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POVERTY ALLEVIATION POLICY TARGETING: A REVIEW OF EXPERIENCES IN DEVELOPING COUNTRIES*

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Abstract

Fiscal constraints and policy changes to improve the effectiveness of programmes in reducing poverty have gradually led the international community to use tools to reach the poor. Poverty reduction policy targeting is one of them. This paper reviews targeted poverty alleviation policies in developing countries and seeks to identify the key factors that affect their performances.

Key words : Targeting, poverty, redistribution, developing countries.

Résumé

Dans un contexte de ressources budgétaires limitées et suite au constat que la croissance et l'aide publique au développement ne bénéficiaient pas forcément aux pauvres, la communauté internationale a eu recours à des outils spécifiques permettant d'atteindre en priorité les pauvres. Le ciblage des politiques de lutte contre la pauvreté est l'un de ces outils. Cet article vise à dresser un bilan des expériences de ciblage menées dans les pays en développement. Il cherche pour cela à dégager les facteurs de réussite ou d'échec de ces expériences et fait le point sur les questions qui font toujours débat.

Mots clés : Ciblage, pauvreté, redistribution, pays en développement.

JEL Classification : I38, O12, H23.

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Introduction

With the impending deadline set by the international community to achieve the Millennium Development Goals and especially reduce extreme poverty, the time has come to look at the performances of poverty alleviation policies. A number of these policies are targeted. The term "targeting" refers to concentrating the poverty reduction programme's resources on the poor or most vulnerable populations. The use of targeted policies in developing countries started in the 1980s to offset the structural adjustment programmes' effects on living conditions while maintaining the fiscal restraint imposed by these programmes. The 1990s saw a turnaround in aid to the developing countries culminating in poverty alleviation being one of the international community's main goals. Targeting no longer plays a supporting role, but is now a fully-fledged tool in the quest for more effective poverty reduction. Targeting can indeed be particularly appealing where resources are scarce, since greater poverty reduction is believed to be achieved if resources are concentrated among poor households rather than spread across the entire population under a universal policy.

Nevertheless, poverty alleviation policy targeting raises a host of practical, ethical and political problems, especially in developing countries. The very identification of the households or individuals to be targeted is problematic. It calls for consideration of the resources required and costs associated with the identification of the targeted populations. Moreover, targeting is actually a complex instrument covering a wide range of mechanisms designed to select individuals, households and even population groups defined by geographic or demographic criteria (women, children, the elderly and ethnic minorities).

The purpose of this study is to review targeting experiences in developing countries drawing on the large body of academic and operational literature that has grown up around this subject since the 1990s. It sets out, more specifically, to identify the key factors affecting targeting performance and take stock of the questions still being debated today. First, however, note that the World Bank dominates thinking on targeting. In fact, most of the studies on this subject have been produced by its members.

This study is laid out as follows. The first section presents the conceptual framework surrounding targeting efficiency. The second section sets out the problems raised by the implementation of targeted poverty reduction policies. The third section provides an overview of the different poverty alleviation policy targeting mechanisms. This section looks at the respective advantages and disadvantages of these different methods and the conditions required to implement them and maximise their effectiveness. Lastly, the fourth section sums up the lessons that can be drawn from the poverty reduction policy targeting experiences in developing countries.

1 Targeting: an ideal tool in theory …

Fiscal constraints and the realisation that growth and official development assistance were not necessarily helping the poor have led the international community to use tools to reach the poor. Poverty reduction policy targeting is one of these tools.

1.1 Definition of targeting

What can be done to make the poor the prime beneficiaries of poverty reduction policies? Two solutions are possible. The first is to invest poverty alleviation resources in the sectors that help the poor the most, such as primary education and primary healthcare.[1] The second solution is to identify the poor to be able to allocate the benefits of a programme exclusively to them. In this way, the poor are "targeted" such that they are the sole beneficiaries of the programme or policy. One possible definition of poverty reduction policy targeting is hence the selection of individuals or households considered to be poor from among the population.

[1] This type of policy is often called "broad targeting", as opposed to the "narrow targeting" studied in this paper. See Van de Walle (1998), for example, for a discussion of "broad targeting".

Although targeting can be geared to different concepts of poverty, targeted policies generally adopt the monetary approach. This approach defines as poor those individuals or households whose income is below a certain threshold. Nevertheless, other approaches to poverty can be taken such as basic needs or capabilities, to coin the terms used by Amartya Sen.

Among the poverty alleviation policies, targeting generally applies to policies in the social sectors such as education, healthcare and nutrition. It can also concern infrastructure development, energy distribution and water supply policies, and, in a more cross-cutting manner, urban and rural development policies. It is not so much the sector as the type of intervention that determines whether a policy can be targeted. Coady, Grosh and Hoddinott (2003) define five types of interventions particularly suited to targeting: direct cash transfers, in-kind transfers, public works, price subsidies and social funds[2] (these intervention types are presented in detail in Table 1). Three of them – direct cash transfers, in-kind transfers and public works – have the particularity of being able to be conditioned on the recipients' compliance with certain obligations such as sending their children to school and taking them for health check-ups.

Table 1: The types of intervention suited to targeting

Type of intervention	Description	Possibility of conditionality
Direct cash transfers	Pay money to targeted individuals or households regularly or on an ad-hoc basis	Yes
Transfers in kind	Offer the targeted population transfers in the form of free meals, nutritional supplements or food stamps, healthcare, registration fee waivers, etc.	Yes
Targeted subsidies	Subsidise poor households' consumption of certain goods such as water, gas, electricity, foodstuffs, building materials, healthcare and loans	Yes
Public works	Offer the targeted population public works employment in exchange for a wage or food	Yes
Social funds	Invest in infrastructures intended for the poor	No

Source: The authors, adapted from the classification proposed by Coady, Grosh and Hoddinott (2003)

