



**WP/20/105**

# **IMF Working Paper**

---

Designing Fiscal Redistribution:  
The Role of Universal and Targeted Transfers

by David Coady and Nghia-Piotr Le

I N T E R N A T I O N A L M O N E T A R Y F U N D



**WP/20/105**

# **IMF Working Paper**

---

Designing Fiscal Redistribution:  
The Role of Universal and Targeted Transfers

by David Coady and Nghia-Piotr Le

I N T E R N A T I O N A L M O N E T A R Y F U N D

**IMF Working Paper**

Fiscal Affairs Department

**Designing Fiscal Redistribution: The Role of Universal and Targeted Transfers**

**Prepared by David Coady and Nghia-Piotr Le**

June 2020

**IMF Working Papers describe research in progress by the author(s) and are published to elicit comments and to encourage debate.** The views expressed in IMF Working Papers are those of the author(s) and do not necessarily represent the views of the IMF, its Executive Board, or IMF management.

**Abstract**

There is a growing debate on the relative merits of universal and targeted social assistance transfers in achieving income redistribution objectives. While the benefits of targeting are clear, i.e., a larger poverty impact for a given transfer budget or lower fiscal cost for a given poverty impact, in practice targeting also comes with various costs, including incentive, administrative, social and political costs. The appropriate balance between targeted and universal transfers will therefore depend on how countries decide to trade-off these costs and benefits as well as on the potential for redistribution through taxes. This paper discusses the trade-offs that arise in different country contexts and the potential for strengthening fiscal redistribution in advanced and developing countries, including through expanding transfer coverage and progressive tax financing.

JEL Classification Numbers: D30, H21, H53

Keywords: Fiscal redistribution, transfers, taxes, targeted, universal

Author's E-Mail Address: [DCoady@imf.org](mailto:DCoady@imf.org); [NLe2@imf.org](mailto:NLe2@imf.org)

<b>Content</b>	<b>Page</b>
Abstract _____	<a href="#">2</a>
I. Introduction _____	<a href="#">4</a>
II. Targeted and Universal Transfers _____	<a href="#">5</a>
III. Benefits of Means-Tested Targeting _____	<a href="#">6</a>
IV. Incentive Costs _____	<a href="#">8</a>
V. Administrative, Social, and Political Costs _____	<a href="#">10</a>
VI. Strengthening Fiscal Redistribution _____	<a href="#">15</a>
VII. Concluding Remarks _____	<a href="#">19</a>
References _____	<a href="#">24</a>
Figures	
1. Benefits of Perfect Means-tested Targeting _____	<a href="#">7</a>
2. Optimal Marginal and Average Income Tax Schedules _____	<a href="#">9</a>
3. Negative Income Tax Scheme _____	<a href="#">11</a>
4. Coverage Under Alternative Categorical and Proxy-means Targeting _____	<a href="#">13</a>
5. Benefit Share and Program Coverage _____	<a href="#">15</a>
Annexes	
1. Targeting Approaches and Costs _____	<a href="#">21</a>
2. Sensitivity to Optimal Income Tax Schedules to Key Model Parameters _____	<a href="#">23</a>

## I. INTRODUCTION

Income inequality has been rising over recent decades in a large share of countries worldwide. Between 1985 and 2015, disposable income inequality<sup>1</sup> increased in more than half of all countries for which data are available, including in large countries such as China, India and the United States. In many cases these increases were driven by sharp increases in the share of income accruing to top income groups (IMF, 2017; Chancel, 2019). There is also evidence of growing concerns about inequality among the public and policy makers, along with decreasing trust in political elites and rising social discontent and political polarization (Clements and others, 2015). Many scholars have argued that high inequality is constraining aggregate economic growth through, for example, decreasing opportunities for low-income and middle-income groups and the capturing of monopolistic rents by the rich where workers' bargaining power is low and income tax systems less progressive (Chancel, 2019; Rajan, 2011; Kumhof and Rancière, 2010). Income inequality has also been linked to aggregate demand weaknesses (Rachel and Summers 2019), and progressive tax and transfer systems can be designed as "automatic stabilizers" to play an important stabilization role (IMF, 2020; McKay and Reis 2016). Recent evidence also suggests that inequality increases in the aftermath of economic crises (Furceri and others, 2020), including in the context of health pandemics, so that concerns about inequality are likely to become even more prominent as countries emerge from the current Covid-19 pandemic.

Although increasing income inequality has been observed in many countries, the varying experiences across countries, with inequality even decreasing in a sizeable share of countries, suggests that public policy and institutions play an important role in determining such outcomes.<sup>2</sup> In this respect, fiscal redistribution (i.e., the transfer of income from higher to lower income households via tax and transfer schemes) has a key role to play in addressing income inequality. For instance, evidence from studies of fiscal redistribution shows that over three-quarters of the difference in average disposable income inequality between advanced and Latin American countries (with the lowest and highest average disposable income inequality, respectively) is accounted for by differences in the extent of fiscal redistribution rather than by differences in market incomes (Bastagli, Coady and Gupta, 2015).

This paper focuses on the design of fiscal redistribution through income taxes and transfers in advanced and developing countries.<sup>3</sup> In particular, it focuses on the growing debate on the

---

<sup>1</sup> Disposable income is income available for consumption after income taxes paid and transfers received. Market income is defined as disposable income plus income taxes minus transfers.

<sup>2</sup> A range of public policies can affect the distribution of income, such as minimum wages, enhancing worker bargaining power, competition policy, and access to education and training. The choice of policies for reducing income inequality needs to be informed by a clear understanding of what is seen as wrong about inequality. For instance, inequality can be bad because the process or institutions that lead to it are perceived as being unjust or because inequality results in unjust institutions that further reinforce inequalities (Scanlon, 2018). Rising inequality can also weaken the social contract underlying support for welfare-improving government interventions when the population believe that they are unjustly being excluded from economic and social gains.

<sup>3</sup> The paper focuses on cash (or monetary) transfers and abstracts from the issue of cash versus in-kind transfers. Advocates for in-kind transfers are often concerned that beneficiaries will waste cash transfers, (continued)

relative merits of universal and targeted social assistance transfers in achieving income redistribution objectives (Atkinson, 2015; Brown, Ravallion, and van de Walle, 2017; Gentilini et al., 2020). It argues that the fixation of the policy debate on the narrow targeting of transfers to lower-income groups (i.e., avoiding leakage of transfers to higher-income groups) in large part reflects an unbalanced framing of the issue with an undesirably narrow focus on the transfer side of fiscal redistribution neglecting the potential redistributive role of taxes. It also reflects an overly narrow focus on incentive (or efficiency) costs with insufficient attention to the administrative, social and political costs of targeting that in practice affect the feasible set of redistributive taxes and transfers available to governments and which need to be balanced against efficiency costs.

The format of the paper is as follows. Section II defines what we mean by universal and targeted transfers; this is important since much of the debate is confounded by the very loose and inconsistent use of these concepts. Section III focuses on the benefits of targeting and defines key targeting concepts. Section IV discusses the trade-offs that need to be addressed when designing fiscal redistribution in the presence of incentive (or efficiency) costs. Section V expands the discussion to incorporate administrative, social, and political costs, which can introduce additional equity-efficiency trade-offs. Section VI presents a brief discussion of policy options for strengthening fiscal redistribution in advanced and developing countries, including through expanding transfer coverage<sup>4</sup> and progressive tax financing. Section VII concludes.

## II. TARGETED AND UNIVERSAL TRANSFERS

The distinction between targeted and universal transfers relates to the former's use of eligibility conditions (or "targeting" criteria) for receiving benefits. It is useful to distinguish between the following concepts:

- *Universal transfers.* These are transfers that are available to everyone without any eligibility conditions (i.e., no targeting). For example, a Universal Basic Income (UBI) is typically defined as a uniform cash transfer, set at a level that covers basic needs, that every person is entitled

---

for example, on undesirable consumption (alcohol, tobacco), reducing their labor supply and increasing leisure, or sub-optimal intra-household resource allocation. Reflecting such concerns, cash transfers are often complemented by conditions or interventions aimed at enhancing human capital of beneficiaries such as participation in health, nutrition, education and training programs (Drèze, 2017). But there is growing empirical evidence that such waste is the exception rather than the rule and that additional money income is typically spent on such things as increasing food consumption, enhancing the quality of diets, and increasing investment (Bastagli and others, 2016; Banerjee and others, 2019). In practice, however, in-kind public transfers still play a very important distributional role in advanced and developing economies, including through the provision of education and health services. For instance, between 1990 and 2005, it has been estimated that public investments in education expansion in low-and-middle-income countries resulted in an average decrease in the Gini inequality index for disposable income of about 2 percentage points (Coady and Dizioli, 2018).

<sup>4</sup> The expansion of coverage in countries with weak social protection systems has also been a key policy challenge in the context of the Covid-19 crisis.

to regardless of income or other conditions such as age, gender, or location.<sup>5</sup> A transfer program under which every person gets a common (or uniform) transfer, not necessarily set to cover basic needs, is also an unconditional universal transfer.

- *Quasi-universal transfers.* These are “categorical” transfers where eligibility is defined according to criteria that are typically viewed as being highly (although not perfectly) correlated with having low income.<sup>6</sup> All households in a given “category” would receive a transfer regardless of income. For instance, households with children or elderly may be deemed more likely to be poor. Therefore, basing (“targeting”) eligibility for transfers on such criteria will result in poor households receiving a relatively high share of total transfers and thus have a bigger poverty impact compared to a universal transfer with the same transfer budget.
- *Means-tested transfers.* These are benefits where eligibility is based on income (or “means”). This requires a capacity to define, measure and verify “means”. For instance, General Minimum Income (GMI) programs will typically base “means” on total household income and assets. The benefit for a household is then based on the gap between “means” and “needs”, where the latter reflects family composition and some concept of basic needs, and the transfer partially or fully closes this gap.

