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## 35. Effects of social protection on food consumption and nutrition

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### 35.1 INTRODUCTION

Social protection programmes can have a direct impact on monetary poverty (see Chapter 34) and broader economic conditions, but also important indirect effects on other sectors, such as education, health and nutrition (see Chapters 36 and 37). This chapter concentrates on the effects of social protection schemes on food consumption and nutrition.

This focus is motivated first by the dramatic figures on hunger: it is estimated that nearly 10.8 per cent of the world population do not consume enough calories, and both the number and the proportion of hungry people has increased since 2015 (FAO et al. 2019). Progress in some nutritional indicators, such as child anthropometric status, in the last years has been limited, while in other indicators such as the prevalence of anaemia among women in reproductive age the situation has even worsened. Moreover, nutrition is central in the Sustainable Development Goal 2 of the 2030 Agenda, ‘End hunger, achieve food security and improved nutrition and promote sustainable agriculture’. It is therefore important to explore whether social protection can be an important tool to tackle nutritional deprivations.

Social protection encompasses both contributory schemes and non-contributory schemes (social assistance). Both types of schemes, in particular (non-contributory) cash transfers (CTs) and (contributory) social insurance cash benefits, can have important impacts on nutrition. Given that, however, contributory schemes are very limited in developing countries, especially in Sub-Saharan Africa (SSA) (ILO 2017; Barrientos et al. 2019), the region with the highest prevalence of hunger and malnutrition, the review of the empirical evidence in this chapter focuses predominantly on social transfers. Moreover, as contributory schemes are more often reaching also the middle class, these instruments are less likely to alleviate nutritional deprivations.

The remainder of the chapter is structured in the following way: Sections 35.2 and 35.3 describe the potential pathways through which different social protection programmes could influence food consumption and nutrition. Section 35.4 then shows the available evidence of the impacts of CTs on these outcomes. Finally, Section 35.5 discusses the role played by programme features, such as transfer size and targeting mechanisms.

### 35.2 LINKING SOCIAL PROTECTION TO NUTRITIONAL OUTCOMES

This section discusses the potential channels through which social protection schemes might be able to affect food consumption and nutrition. Before that, it presents the most common indicators for food consumption and nutrition.

### **35.2.1 Indicators of Food Consumption and Nutrition**

Indicators related to food consumption include food expenditures, household food production for own consumption, calorie intake and subjective measures of access to food, such as the Household Food Insecurity Access Scale (Coates et al. 2007).<sup>1</sup>

Impacts of social programmes on nutritional outcomes are measured mostly through indicators of diet quality and anthropometric status. The household dietary diversity score is the most common: this is calculated as the number of different food groups – which vary according to context – that the household has consumed at least once in the seven days before the interview (Swindale and Bilinsky 2006). While collecting information to generate this index is simple and relatively fast, this indicator has the drawback that it does not inform on the amount of food consumed for each food group and considers only the variety and not the quality of the diet.<sup>2</sup>

Finally, standard anthropometric measures include the Body Mass Index (BMI) for women in reproductive age and measures of height and weight for children, usually between zero and five years old. In particular, from information on child height and weight, three main indicators can be obtained: height for age – a proxy for child chronic nutritional status; weight for height – a proxy for child acute nutritional status; and weight for age – a measure that encompasses both child acute and chronic nutrition (Burchi 2012).

### **35.2.2 Potential Pathways**

Contributory schemes, such as public health insurance or the presence of a public health system delivering free healthcare, can have important effects on food consumption and nutritional outcomes. This happens entirely through a health effect: a good health status is fundamental to be able to absorb food, and thereby have a better nutritional status. The link between social insurance and different health outcomes is not further elaborated here, as this is the topic of Chapter 3 of this handbook.

We focus predominantly on cash benefits, which consist of CTs and social insurance cash benefits (mainly child allowance and social pensions). The potential channels through which these two types of social protection instruments could influence our outcomes of interest are, indeed, the same. However, the strengths of these channels can, in practice, vary. In particular, it is far more probable that a social insurance cash benefit, being contributory, includes the middle class. If that is the case the expected impacts on nutrition, and in particular on nutritional deprivations, are lower than that of a CT, especially when the latter targets households in poverty or food insecurity.