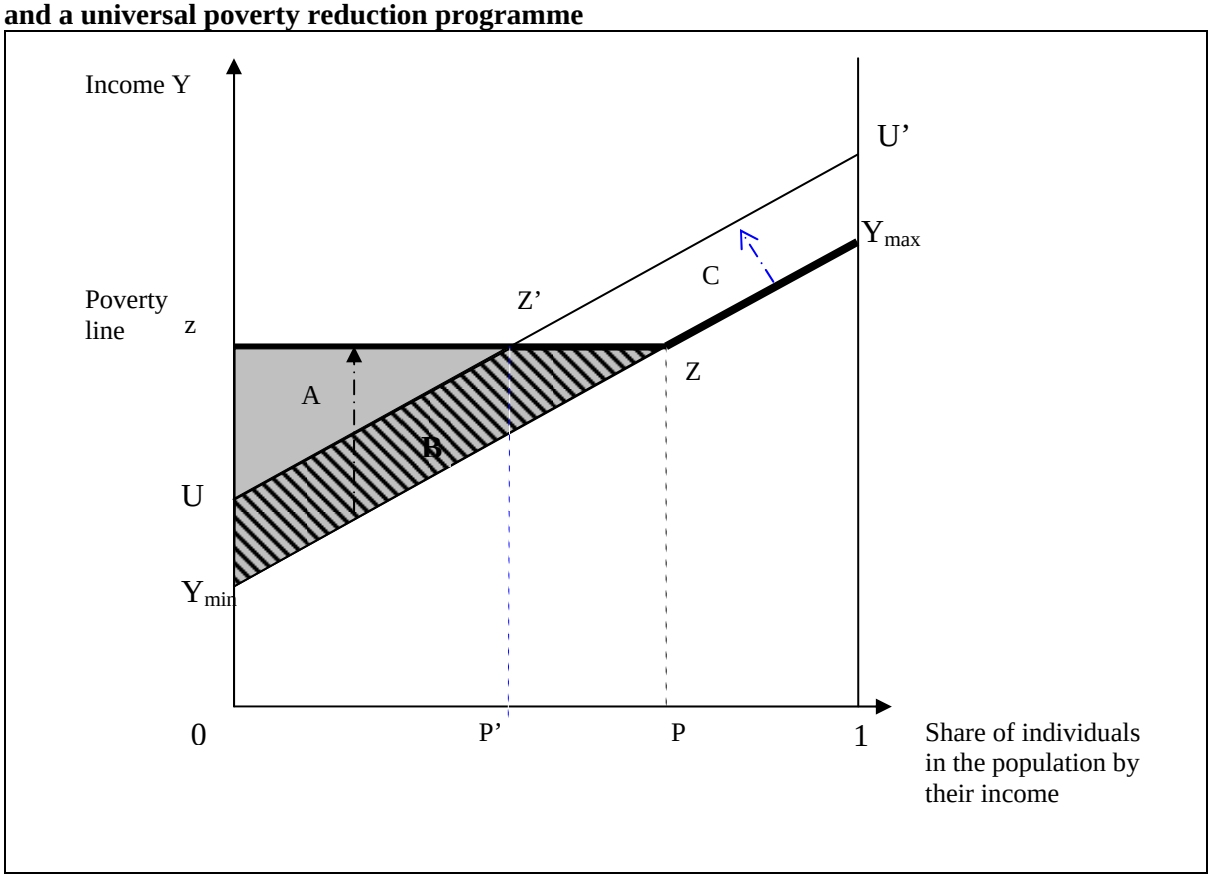
1.2 The theoretical effectiveness of targeting

Targeting is geared to the challenges of poverty alleviation in two ways. Firstly, it allows for programmes to be put in place that are specifically designed to meet the needs of the poor. Secondly, by concentrating the resources among the poor, targeting offers a more efficient use of resources than a universal policy.

Figure 1 illustrates this second point in graph form assuming perfect access to information. This strong hypothesis implies that each individual's income can be identified accurately and at zero cost. The graph's ordinate is income Y observed among the population. Its abscissa is the population ranked by income level. The line ($Y_{\min}$ $Y_{\max}$) represents the initial distribution of income corresponding to each centile of the distribution. Denoting by z the poverty line, we obtain in Z that $P\%$ of the population has an income below or on the poverty line.

[2] This classification has the advantage of homing in on the intervention types suited to targeting. However, the classification's internal consistency is debatable. For example, social funds can partially cover the other types of interventions, especially when they are used to finance public works programmes or transfers. Public works could be seen as a transfer in cash or in kind conditional on the work of the defined public works programmes.

Figure 1: Representation of the distributive effects of a targeted poverty reduction programme and a universal poverty reduction programme



Let's assume that the government puts in place a universal direct cash transfer policy, i.e. that it allocates the same sum of transfers to all individuals. This policy is reflected by a new income distribution represented on the graph by the line (*UU'*), parallel to the initial distribution.

Let's now assume that the government uses the same budget to implement a policy of targeted cash transfers, i.e. that it allocates a transfer solely to those people below the poverty line. Let's assume, moreover, that the sum of this transfer is equal to the difference between the poverty line and their income. This policy affects solely the incomes of the poor and is reflected by a new income distribution for the poorest P% represented by segment zZ. The population's new income distribution is made up of the segments [zZ] and [ZY_{max}].

For a given budget (area A equals area C), this graph shows the targeted policy's superiority at reducing poverty. The programme of universal transfers may well have reduced the proportion of poor from P to P'. The poverty gap[3], equal before any transfers to the area (A+B), the grey area on the graph, has been reduced by area B (striped area). However, part of the transfers for a sum equal to area C has been paid to individuals living above the poverty line, which is totally ineffectual for poverty alleviation. In the case of the targeted transfers, the sum of transfers has eradicated poverty since both the number of poor and the poverty gap now stand at zero (reduction of the poverty gap equal to A+B). Moreover, the transfers have been exclusively directed at those who need them the most.

Therefore, in a situation of perfect information and assuming there is no change in behaviour, targeted policies are indisputably preferable to universal allocation policies since they increase the programme's poverty reduction effectiveness for the same cost.

[3] The poverty gap is the total sum of transfers that would need to be paid to poor households for them to break out of poverty, i.e. for each poor household's income to be at least equal to the poverty line.

2 … hard to implement in practice

In theory, for a given budget, concentrating poverty reduction action among poor households or individuals is the most effective way to reduce poverty. In practice, a number of elements complicate the implementation of targeted policies and can alter their effects. The situation of each household or individual with regard to poverty is not normally known. Targeting therefore has to identify who is poor and who is not poor. This identification is never perfect. It has to contend with the complexity and different costs of the mechanisms used to bring to light or collect information on the individuals' poverty levels. Secondly, by excluding part of the population from the beneficiaries, targeting deprives the targeted policy of political support. This lack of support can find expression in the underfunding or shelving of targeted policies.

2.1 Imperfect access to information

Contrary to the theoretical example presented above, we live in a world of imperfect information. Consequently, poverty reduction programme administrators do not normally know who the poor are. The strategies they put in place cannot perfectly identify the poor. Imperfect information hence exposes targeting to two types of identification errors: inclusion errors and exclusion errors.[4]

Inclusion errors, also known as Type II errors (Smolensky *et al.*, 1995) or *E-mistakes* for *"Excessive coverage"* (Cornia and Stewart, 1995), occur when persons who are not initially targeted benefit from the programme or policy. In the case of a programme targeting the poor, inclusion errors concern all non-poor individuals benefiting from the programme. This is represented in Table 2 by the value NP^B equal to the number of non-poor (NP) benefiting from the programme.

Exclusion errors, also known as Type I errors or *F-mistakes* for *"Failure to cover"*, occur when targeted persons do not benefit from the programme, i.e. poor individuals are excluded from the programme. The exclusion error is measured in Table 2 by the value P^{NB}, which is the number of poor (P) not benefiting from the programme.
The worst targeting occurs when no poor individual is reached while all the non-poor benefit from the programme. Conversely, the best targeting occurs when the two identification errors equal zero: $NP^B = P^{NB} = 0$.