In practice, safety net programs can use a combination of targeting criteria (Annex 1). For example, child benefits for children of lower age groups may be universal while for some older children may be means tested. Similarly, social pensions for the elderly can be means tested. Or universal child benefits and social pensions can be complemented by a means-tested GMI-type program. Any evaluation of social safety net systems therefore needs to address the whole range of programs being used. Note also that, in practice, all transfer programs outside of a universal transfer typically involve some sort of targeting, so that targeting is typically the norm rather than the exception.

### III. BENEFITS OF MEANS-TESTED TARGETING

The basic case for means-tested targeting is straightforward.<sup>7</sup> In the presence of a budget constraint, an ability to target transfers to lower-income (or “poor”) households will result in a greater decrease in poverty (or inequality). For instance, suppose we have a fixed transfer budget just sufficient to eliminate poverty, and perfect information on actual household income before any transfers (i.e., “original income”, for now assumed fixed). Income after transfers is “final income”. Maximum and minimum household incomes are  $y_{max}$  and  $y_{min}$  respectively, and  $z$  is the poverty line (Figure 1). The line  $dy_{min}$  shows that, before the transfer program is in place, households’ final incomes are equal to their original incomes. The *perfect* transfer scheme is one

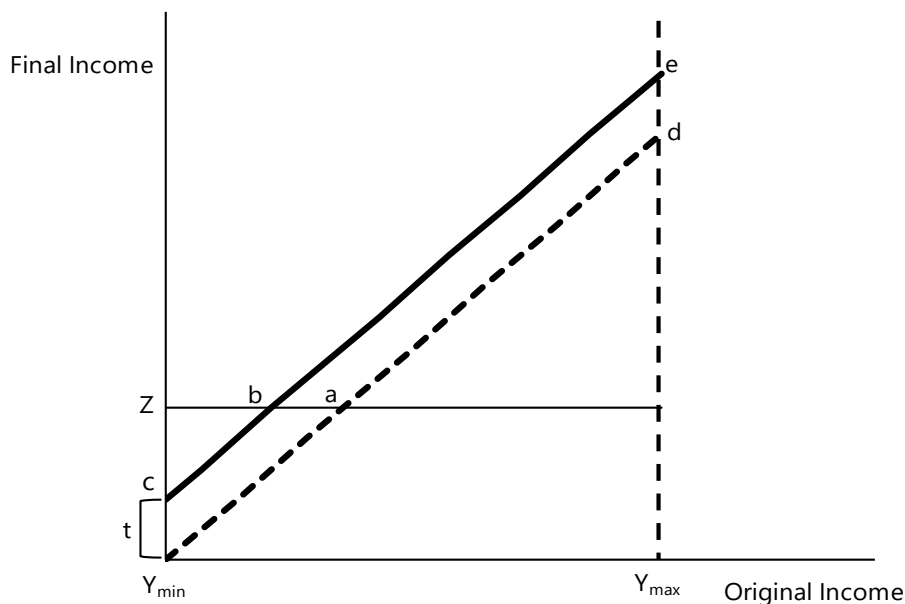
<sup>5</sup> For a more detailed discussion of the pros and cons of universal basic income, see Francese and Prady (2018) and Gentilini et al. (2020).

<sup>6</sup> This is also often referred to as “tagging” or “statistical targeting” (Akerlof, 1978).

<sup>7</sup> For more detailed discussion, see Atkinson (1995ab); Besley and Kanbur (1993); Coady, Grosh, and Hoddinott (2004a,b); and van de Walle (1998).

that gives a transfer to all poor households only (i.e. those with income less than  $z$ ), with transfer levels equal to their individual “poverty gaps” given by the distance between their original income and the poverty line  $za$ .<sup>8</sup> This transfer program brings all poor households up to the poverty line and all non-poor households have equal final and original incomes. The poverty budget is thus represented by the area  $zay_{min}$  and this is also the minimum budget required to eliminate poverty.

**Figure 1. Benefits of Perfect Means-tested Targeting**



Source: Based on Besley and Kanbur (1993).

Now consider the case of a uniform (non-targeted) transfer program. This gives a uniform transfer equal  $t (= c - y_{min})$  to all households, both poor and non-poor. Because of the “leakage” of transfers to non-poor households, the transfers to poor households are no longer sufficient to eliminate all poverty. There are two forms of “inefficiency” associated with this uniform transfer: (i) non-poor households receive a transfer, and (ii) some poor households (those in the line interval  $ba$ ) receive transfers greater than their poverty gaps. As a result, with a fixed budget, the poorest households receive lower transfers and remain poor so that the poverty impact of the uniform transfer scheme is less than that of the perfect transfer scheme; less by the area  $zcb$ . The total “leakage” of the budget (reflecting the two sources of inefficiency identified above) is given by the area  $bade$ , which for a fixed budget must also equal the area  $zcb$  representing the level of poverty after the uniform transfer program. Therefore, imperfect targeting (or the presence of targeting errors) results in a lower poverty impact for a given budget.

In summary, the main arguments for (perfect) means-tested targeting are twofold. In the presence of a budget constraint, it results in *perfect targeting* which in turn involves:

<sup>8</sup> We use the term “perfect” to distinguish this scheme from the conventional notion of an optimal scheme that minimizes the efficiency cost associated with means-tested transfers.



- *Perfect beneficiary targeting*: where only the poor receive transfers and all the poor receive transfers; and
- *Perfect transfer targeting*: where all of the transfer budget goes to the poor and the poor receive exactly the gap between their income and the poverty line.

However, these arguments abstract from important costs associated with designing and implementing means-tested programs (Annex 1). These costs include, for example, incentive costs associated with the distortion of household labor supply decisions, administrative costs associated with verifying incomes, private costs associated with taking up benefits, social costs associated with being identified as poor, and political costs associated with the need to build broad political support for social programs. Other targeting methods will also involve costs and the relative importance of each of these costs will typically differ across targeting methods and also across different socio-political environments. Decisions about whether to target, how precise to be, and what method to use will therefore depend on the relative size of these costs and benefits and how they vary across targeting methods and in different settings.

#### IV. INCENTIVE COSTS

We start by focusing on the implications of incentive costs for the optimal design of redistributive tax and transfer mechanisms. Clearly, under the perfect targeting mechanism above, the poor do not have any incentive to increase their income since this will simply result in a corresponding decrease in transfers (effectively a 100 percent *marginal* income tax rate). On the contrary, they have an incentive to decrease their labor supply and earned income since in practice eligibility for transfers and the level of transfers can only be based on observed (as opposed to “potential” or original) income and lower income is fully offset by higher transfers. Similarly, the non-poor have an incentive to lower their labor supply and income to receive transfers, especially those in and around the poverty line.

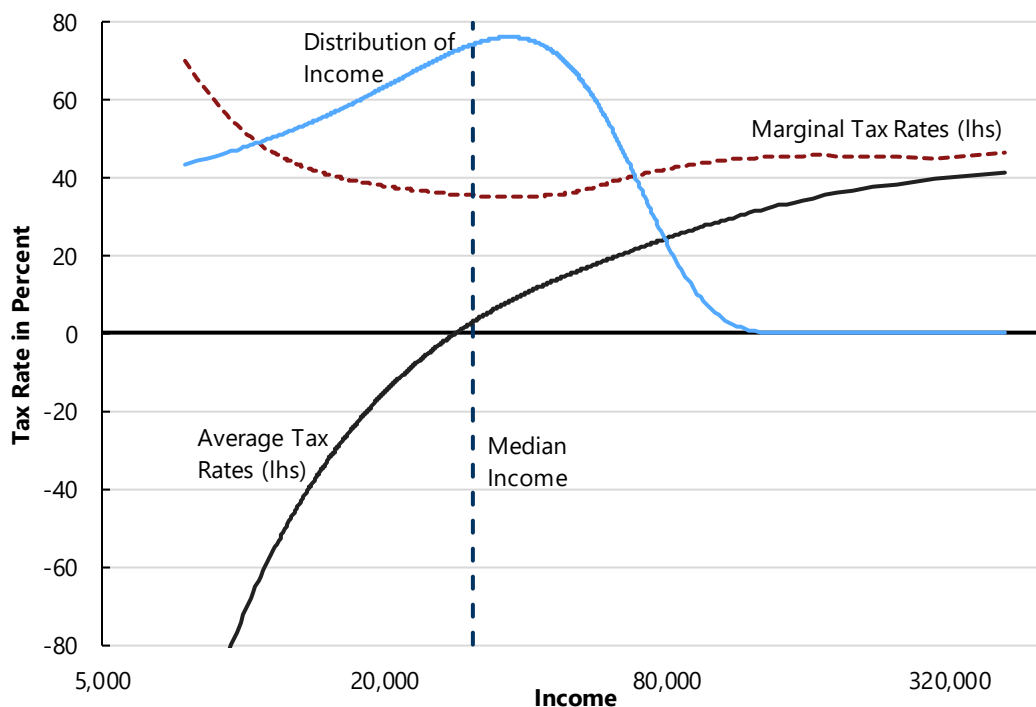
The theory of *optimal* income taxation is concerned with the design of redistributive tax and transfer systems in the presence of incentive costs (Mirrlees, 1971; Piketty and Saez, 2013). The basic model involves the optimal choice of the level of a lump-sum transfer<sup>9</sup> to all working individuals (i.e., a universal income or grant) and of a non-linear income tax schedule levied on earned income. Incomes are assumed to be distributed with most individuals bunched around mean income and fewer farther from the mean. Consistent with the presence of distributional objectives, the social value of income is assumed to decline with income. All individuals have the same labor supply elasticity, and so will reduce labor supply and earned income in response to income taxation. The optimal income tax schedule therefore involves managing this equity-efficiency trade-off. Under these conditions, the optimal (non-linear) income tax schedule involves an (incomplete) U-shaped marginal income tax schedule with *marginal* income tax rates being relatively high for both low-income and high-income individuals (but especially for low-income), and relatively low and flat for middle-income individuals (Figure 2). This is rationalized as follows:

---

<sup>9</sup> A lump-sum transfer is one where recipients cannot influence eligibility for, or the level of, the transfer through changing their behavior.

