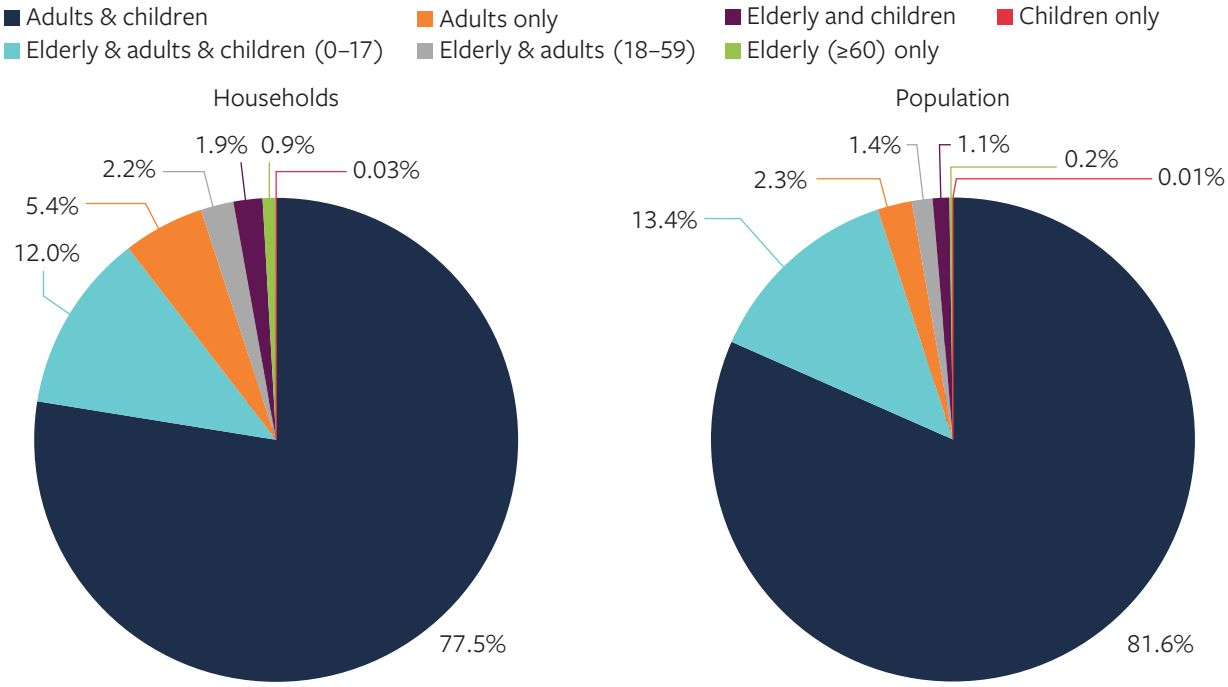



Source: Author's calculations from ECIV5

## 2.4.4 Inter-generational co-residence

Do different inter-generational profiles of households have different profiles that can help target transfers to the elderly and child populations? Figure 16 shows the overall patterns of co-residence according to the large population age groups used when thinking about 'dependency': children from birth to 17 years of age, 'prime-age adults' aged 18–59, and those aged 60 and over.