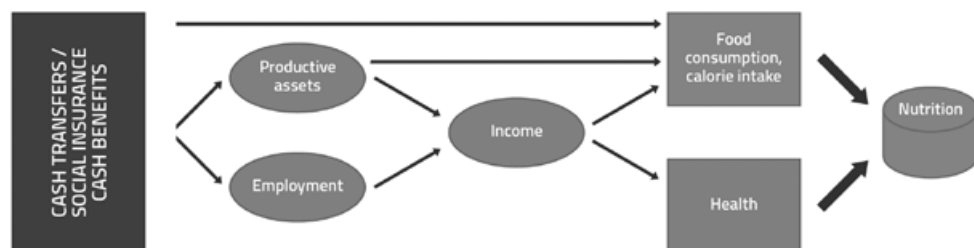
Figure 35.1 provides a brief illustration of the mechanisms linking cash benefits to nutrition. The most direct impact of cash benefits is on the beneficiaries. Recipients of these programmes can use the cash to purchase food, thus enhancing calorie intake already in the

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<sup>1</sup> The Household Food Insecurity Access Scale is computed by aggregating self-reported information on people's frequency in the use of coping strategies, such as eating a smaller meal because of a lack of food or going a whole day and night without eating anything.

<sup>2</sup> The same indicator can be computed also at the individual level, and provides a much more accurate picture of diet quality; however, it is rarely available as collecting this information for each household member is time-consuming.

short run. Otherwise, the cash can be invested into livestock or other productive assets. This can enhance productivity, thus income, and therefore ensure an increase in food (and total) consumption. When the household is mainly involved in agricultural activities, an increase in food consumption can take place without the mediation of the market.



Source: Author's own illustration adapted from Burchi et al. (2018).

Figure 35.1 Pathways of impact of cash benefits on food consumption and nutrition

While the availability and quality of employment are crucial for nutrition, the relationship between cash benefits and employment is more controversial. It has often been argued that people who receive a regular payment without doing anything specific in return may have little incentive to start any work activity. However, this depends on the monetary value of the transfer: as this is usually rather small in the programmes implemented in developing countries, this theoretical argument should not be valid. Moreover, a comprehensive evaluation of government-run cash benefits in six developing countries in Asia and Latin America concludes that these programmes do not discourage work (Banerjee et al. 2017). Instead, the possibility to rely on a regular amount of money could reduce immediate financial needs, and thus provide a person with more time and less pressure to find a job of higher quality. This is particularly the case when the CT beneficiary has no labour constraints.<sup>3</sup>

Through the channels highlighted above, the extra cash could theoretically increase the quality of the diet, but only if budget constraints are the main cause of a monotone and poor-quality diet. When the reasons, instead, lie in the lack of adequate information on nutrition matters or imperfect nutritional practices, the (unconditional) cash benefit alone is unlikely to play any role in nutrition. In some cases, especially in Latin American countries, the attendance of regular visits at health facilities, where nutrition education among other services are offered, is a conditionality to have access to the transfer.

Finally, anthropometric indicators are affected by health conditions, too. Cash benefits could increase the utilization of health facilities where such services (or simply better ones)

<sup>3</sup> The study by Burchi and Strupat (2018) on Malawi shows also that labour-constrained households, when they are provided with a lump sum and possibly some financial training, can engage in productive activities and, this way, improve their living standards. This study casts some doubt on the common idea that labour-constrained households will always need to depend on social assistance. In particular, Burchi and Strupat show that recipient households could become small entrepreneurs if they cannot carry out physical work.

are not free, thus improving health status. Given that Chapter 36 of this handbook already examines the effects of social protection schemes on health outcomes, we do not stress this channel in this chapter.

Cash benefits can improve nutrition indicators also for non-beneficiaries. This could happen, for example, when an increase in beneficiaries' living standards stimulates the local demand for goods and services in the local community. Through this 'local economy effect', food consumption and nutrition of households ineligible for the programmes can improve (Carraro and Ferrone 2019). There is also another potential channel, which could connect programme existence/implementation to non-beneficiaries even more directly. Households that are just above eligibility criteria may decide to undertake riskier (and more remunerative) economic activities, and could rely on the cash benefit as a safety net in case they are not successful with their activities. This way, they could increase both the quantity and quality of food consumed. This is usually referred to as the 'insurance effect'.<sup>4</sup> This effect is particularly relevant for (non-contributory) CTs targeted at poor or food-insecure households.