- The *high marginal tax rate for low-income* individuals reflects two factors related to efficiency objectives. First, fast withdrawal of income (and the transfer) reduces the fiscal cost of redistribution and facilitates lower marginal income tax rates throughout the bulk of the income distribution (including the middle). Second, marginal rates at the bottom of the distribution have low aggregate efficiency cost since they are akin to non-distortionary lump-sum (infra-marginal) taxes on those with higher earnings. So “the government should apply high marginal rates at points in the earnings distribution where there are few taxpayers relative to the number of taxpayers who have earnings exceeding this amount” (Brewer, Saez, and Shephard (2010, pp. 91)).<sup>10</sup> Income redistribution objectives are addressed through the lump-sum transfer.

**Figure 2. Optimal Marginal and Average Income Tax Schedules**



Source: Based on the excel model developed in Hummel and Jacobs (2018).

Note: The results are based on a compensated earnings supply elasticity of 0.25, an inequality aversion of 0.5, and a Pareto distribution parameter (PI) of 2.5. Under a Pareto distribution, the share of total income accruing to the  $q$ 'th percentile is  $(q/100)^{1/PI} \cdot [(PI-1)/PI]$ ; the higher PI, the lower the income share concentrated at the top of the income distribution. A PI of 2.5 therefore implies that the top 5 percent have approximately 16.6 percent share of total income. The optimal grant is 10,718—or 36 percent of median income of 30,000. As the inequality aversion parameter increases, the optimal marginal income tax schedule decreases with income throughout the income distribution with, for example, the optimal grant increasing to 54 percent of median income for inequality aversion of 1.0. The general shape of the optimal income tax schedule is relatively robust to these key model parameters (Annex 2).

<sup>10</sup> For presentational purposes, this note abstracts from labor force participation behavior (the so-called “extensive margin”). Introducing such considerations means that the optimal marginal income tax schedule should include negative marginal income tax rates at the lowest incomes (i.e., earnings subsidies).

- The *low marginal tax rate on middle-income* individuals reflects the high aggregate efficiency cost of income taxes since most individuals are located in the middle of the income distribution.
- The *medium marginal tax rate on high-income* individuals reflects the combination of low aggregate efficiency cost given the decreasing share of individuals with higher incomes and the low social value attached to extra income to these individuals.

Note that although the optimal income tax solution involves a uniform untaxed income grant, the (assumed) capacity to implement a non-linear income tax schedule essentially transforms this into a sophisticated means-tested transfer system. While in principle this means-testing can take place on the tax or transfer side, in practice, in most advanced economies with more sophisticated administrative systems, the high marginal tax rate at the bottom is typically achieved on the transfer side via a GMI-type scheme with a high withdrawal rate of benefits as income increases. To further reduce efficiency costs, many advanced economies have also added employment or employment-search requirements as an additional eligibility condition (Immervoll, 2009). Note, however, that even advanced countries with the capacity to implement sophisticated tax and transfer systems often also use quasi-universal transfers (e.g., child benefits and social pensions), suggesting that many forces, including social and political considerations, are at play when designing fiscal redistribution systems.

## V. ADMINISTRATIVE, SOCIAL, AND POLITICAL COSTS

In practice, many countries do not have the capacity to implement sophisticated non-linear means-tested transfer schemes. This may reflect low administrative capacity, and a large “informal” sector constituting small-scale and self-employment activities, individuals with multiple and volatile sources of income (including in-kind income), and poor or non-existent bookkeeping.<sup>11</sup> This makes verification of income very difficult, especially for low-income individuals.<sup>12</sup> There may also be a reluctance to do such means testing for social or political reasons (e.g., beneficiary stigma or middle-class support for redistribution, respectively). Or the costs of individuals acquiring sufficient capacity to comply (or understand) may be deemed undesirable or prohibitive. In such circumstances, countries can revert to less sophisticated approaches to “targeting” taxes and transfers. These can include the use of a “negative income tax” (NIT) or various forms of categorical targeting. Since such schemes will have higher efficiency costs, the optimal level of redistribution is also likely to be lower.

---

<sup>11</sup> The strength of public financial management (PFM) systems can also drive political will for effective fiscal redistribution. Strong PFM systems are necessary to ensure the effectiveness of sophisticated transfers systems at the various stages of the spending execution (e.g., appropriate budget and accounting nomenclatures; sound Financial Management Information systems to allocate and deliver the resources to the right beneficiaries; and capacity to ensure accountability for transfers).

<sup>12</sup> This could be interpreted as the tax elasticity being much higher at the bottom of the income distribution reflecting significant evasion possibilities, thus making high tax rates at low incomes very inefficient. Note that information (or data) constraints are at the heart of the design problem, as well as constraints on delivering transfers, and these constraints are typically most challenging in countries with large informal sectors and weak administrative capacity (see Prady, 2020, for a discussion and recent initiatives).

### Negative Income Tax

If countries cannot implement a non-linear tax-transfer scheme then they can consider adopting a negative income tax system (NIT), or some variant. The NIT assumes a uniform (universal) transfer and restricts the rate at which income is taxed to a constant proportional rate—in contrast to the optimal tax schedule with relatively high marginal tax rates at the bottom and top of the income distribution. Therefore, each individual receives a uniform lump-sum transfer of  $g$  and pays tax at rate  $t$  on all *earned* income,  $y_0$  (Figure 3; lhs). Let “original” (pre-tax and transfer) earned income be  $y_0$  and “final” (post tax and transfer) income be  $y_1$  so that:

$$y_1 = g + (1-t)y_0$$

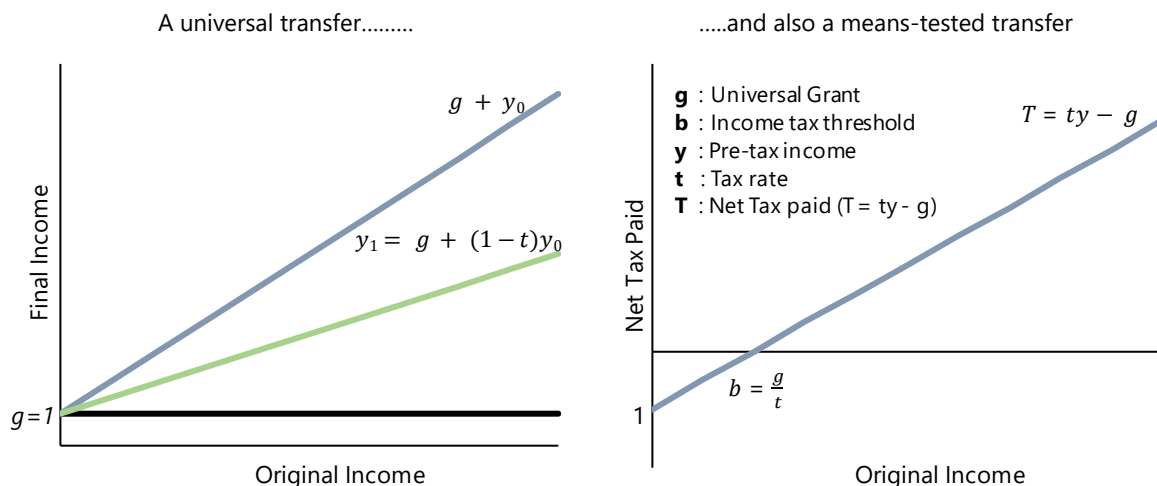
where everyone receives a grant of  $g$  and pays tax at rate  $t$  on all earned income. Note that if all income is consumed then a uniform proportional income tax is equivalent to a uniform proportional consumption tax rate.

As with the optimal income tax system, the NIT can be alternatively described as a means-tested tax-and-transfer scheme. This can be seen by rewriting the above equation as:

$$y_1 = y_0 + T = y_0 + (g - ty_0)$$

Individuals with earned income  $y_0$  above  $(g/t)$  pay income taxes to the government while those below this threshold receive a transfer (i.e., pay negative income taxes). Those above the threshold pay taxes equal  $t$  times the excess of their income over this threshold and those with income below receive transfers equal to  $t$  times the gap between their income and the threshold. Therefore, the net transfer received decreases at rate  $t$  as earned income  $y_0$  increases. This formulation, taking account of both the tax and transfer side of the redistributive fiscal system, helps to emphasize the means-tested nature of the transfer scheme once its financing through taxation is considered. The formulation also helps to demonstrate the need to consider both the tax and transfer sides when designing and discussing fiscal redistribution and the use of targeted and universal transfers.