**Figure 16** Household and population composition by age co-residence



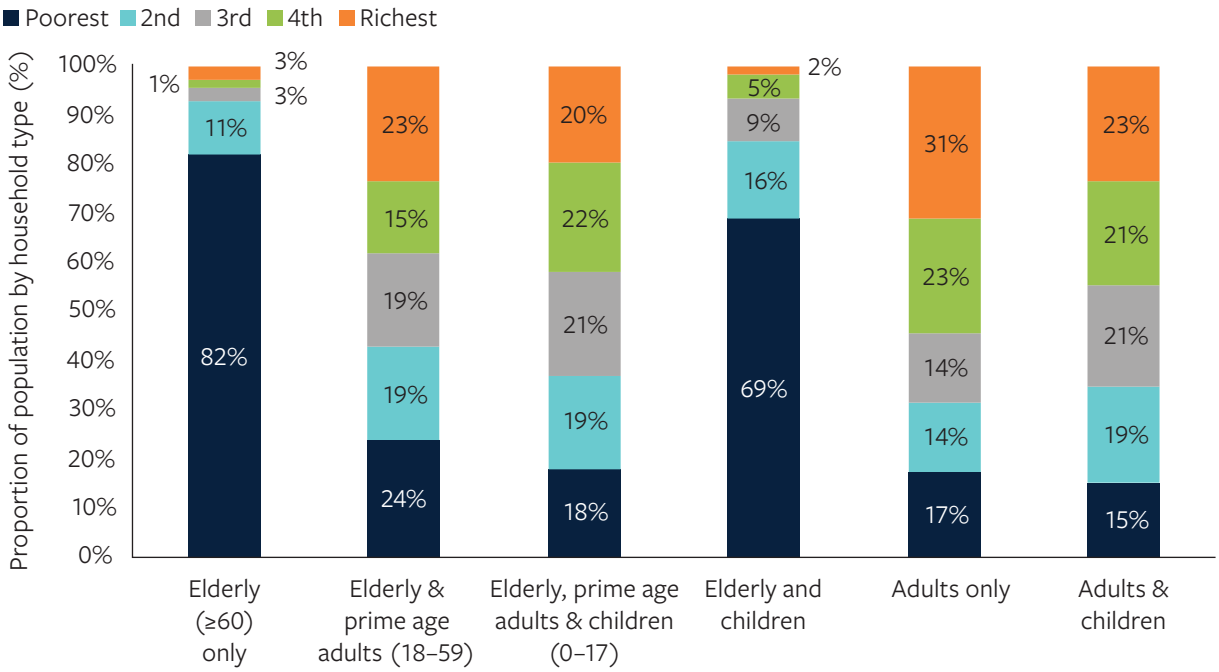

Source: Author's calculations from ECIV5

Figure 16 shows that two-generation 'prime-age' and children households are 77.5% of all households, accounting for 82.6% of the population. Three-generational households (children, prime-age adults and over-60s) make up a further 12% of households and contain a further 13.4% of the population. The remaining 10.5% of households are either single generation (elderly only, prime age only and a tiny incidence of child only)[7] or two-generation 'skip generation' households that contain just elderly people and children.

Figure 17 shows the quintile distribution of the population by these household co-residence profiles and clearly indicates two forms of households that are very poor: households that contain solely elderly people, where 82% are in the poorest quintile, and households that contain just elderly people and children, where 69% of people are similarly in the poorest quintile. This is a huge level of difference compared to the main forms of households and clearly demonstrates a case for transfers to be directed at elderly people in these situations.

7 Statistically not significantly different from zero.

**Figure 17** Quintile distribution of household type by inter-generational co-residence

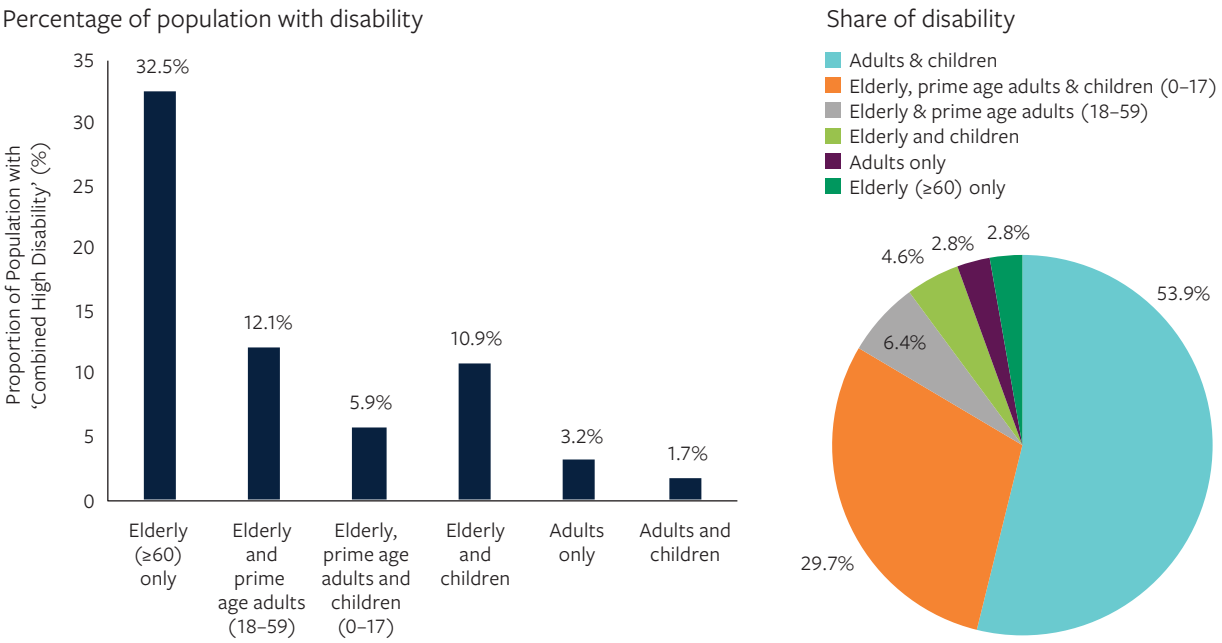



Source: Author's calculations from ECIV5

## 2.4.5 Disability and inter-generational households

In what kind of inter-generational household do people with disabilities live? Figure 18 shows the prevalence of people with disabilities using the same inter-generational classification of households used in Figures 16 and 17. As previously shown in Figure 9, the prevalence of disability is highest in households with elderly members. Highest prevalence is in households with just elderly members – a very worrying finding as there are no younger co-resident carers. The prevalence of disability is thus lower when elderly people live with younger people: between 12% and 6%. But these rates of disability hide an important fact: they may have high prevalence but have small population share. This means it is also useful to consider what proportion of the disabled population live in these household types. When we do so, we see that over half live in the largest household type of prime-age adults with children, and a further 29.7% live in three-generational households – reflecting the 90% of the population who live in these two forms of household. This means that targeting disability benefits at the individual level will face the large dilution effects on poverty reduction, as outlined earlier. Any targeting of small populations with high levels of prevalence will result in coverage of less than 10% of all people with disability. This may be acceptable as a first step in an incremental expansion of coverage that starts with those who are most in need but would sit uncomfortably with any prioritisation of disability for the 3% of the population that have 'serious' or severe disability status.