Table 2: Targeting errors

	Poor	Non-poor
Population of beneficiaries	P^B	NP^B Inclusion error (II)
Population of non-beneficiaries	P^{NB} Exclusion error (I)	NP^{NB}

In practice, no targeting produces either of these extremes, especially the sought-after extreme whereby the two errors are zero. Yet the effectiveness of a poverty reduction policy is sensitive to both of these types of errors. Inclusion errors waste resources in that part of the programme's resources are transferred to people who should not receive them. These errors therefore raise the cost of the programme without improving its effectiveness. They also reduce the programme's *vertical* efficiency. By transferring resources to non-poor individuals, the programme increases vertical inequalities, i.e. inequalities between individuals with different incomes, here the poor and the non-poor (Ravallion, 2004).

Exclusion errors reduce the programme's cost, but diminish its efficiency since part of the transfers do not reach the persons targeted by the programme. The programme's poverty alleviation impact decreases in proportion. These errors moreover impede the programme's *horizontal* efficiency by

[4] The distinction between the two types of errors can be found in the literature in 1970, in an article by Weisbrod who defines the vertical and horizontal efficiency of targeting.

creating inequalities between individuals with the same incomes before the programme was put in place. These horizontal inequalities can create resentment and social instability (Bibi and Duclos, 2007).

Inclusion and exclusion errors need to be minimised if the effectiveness of the targeted policies is to be improved. However, it is hard to reduce one type of error without increasing the other. So a trade-off between the two types of error is often necessary. Basically, the definition of extremely strict targeting criteria reduces waste (*leakage*), but generally undercuts the coverage of poor individuals (*undercoverage*).[5] On the other hand, broadening the targeted population coverage generally results in part of the non-targeted population being included. The extreme example is where a universal policy reaches all the poor, but also all the non-poor and therefore maximises the inclusion errors.

2.2 Information hide-and-seek

Imperfect information means that instruments have to be found to separate out the poor from the non-poor. In practice, two tools have been developed to this end: self-targeting and the collection of information on household living conditions.[6]

Self-targeting consists of providing incentives to encourage participation by the poor while discouraging participation by the non-poor. In other words, these incentives lead the poor, via their participation in the programme, to disclose their living conditions. The incentives are such that the costs of participating in the programme differ between the poor and the non-poor, with the costs being higher for the non-poor.[7] The purpose of collecting information on household living conditions,[8] however, is to determine whether programme candidates satisfy the eligibility conditions.

Yet neither of these two instruments is perfect. The effectiveness of self-targeting programmes critically depends on the validity of the assumption on which the self-targeting mechanism is based. If the differences in the costs of programme participation are small, the non-poor can benefit from the programme just as much as the poor, if not more if they are better informed. In addition, self-targeting mechanisms can prove particularly stigmatising for poor households. If the loss of social standing induced by participating in the programme has too high a psychological or social cost for certain poor households, then the self-targeting mechanism can end up excluding targeted beneficiaries.

In the case of using information on household living conditions, targeting efficiency – or more generally programme effectiveness – depends to a large extent on the quality of the available or collected data. Data quality is closely associated with a country's institutional capacities. The collection of high-quality data calls for skilled manpower, considerable statistical capabilities, but often also substantial management, financial control and logistical capacities. Yet these resources are relatively thin on the ground in low-income countries (Smith and Subbarao, 2003). The efficiency of targeting using information on living conditions is therefore closely linked with the institutional capacities of the country in which it is implemented.

Irrespective of whether the data are collected or already exist, another risk lies in the disincentive effects of setting an eligibility criterion: individuals may be encouraged to change their behaviour to benefit from a targeted policy. For example, non-poor households may move to meet targeted policy selection criteria based on a geographic criterion. When targeting calls for data collection, a programme open solely to households with income below a certain threshold may prompt some

[5] The reasons for this exclusion of poor individuals depend on the targeting method and are consequently presented in the sections describing these methods.

[6] The term "living conditions" is used here to broadly cover a number of definitions of poverty. Depending on the given programme's definition of poverty, the information will concern household consumption or income, satisfaction of basic needs, access to infrastructures, etc.

[7] This targeting method is described in detail in Section 3.3.

[8] Depending on the targeting methods used, which are detailed in the following section, information is collected either by the programme or upstream where the programme uses already existing data.

households to falsify their income information or rein in their labour supply. This problem is found particularly with households whose income is close to the eligibility threshold: earning a little less money makes them eligible for the programme; earning a little more disqualifies them, which raises the opportunity cost of working. One solution to reduce the disincentive effects of programmes targeted using a selection criterion is to refrain from revealing exactly what this criterion is. This, however, undermines the programme's transparency. And a lack of transparency gives the agents in charge of implementing the programme more discretionary leeway, which could create a breeding ground for corruption and generate suspicion of the programme (Lipsky, 1980). Behavioural changes can therefore either hamper targeting efficiency by including non-poor individuals in a programme's recipients, or push up the cost of the policy when households replace their income source with the policy's benefits.

Last but by no means least, the third drawback of targeting using information on household living conditions is the cost for the programme's potential recipients and its operator of collecting the information. Even when no specific information collection is organised, potential beneficiaries are asked to provide the information required to prove their eligibility for the programme: potential recipients generally have to actually go to the programme offices and present all the documents to provide evidence of their eligibility (ID, proof of residence, certificate of disability, etc.). These formalities represent a cost in that the individuals have to pay for some of these papers and also that it takes them time to put them together. These private costs can not only increase the exclusion errors by discouraging potential recipients from participating in the programme, but also reduce the programme's net benefits for the poor since part of the resources allocated to them are used to cover their private participation costs.[9] Information collection is also potentially expensive for the organisation in charge of implementing the targeted policy. The potentially prohibitive cost of identifying beneficiaries is incidentally one of the main criticisms made of targeted programmes. The large chunk that this cost can take out of the programme budget is alleged to substantially reduce transfers to the poor and consequently the poverty reduction performances of the targeted policies.