**Figure 3. Negative Income Tax Scheme**



The NIT essentially restricts the rate at which the universal transfer can be withdrawn from low-income groups (and indeed high-income groups). One therefore expects that the efficient amount of redistribution (e.g., the universal grant) is now lower since the efficiency cost increases with departure from the optimal tax schedule (and, in this case, especially departures at lower and higher incomes). However, even this system may be difficult in countries with high informality and low administrative capacity, necessitating an income tax schedule with a high exemption threshold and greater reliance on consumption taxes. This again can be expected to further decrease the optimal level of redistribution.

### **Categorical Targeting**

Countries with very limited capacity to means-test transfers often rely on cruder forms of “categorical” targeting. Eligibility can be based on such characteristics as the presence of children (child benefit) or elderly (social pensions) in the household, the location of the household (living in poor areas), being disabled or in ill health, or some combination of these characteristics. Such characteristics may be highly—but imperfectly—correlated with being poor. For instance, while the poverty rate for households with children or elderly may be relatively high, not all households with children or elderly are poor, or if poor they are not equally poor. Categorical targeting can also be used to differentiate the level of transfers across households based on these characteristics, which can be desirable since individual earners reside in households and policy is typically concerned with (per capita) household welfare. In addition, the use of categorical targeting based on relatively exogenous characteristics may reduce the inefficiency associated with transfers, although not with the taxes needed to finance them.

The imperfect nature of categorical targeting gives rise to a trade-off between poverty impact, coverage of the poor, and fiscal cost.<sup>13</sup> While restricting transfers to households with children may help channel a larger share of the poverty budget to the poor, and thus have a larger poverty impact, poor households without children will be excluded, while non-poor with children are included. Coverage of the poor can be increased by expanding eligibility to include, say, older children or the elderly.<sup>14</sup>

Figure 4 (lhs) illustrates the trade-offs involved—between coverage of the poor, leakage to the rich, the transfer levels received by the poor, and fiscal cost—using simulations based on household survey data. Uniform benefits for children up to 5 years are relatively progressive, with coverage of the bottom quintile at around 50 percent, falling to around 15 percent for the top

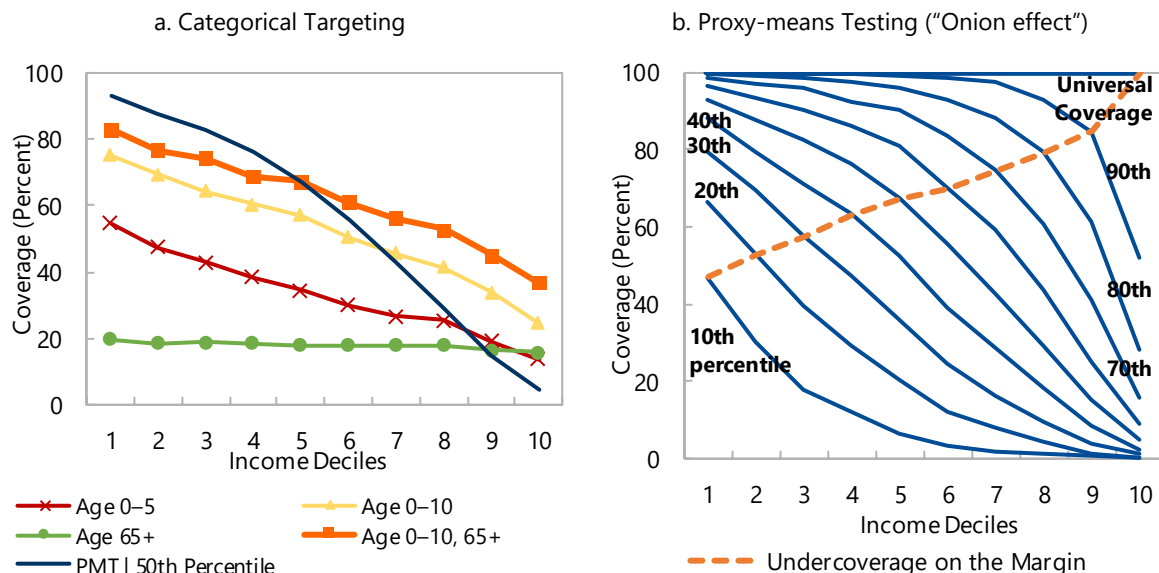
---

<sup>13</sup> This can be interpreted as a trade-off between *vertical equity*, as say captured by the share of transfers going to lower-income groups, and *horizontal equity* which requires that all poor are treated equally in terms of eligibility. Note that while the standard economic model adequately captures concerns about “vertical” income inequality (placing a higher social weight to income accruing to lower-income groups), it does not capture so well concerns about “horizontal” income inequality, i.e., the objective of treating all poor households equally. The latter would put a higher weight on increasing coverage among the poor.

<sup>14</sup> The approach of expanding coverage across groups over time is similar to the concept of gradual expansion of coverage through “progressive universalism”, which is generating broad support (Gentilini et al., 2020).

quintile.<sup>15</sup> Expanding eligibility to children up to 10 years would increase overall household coverage from 33 percent to 50 percent, with coverage increasing similarly across all income groups and reaching around 72 percent for the bottom quintile. Expanding eligibility to include the elderly would similarly increase overall coverage to 62 percent and coverage of the bottom quintile to nearly 80 percent.<sup>16</sup> Moving to universal benefits would obviously involve an increase in coverage from 62 percent to 100 percent and, under a fixed budget, lower transfer levels per household across all income groups. The choice between universal and targeted transfers therefore involves a choice between poverty impact, coverage of the poor, and the size of the transfer budget (and therefore also required tax levels).

**Figure 4. Coverage Under Alternative Categorical and Proxy-means Targeting**



Source: Authors calculations based on Indian 2011 National Sample Survey.

Note: Income (or welfare) deciles are based on household per capita income, with 1 being the poorest and 10 the richest. In the survey, 33 percent of households have children aged 0–5 years, 50 percent have children aged 0–10 years, and 62 percent have either children aged 0–10 years or elderly 65 years or above. Over 35(60) percent of children aged up to 10 years are in the bottom 2(4) income deciles, with very little variation across age levels. Compared to child and elderly transfers, the share of benefits accruing to the bottom five deciles is always higher under PMT targeting at the 50th percentile.

<sup>15</sup> Note that while the precise relationship between coverage and income can be expected to depend on how welfare is defined (e.g., adjusting for adult equivalence or economies of household size), the qualitative relationship is likely to be robust.

<sup>16</sup> If the level of benefit is held constant across transfer schemes then the total transfer budget for the expanded child benefit (0–10yrs) program would be 57 percent higher than the smaller (0–5yrs) program, and 87 percent higher when the elderly are included. Alternatively, under a fixed budget, individual transfer levels would need to fall by 36 percent and 46 percent, respectively.

## Proxy-means Testing

Targeting eligibility based on proxy-means tests (PMTs) has become more prevalent (and contentious) in recent years. This approach typically attaches a continuous score to households based on various household characteristics strongly correlated with welfare, often based on the coefficients from a regression analysis of income or consumption on these characteristics.<sup>17</sup> It has been argued that, by design, this approach is prone to significant leakage and under-coverage of the target poor population, especially of the poorest (Brown, Ravallion, and van de Walle, 2016). Figure 4 (rhs) illustrates the trade-offs involved. Each line, going from bottom to top, shows the “onion effect” on coverage across income deciles as program coverage increases from 10 percent of the population to 100 percent based on a standard form of PMT.<sup>18</sup> Under all PMT schemes, coverage is substantially higher for lower-income groups than for higher-income groups.<sup>19</sup> As the program expands upwards from 10 percent of the population, coverage of lower-income groups increases significantly, reaching around 80–90 percent for the bottom quintile at 40 percent population coverage.<sup>20</sup> If the objective is to ensure almost universal coverage (say above 80 percent) of each of the bottom three deciles, then the program would need to expand to 50 percent of the population.

PMT targeting can therefore be designed to outperform categorical child and elderly targeting in terms of both coverage and benefit incidence. Coverage of lower-income groups is higher under a PMT that covers 50 percent of the population (Figure 4a). Combined with the sharper drop off in coverage over higher-income groups, this results in a higher share of the transfer budget going to lower-income groups under PMT. Therefore, for a given budget, the PMT will typically have a larger poverty reduction impact and better coverage of lower-income groups than under simpler categorical targeting. Also, as coverage expands, this significantly dilutes, although does not eliminate, concerns for horizontal inequity.<sup>21</sup>

An alternative would be to use the PMT score only to *differentiate the level of benefits* across the population, *with universal coverage*. This would help to eliminate undercoverage of poor

<sup>17</sup> These characteristics typically include those highly correlated with consumption or poverty and not easily manipulated by beneficiaries (e.g., household composition, housing characteristics, and significant assets).

<sup>18</sup> The PMT regression includes explanatory variables reflecting: Household size, Number of Dependents 0–14, Age of the Household Head, Marital Status of the Household Head, Education of the Household Head, District dummies, Employment category, and Social Group.