**Figure 18** People with disabilities and inter-generational households




Source: Author's calculations from ECIV5

These findings are now used to consider how to cost an incremental approach to implementing categorical transfers that focus on the 'most disadvantaged' first.

# 3 Costing transfers for categorical populations

How much would it cost to implement the social floors? Answering this question requires making assumptions about the levels and design of transfers (for example, whether rates differ by age or are paid at the same rate or at an equivalent rate in cases where more than one person in a household is entitled to the benefit, such as the oldest child receiving a higher rate, for example). We put those questions to one side and approach costing solely on population coverage.

## 3.1 Costing approach

The underlying question of costing follows on from the profiling and analysis undertaken previously. Our questions refer to the approach laid out in the introduction:

- What would it cost to cover all those who fit the categorical definitions of age and disability?
- What would be the different costs of covering sub-groups of these larger populations who are observed to be poorer and more disadvantaged?
- How do these profiles demonstrate a costed incremental approach to introducing categorical transfers that firstly prioritises the most disadvantages before expanding to later cover all those who fit the categorial definitions?

ILO estimates of costs use individual population estimates (UNDESA population projections by age) (UNDESA, 2020) and estimates from 2010 of the prevalence of disability (World Bank and WHO, 2011). Our methodology uses an approach based on micro-simulation using a population-weighted nationally representative household survey. This means that the size of populations will differ from those in United Nations Department of Economic and Social Affairs (UNDESA) population projections.

We do not reduce categorical populations to reflect current entitlement to or receipt of social protection under existing programmes. Any finalised costings could deduct those who already receive transfers (for instance social insurance pensioners from those aged over 60), but the populations of those already covered by transfers is small in LICs and will not greatly alter the level of overall costs. Neither the ILO nor this paper consider how 'safety net' social assistance will overlap with social floors. We make no deductions from eligibility for those who may receive means-tested or other forms of non-categorical social assistance.

It is important to set out our approach to costing:

- We first fix the cost of covering all categorical populations (all those aged 60, all under-fives and all people with serious disability) and use this fixed aggregate cost as the reference point for costing of smaller sub-groups who have been identified as 'most disadvantaged' and poorer in Section 2. This approach means that the underlying transfer values are inherently fixed and unchanging, and costings purely reflect differences in population size.
- However, as transfer value will affect the impact on reducing poverty, one of the measures of impact we consider for cost efficiency, we must set a transfer level. We use an assumption that is based on transfer values represented in cross-national evidence of the impact of social assistance in sub-Saharan African countries: where transfers are set at 20% of low-income households' average (mean) consumption level/income level (Davis et al., 2016). We set this amount as the assumption for adult transfer level (for social pension) and then adjust it for children and people with disabilities – by a factor of 0.5 and 1.3 respectively, to reflect clear differences in 'needs' based on expenditure equivalence.

These assumptions mean that transfer values have no effect on our costings as only population size generates differences in overall cost. We use an index approach where the 'full implementation' cost of covering all over-60s, under-fives and people with serious disabilities is set to a baseline index score of 100 in the first instance. Subsequent costings of smaller sub-sets of these populations are then compared using an index score that is relative to this original score of 100. The baseline policy results also show the baseline 'benefit incidence', the percentage share of all transfer spending in each quintile (higher proportions for the lower quintiles are progressive).

We also calculate and profile a set of associated outcomes for each costing scenario including the baseline. These outcomes are:

- Mean income
- Median income
- Inequality index score (the Gini coefficient)
- Poverty headcount
- Poverty gap.

We set these outcomes to baseline scores of 100 to capture the position *prior to any transfer*.

The remainder of our costings consider the main population sub-groups that are the 'most disadvantaged' as previously identified and give the costs of a categorical transfer made solely to that sub-group, and the outcomes and benefit incidence, relative to the baseline costs and baseline outcomes.

A critical assumption in these simulations is that there is no simulation of fiscal mechanisms to finance these transfers. This is crucial for any interpretation of the overall progressivity of the options, since taxation of households or businesses to finance the transfers may well have

effects on disposable income in addition to those simulated by the incidence transfers. In short, these simulations are purely to demonstrate how, in 'first order' terms, categorical transfers can be designed to be targeted on the poorest and then expanded to the larger categorical groups. A greater redistribution effect will occur if the financing of the transfers is progressive and if wealthier populations pay more in taxes for their implementation.

Table 1 shows the baseline profile for pre-transfer incomes in the household survey dataset. These are all set to an index score of 100 for comparison with simulated outcomes from transfer costings.