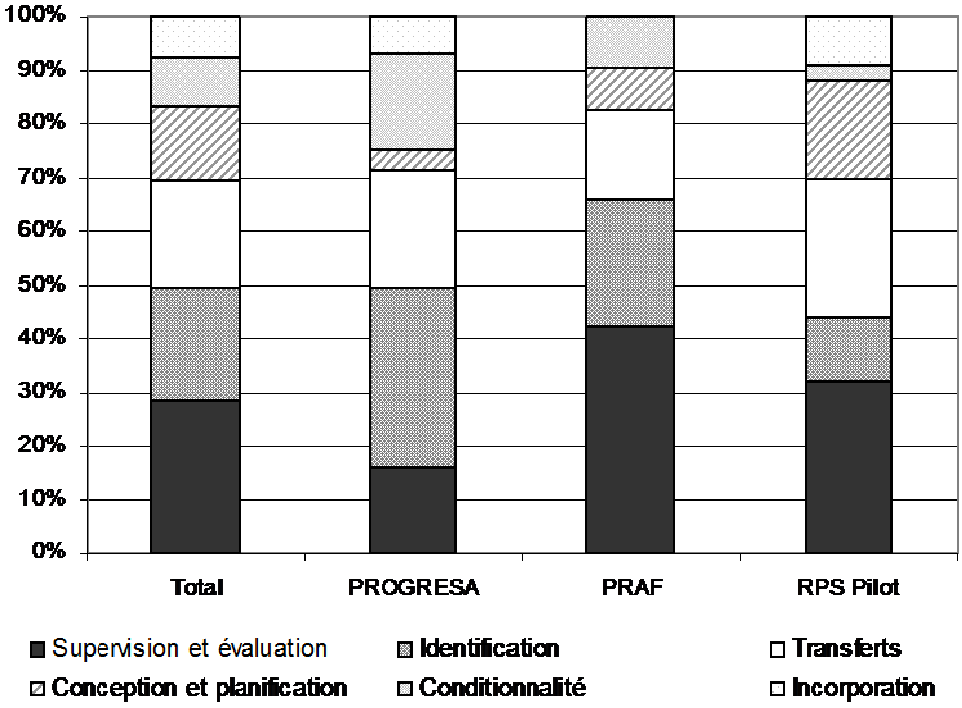
Due to a lack of data, few empirical studies analyse the costs of targeting and their weight in the total costs of targeted programmes in developing countries. However, those studies that do so tend to play down the magnitude of targeting costs. A study by Grosh (1994) on 30 targeted programmes in Latin America shows that the direct costs of targeting, i.e. of identifying the beneficiaries, account for just 0.4% to 8% of the total programme costs, with a median cost of 1%. A study by Caldés *et al.* (2004) of the costs of three Latin American targeted conditional transfer programmes[10] shows that beneficiary identification is not the main cost involved in targeted programmes (Figure 2). Identification represents, on average, 22% of the total programme cost as opposed to 30% for monitoring and evaluation activities.[11] Their study also shows that cost structure varies considerably from one programme to the next. For example, identification costs accounted for 34% of the PROGRESA programme's total cost in its early years, compared with 12% for the pilot RPS programme. Lastly, the authors point out that although beneficiary identification costs account for a large share of programme costs, these fall off as the programme proceeds.

[9] Several studies have been made of the costs involved in applying for a targeted welfare programme, including Duclos (1995), Moffit (1983) and Hernandez, Pudney and Hancock (2007). These studies focus exclusively on British and American welfare programmes, with contrasting findings. For example, Duclos shows that claiming supplementary benefit in the UK cost a single pensioner £3-4 per week and a couple of pensioners £20 per week in 1985. Hernandez, Pudney and Hancock's findings on income support for pensioners in 1997-1998 and 2001-2002 are more moderate. The costs estimated are around £3-4 per week for an average recipient.

[10] These programmes are: the *Programa Nacional de Educación, Salud y Alimentación* (PROGRESA) in Mexico, the *Programa de Asignación Familiar-Fase II* (PRAF) in Honduras, and the *Red de Protección Social* (RPS) in Nicaragua. These programmes focus exclusively on education and health, and have relatively similar complex targeting methods (geographic and individual for PROGRESA and the pilot RPS, and geographic and category-based for PRAF).

[11] Grosh finds very different results to Caldés *et al.* Bear in mind, however, that Grosh's study covers a larger number of programmes and that Caldés *et al.*'s study analyses large-scale complex programmes (PROGRESA covered more than two and a half million rural inhabitants nationwide in Mexico in 1999).

Figure 2: Breakdown of costs by activity (as a percentage of total costs)



Source: Authors' calculations based on Caldés *et al.* (2004)
Note: These are average percentages calculated for the programmes' early years (first four years for the PROGRESA and PRAF programmes and first three years for the Pilot RPS programme).

2.3 Sometimes tenuous political support

Imperfect information is not the only obstacle to the implementation of targeted policies. Lack of support from the people is another.

The question of targeted policy sustainability is often raised in the literature and is paramount when these policies are financed locally. By targeting the poor, targeted programmes generally sacrifice the political support of the majority. This happens not only because they are often aimed at a minority or stigmatise their beneficiaries, but most importantly because they risk diverting resources away from welfare programmes whose number one recipients are the middle classes. The middle classes form a powerful body of voters. Consequently, lack of electoral support can doom targeted policies to shelving or underfunding (Gelbach and Pritchett, 1997). Taking the case of Sri Lanka, Anand and Kanbur (1990) explain the erosion in the real value of food stamps over the 1979-1989 period by the fact that the beneficiaries had no political weight and the middle class was indifferent to the issue. Cornia and Stewart (1995), in their study of eight targeted programmes, observe a drop over time in the real value of benefits provided by universal programmes converted into targeted programmes. Weak political support can therefore transform "programmes for poor into poor programmes" to coin an argument frequently put forward by sociologists such as T. Skocpol (1991) on the basis of the American experience of policies aimed at African Americans.

However, many factors influence the political economy of poverty reduction programmes. For example, in certain circumstances, the public may turn around and support the implementation of targeted policies rather than universal policies since they perceive them as a way of efficiently reaching the poor and saving resources to finance other public goods. Different strategies can be used to increase the public's support for targeted programmes.

Tuck and Lindert (1996) explain how an information campaign in Tunisia in 1989 helped get the public to accept the shift from a universal food aid programme to a targeted programme.[12] This information campaign, launched several months before the reform, explained the weight and inefficiency of the universal programme and detailed the targeted measures to be gradually rolled out. Tuck and Lindert report that an opinion poll conducted just before the reform found that most of the Tunisian public felt that the previous programme was too expensive and were convinced of the need for the reforms.

Van de Walle (1998) points out that it is also possible to change the design of targeted programmes, since public opinion is generally less hostile to the targeting of transfers in kind and workfare programmes than to the targeting of cash transfers.

2.4 Is targeting always the answer?

The problems involved in the practicalities of targeting have two effects on the performances of targeted policies. They reduce targeting efficiency by introducing inclusion and exclusion errors into the identification of the targeted population. This occurs in particular in the case of poor quality data, flawed self-targeting assumptions, substantial manipulation of information by the households, and when the private costs of participating in the programme (stigma, opportunity costs and transaction costs) are too high. Moreover, they can reduce the programme's impact on poverty by raising its costs and hence reducing the benefits reaching the poor. This is observed in the presence of disincentive effects on households, high information collection costs, high private costs and weak political support.[13] Where these problems are too sizeable, targeting can prove less effective at reducing poverty than a universal policy.