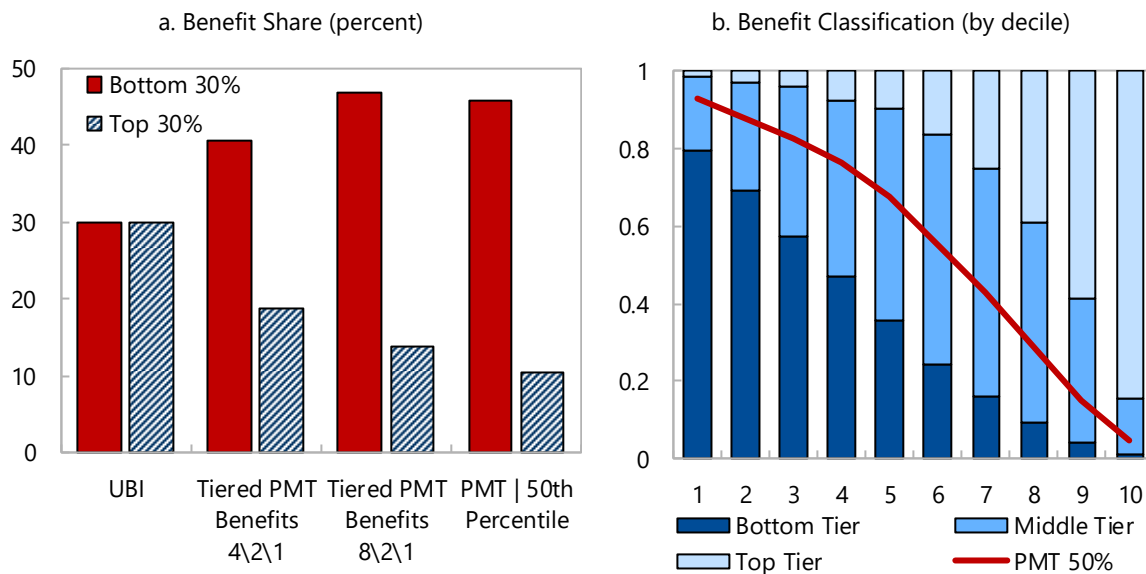
<sup>19</sup> As noted in the recent literature (e.g., Brown, Ravallion, and van de Walle, 2016), the use of PMT to target the poorest income groups results in significant undercoverage and thus horizontal inequity. The random nature of exclusion (particularly exclusion on the margin around the eligibility cut-off score) and the associated lack of transparency in defining eligibility can also generate significant community unrest as they observe that poor households are excluded while better-off households are included.

<sup>20</sup> Therefore, as coverage expands this significantly dilutes, but does not eliminate, concerns for horizontal inequity. This could presumably be addressed through additional programs focusing on those not covered, e.g., public works programs based on self-selection. Note also that undercoverage of the “marginal” (or threshold) decile group also decreases as program population coverage expands, from 53 percent at 10 percent population coverage to 33 percent at 50 percent population coverage.

<sup>21</sup> Note that the structural nature of the underlying statistical approach means that PMT scoring systems need to be regularly updated to remain effective at targeting lower-income groups.

beneficiaries (however defined), although not all (equally) poor beneficiaries would have the same transfer. Figure 5 (lhs) shows the outcome in terms of share of benefits accruing to the poorest (and richest) 30 percent of the population. Under the universal transfer, the poorest 30 percent receive 30 percent of the fixed transfer budget. The second set of bars show the share under a “tiered PMT” where the ratio of benefits received by individuals is 4:2:1 across the lowest three deciles, the next four deciles, and the highest three deciles respectively. This increases the share of benefits accruing to the bottom three deciles to over 40 percent, while that for the richest three deciles decreases to just above 15 percent. In addition to having a bigger poverty impact, this also eliminates eligibility undercoverage. Although the PMT that targets half the population (fourth set of bars on lhs) has a slightly higher share of benefits accruing to the bottom three deciles, it also comes with significant undercoverage of lower welfare deciles. Tiering benefits also further eases, but does not eliminate completely, horizontal equity concerns.

**Figure 5. Benefit Share and Program Coverage**



Source: Authors' calculations based on Indian 2011 National Sample Survey.

Note: In panel b, chart bars show the share of each decile receiving different benefit levels under the ratio 4:2:1 for the bottom three deciles (bottom tier", next four deciles (middle tier), and top three deciles (top tier).

## VI. STRENGTHENING FISCAL REDISTRIBUTION

Although both advanced, emerging and developing countries have room for strengthening their fiscal redistribution systems, the nature of the challenges varies reflecting their different levels of development and administrative capacity. In this section, we briefly discuss various ways in which fiscal redistribution systems can be strengthened in these countries. In general, the challenge is to use existing and feasible tax and transfer instruments to approximate as closely as possible the optimal income tax schedule in the short term, while strengthening the administrative capacity to design and implemented more sophisticated redistributive policy instruments over the medium term.



## Advanced Countries

For the most part, advanced countries already have strong fiscal redistribution systems, as reflected in relatively high levels of taxes and transfers. The existing set of tools at their disposal means that these countries can closely approximate the optimal income tax schedule discussed above through a combination of means-tested social assistance transfers (high MTRs at the bottom), consumption taxes (flat tax in the middle), and progressive income taxes (increasing MTRs at the top). In many countries these are complemented by categorical transfers including child benefits and social pensions, as well as comprehensive social insurance systems. However, there are some areas where these systems could be further strengthened (IMF, 2017):

- *Personal income taxation (PIT)*: There appears to be room in many advanced countries for increasing the progressivity of income taxes, which has fallen in many countries since the 1980s.<sup>22</sup> Top marginal PIT rates have declined significantly since 1980. The progressivity of income taxes is often even lower than suggested by statutory rates due to the proliferation of tax exemptions which can be more easily exploited by high-income individuals through aggressive tax planning (Alstadsaeter, Johannesen, and Zucman, 2018). Recent empirical studies suggest that in many countries progressivity could be enhanced without adversely affecting economic growth (Gerber et al., 2018). In the context of increasing income volatility and income uncertainty driven by rapid technological change, more progressive income tax systems will also strengthen the insurance role played by fiscal redistribution.
- *Capital income taxation (CIT)*: Efficiency and fairness principles point to the need for equal tax treatment of income regardless of source. Yet capital income (including profits, interest, and capital gains) is typically taxed at a lower rate than labor income, and this rate has been declining in many countries over recent decades<sup>23</sup>. Also, capital income is typically more unequally distributed than labor income and its share in total income has been steadily increasing over recent decades. Strengthening efficiency, equity and fairness of the income tax system will require better integration of PIT and CIT systems (to reduce incentives to reclassify income), reducing opportunities for tax evasion and avoidance, and addressing the challenge posed by increasing international mobility of the tax base.
- *Wealth taxation*: Taxation of wealth itself (rather than income returns on wealth) can further strengthen the progressivity and fairness of the tax system, especially since high-income individuals often consume only a small proportion of their income and wealth over their lifetimes and taxing capital returns can be administratively and politically difficult. However, some OECD countries have moved away from this kind of tax on revenue, efficiency and administrative grounds (OECD, 2018). Taxation of immovable property, such as real estate or land taxes which are typically seen as both equitable and efficient, are underused in many countries. Norregaard (2015) estimates additional revenue potential at around 2 percent of

---

<sup>22</sup> Empirical evidence also shows that income and wealth inequality are higher in countries where income taxes are less progressive.

<sup>23</sup> The literature on optimal taxation contains various arguments in favor of lower or higher capital taxation (Clements and others, 2015).

GDP in countries that currently rely only modestly on property taxes, and highlights the importance of having accurate valuation systems.

- *Consumption taxation:* Enhancing the C-efficiency<sup>24</sup> of consumption taxes could increase revenues by over 1 percentage point of GDP in many advanced economies (de Mooij and Keen, 2012). More efficient taxation of fossil fuel consumption to internalize negative domestic and global environmental externalities can also enhance the progressivity of consumption taxes. Coady and others (2019) estimate that efficient taxation of fossil fuels would increase tax revenues by nearly 3 percentage points of GDP on average in advanced countries. However, gaining political support for such tax increases would probably require clarity on how these revenues would be returned to the population to mitigate the adverse welfare impact of price increases, including possibly a universal (or near universal) income transfer (IMF, 2017) which would further enhance fiscal redistribution.
- *Means-tested transfers.* Most countries have some form of General Minimum Income (GMI) program that provides means-tested transfers to lower-income groups. However, evidence suggests that the disincentive for employment and labor supply is high due to high marginal tax rates (MTRs) as benefits are withdrawn as income rises. Reducing these high MTRs can enhance both the efficiency and equity of fiscal redistribution, especially with greater use of in-work benefits and wage subsidies (Immervoll and others, 2007; IMF, 2019; de Mooij, 2015), if lost revenues are recouped through higher top MTRs and efficient consumption taxes. Efficiency can be further enhanced through strengthening active labor market programs that condition benefit eligibility on job search and participation in training or public employment.

### **Emerging<sup>25</sup> and Developing Countries**

Many emerging and most developing countries have much weaker fiscal redistribution systems reflecting administrative constraints on both the tax and spending sides. They also have other significant development challenges that require higher public spending on physical investment (e.g., roads, water, electricity) and human capital investment (e.g., education and health), which are crucial for promoting inclusive growth and for longer-term poverty reduction. Strengthening fiscal redistribution will require an expansion of broad-based consumption taxes and selective excise taxes as well as the development of progressive income tax systems.

- *Consumption taxation:* Consumption taxes will remain the most important source of revenues over the short term. While value-added taxes (VAT) have been, and will remain, the most effective source of additional revenues, most countries have sizeable tax exemptions that are often inequitable and inefficient. Strengthening VAT systems will therefore require both reducing these exemptions and increasing compliance (enhancing C-efficiency, e.g., through

---

<sup>24</sup> C-efficiency is defined as the ratio of actual revenue to potential revenue when all consumption is taxed at the standard rate in a country, and measures how close a government comes to collecting tax on all consumption in the economy. In practice, the rise in VAT revenue in recent decades has been driven primarily by improvements in C-efficiency rather than by increasing standard tax rates (Keen 2013).