**Table 1** Pre-transfer outcomes baseline

| **Pretransfer disposable income** | **Value** | **Index** |
|---|---|---|
| Mean | 157,000 | 100 |
| Median | 94,700 | 100 |
| Inequality (Gini coefficient) | 0.52 | 100 |
| Poverty headcount | 30% | 100 |
| Poverty gap | 40% | 100 |

Source: Author's calculations from ECIV5

**Table 2** Policy baseline: costing and outcomes from full implementation

| **Overall cost (Policy cost baseline)** | | | | |
|---|---|---|---|---|
| Total cost | | | | 100 |
| **Benefit incidence (Percentage of total transfer expenditure by quintile)** | | | | |
| **Poorest** | **2nd** | **3rd** | **4th** | **Richest** |
| 28% | 21% | 19% | 17% | 15% |
| **Outcomes (Post-transfer disposable income)** | | | | **Index (Table 1 baseline=100)** |
| Mean | | | | 101 |
| Median | | | | 103 |
| Inequality (Gini coefficient) | | | | 98 |
| Poverty headcount | | | | 87 |
| Poverty gap | | | | 93 |

Note: Child benefit for under-fives, disability benefit and social pension for those aged 60 and older.
Source: Author's calculations from ECIV5

## 3.2 Social pensions

The simulation of social pension options starts with the option that sets entitlement at age 60 and over. Table 3 shows that this has a cost of 27.2 (i.e. 27.1% of the cost of the total set of all three categorical transfers) and is progressive: 37% of transfer spending goes to the poorest quintile, 20% to the second poorest, and 15% and 12% to the fourth and richest quintiles respectively. Total inequality reduces to an index score of 99.1 (a 0.9% reduction)[8] and total poverty headcount reduces to 90.7 (a 9.3% reduction) and poverty gaps reduces to 96.4 (a 3.6% reduction).

**Table 3** Social pension to all aged 60 and over

| **Overall cost** | | | | **Index (Table 2 policy cost=100)** |
|---|---|---|---|---|
| Total cost | | | | 27.2 |
| **Benefit incidence (Percentage of transfer expenditure by quintile)** | | | | |
| **Poorest** | **2nd** | **3rd** | **4th** | **Richest** |
| 37% | 20% | 17% | 15% | 12% |
| **Outcomes (Post-transfer disposable income)** | | | | **Index (Table 1 baseline=100)** |
| Mean | | | | 100.4 |
| Median | | | | 100.7 |
| Inequality (Gini coefficient) | | | | 99.1 |
| Poverty headcount | | | | 90.7 |
| Poverty gap | | | | 96.4 |

Source: Author's calculations from ECIV5

A first step in targeting within the over-60s can be demonstrated by changing just the age for entitlement. Table 4 shows the costs and outcomes of adjusting targeting to those aged 75 and over. This option is far cheaper – just 5.8 in our index of costs where 100 is the full cost of implementing all the categorical benefits, but that is also just 21% of the cost of giving social pensions to all those aged 60 and over. There are far fewer people entitled (see Figure 1 above).

8 Gini inequality index is an ordinal index and percentage reductions are given for ease of understanding compared to the baseline. The underlying scores in this instance were 0.517 against the baseline of 0.522.

**Table 4** Social pension to all aged 75 and older

| **Overall cost** | | | | **Index (Table 2 policy cost=100)** |
|---|---|---|---|---|
| Total cost | | | | 5.8 |
| **Benefit incidence (Percentage of transfer expenditure by quintile)** | | | | |
| **Poorest** | **2nd** | **3rd** | **4th** | **Richest** |
| 48% | 20% | 14% | 10% | 8% |
| **Outcomes (Post-transfer disposable income)** | | | | **Index (Table 1 baseline=100)** |
| Mean | | | | 100.1 |
| Median | | | | 100.3 |
| Inequality (Gini coefficient) | | | | 99.7 |
| Poverty headcount | | | | 91.8 |
| Poverty gap | | | | 98.7 |

Source: Author's calculations from ECIV5

With an age entitlement set to 75 and over, social pensions are far more progressive with 48% of all transfer spending going to the poorest quintile and just 8% to the richest. Reductions in inequality and poverty are smaller as the populations receiving the transfer are smaller, even though they are poorer. Inequality falls to 99.7 (0.3%) while poverty headcount reduces to 91.8 (8.2%) and the total poverty gap falls to 98.7 (2.3%). The poverty-reduction effect is worth considering in comparison to that achieved by the far larger transfer spending for all over-60s: a transfer at just 20% of the cost to the over-75s reduces poverty at the margins by only 0.9% less.

Our earlier profiling also identified elderly people (aged 60 and over) who lived in households without any working-age members as very vulnerable to low income and poverty. Table 5 shows the costs and outcomes of a categorical transfer designed for them.

The index cost of such a social pension would be 9.1 compared to 100 from a full provision of all three categorical transfers, and the cost is around a third of a full social pension to all aged 60 and over as it goes to fewer people. This targeting also leads to greater progressivity, with 75% of all the transfer going to the poorest quintile and just 1.0% to the richest. The effects on inequality are to lower the Gini coefficient to 99.3 (a 0.7% reduction) and poverty headcount reduces to 91.7 (8.3%) and the average poverty gap reduces to 96.2 (3.8%). Once again, the poverty-reduction effects of this targeted transfer are impressive when compared to the full social pension to all aged 60 and over. For a third of the costs, the poverty headcount reduction is just 1.0% lower than that gained from a full social pension.