Some authors (Datt and Ravallion, 1995; Murgai and Ravallion, 2005) draw on empirical data to show that targeted policies are not necessarily more effective at reducing poverty than universal policies. Datt and Ravallion (1995), for example, compare the poverty impact of the targeted Maharashtra Employment Guarantee Scheme (India) with the effect that would have been induced by a policy with the same budget paying a uniform transfer sum to the entire population. This targeted poverty alleviation programme operates on the basis of self-targeting. It provides jobs paying wages held to be too low to interest non-poor groups. The authors econometrically estimate the opportunity cost to the households of taking part in the programme, i.e. the cost associated with giving up farming and household tasks. Taking these costs into account, Datt and Ravallion (1995) show that the targeted policy has less of an impact on poverty than the universal policy. Yet this study has its limitations in that it considers neither the targeted programme's positive externalities on poverty, due to the development of infrastructures, nor the disincentive effects that the universal policy could have on the households' labour supply.

To conclude, targeting emerges as a potentially high effective poverty reduction tool. Its performance depends to a great extent on how well it is implemented. Successful targeting can accurately identify the poor without costing too much either to the beneficiaries or the programme operator. Although it may appear to be particularly hard to satisfy both of these conditions in certain cases, the range of targeting methods is wide enough to adjust to the demands of the situation.

3 A wide range of targeting methods

There is a wide range of targeting methods available, which can be grouped into two main categories. First, there are the selective targeting methods, i.e. the methods that define an eligibility criterion to target the population. Second, there are the non-selective methods covering the different types of self-

[12] There are many examples illustrating the risky, if not explosive nature of such a reform. In the 1980s and early 1990s, the reform of universal food aid programmes sparked riots in Tunisia, Morocco, Egypt, the Dominican Republic, Sudan and Jordan.

[13] The cut in the programme budget due to poor political support can be said to be a cost.

targeting. The choice between these two main categories assumes a different overall policy concept since not all policies can be self-targeting.

Among the selective targeting methods, the discriminating criterion is "target size". In one case, the aim is to target individuals or households. In the other, the aim is to target an entire category of the population. The general targeting principle for individuals and households is that officially appointed programme representatives check, individual by individual or household by household, whether the applicant is eligible for the programme on the basis of a criterion defined upstream. Categorical targeting consists of making all individuals eligible in a given population category. The only eligibility criterion is therefore whether or not the applicant belongs to this category. The underlying assumption is that membership of the chosen category is closely correlated with being poor. The category is often defined by area of residence, gender, age, ethnic group, disability or unemployment. The purpose of this section is to present each of these three kinds of targeting with their own particularities.

3.1 Targeting poor individuals or households

The most intuitive method for focusing a programme's resources on the poor is to define an eligibility criterion and select the households or individuals that meet this criterion. The eligibility criterion needs to measure the poverty status of the households or individuals.
The eligibility criterion can be defined using a direct measurement of income or consumption. This targeting method, known as *means testing*, can only be used for programmes that aim to reduce monetary poverty. It is by far the most expensive method, but boasts the lowest inclusion and exclusion error levels when it is conducted properly.

The eligibility criterion may also be based on a score built from a set of variables reflecting the households' living conditions. This method is known as *proxy means testing*, alluding to the fact that the indicator is an approximation of a direct measurement of income or consumption. It can also be seen as an indicator that measures non-monetary poverty, in particular the non-satisfaction of basic needs. If the aim is to measure monetary poverty, this method is cheaper and easier to implement than the first, but it is also less accurate.

3.1.1 Means testing

Means testing identifies the poor on the basis of a monetary criterion. The standard of living of each household or individual in the programme's potential beneficiary population is measured. Only those individuals or households with a standard of living below a given threshold then benefit from the programme. This type of targeting is used mostly for cash transfer policies.

The potential beneficiaries' standard of living can be estimated from their income or consumption. The choice of one or the other indicator depends on a number of considerations, namely the programme's poverty reduction goals and the quality of the available data. If the programme's main aim is to reach the chronic poor, the most suitable indicator for measuring a household's standard of living is the amount of consumption spending. As shown by Deaton (1992), household consumption is indeed the best indicator of a household's permanent income. It is less sensitive to seasonal variations than household income. Moreover, measuring consumption often produces higher quality results than measuring income.[14] However, if the programme's aim is to reach transient poor households, income can be a more suitable measurement[15] since it is a less smoothed measurement of welfare than consumption and, consequently, better reflects the shocks suffered by the households.

[14] Households are often less reluctant to detail their expenditure than to state their level of income. In addition, measuring earned income is a tricky and often inaccurate exercise in developing countries where a large part of the economy is informal. This is especially true of agricultural earnings.
[15] When no cross-cutting data are available.

Information on the income or consumption of potential beneficiaries can be collected by a quasi-exhaustive survey or by on-demand applications. The choice between these two collection processes is made by a trade-off between keeping down the costs of data collection and minimising targeting exclusion errors. Collection using a quasi-exhaustive survey is more apt to minimise exclusion errors, but is also the most expensive method.

In practice, the effectiveness of means testing is highly dependent on the mechanisms used to check the quality of the potential beneficiaries' statements. The more meticulous the check, the lower the risks of understated means. Ideally, this information would be crosschecked with other data sources such as tax, employer and social security databases, which implies a highly developed administrative system in the country concerned. This type of check is generally impracticable in developing countries.

Another way of checking on statements is to visit the household to check in a qualitative way that visible standards of living are more or less consistent with the figures reported. This method was used, for example, for the Jamaican food stamp programme and the Mexican subsidised milk programme (Grosh, 1994). This method of checking also reduces inclusion and exclusion errors, but it is very expensive.

A final way of checking is to ask the potential beneficiaries to provide proof of their statements. This system with its lower administrative costs can be put in place more quickly and is less demanding of administrative capacities. However, the cost of checking falls largely on the households' shoulders as they are the ones who pay the cost of supplying the substantiating documents. The example of the targeted child support grant programme in South Africa (Rosa *et al.*, 2005) provides a good illustration of the programme's private cost. Applicants for the programme had to provide supporting documents such as their marriage certificate, a payslip for those employed and otherwise an official statement from the person supporting the family. In a country where employment certificates are rare due to the high level of labour market informality and where marriages are seldom registered at a registry office, especially in rural areas, it is clearly extremely expensive for households to obtain all the documents required, especially the poorest households often the most remote from the administrative system. The direct upshot of this was the exclusion of the poorest from the programme. It also emerged that the supporting documents required varied a great deal depending on the regional offices in charge. This raised the question of equity in the treatment of applicants.

So means testing is no doubt the targeting method most apt to minimise inclusion and exclusion errors, provided that the mechanisms set up to check the information are effective. Yet it does have the drawback of encouraging households to reduce their income to benefit from the programme, for example by working less. It is also the most expensive method by far. The cost is borne by the central administration if the means testing is based on crosschecks of databases or household visits. It is borne by the households if it is up to them to prove their means statements. In this latter case, there is a high risk of excluding the poorest and lowering net programme benefits for the poor.

3.1.2 Proxy-means testing

Many programmes have sought to target poor households or individuals using an alternative methodology to circumvent the burden and cost of collecting means testing information or in the interests of a broader approach to poverty. This alternative methodology is *proxy-means testing*. Originally established in the Latin American countries, this type of targeting has been used in most of the world's regions for a whole host of different programmes (food stamps, conditional transfers, public employment programmes, vocational training grants, etc.).