Another important type of social protection scheme, especially when nutritional outcomes are examined, is food transfers (FTs). FTs can take a variety of forms depending on who are the recipients and the typology of the transfer. They include school feeding programmes, vitamin/micronutrient supplementation for specific vulnerable groups and food subsidies. Food vouchers are often included in this category, too, though they could be viewed as a form of cash benefit conditional on spending on food items.

Most of the pathways highlighted above could at least in theory work for the different FTs. The most relevant exception is the 'productive assets' channel. In addition, FTs can directly ensure higher food consumption as there is no 'mediation' of the market. However, the intensity of these relationships may vary a lot across the different types of FTs. Finally, the direct provision of vitamins or other micronutrients allows improving directly the quality of the diet, and tackles so-called 'hidden hunger'. As this intervention usually targets children and pregnant/lactating mothers in food-insecure contexts, it has a great potential to alleviate malnutrition.

The next sub-section elaborates more on the general differences between CTs and FTs.

### 35.3 CASH VERSUS FOOD TRANSFERS

Nowadays, CTs (or, more in general, cash benefits) programmes are much more widespread than FTs. This is one of the reasons why we concentrate mostly on the former type of social protection programme in the following sections. As suggested by standard economic theory, providing targeted households with cash instead of food does not distort individual consumption or production choice (HLPE 2012). Even more important, by receiving cash people can decide how to spend the money: they may decide to use it to buy other basic items, and to balance short-term with long-term choices. Moreover, cash is usually easier and cheaper to deliver (Cunha 2014; Ahmed et al. 2010; Alderman 2015) and, unlike food, non-depletable.

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<sup>4</sup> Most of the attention, especially in empirical studies, is on the 'income effect' of CTs on direct programme beneficiaries. This also means that the available empirical evidence probably underestimates the overall impacts. This may be particularly the case for those CT programmes (e.g. in Malawi) where the eligibility criteria are particularly strict, thus several poor and food-insecure households are left out.

The few studies that compare CTs and FTs show mixed evidence of their effects on food consumption (e.g. del Ninno and Dorosh 2003; Audsley et al. 2010; Hoddinott et al. 2018), while they indicate larger effects of CTs on diet diversification (Sharma 2006; Audsley et al. 2010).

However, one has to keep in mind that there might be (limited) situations in which FTs could work better and are preferred by the recipients of the transfers. In contexts of high inflation and, in particular, rising food prices, food-insecure households may prefer to receive FTs in order to have a secure amount of food every month. This is, for example, what in some Ethiopian districts rural households participating in the Productive Safety Net Programme (PSNP) have highlighted (Ahmed et al. 2010; Sabates-Wheeler and Devereux 2010; Alderman 2015). The direct transfer component of the PSNP, in fact, takes the form of CTs in some areas and of FTs in other areas. Given that the world, including SSA, is experiencing a period of low food prices, this argument is less relevant at the moment.

A general risk associated with CTs is corruption: moneys are more likely than food to be ‘captured’ by local elites, generating inclusion and exclusion errors in the targeting. In general, CTs address the problem of economic access to food, but for the physical access to food there is a need of well-functioning local food markets (Barrett et al. 2007). When this is not the case, FTs may be preferable. Moreover, it requires availability of different food groups/items in the local markets in order to improve the diet, while with FTs, policy designers could *theoretically* choose the food that makes the diet more balanced. This is an argument often raised in favour of forms of FTs, such as vitamin supplementation.

### 35.4 CASH TRANSFERS AND NUTRITION: EVIDENCE FROM SUB-SAHARAN AFRICA AND BEYOND

CTs are widespread nowadays in SSA.<sup>5</sup> Here, we consider only those programmes which were evaluated on the basis of their impacts on food consumption and nutrition,<sup>6</sup> and possibly had a focus on these areas either in their goals or in the identification of beneficiaries. In total, we cover nine countries and 10 CT programmes. We then enrich these findings with results from other world regions. In a nutshell, it appears clear that these social protection schemes play a major role in improving food consumption and are often successful in improving diet diversification, too. In contrast, these programmes alone do not manage to reach the last mile, i.e. improving final nutritional outcomes. Based on the considerations made in the section pathways, we expect social insurance cash benefits to provide similar results or, eventually, lower results.