**Table 5** Social pension to those aged 60 and above who live in households with no working-age members

| **Overall cost** | | | | **Index (Table 2 policy cost=100)** |
|---|---|---|---|---|
| Total cost | | | | 9.1 |
| **Benefit incidence (Percentage of transfer expenditure by quintile)** | | | | |
| **Poorest** | **2nd** | **3rd** | **4th** | **Richest** |
| 75% | 13% | 6% | 4% | 1% |
| **Outcomes (Post-transfer disposable income)** | | | | **Index (Table 1 baseline=100)** |
| Mean | | | | 100.1 |
| Median | | | | 100.3 |
| Inequality (Gini coefficient) | | | | 99.3 |
| Poverty headcount | | | | 91.7 |
| Poverty gap | | | | 96.2 |

Source: Author's calculations from ECIV5

Our costing for a social pension is based on age, and our transfer value is set at '1' (20% of average income of the poor), so what would happen to costs and outcomes if social pensions were set at the higher level of 1.3[9] (effectively 26.7% of the average income of the poor)? While most discussion is on 'separate' disability transfers, there may be efficiencies in administration and implementation in disability-entitlement procedures if social pensions and disability benefits were considered together for older populations.[10]

Tables 6a and 6b show revised versions of Tables 3 and 4 that also give larger transfers (at a value of 1.3 times the basic social pension level) to older people with serious or severe disability. Comparing results with Tables 3 and 4, we see that costs increase from 27.2 to 28.9 of the baseline costs (100)

9 Should those who qualify for both disability benefits and social pension get both entitlements cumulatively? Such an approach would give a transfer level of 2.3 times basic adult rates for older disabled people, rather than the 1.3 used in these costings. The key to answering this question is how far the 'additional costs' of disability are reflected in the weights given to disability benefits and how far they additionally consider 'basic costs' that are not affected by disability. These costings assume that the 0.3 additional weight for disability on adult transfer rates captures those additional costs and that using 2.3 weight would duplicate the 'basic costs' assumed across both transfer value levels.

10 In any incremental implementation of disability benefits it may be efficient and appropriate to initially set and implement the eligibility tests for disability status for those who are not of working age. This would allow the administration and design of transfers to be purely set in the first instance on disability status and thus to proceed without undue influence from social insurance rules for those in employment (and any 'work' test or 'earnings replacement' principles). Once in place for older people, the precedent to treat disability independently from earnings, income and work tests is established and could then expand to the working-age population.

for the full social pension and increase from 5.8 to 6.6 for the 'over 75' variant. We see little or no change to benefit incidence and progressivity. Nor is there any observed change to inequality, and poverty headcounts further reduce by 0.1 against their baseline (i.e. by 0.1% more than original results in Tables 3 and 4). There are slightly higher effects on poverty gaps, suggesting that the disability premium is targeted at the poor elderly population, but is not at a level that will move many over the poverty line. The number of elderly people with disabilities is small, as is the increase in benefit levels. A joint transfer approach thus has small marginal effects on outcomes.

**Table 6** Social pensions with disability premiums

**a) Social pension for those aged 60 and over with disability addition**

| **Overall cost** | | | | **Index (Table 2 policy cost=100)** |
|---|---|---|---|---|
| Total cost | | | | 28.9 |
| **Benefit incidence (Percentage of transfer expenditure by quintile)** | | | | |
| **Poorest** | **2nd** | **3rd** | **4th** | **Richest** |
| 37% | 20% | 17% | 15% | 11% |
| **Outcomes (Post-transfer disposable income)** | | | | **Index (Table 1 baseline=100)** |
| Mean | | | | 100.4 |
| Median | | | | 100.8 |
| Inequality (Gini coefficient) | | | | 99.1 |
| Poverty headcount | | | | 90.6 |
| Poverty gap | | | | 96.1 |

**b) Social pension for those aged 75 and over, with disability addition**

| **Overall cost** | | | | **Index (Table 2 policy cost=100)** |
|---|---|---|---|---|
| Total cost | | 6.6 | | |
| **Benefit incidence (Percentage of transfer expenditure by quintile)** | | | | |
| **Poorest** | **2nd** | **3rd** | **4th** | **Richest** |
| 49% | 20% | 14% | 9% | 8% |
| **Outcomes (Post-transfer disposable income)** | | | | **Index (Table 1 baseline=100)** |
| Mean | | | | 100.1 |
| Median | | | | 100.3 |
| Inequality (Gini coefficient) | | | | 99.7 |
| Poverty headcount | | | | 91.7 |
| Poverty gap | | | | 98.6 |

Source: Author's calculations from ECIV5

## 3.3 Child benefits

Table 7 shows the costs and outcomes of a universal child benefit paid to all under-fives. It is 'expensive', with index score of 49.3, representing 40.3% of the costs of the total categorical package for all three groups shown in Table 2. The progressivity is weak, with 21% of all transfer expenditure going to the poorest quintile, while 17% goes to the richest quintile. Inequality reduces by 0.8 (0.8%), but poverty reduces by 10.3 (10.3%) a result of the large coverage and the fact that incomes are compressed around the poverty line, allowing people to 'cross over' this line with small marginal changes in income from the transfer. The average poverty gap also reduces by 1.8 (1.8%).