The principle of proxy-means testing is to generate a score by adding up and weighting a small number of variables that meet three main criteria:

- They are closely correlated in terms of household or individual poverty,
- They can be easily measured or observed,
- They are hard for the households or individuals to manipulate.

These variables generally concern housing quality and occupancy status, ownership of durable goods, the household's demographic structure, labour force status, activity sector, and the level of education of the members of the household. The number of variables has to remain small for proxy-means testing to maintain its comparative advantage in terms of collection cost and for the programme allocation process to remain relatively transparent.

When poverty is defined in monetary terms, the variables used for the indicator are generally chosen from an already available household survey including a measurement of the income or consumption of the individuals or households. The income or consumption is then estimated from the chosen explanatory variables. The coefficients obtained from the estimation are used to assign a weight to each of the variables. This regression can be made for each region or administrative division or by urban/rural area to account for regional disparities in a given country. In this event, the weight vector varies depending on the different geographical units.
When the chosen approach to poverty is not monetary, the variables are weighted according to the programme's stated priorities.

A lightweight survey is then conducted of all the individuals or households that are potential beneficiaries of the programme. Its questionnaire is restricted to collecting information on the variables identified in the previous stage. As with means testing, this collection stage is decisive for the efficiency and cost of the targeting. The survey is used to assign each programme applicant a score corresponding to the sum of the variables observed weighted by the coefficients obtained from the estimation or set by the programme. Each household's eligibility depends on the value of this score compared with a score set as the poverty line.

Where the objective is to reduce monetary poverty, proxy-means testing is less effective than means testing in that the standard of living is not directly observed, but approximated by a set of variables more or less correlated with the standard of living (Skoufias and Coady, 2007). However, it does have a number of advantages. The first is its lower cost. Secondly, it is relatively less demanding of administrative system capacities. However, it does call for personnel trained to calculate the scores of the households or individuals, either nationally or locally depending on the data collection process set up. Proxy-means testing also boasts the advantage of limiting the incentives for households to change their behaviour, since they do not necessarily make a clear connection between the information they are asked to provide and the score that will determine whether or not they are entitled to benefit from the programme. On the downside, however, this type of targeting has a higher social cost precisely because the population often has a flawed understanding of the system used to build the indicator. One last advantage of proxy-means testing is that it reduces the risks of corruption or diversion of the programme for political ends because the criterion is extremely rigid. This rigidity can result in a more level playing field for the potential beneficiaries since the targeting criterion is the same for everyone: households with the same (observable) characteristics will be treated in the same way.

However, the score is put together from variables that do not change very much, even in the event of a huge change in the household's standard of living. In addition, it does not do such a good job of reflecting the situation of households at either end of the distribution. Proxy-means testing is therefore suited to a policy that aims to break chronically poor households out of poverty, but is not suitable for programmes designed to play a safety net role (Coady, Grosh and Hoddinott, 2004a).

3.2 Categorical targeting

Rather than targeting individuals or households, many poverty reduction programmes have opted for broader targeting, i.e. choosing to target a population of categories of individuals. The categories most frequently defined by the programmes using this type of targeting are area of residence – called geographic targeting – and demographic characteristics such as age and gender.

This type of targeting is particularly well suited to countries in which a particular category of the population is harder hit by poverty than the others. It saves having to identify the poor household by

household or individual by individual. This keeps down the administrative and private costs of targeting, but also the social costs since there is not so much stigma attached to this type of targeted programme. Targeting by categories also takes into account the non-monetary aspects of poverty, in the same way as proxy-means testing, and reduces unfair inequalities based, for example, on gender or place of birth. However, targeting by categories is only efficient on two conditions:

- The targeted category must be poorer on the whole than the other categories;
- The individuals or households in the category must be relatively homogeneous in terms of their poverty status.

Its efficiency is also highly dependent on the quality of the available data.

3.2.1 Geographic targeting

In most developing countries, poverty is concentrated in certain geographic areas, also called "pockets of poverty" (Bigman and Fofack, 2000). There are many reasons for regional disparities. At a detailed geographic level, such as the village, households generally share the same climatic and geographical conditions, the same type of productive activities and the same infrastructure access. Income inequalities can therefore be greater between villages than among individuals in the same village. For example, Ravallion and Wodon (1997) show that the place of residence in Bangladesh is a better predictor of poverty level than all the other household characteristics. They conclude that poor areas are not just poor because households with observable attributes correlated with poverty are geographically concentrated, but rather because of differences in returns to given household characteristics (their labour force, their human capital, etc.) depending on the geographic area.

This observation has prompted many policymakers and poverty alleviation programme administrators to choose programme beneficiaries by the geographic area in which they live, differentiating between poor areas and non-poor areas.

So the efficiency of geographic targeting depends to a large extent on the concentration of poor individuals within the geographic areas. If the population has fairly heterogeneous poverty levels within the areas, targeting generates both inclusion errors (the areas identified as poor contain a large proportion of non-poor) and exclusion errors (poor individuals live in areas defined as non-poor). This example of the inefficiency of geographic targeting is illustrated by Simler and Nhate (2005) in Mozambique. The authors find very low concentrations of poverty within the geographic areas, even when these areas are defined at a highly detailed level. A mere 20% of consumption inequalities observed can be accounted for by differences between districts or between the smaller administrative posts. This means that 80% of the inequalities are due to differences within geographic areas, with the poor living alongside the non-poor. So geographic targeting is unsuitable in countries such as Mozambique.

In general, the more detailed the geographic breakdown, the greater the chances of the population displaying homogeneous poverty characteristics within the area, as shown by Backer and Grosh (1994) in the case of Venezuela, Mexico and Jamaica. However, the level of geographic breakdown depends on the data available.

If the only recent data available come from household surveys, the poverty indicator is calculated at a necessarily broad geographic level, that for which the survey remains representative. Ravallion (1993) evaluates the effect of geographic targeting in Indonesia where poor areas are identified from a household survey representative at province level. He shows that there are poverty reduction gains to be had with this type of targeting, but that they are small compared with a non-targeted policy.

Another possibility is to use nationwide administrative data containing information assumed to be correlated with the geographic area's poverty level. The geographic breakdown in this case is highly detailed, but the information available sometimes has little to do with poverty, especially monetary poverty (Hentschel *et al.*, 1998). This information may concern levels of education, infrastructure endowments (roads, water supply, healthcare infrastructures, school supply, etc.) or the satisfaction of

basic needs. In Honduras, for example, the PRAF transfer programme chose level of nutrition in each municipality[16] as its criterion for the selection of eligible municipalities. In its early days, the PROGRESA programme used census data to build a local poverty indicator, including such variables as the over-15 illiteracy rate; the percentage of households without access to running water, drainage or electricity; the average number of occupants per room; and the percentage of houses with earth floors (Coady, Grosh and Hoddinott, 2004a).