We now present the findings from each programme, following an order based on countries’ economic conditions around 2005, when the majority of the programmes were launched: we start therefore with the richest country (highest per capita gross domestic product (GDP)) and end with the poorest (lowest per capita GDP).

South Africa has the oldest and most comprehensive social protection system in the region, with more than 3.5 per cent of GDP used for social assistance in general. One of the most important programmes is the Child Support Grant (CSG), launched in 1998 with a clear

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<sup>5</sup> The evidence presented in this section is mostly based on that discussed in Burchi et al. (2018).

<sup>6</sup> The evaluations examined used quantitative methods, mostly experimental or quasi-experimental methods.

anti-poverty goal. Although conditionalities were initially imposed, the CSG has operated in practice as an unconditional CT since 2010.

A number of studies have analysed the impact of the CSG on different outcomes. Williams (2007) found that children in CSG-recipient households were significantly less likely to suffer from hunger (as reported by the mother). The effect on adult labour force participation, rather, was insignificant. D'Agostino et al. (2018) show that the CSG increased by about 10 per cent the total food expenditure per adult equivalent, with this impact being double in urban areas as compared to rural areas. Given that food insecurity is predominantly a rural phenomenon, this means that the CSG alone has limited capacity to tackle food deprivation.

To the best of our knowledge, only two studies have tried to assess whether the CSG has enhanced children's anthropometric status. Agüero et al. (2007) and Coetzee (2013) reported a significant, though small, effect on the height for age score for 0–3-year-old and 0–14-year-old children, respectively. On the other hand, the impact on child weight for age was found to be insignificant (Coetzee 2013).

Like many Southern African middle-income countries, Lesotho adopted a rights-based social protection system in the early 2000s covering a wide range of vulnerable groups. In particular, the Child Grant Programme (CGP) has been the object of a rigorous impact evaluation (Pellerano et al. 2014). This study detected large, positive effects on subjective measures of food consumption, but almost negligible effects on food expenditure and consumption. Finally, the nutritional outcome analysed in the study, i.e. the household dietary score, appears not to be affected by participation in the CGP.

In Zambia, the most important – and most studied – CT is the CGP, which since 2010 has targeted households with children below three years of age in three districts with high poverty rates. Some empirical studies (American Institutes for Research 2013; Daidone et al. 2014) investigated the impact of this programme two years after its launch. They point to a significant and substantial impact on indicators, such as food consumption, number of meals and accumulation of productive assets, as well as on extreme poverty. The effects on household diet diversification, instead, are small in magnitude and those on all the child anthropometric indicators statistically insignificant. A study comparing the impacts of CTs in four different countries in SSA – all examined here: Ghana, Zambia, Lesotho and Kenya – reveals that the programme in Zambia had the largest impact on food expenditure, with an increase of nearly 35 per cent (Tiwari et al. 2016) and on per capita caloric intake, with an increase of about 15 per cent. Unlike previous work, Tiwari et al. (2016) report an increase of 1.9 in the number of food items consumed resulting from the introduction of the CT.

A study by Chakrabarti et al. (2019) largely confirms these results four years after the beginning of the programme, though the impact seems to gradually decline over time. The authors find that the CGP has improved remarkably food consumption and the use of clean water and sanitation – two other fundamental inputs into child nutrition – but had no effect on child height.

Empirical evidence exists on the impacts of two, rather different, CTs in Kenya: the programme for orphans and vulnerable children and the Hunger Safety Net Programme (HSNP). The former started as a pilot in 2004 and since then has gradually been expanded. The CT for orphans and vulnerable children managed to improve food consumption and the diversification of income-generating activities (Asfaw et al. 2014) and, as a result, household diet (Tiwari et al. 2016).

The HSNP has operated since 2008 in the arid and semi-arid regions in the north of the country. According to a study by Merttens et al. (2013), the HSNP had positive impacts on food consumption but no effects on poverty and ownership of productive assets. Also in this case the CT was unable to affect nutritional outcomes, namely household diet diversification and children's anthropometric status.