**Table 7** Universal child benefit to all under-fives

| **Overall cost** | | | | **Index (Table 2 policy cost=100)** |
|---|---|---|---|---|
| **Total cost** | | | | 49.3 |
| **Benefit incidence (Percentage of transfer expenditure by quintile)** | | | | |
| **Poorest** | **2nd** | **3rd** | **4th** | **Richest** |
| 21% | 21% | 22% | 19% | 17% |
| **Outcomes (Post-transfer disposable income)** | | | | **Index (Table 1 baseline=100)** |
| Mean | | | | 100.7 |
| Median | | | | 101.4 |
| Inequality (Gini coefficient) | | | | 99.2 |
| Poverty headcount | | | | 89.7 |
| Poverty gap | | | | 98.2 |

Source: Author's calculations from ECIV5

The earlier profiling in Section 2 showed that children in lone female-parent households were a sub-group of children that were far poorer. Table 8 shows the results for costs and outcomes for a more limited child benefit that responds to their entitlement and includes children of both pre-school and primary age (below 12 years) in estimates. This higher age entitlement responds to the economic needs of lone female-parent households that will remain strong after children enter schooling given the constraints on their economic activity as sole parental carers for their children.

Table 8 shows that a transfer targeted at all under-12s in lone female-parent households would have an index cost of 4 (4% of the total cost of all three transfers in Table 2) and would cost just 8% of the costs of a universal child benefit shown in Table 7. Such a transfer would be more progressive – with 47% of all transfer spending going to the poorest quintile and just 5% going to the richest. Impact on overall inequality would be small: lowering inequality by 0.1 (0.1%) but reducing poverty headcount to index 91.9 (8.1 percentage points' reduction) and average poverty

gap falls to index 99.4 (0.6 percentage points' reduction). The concentration of these children in the poorest households means that small transfers will take many over the poverty line due to the clustering of income around the poverty threshold but not reduce the poverty gap very much of those who remain poor.

**Table 8** Children in lone female-parent households

| **Overall Cost** | | | | **Index (Table 2 policy cost=100)** |
|---|---|---|---|---|
| Total cost | | | | 4.0 |
| **Benefit incidence (Percentage of transfer expenditure by quintile)** | | | | |
| **Poorest** | **2nd** | **3rd** | **4th** | **Richest** |
| 47% | 21% | 19% | 8% | 5% |
| **Outcomes (Post-transfer disposable income)** | | | | **Index (Table 1 baseline=100)** |
| Mean | | | | 100.1 |
| Median | | | | 100.2 |
| Inequality (Gini coefficient) | | | | 99.9 |
| Poverty headcount | | | | 91.9 |
| Poverty gap | | | | 99.4 |

Source: Author's calculations from ECIV5

## 3.4 People with disabilities

Table 9 shows the cost and outcomes from a disability benefit paid to all those with 'serious or severe disability' as defined earlier. No identification is available for under-fives with disability due to survey constraints. The cost of such a benefit (paid at 1.3 times the value of standard adult (e.g. social pension) rate) is index 23.5 – meaning that such a benefit represents 23.5% of the total cost of the universal categorical transfers for children, older people and people with disabilities. The benefit is moderately progressive with 33% of all expenditure on transfers going to the poorest quintile and 14% to the richest quintile. The effect on inequality is to reduce the Gini coefficient to 99.4 index score from original pre-transfer position (a 0.6% reduction). The impact on the poverty headcount is to reduce overall poverty rates to index 90.9 (a 9.1% reduction) and the overall average poverty gap falls to index 97.9 (a 2.1% reduction).

We discussed disability benefits to older people following Tables 6a and 6b. We know from our profiles that disability rates are high for older people but that the populations are smaller, and that most people with disabilities live in households with other adults and children. Table 10 focuses on the disability benefit for working-age people: not because they are a 'poorer' group but because most disability is seen in this population (a lower rate of disability in a large proportion of the population gives rise to the largest share of disability in that population group, shown in Figure 3).