<sup>25</sup> Some emerging countries, such as emerging European countries, have relatively strong systems and are much similar to advanced countries in terms of policy challenges and reforms for strengthen fiscal redistribution systems.

risk-based auditing) and increasing tax levels (Keen, 2013). Setting the tax registration threshold at a reasonably high level can also enhance the progressivity of the consumption tax burden since owners of smaller scale businesses typically have lower incomes and lower-income groups often buy from small-scale retailers. This can be supplemented by increasing excise taxes on luxury goods and consumption items that generate negative externalities, such as fossil-fuel-based energy, alcohol, and tobacco. Coady and others (2019) estimate that, on average, efficient pricing of fossil fuels would generate additional tax revenues of nearly 4 percentage points of GDP in sub-Saharan Africa and 7 percentage points of GDP in Middle East and North Africa. The fiscal gains would also be accompanied by significant improvements on health due to lower domestic pollution. Reallocating these revenues to progressive spending would further enhance fiscal redistribution. Note, however, increased consumption taxes should be accompanied by a strengthening of weak social protection systems to protect vulnerable households from price increases, especially through expanding coverage of the social safety net.

- *Income and wealth taxes:* Developing countries should focus on gradually expanding the coverage of the PIT system, starting with high income tax thresholds and gradually reducing these as administrative capacity expands. This should be accompanied by strengthening the CIT system, reducing revenue losses from profit shifting,<sup>26</sup> higher CIT rates (which have declined significantly over recent decades), and better integration of PIT and CIT systems. These reforms will require the removal of unnecessary exemptions and deductions which can be exploited through aggressive tax planning, and the avoidance of mutually destructive international tax competition, which may also need stronger international tax cooperation to be effective. While wealth taxation can also contribute to revenue needs, the significant investment in the capacity needed to administer these taxes limit their role in the short to medium term. Norregaard (2015) estimates the revenue potential of property taxes at 0.5–1.0 percent of GDP over 5–10 years with sufficient investment in information and administrative systems.
- *Social safety nets:* The key challenge in developing countries is how to expand coverage (which is particularly low in low-income economies) to reduce poverty and protect poor and vulnerable households from increases in consumption and other taxes and from economic reforms more generally. Expanding coverage can be achieved through a combination of transfer programs and targeting methods. Since most countries will need to rely on (non-means tested) categorical targeting methods, the challenge is to do this in a fiscally sustainable manner. Demographic transfers, such as child benefits and social pensions, can be used to quickly increase coverage. The relatively large leakage of benefits to higher-income groups increases the importance of strengthening progressive income tax systems to claw back these benefits from high-income groups. To further expand coverage of lower-income groups, demographic transfers can be complemented by better targeted programs such as proxy-means targeted (PMT) transfers and public works programs based on self-selection via a work requirement and relatively low wages. As countries strengthen their

---

<sup>26</sup> Revenue losses from profit shifting have been estimates at nearly 2 percentage points of GDP on average in developing countries (Cobham and Janský, 2018; Crivelli, de Mooij, and Keen, 2016).

administrative capacity, consideration could be given to expanding coverage in PMT programs combined with decreasing transfer levels.

- *Conditional cash transfers*: The complementarity between cash transfers and in-kind transfers such as education and health makes the use of conditional cash transfers (CCTs), which typically condition eligibility for transfers on attendance at school, health and nutrition clinics, attractive. However, to be effective, these cash transfers need to be complemented by access to quality service delivery, especially given the large gaps in access that remain in many countries. These programs can also require significant investments in strengthening the administrative capacity to co-ordinate different line ministries and monitor beneficiary compliance. Expansion of access to quality human capital services is also key for breaking the inter-generational transmission of poverty and reducing market income inequality over the medium term.

Expanding tax capacities is therefore crucial for enhancing fiscal redistribution in developing countries while avoiding crowding out of other public spending crucial for promoting inclusive growth and poverty reduction over the long term. Recent research also finds that countries move to a higher growth path once tax revenue reaches about 15 percent of GDP (Gaspar, Jaramillo, and Wingender 2016), in part reflecting higher social spending. However, about half of low-income countries—and a third of emerging market economies—have tax ratios below this 15 percent threshold. Low tax ratios in turn result in low levels of social spending. The large variation in tax ratios within developing countries suggests that many have ample room for higher taxation over the short term. Some have succeeded in sustainably increasing tax revenues to bring them close to or above 15 percent of GDP (Coady, 2018). Georgia is a leader in this group, having increased tax revenue by 12.9 percent of GDP during 2004–08. Maldives raised revenue by 11 percent of GDP during 2011–15. Others that have made significant gains over similar periods include Dominica (7.5 percent, 2002–06), Ghana (7.3 percent, 2000–04), Mauritania (6.1 percent, 2010–14), Mozambique (6.1 percent, 2007–11), Guinea (5.8 percent, 2008–12), Malawi (5.7 percent, 2003–07), and Cambodia (5.0 percent, 2012–16).

## VII. CONCLUDING REMARKS

There is a growing debate on the roles of targeted and universal transfers in achieving fiscal redistribution objectives. The benefit of targeting transfers is clear; by increasing the share of the transfer budget received by the target “poor” population it maximizes the impact in terms of reducing poverty. Perfect targeting occurs when all of the poor receive transfers, with each receiving a transfer level equal to their poverty gap. With a transfer budget equal to the aggregate poverty gap, this would fully eliminate poverty.

However, when there are costs to targeting, perfect targeting is no longer optimal or even feasible. The theory of optimal income taxation explores the optimal design of fiscal redistribution when there are incentive (or efficiency) costs, i.e., when individuals will reduce their labor supply (and therefore the income tax base) in response to the withdrawal of benefits as their earnings increase. The presence of these efficiency costs introduces a trade-off between efficiency and equity objectives, and it is no longer optimal to do perfect targeting (i.e., a 100 percent withdrawal of benefits as income increases). Efficiency requires that benefits are withdrawn at a rate below 100 percent to strengthen incentives for labor supply. While the

optimal income taxation framework involves a universal income transfer, the assumption that governments can implement a sophisticated non-linear income tax system essentially transforms the universal transfer into a heavily means-tested transfer.

The presence of other targeting costs introduces further trade-offs that need to be managed. Administrative constraints in many countries, especially developing countries with large informal sectors, implies that means-tested transfers are not feasible. At the same time, in the presence of transfer budget constraints, universal transfers would involve substantial leakage of benefits to higher-income groups and therefore a much smaller poverty impact. While increasing the budget would help to reinforce the poverty impact, this may be undesirable on efficiency grounds if it requires very high tax levels or crowding out of productive public spending on such things as physical and human capital which are crucial for promoting inclusive growth. However, universal transfers may become more feasible if they are financed by ambitious progressive and efficient taxation reforms, including progressive income and consumption taxation, and efficient taxation of fossil fuel consumption.

In the presence of such budget constraints, countries often rely on quasi-universal (or categorical) transfers which target based on criteria such as age, gender, and location. These alternative approaches to targeting introduce different trade-offs between coverage of lower-income groups, poverty impact and fiscal cost. They also introduce horizontal inequities in that not all the poor are covered, similarly poor individuals receive different benefit levels, and non-poor also receive benefits. These can also generate associated social and political costs in the form of lack of public support and social discontent.

Proxy-means testing, whereby households are given a score based on a statistical algorithm that predicts incomes (or consumption or poverty), is often seen as an attractive alternative. Although this may enhance the poverty impact, it still has many of the challenges posed by quasi-universal targeting. However, these challenges can be substantially reduced (although not completely eliminated) if the score is used to differentiate transfers across individuals (rather than to include or exclude individuals), with transfers decreasing across groups with higher predicted income.

To conclude, targeting comes with costs as well as benefits and countries may choose to strike a different balance between these costs and benefits due to different social and political preferences and administrative and fiscal constraints. Therefore, the appropriate choice among universal transfers and different forms of targeted transfers will also be country specific. However, the greater the reliance on universal transfers, the higher the premium attached to financing transfers through progressive income taxation and efficient consumption taxation to claw back leakage of benefits to higher income groups. While advanced economies have the potential to closely approximate the tax and transfer regime suggested by optimal income tax theory (means-tested transfers and progressive income taxation combined with consumption taxation) this is not the case in most developing economies. But, even in these economies, there is ample room for enhancing the progressivity and efficiency of income and consumption taxes to raise the taxes needed to strengthen social safety nets based on quasi-universal transfers. The fact that even advanced economies with the capability to implement sophisticated means-tested transfer schemes still use quasi-universal benefits such as child benefits and social pensions, suggests important social and political factors are always at play.

## ANNEX 1. TARGETING APPROACHES AND COSTS

Countries use a range of approaches to target benefits to households, but each of these approaches come with various costs (Coady, Grosh, Hoddinott, 2004a, Chapter 1).

### Alternative Targeting Approaches

Countries often use criteria other than income to target transfers to lower-income groups. The most common types of targeting discussed in the literature include:

- *Demographic targeting.* Eligibility is based on individual or household characteristics that are thought to be highly (but imperfectly) correlated with low income or poverty. This could include, for example, the presence of children, elderly, or disabled in the household.
- *Geographic targeting.* Eligibility can be based on whether or not a household lives in a poor community using, for example, national poverty maps.
- *Proxy-means targeting.* A growing number of countries use a statistical proxy-means approach that identifies key socio-economic characteristics strongly correlated with economic status, attaches a numerical weight to each characteristic (usually based on a regression analysis), and calculates a score by summing the products of weights and characteristics. This score is used to determine eligibility.
- *Self-selection targeting.* Eligibility can be based on an individual being willing to participate in a work program at a relatively low wage to encourage high wage individuals from taking up the benefit.