In Ghana, the Livelihood Empowerment Against Poverty (LEAP) Programme tries to address extreme poverty through a mix of unconditional and conditional transfers. Rigorous impact evaluations have examined the effects of LEAP on several outcomes (Handa et al. 2013; Tiwari et al. 2016). They indicate that this CT did not generate relevant benefits: employment opportunities, food consumption and diet diversity were, indeed, not higher for transfer recipients as compared to non-beneficiaries. Only the most recent evaluation report (Angeles et al. 2017) reveals positive effects on food consumption, but only statistically significant at the 10 per cent level.

To tackle poverty the government of Zimbabwe, with the financial support of several donors, launched the revised National Action Plan for Orphans and Vulnerable Children for the 2011–15 period, where the social CT, called Harmonized Social Cash Transfer, is the most important component. A programme assessment four years after its launch reveals an interesting picture (Angeles et al. 2018). The programme has not affected food consumption, while it has had a small impact on household diet diversification. The authors estimate that participation in the Harmonized Social Cash Transfer has generated an increase in diet diversity of 0.401, corresponding to about 7 per cent. An important share of the direct cash and the extra income generated through the CT were used to consume food groups that were not previously consumed, namely fruits, eggs, pulses and legumes, fats and sweets (Angeles et al. 2018).

The Community-Based Conditional Cash Transfer programme is the most relevant CT in Tanzania, though just a pilot programme. It is a CCT, as people of different ages need to fulfil different conditionalities, related to use of health services or school enrolment. While the programme seems to have increased livestock wealth, it did not affect food consumption (Evans et al. 2014). Finally, no short-term effects were detected on any of the anthropometric indicators for 0–4-year-old children, i.e. height, weight and middle upper-arm circumference.

Malawi started a pilot social CT in 2006 in one district and gradually expanded to all the districts. The poorest 10 per cent households in each district are selected as beneficiaries. Empirical studies of both the pilot and the expanded CT indicate large impacts on accumulation of productive assets, and direct indicators of food consumption (Miller et al. 2011; Covarrubias et al. 2012; Abdoulayi et al. 2016).<sup>7</sup> Miller et al. (2011) also find a substantial increase on household diet diversification, though measured by the share of budget allocated to protein-rich food, and not by a comprehensive diet diversity index. On the contrary, the Malawi Social Cash Transfer seemed not to have improved other nutritional outcomes: neither the BMI of the household head nor children's anthropometric indicators improved as a result of the introduction of the programme. The only exception was child's wasting (low weight for height) for which the programme seems to have reduced by three percentage points. However, the authors argue that the latter result 'should be interpreted with caution, given the low prevalence of wasting at baseline and follow-up among all study children' (Abdoulayi et al. 2016, 49).

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<sup>7</sup> Abdoulayi et al. (2016), for example, conclude that the CT in Malawi has increased food consumption by 22 per cent.

Finally, Ethiopia has one of the most prominent social protection schemes in the whole region, the PSNP. This programme has received considerable attention for its comprehensive design, and has been subject to several studies. However, the available evidence focuses predominantly on the public work component, which accounts for more than 80 per cent of the beneficiaries, as opposed to the CT component. For this reason, we do not include the PSNP in this review, but rather consider another CT scheme in Ethiopia: the Social Cash Transfers Pilot Programme, launched in 2011 and covering the Tigray region. Available evidence suggests that after two years, this programme reduced the food gap and increased the (adult equivalent) quantity of calories available for consumption at the household level by 6 per cent (Berhane et al. 2015). It also caused an increase in diet diversity at household level by 12 per cent.<sup>8</sup> Finally, in line with evidence from the other countries in SSA, the CT did not succeed in improving maternal BMI and children's anthropometry.