**Table 9** Disability benefit (all over-fives)

| **Overall cost** | | | | **Index (Table 2 policy cost=100)** |
|---|---|---|---|---|
| Total cost | | | | 23.5 |
| **Benefit incidence (Percentage of transfer expenditure by quintile)** | | | | |
| **Poorest** | **2nd** | **3rd** | **4th** | **Richest** |
| 33% | 20% | 18% | 14% | 14% |
| **Outcomes (Post-transfer disposable income)** | | | | **Index (Table 1 baseline=100)** |
| Mean | | | | 100.3 |
| Median | | | | 100.7 |
| Inequality (Gini coefficient) | | | | 99.4 |
| Poverty headcount | | | | 90.9 |
| Poverty gap | | | | 97.9 |

Source: Author's calculations from ECIV5

**Table 10** Disability benefit for working-age population

| **Overall cost** | | | | **Index (Table 2 policy cost=100)** |
|---|---|---|---|---|
| Total cost | | | | 12.9 |
| **Benefit incidence (Percentage of transfer expenditure by quintile)** | | | | |
| **Poorest** | **2nd** | **3rd** | **4th** | **Richest** |
| 26% | 20% | 20% | 16% | 18% |
| **Outcomes (Post-transfer disposable income)** | | | | **Index (Table 1 baseline=100)** |
| Mean | | | | 100.2 |
| Median | | | | 100.4 |
| Inequality (Gini coefficient) | | | | 99.8 |
| Poverty headcount | | | | 91.6 |
| Poverty gap | | | | 99.4 |

Source: Author's calculations from ECIV5

Table 10 shows that providing disability benefits purely for the working-age population would cost index 12.9 (12.9% of the total costs for universal benefits for all three categorical groups) and would be 56% of the costs of a disability benefit for all ages shown in Table 9. The omission of older people means that progressivity reduces in comparison to all age-related disability benefit

– with 26% of transfer spending going to the poorest quintile and 18% to the richest. The effects on inequality are small – reduction to 99.8 index score (a 0.2% reduction). The effects on poverty headcount are 91.6 index score – an 8.4% reduction in poverty prevalence, but poverty gaps for the poor are 99.4 index, a 0.6% reduction.

## 3.5 Cost effectiveness

These results also allow for a consideration of cost effectiveness if we consider the level of outcome against the underlying cost of the transfer. Reductions in the poverty headcount are probably the easiest and clearest results to consider in this light, where the simulations show the greatest range of impacts. Table 11 shows the level of poverty reduction obtained from one unit (index score 1) of spending by the options outlined in Tables 2–10. We see that the baseline provides just 0.1 points in poverty reduction for every point of spending. The most cost-efficient transfer option is to provide child benefits to children living in lone-parent households – this gives 2 points of poverty reduction to every unit of spending. Other options also show relatively high-cost efficiency – particularly for transfers to those aged 75 and over, with or without a disability premium. We see the lowest cost efficiency for the transfers for wide age ranges of the population – all under-fives and all those aged 60 and over (0.2 and 0.3 points of poverty reduction per unit of spending, respectively).

**Table 11** Cost efficiency of poverty reduction to transfer spending

| | Cost | Poverty reduction | Cost efficiency (Poverty reduction per unit of spending) |
|---|---|---|---|
| Baseline | 100 | 13 | 0.1 |
| **Social pensions** | | | |
| Social pension ≥60 | 27.2 | 9.3 | 0.3 |
| Social pension ≥75 | 5.8 | 8.2 | 1.4 |
| Social pension >60 'alone' | 9.1 | 8.3 | 0.9 |
| Social pension & disability ≥60 | 28.9 | 9.4 | 0.3 |
| Social pension & disability ≥75 | 6.6 | 8.3 | 1.3 |
| **Child benefits** | | | |
| To all aged <5 | 49.3 | 10.3 | 0.2 |
| To lone-parent children | 4.00 | 8.1 | 2.0 |
| **Disability benefits** | | | |
| To all aged >5 | 23.5 | 9.1 | 0.4 |
| Working age | 12.9 | 8.4 | 0.7 |

Source: Author's calculations from ECIV5

This evidence of cost efficiency, as well as breaking down the total aggregate cost of all categorical social floors into smaller sub-groups of people who are most disadvantaged, clearly demonstrates how a gradual and incremental approach to building social floors can be considered: the investment in two programmes for children in lone-parent households and for people aged 75 and over would commit just 10.6% of a budget line for all social floors but would allow spending to be most 'pro-poor'. A disability benefit for those of working age would also cost 12.9% of the total social floor budget but have a significant effect on reducing poverty (0.7 points for every unit of spending).

# 4 Discussion and conclusions

The best policy-making reflects good empirical evidence and decisions based on understanding the costs and consequences of choices that come from such evidence. The best advocacy approaches reflect capturing policy-makers' attention on an issue and convincing them of its importance. Policy for attaining the SDGs involves understanding both. Advocates for universal coverage for social protection work alongside advocates for the 'leave no one behind' principles and advocates representing specific group interests (children, older people and people with disabilities). These interests and viewpoints feed into national Social Protection Strategies and result in a consensus at a high level of principles and programme areas that form ambitious aims for expanded and comprehensive social protection systems. The underlying problem facing policy-makers who want to implement these is that a 'strategy' is a consensus-based 'shopping list' of programmes, which may be insufficiently costed or put into an implementable plan. This paper offers the basis for creating a 'recipe' from a 'shopping list', which in all cases should be country- and transfer-specific.

The paper seeks to illustrate an approach and methods, with the aim of demonstrating and encouraging (if not inspiring) analysts to engage with policy-makers on the basis of these approaches. It does not, therefore, seek to be representative or intended for replication.