These targeting criteria are often used in combination. In addition to determining eligibility, the above targeting criteria can be used to vary the level of benefit across eligible beneficiaries. This can often help to further reduce leakage of transfers to non-poor households.

### Costs of Targeting

In practice, the use of targeting introduces a range of costs that need to be considered along with the benefits of targeting when designing fiscal redistribution policies. These include:

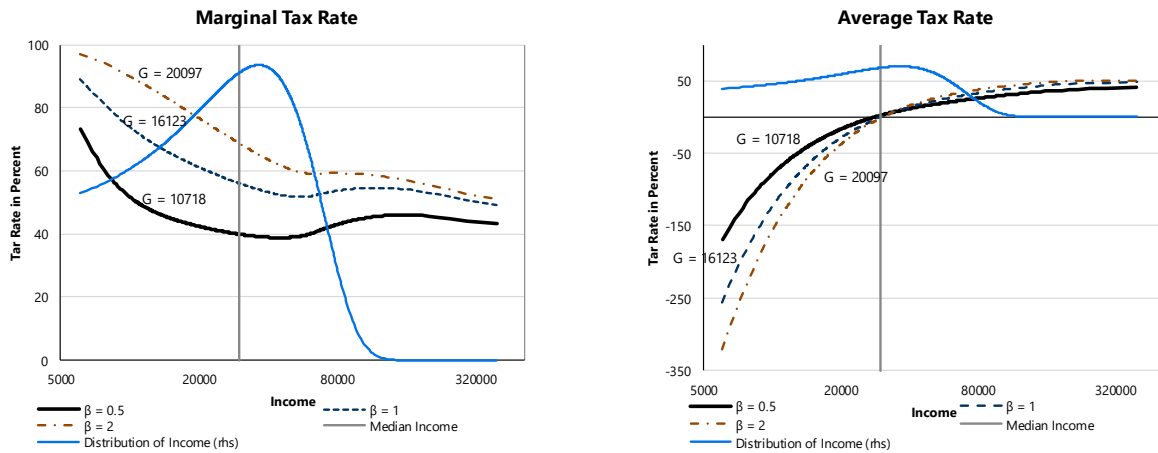
- *Incentive costs.* These exist because the presence of eligibility criteria may induce households to change their behavior to become eligible for benefits. For example, a program that is open only to those below a minimum income (or poverty line) may cause some households to reduce their labor supply and thus their earned incomes. Individuals may also incur costs in hiding their true incomes.
- *Administrative costs.* These costs include the costs of collecting and verifying information on household incomes. In practice, households can report lower incomes in a bid to receive benefits, and verification is never likely to be completely effective, especially in informal settings where, for example, income can be very volatile, come from many sources, and be in-kind.

- *Private costs.* Households also incur private costs involved in taking up transfers. For example, workfare programs involve households incurring an opportunity cost in terms of forgone income opportunities. Queuing involves similar, though usually much smaller, opportunity costs. Households may also face cash costs for obtaining certifications required for the program (a national identity card, proof of residency, of disability, etc.) and for transportation to and from program offices.
- *Social costs.* These costs may arise when the targeting of poor households involves publicly identifying households as poor, which may carry with it a social stigma. If the poorest households do not take-up the transfer as a result, then this decreases the effectiveness of the program at getting transfers into the hands of the poorest. Such issues obviously take on additional importance when one appeals to concepts of poverty such as “capabilities” (Sen, 1988). Targeting errors, i.e., excluding some poor and including some non-poor, can also create social tensions within communities.
- *Political costs.* Excluding the middle classes may remove broad-based support for such programs and make them unsustainable if voter support determines the budget and is in turn determined by whether the voter benefits directly from the program. On the other hand, efficient targeting to ensure that only those in need receive benefits may actually increase political support from those who support it based on its indirect benefits to them of reducing poverty (such a feeling of social justice, increased political and social stability, or lower taxes).

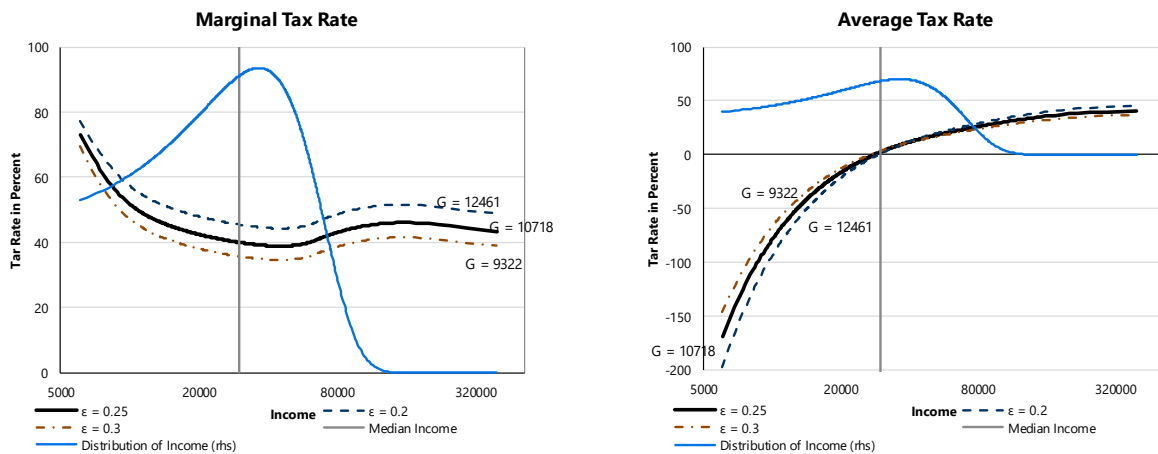
In summary, the nature and level of the costs of targeting will vary across targeting method. It is likely that administrative costs are more important when individual or household assessment is used. Incentive costs are likely to be less important when categorical targeting is used, although they will be transferred to the tax side of fiscal redistribution. Private costs are likely to be more important when self-selection methods are used. The nature and importance of social costs may differ widely with the form of self-selection inherent in the program design. In practice, all of these costs need to be considered when evaluating the targeting effectiveness of programs.

## ANNEX 2. SENSITIVITY TO OPTIMAL INCOME TAX SCHEDULES TO KEY MODEL PARAMETERS

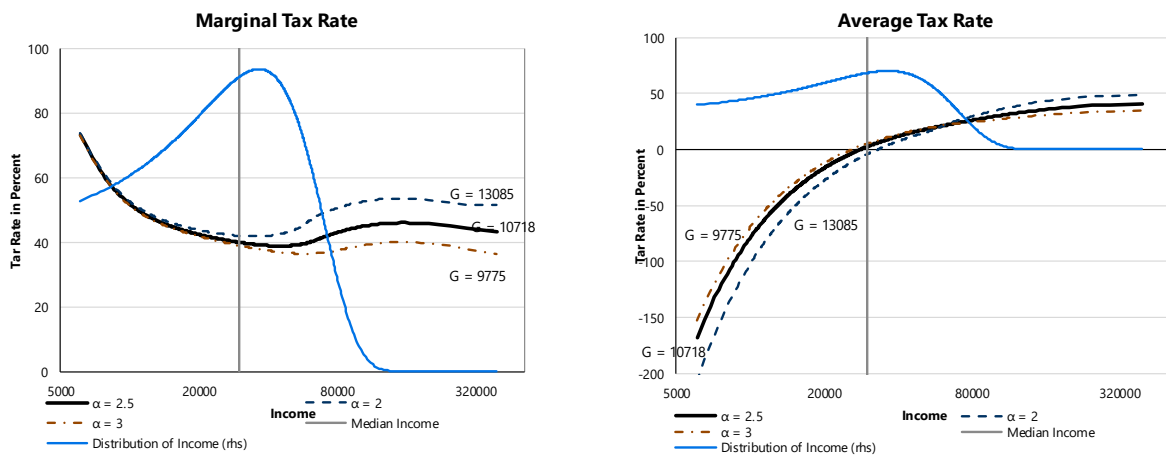
### a. Sensitivity to Inequality Aversion, $\beta$