Evidence from systematic reviews covering mostly countries outside SSA seem to support the above findings. Hidrobo et al. (2018), who looked at 46 programmes in Latin America, East and South Asia and SSA find strong effects on asset accumulation, food consumption (+ 13 per cent, on average) and calorie intake (+ 8 per cent, on average). Leroy et al. (2009) conclude that CTs have improved household diet in most Latin American countries, especially through an increase in consumption of calories from animal source foods. However, the authors argue that this may be due to the frequent provision of micronutrients that accompanies CCTs in Latin America more than to the CT itself. Finally, a systematic review of 17 CTs, covering 12 countries mostly located in Latin America, shows overall insignificant effects on child height (Manley et al. 2013, 143).<sup>9</sup>

There are different possible explanations for these findings. First, while the impacts on food consumption are somehow 'direct', those on nutrition are 'indirect'. An intake of micronutrients, for example, is fundamental to improve children's anthropometric indicators. CTs can improve them only when the reasons for a poor consumption of micronutrients are merely economic: when the reasons are related to the poor knowledge of dietary issues or poor nutritional practices, then there is no scope for CTs alone to influence it. To improve nutritional outcomes, CTs need to be accompanied by other interventions. This could be done by introducing conditionalities, for example related to the attendance of a nutrition literacy course in the local health post.<sup>10</sup> Unlike standard CCTs in Latin America, this will not require large financial cost and high administrative capacity, making it thus possible in many contexts in SSA. Alternatively, the CT could be made more nutrition sensitive by including 'soft' (rather than 'hard') conditionalities, where beneficiaries are 'suggested' to use the cash to improve the quality of their diet.<sup>11</sup>

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<sup>8</sup> This finding is, however, not comparable with the findings from most of the other studies as they measured diet diversity based on food items rather than food groups.

<sup>9</sup> While, in theory, one potential reason could be that indicators such as children's height and women's BMI are rigid, some of the studies included in this systematic review go beyond short-term impacts and still do not detect any effect on these outcomes, therefore minimizing the intensity of this problem.

<sup>10</sup> A study in Bangladesh shows that the impacts of the CT on child stunting (low height for age) are significantly larger for households that also participated in nutrition education sessions (Ahmed et al. 2016).

<sup>11</sup> This occurs, for example, in the CT for orphans and vulnerable children in Kenya.



Another possible reason for the low effects on nutrition and, in some cases, the low effects on food consumption could be found in the specific design and management of the CT programmes. These issues are analysed in the next section.

### 35.5 THE ROLE OF PROGRAMME DESIGN AND MANAGEMENT

The aim so far has been to understand from a large set of countries and programmes whether CTs are a valid tool to enhance food consumption and, above all, nutritional indicators. As we have shown, the evidence for SSA points to a certain degree of heterogeneity in the results across countries. Now, we verify whether such diversity is (also) due to how programmes are designed and conclude that this plays a very important role.

We focus on three features, previously identified as crucial for CT effectiveness (UNICEF-ESARO 2015). The first is the monetary value of the transfer: we could expect a positive effect on nutrition only when it is not too small. The second is targeting: only if the programme correctly reaches poor, food-insecure or vulnerable households/people can it improve nutrition. The third is the regularity of payments: only when people are sure they will receive the transfer and can predict when they will receive it can they make longer-term choices with regard to budget allocation, making full use of the CT.

The low transfer size is a major problem for the LEAP in Ghana, one of the countries where CTs are less effective. Here, the value of the transfer is about 11 per cent of the consumption of the poor, thus well below the minimum threshold of 20 per cent, identified on the basis of empirical studies (UNICEF-ESARO 2015). At the same time, it is important to stress that the systematic review conducted by Manley et al. (2013, 143) reached the conclusion that the specific effects of CTs on child height 'are relatively insensitive to the amount of the transfer'.

High inclusion and exclusion errors in the targeting of the beneficiaries have been identified, instead, as an important reason for the limited effects of the HSNP in Kenya on nutrition (Handa et al. 2012). In other countries, including Ghana and Tanzania, the targeting worked better. Based on this limited evidence, though, it is not possible to generalize which targeting mechanism – proxy means test, categorical, community-based or a combination of them – seem to be more effective. Finally, for the vast majority of the examined programmes major problems of discontinuity in the disbursement were not encountered (UNICEF-ESARO 2015; Ward et al. 2010). The clear exception is the LEAP in Ghana, where payments were even interrupted for eight months in 2011 (Handa et al. 2013). In conclusion, we strongly suggest that policy-makers interested in implementing CTs pay major attention in their initial design as well as in their day-to-day implementation.

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