The paper suggests the following approaches:

- Find the direct and indirect beneficiary populations for any categorical definition and understand how far they represent a large or small sub-group of the total population.
- Identify sub-groups on categorical populations that are poorer/more disadvantaged by
  - Finding overlaps of categories
  - Finding sub-groups of categories
  - Finding co-resident patterns in populations within and across categories.

This is a targeting approach. Very often, 'targeting' is viewed as the antithesis of categorical transfers. But clearly identifying age and other simple characteristics of individuals and households can help 'target' so-called 'universal' benefits to be more 'selective' in order to reflect a smaller population defined solely on non-income-related characteristics. Such 'targeting' can accept both the larger aim of universal coverage, but in the shorter term focus on the most disadvantaged. This incremental approach also allows for the investment in capacities and technologies that will be necessary to administer social floors: to capture and verify age and to assess and validate types and levels of disability. Starting with smaller populations to trial and test approaches to implementation and administration may also help administrative efficiency – especially in countries where registries, payment and administrative systems require significant investment.

The calculations used in such profiling are intricate but not methodologically complex. Basically, it is just arithmetic – addition, subtraction and multiplication – based on cross-tabulation. There are no complex regressions needed, unlike proxy means-testing. For governments already considering or developing 'micro-simulation' models, these forms of calculations suggest a way to develop those models and embed them quickly in policy design. For others, there is no need to wait for a complex and fully parameterised micro-simulation model to be put in place. This form of analysis can be done quickly without a full model.

What are the lessons from this approach? First, the lessons from simple demographic arithmetic are paramount. Giving transfers to individuals defined by age or disability indirectly affects those with whom they live. Much work will be needed to consider 'intra-household' measurement and analysis – but it will take a decade or more for this to be implemented in new forms of surveys. This paper accepts these limitations and suggests working with a flawed but dominant household-level assumption. Who the categorical target groups live with is hugely important. Second, these 'indirect beneficiaries' of categorical transfers alter the effectiveness of transfers in changing income profiles.

The direct examples from the analysis presented may not be fully applicable to other countries, where perhaps older age groups may not be poorer than those aged over 60, children in women-headed lone-parent households may not be poorer than other children, for example. The lessons are not in the groups identified in the analysis, but in the analytical approach.

The costing approach follows this 'simple' analysis and establishes three steps:

1. Create a baseline set of outcomes that policy-makers see as important (poverty and inequality in this instance).
2. Cost the full implementation of all transfers to set a baseline upper-bound estimate of total costs and outcomes of any strategy that includes all three social protection floors.
3. Cost 'sub-groups' that have been identified as 'left behind', 'poorer', 'the most deprived' or 'most disadvantaged' to show how lower costs can, pro rata, be more achievable by restricting eligibility to those sub-groups. This both reduced costs and increases poverty-reducing efficiency.

From this costing and analysis of outcomes for each policy simulation, policy-makers can then plan a way forward (not necessarily doing so by 2030) to achieve full implementation of social floors by prioritising the poorest sub-groups early in such implementation.

The paper has some limitations. It is based on a single example and is not representative. Replication in different country contexts will build a more established method. In addition, in the interest of brevity we have had to put aside some important considerations for profiling.

By defining categorical sub-groups using co-residence we raise the questions of incentives. Would a social pension to isolated older people encourage their families not to co-reside with them?

Would a benefit for lone-parent households discourage parents from finding a new partner or even encourage separation? These are important questions to consider in a detailed policy and there are major issues of encouraging saving and informal care of the elderly population as well as ensuring child maintenance and alimony payments are not weakened and continue to be received alongside categorical benefits for lone mothers. Many countries have developed policy approaches to reflect and counter these incentive problems and there is a large literature on the topic.

We have used outcomes defined as the 'usual' approach for attaining SDG 1 and national performance measurement – based on poverty and inequality measures across the whole population. But it is also important to understand the 'horizontal equity' measures that could accompany these. For example, how do categorical groups' incomes change after transfers compared to the average income or to other groups – for example, does the gap between older peoples' incomes and the rest of the population narrow after transfers and, if so, by how much? It is unfortunately rare for such analysis to be part of standard 'fiscal incidence' analysis that is nearly always dominated by 'vertical' issues of equity – for instance, in the excellent work done by CEQ and others. Gendered fiscal analysis (Bastagli, 2016) is a growing area, but an expansion of 'horizontal equity' in the discussion and examination of social protection and other fiscal incidence is seriously lagging behind the drive to form policy that leaves no one behind. The final limitation has already been mentioned and bears repeating: there is no analysis of how to finance any of the transfer options discussed in this paper, which is based on the assumption of postponing such considerations to a later date or subsequent analysis; and to encourage readers to undertake the first steps in breaking down ambitious aims of social protection coverage into more progressive instalments. Issues of finance cannot be ignored, but by demonstrating smaller and more pro-poor approaches to targeting categorical benefits, the issue of affordability can be broken down, and methods of finance more realistically explored. Future analysis will expand on this.

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