When both a recent census and household surveys are available for the country, a detailed geographic breakdown can be combined with a precise definition of poverty. The combination of these two data sources overcomes the limitations they present when taken separately: the poor representativeness of the surveys at a detailed geographic level and inadequate census information for the calculation of a poverty indicator. Geographic targeting then uses the methodology developed to draw up poverty maps. This methodology targets the poor defined by a monetary criterion. The household survey is used to estimate a level of consumption based on variables found in both the survey and the census.[17] The model obtained from this estimation is subsequently used to estimate a level of consumption for all the households from the census data, using the same variables as those contained in the survey. Poverty can then be evaluated at the level of the smallest geographic unit contained in the census. In recent years, developing countries have widely developed this tool to implement their social policies. Elbers *et al.* (2004) list over 30 developing countries with this instrument.

Many consider that this geographic targeting method outdoes the others. However, it does suffer from some serious shortcomings due to the constraints of the data, namely the small number of variables shared by the consumption survey and the census and the fact that these common variables are often not very comparable because they are worded differently in the two data sources. Hentschel *et al.* (1998), in their pioneering study on Ecuador, ultimately manage to rank very few provinces by poverty level since the poverty rates estimated by this methodology are generally not significantly different from one province to the next. Similarly, Schady (2002) compares this method in Peru with other less sophisticated types of geographic targeting: targeting based on infant mortality rates, on the chronic malnutrition rate, and on a composite indicator.[18] He finds no significant difference in the results obtained using the different geographic targeting indicators. The methodology of combining census and household survey data does not outclass the others.

Some authors have taken advantage of technological advances in geographic information systems (GIS) to improve the predictive capacities of poverty map targeting by supplementing census and household survey data with geo-referenced data. Bigman *et al.* (1998) take this approach in a study on Burkina Faso. The authors overcome the limitations of the information contained in the population census by drawing on a large number of information sources in addition to the census: different household surveys, a community-level database on public infrastructures (roads, water supply, etc.), and department-level data on agro-climatic conditions. Each piece of information is mapped by a geographic information system (GIS). All the data are integrated by means of their geographic coordinates into the household surveys for which consumption information is available. The level of consumption is then estimated using the variables that best explain consumption and area available for all the communities. Here again, the model's parameters dictate the weights to be assigned to each variable available for all the geographic coordinates present in the census. In this way, the authors predict poverty indicators for 3,871 rural and urban communities and show that community-level targeting conducted in this manner sharply reduces inclusion and exclusion errors compared with regional targeting.

[16] This level was defined following a 1997 census of all children in the first year of school during which children were weighed and measured.

[17] Data on education, the household's demographic structure, sometimes the household members' work, and the quality of housing.

[18] This indicator is the weighted sum of the rates of chronic malnutrition, illiteracy, school-age children not in school, overcrowded housing, inadequate roofing, and the proportion of the population without access to water, sewerage and electricity.

So in the case where there is support for the spatial concentration of poverty hypothesis and where the available data are of good quality, geographic targeting is definitely a preferable targeting method to individual or household targeting. It costs much less because the beneficiaries are defined from already existing data. Grosh finds that the cost of geographic targeting for 30 targeted programmes in Latin America is, on average, three times lower than the cost of individual targeting.

This type of targeting also has a limited effect on household behaviour in that it is expensive to change place of residence just to be eligible for the programme. In addition, there is little stigma attached to it for the households or individuals.[19]

However, the political cost of including or excluding certain geographic areas can be high, since the excluded geographic areas could feel strongly that the system is unfair. If, for example, as in the Bolivian case, the beneficiary geographic areas are concentrated in just a few departments, the other departments will bring political pressure to bear that could put an end to the programme (Grosh, 1994). However, Bigman and Fofack (2000) posit that when geographic targeting is conducted at a detailed enough level (village or urban community), it can reduce ethnic and political tensions due to the dispersal of the programme's beneficiary villages among wider geographic areas that are more homogeneous in ethnic and political terms.

3.2.2 Demographic targeting

Demographic targeting defines programme beneficiaries on the basis of all the people who correspond to an easily observable demographic group such as women or the elderly. The underlying assumption in this type of targeting is that certain demographic groups are harder hit by poverty than others, due either to their vulnerability or discrimination against them. Another objective of demographic targeting is, in some cases, to use the positive externalities generated by the fact that a certain category of the population benefits from the programme. Duflo (2000) shows, for example, that when the beneficiary of a transfer programme for pensioners in South Africa is a woman, the development of the household's granddaughters (measured by the size-to-age ratio) significantly improves.

The first step in this type of targeting is to make sure, upstream, that the targeted group really is poorer than the others. This can be complicated when the poverty indicator used is consumption since estimating the chosen group's poverty level is often sensitive to the choice of equivalence scales.[20] Lanjouw *et al.* (1998) illustrate this issue in seven Eastern European and former USSR countries. Without an equivalence scale, the elderly are less poor on average than the rest of the population and the households with at least three children are poorer on average. The results are reversed when the children are assigned a weight of 0.7 to 0.9, i.e. the adults are assumed to have greater needs than the children. This then justifies targeting elderly persons rather than families with a lot of children.

This type of targeting is generally used to meet specific poverty reduction goals, but above all for its relative ease of implementation and its low cost compared with the other types of targeting. Like geographic targeting, it does not stigmatise the poor population and avoids behavioural changes by individuals. And it has the added advantage of often being popular and therefore enjoying broad-based public support.

[19] However, at detailed levels, geographic targeting of disadvantaged areas could have a stigma attached to it.

[20] Household consumption is provided by the surveys. A household's consumption cannot be divided by the number of its members to find one household member's consumption (young child, elderly member, head of household or pregnant woman) since the household's members have different needs in view of their age and work, and economies of scale exist within the household. Hence the use of an equivalence scale, which assigns different weights to each household member. The verdict regarding the demographic group considered can change immensely depending on the weights used.

Nevertheless, it can prove more complicated to implement for certain demographic groups. Age targeting requires potential beneficiaries to produce documentary proof of their age and these papers can be hard to come by, especially for the elderly. In addition, the youngest and the oldest are the least mobile. This potentially restricts their applications to participate in the programme and therefore the targeting's coverage. Pregnant women targeting requires the women to provide a certificate of pregnancy, which is expensive to get hold of since they have to go to a health centre for one.

Demographic targeting can therefore be an effective way of targeting the poor, provided that the chosen group is relevant and the programme application procedures do not represent too high a private cost, which would exclude part of the targeted population. Bear in mind that exclusion errors, in addition to reducing the programme's poverty alleviation impact, give rise to horizontal inequity by discriminating among the poor – poor beneficiaries and poor non-beneficiaries – which can in turn prompt a feeling of injustice.