### b. Sensitivity to Compensated Earnings-Supply Elasticity, $\epsilon$



### c. Sensitivity to Pareto Parameter, $\alpha$





## REFERENCES

- Akerlof, George A., 1978, "[The Economics of 'Tagging' as Applied to the Optimal Income Tax, Welfare Programs, and Manpower Planning](#)," *The American Economic Review*, Vol. 68, No. 1, pp. 8–19.
- Alstadsaeter, Annette, Niels Johannesen, and Gabriel Zucman, 2018, "[Who Owns the Wealth in Tax Havens? Macro Evidence and Implications for Global Inequality](#)," *Journal of Public Economics*, Vol. 162, pp. 2073–2103.
- Atkinson, Anthony Barnes, 1995a, "[On Targeting and Family Benefits](#)," in *Incomes and the Welfare State: Essays on Britain and Europe*, ed. by Anthony Barnes Atkinson (Cambridge: Cambridge University Press).
- \_\_\_\_\_, 1995b, "[On Targeting Social Security: Theory and Western Experience with Family Benefits](#)," in *Public Spending and the Poor: Theory and Evidence*, ed. by Dominique van de Walle and Kimberly Nead (Baltimore: Johns Hopkins University Press).
- \_\_\_\_\_, 2015, *Inequality: What Can Be Done?* (Cambridge: Harvard University Press).
- Banerjee, Abhijit, Paul Niehaus, and Tavneet Suri, 2019, "Universal Basic Income in the Developing World," NBER Working Paper No. 25598.
- Bastagli, Francesca, David Coady, and Sanjeev Gupta, 2015, "Fiscal Redistribution in Developing Countries: Overview of Policy Issues and Options," in *Inequality and Fiscal Policy*, ed. by Benedict Clements, Ruud A. de Mooij, Sanjeev Gupta, and Michael Keen (Washington: International Monetary Fund).
- Bastagli, Francesca, Jessica Hagen-Zanker, Luke Harman, Valentina Barca, Georgina Sturge, Tanja Schmidt, and Luca Pellerano, 2016, "[Cash Transfers: What Does the Evidence Say. A Rigorous Review of Programme Impact and of The Role of Design and Implementation Features](#)," Technical Report (London, Overseas Development Institute).
- Besley, Timothy, and Ravi Kanbur, 1993, "[The Principles of Targeting](#)," in *Including the Poor*, ed. by Michael Lipton and Jacques Van Der Gaag (Washington: The World Bank Group).
- Besley, Timothy and Ravi Kanbur, 1993, "[The Principles of Targeting](#)," Policy Research Working Paper Series 385 (Washington: The World Bank Group).
- Brewer, Mike, Emmanuel Saez, and Andrew Shepard, 2010, "[Means-testing and Tax Rates on Earnings](#)," pp. 91 in *Dimensions of Tax Design*, ed. by Stuart Adam, Tim Besley, Richard Blundell, Stephen Bond, Robert Chote, Malcolm Gammie, Paul Johnson, Gareth Myles, and James M. Poterba (Oxford: Oxford University Press).
- Brown, Caitlin, Martin Ravallion, and Dominique van de Walle, 2016, "[A Poor Means Test? Econometric Targeting in Africa](#)," NBER Working Paper No. 22919.
- \_\_\_\_\_, 2017, "[Reaching Poor People](#)," *Finance and Development*, Vol. 54, No. 4, pp. 48–51 (Washington: International Monetary Fund).
- Chancel Lucas, 2019, "[Ten Facts About Inequality in Advanced Economies](#)," World Inequality Database Working Paper No. 2019/15.

- Clements, Benedict, Ruud A. de Mooij, Sanjeev Gupta, and Michael Keen, 2105, [\*Inequality and Fiscal Policy\*](#) (Washington: International Monetary Fund).
- Coady, David, Margaret Grosh, and John Hoddinott, 2004a, "[Targeting of Transfers in Developing Countries: Review of Lessons and Experience](#)," World Bank Regional and Sectoral Studies No. 30230 (Washington: The World Bank Group).
- \_\_\_\_\_, 2004b, "[Targeting Outcomes Redux](#)," *The World Bank Research Observer*, Vol. 19, No. 1, pp. 61–85 (Washington: The World Bank Group).
- Coady, David, 2018, "[Creating Fiscal Space](#)," *Finance and Development*, Vol. 55, No. 4, pp. 24–7 (Washington: International Monetary Fund).
- \_\_\_\_\_, and Allan Dizioli, 2018, "[Income Inequality and Education Revisited: Persistence, Endogeneity and Heterogeneity](#)," *Applied Economics*, Vol. 50, No. 25, pp. 2747–61.
- Coady, David, Ian Parry, Nghia-Piotr Le, and Baoping Shang, 2019, "[Global Fossil Fuel Subsidies Remain Large: An Update Based on Country-Level Estimates](#)," IMF Working Paper No. 19/89 (Washington: International Monetary Fund).
- Cobham, Alex, and Petr Janský, 2018, "[Global Distribution of Revenue Loss from Corporate Tax Avoidance: Re-estimation and Country Results](#)," *Journal of International Development*, Vol. 30, No. 2, pp. 206–32.
- Crivelli, Ernesto, Ruud A. de Mooij, and Michael Keen, 2016, "[Base Erosion, Profit Shifting, and Developing Countries](#)," IMF Working Paper No. 15/118 (Washington: International Monetary Fund).
- de Mooij, Ruud A., 2015, "Reinventing the Dutch Tax-Benefit System: Exploring the Frontier of the Equity-Efficiency Trade-Off," in [\*Inequality and Fiscal Policy\*](#) ed. by Benedict Clements, Ruud A. de Mooij, Sanjeev Gupta, and Michael Keen (Washington: International Monetary Fund).
- \_\_\_\_\_, and Michael Keen, 2012, "[Fiscal Devaluation and Fiscal Consolidation: The VAT in Troubled Times](#)," IMF Working Paper No. 12/85 (Washington: International Monetary Fund).
- Drèze, Jean, 2017, "[Decoding Universal Basic Income](#)," *Indian Journal of Human Development*, Vol. 11, No. 2, pp. 163–6.
- Francese, Maura, and Delphine Prady, 2018, "[Universal Basic Income: Debate and Impact Assessment](#)," IMF Working Paper No. 18/273 (Washington: International Monetary Fund).
- Furceri, Davide, Prakash Loungani, Jonathan Ostry, and Pietro Pizzuto, 2020, "[Will Covid-19 Affect Inequality? Evidence from Past Pandemics](#)," *COVID Economics*, No. 12, pp. 138–57 (London: Center for Economic Policy Research).
- Gaspar Vitor, Laura Jaramillo, Philippe and Wingender, 2016, "[Tax Capacity and Growth: Is There a Tipping Point?](#)," IMF Working Paper No. 16/234 (Washington: International Monetary Fund).
- Gerber, Claudia, Alexander Klemm, Li Lu, and Victor Mylonas, 2018, "[Income Tax Progressivity: Trends and Implications](#)," IMF Working Paper No. 18/24 (Washington: International Monetary Fund).

- \_\_\_\_\_, Margaret Grosh, Jamele Rigolini, and Ruslan Yemtsov, 2020, [\*Exploring Universal Basic Income: A Guide to Navigating Concepts, Evidence and Practices\*](#) (Washington: The World Bank Group).
- Hummel, Albert Jan and Bas Jacobs, 2018, *Optimal Nonlinear Tax Simulator for Excel*, Erasmus University Rotterdam.
- International Monetary Fund, 2017, "[Tackling Inequality](#)," October 2017 *Fiscal Monitor* (Washington: International Monetary Fund).
- \_\_\_\_\_, 2019, "[Denmark: 2019 Article IV Consultation Staff Report](#)," IMF Country Report No. 19/179 (Washington: International Monetary Fund).
- \_\_\_\_\_, 2020, "[Policies to Support People During the COVID-19 Pandemic](#)," April 2020 *Fiscal Monitor* (Washington: International Monetary Fund).
- Immervoll, Herwig, 2009, "[Minimum-Income Benefits in OECD Countries: Policy Design, Effectiveness and Challenges](#)," IZA Discussion Paper No. 4627.
- Immervoll, Herwig, Henrik Kleven, Claus Kreiner, and Emmanuel Saez, 2007, "Welfare Reform in European Countries: A Microsimulation Analysis," *Economic Journal*, Vol. 117, No. 516, pp. 1–44.
- Keen, Michael, 2013, "[The Anatomy of the VAT](#)," *National Tax Journal*, Vol. 66, No. 2, pp. 423–46.
- Kumhof, Michael and Romain Rancière, 2010, "[Inequality, Leverage, and Crises](#)," IMF Working Paper No. 10/268 (Washington: International Monetary Fund).
- McKay, Alisdair and Ricardo Reis, 2016, "[The Role of Automatic Stabilizers in the U.S. Business Cycle](#)," *Econometrica*, Vol. 84, No. 1, pp. 141–94.
- Mirrlees, James A., 1971, "[An Exploration in the Theory of Optimum Income Taxation](#)," *The Review of Economic Studies*, Vol. 38, No. 2, pp. 175–208.
- Norregaard, John, 2015, "Taxing Immovable Property," in [\*Inequality and Fiscal Policy\*](#) ed. by Benedict Clements, Ruud A. de Mooij, Sanjeev Gupta, and Michael Keen (Washington: International Monetary Fund).
- Organisation for Economic Cooperation and Development (OECD), 2018, [\*The Role and Design of Net Wealth Taxes in the OECD\*](#), OECD Tax Policy Studies, No. 26 (Paris: OECD Publishing).
- Prady, Delphine, 2020, "[Reaching Households in Emerging and Developing Countries: Citizen ID, Socioeconomic Data, and Digital Delivery](#)," Special Series on Fiscal Policies to Respond to COVID-19 (Washington: International Monetary Fund).
- Picketty, Thomas, and Emmanuel Saez, 2013, "[Chapter 7 - Optimal Labor Income Taxation](#)," *Handbook of Public Economics*, Vol. 5, pp. 391–474.
- Rachel, Lukasz and Lawrence Summers, 2019, "On Falling Neutral Real Rates, Fiscal Policy and the Risk of Secular Stagnation," Brookings Papers on Economic Activity (BPEA) Conference Drafts, March 7–8 (Washington: The Brookings Institution).
- Rajan, Raghuram G., 2011, [\*Fault Lines: How Hidden Fractures Still Threaten the World Economy\*](#), (Princeton: Princeton University Press).
- Scanlon, Thomas M., 2018, "[Why Does Inequality Matter?](#)" (Oxford: Oxford University Press).

van de Walle, Dominique, 1998, "[Targeting Revisited](#)," *The World Bank Research Observer*, Vol. 13, No. 2, pp. 231–48 (Washington: The World Bank Group).