3.3 Self-targeting

Self-targeting does not impose eligibility conditions. The method is based on incentives that encourage participation by the poor and/or discourage participation by the non-poor. These incentives make use of opportunity cost differences between the poor and the non-poor. The allocation mechanisms make the implicit cost of participating in the programme proportional to the participants' level of income or wealth. A number of benefit or transfer allocation mechanisms are commonly used: workfare, goods quality differentiation and distribution conditions, and targeting by quantities consumed.

One of the main advantages of self-targeting is that it saves on beneficiary selection costs. It is a relatively long-standing and widespread targeting method, especially in countries with weak administrative capacities. It often links an incentive mechanism with a particular type of intervention. Workfare goes hand in hand with the provision of public works. Food subsidies make use of goods quality differentiation and/or distribution method. Quantity targeting concerns mainly the distribution of services such as water and electricity at highly subsidised rates.

The efficiency of self-targeted programmes depends on the validity of the hypothesis on which the self-targeting mechanism is based. We will look in turn at three different incentive mechanisms: work, quality and quantity.

3.3.1 Self-targeted workfare

Self-targeted workfare in the form of public works programmes aims to reach the poorest members of the community and contribute to national development projects. This type of system is more widespread in rural areas. The public works programmes generally use unskilled or low-skilled manpower for construction projects such as building roads, schools and drainage channels, reforestation and land reclamation. The self-targeting is based on the fact that the wages paid in return for the work are low enough to encourage participation solely by individuals without or unable to find more well-paid jobs.

This type of programme is often presented as a safety net system: universal accessibility and the transient nature of the work mean that individuals can turn to the programme if they need to. Nevertheless, this insurance property relies on two vital characteristics: the availability of the mechanism at all times to cover individual risks and its capacity for rapid deployment if necessary to cover collective risks. This safety net aspect can be illustrated by the Maharashta Employment Guarantee Scheme (MEGS) in operation in the Indian State of Maharashtra since 1965. Under this programme, each participant is guaranteed a minimum-wage job within a 5 km radius of his or her home (Datt and Ravallion, 1994).

Among the programmes using work as a beneficiary selection mechanism, the food-for-work (FFW) programmes are particularly widespread. Food represents all or part of the wage paid to workers on

these programmes. Although the food-for-work programmes distribute food, they rarely include explicit nutritional objectives in their main goals and are seen mainly as programmes for employment generating earnings distributed in kind.

As with other self-targeting programmes, the beneficiaries' selection costs are theoretically zero because accessibility is universal. The implementation costs, however, are high as managing public works is a relatively technical and complex task. The private participation costs are also potentially high. The value of the transfer made by these programmes corresponds to the value of the wage distributed minus the direct participation costs (transport) and earnings from alternative work. This latter cost element can represent a not-inconsiderable share of the costs borne by the individuals. In the case of the Maharashtra Employment Guarantee Scheme (MEGS), Datt and Ravallion find that loss of earnings from alternative activities varies enormously depending on the circumstances and can represent over 25% of the wage paid by the programme.

Evaluations of the effectiveness of self-targeted workfare programmes have shown that even though these programmes often reach their targets (relatively small exclusion error), many non-poor individuals also take part (large inclusion error) (Barrett, 2002). The usual explanation is that the wage rates are generally set too high. The work provided by these programmes hence replaces the work that would have been offered on the local market, thereby limiting the additionality of the transfers made. Moreover, when wages are too high, programme administrators can find themselves faced with a surplus labour supply and have to ration participation. In the presence of rationing, the probability of participation generally increases with social standing and the poor can hence be excluded from the programme.

More structural causes such as labour, land and credit market imperfections can also introduce distortions that make the public works programme incentives counteract the aim of the targeting.

This problem is illustrated in a study by Barrett and Clay (2003), who examine the effectiveness of a FFW programme in Ethiopia. They use a data set to establish that participation is extremely sensitive to the wage level offered (high wage elasticity of labour supply), but also that individuals' propensity to participate in the programme varies little with income level (low income elasticity of labour supply). These two characteristics suggest that the trade-off between exclusion and inclusion errors is very tricky. If wage levels are too low, very few poor people take part in the programme (exclusion error). At higher wage levels, a very large proportion of non-poor want to participate (inclusion error). For example, households with incomes at double the median income have a tendency to participate that is never below 80% of the probability for households in the poorest decile.

The self-targeting property of FFW programmes is based on the idea that the households with the most productive assets (land and livestock) have a high marginal labour productivity and, consequently, higher shadow wages than the households less well endowed with physical capital.[21] However, Barrett and Clay (2003) show that imperfect labour and land markets prevent the equalisation of factor ratios (workers/hectare) across farms of different sizes. So a relatively poor household with little land and even less work can have a higher shadow wage than a better-off household with more land and proportionally more work. This gives rise to a huge amount of variability in marginal productivity (i.e. shadow wages) and a relative decorrelation between the household's shadow wage and income. This decorrelation explains the low income elasticity of the labour supply of rural Ethiopian households and the problems involved in making a trade-off between exclusion errors and inclusion errors. Studies of self-targeted transfer schemes with a work condition show that the effectiveness and equity of these programmes depend on the characteristics of both the programme and the local labour market. More specifically, the most decisive programme elements are the wage offered and incorporation of the seasonal nature of farming in rural areas. As regards the local labour market characteristics, the wage and income elasticities of the individuals' labour supply explain not only the exclusion and inclusion

[21] The same reasoning can be applied to human capital endowments.

errors, but also the magnitude of the private participation costs due to the loss of income from alternative activities.

Other problems specific to public works programmes are liable to occur (FAO, 2003). In many cases, the infrastructure and other facilities built by these schemes are not properly maintained. Public works programmes can trigger population movements and put strong pressure on social infrastructures and the environment in areas where the programme is being conducted. The schemes do not necessarily improve the nutritional condition of the family members the most at risk of malnutrition. This shortcoming is due to the fact that certain household members cannot participate in the programme (children, the elderly and the invalid) and that participating individuals' transfers are not proportional to the size of their household.

3.3.2 Self-targeting by quality differentiation and time costs

Self-targeting by quality differentiation and time costs is commonly used for food distribution and the distribution of basic social services (healthcare and education). Targeting by quality differentiation is based on the assumption that there are different types of goods: "inferior" goods – goods for which demand decreases when income increases – and "normal" or "superior" goods – for which demand increases when income increases. Applying public subsidies to inferior goods provides a transfer to poor households without any beneficiary household selection required.

In the case of the food distribution programmes, the inferior nature of the subsidised goods is generally associated with non-nutritional qualities such as taste, preparation and presentation. For example, in Thailand in the 1970s, subsidised rice was distributed consisting of 25% sticky rice and 75% ordinary rice, a mixture that was less preferable to consumers (Lorge, Rogers and Coates, 2002). In the United States, products distributed by food stamp programmes are identical to commercial products, but identified differently by their labels, which makes them less desirable. In many North African and Middle Eastern countries, targeting by quality differentiation has gradually been introduced into existing subsidised food distribution programmes in order to reduce the costs of these programmes which, in the case of Iran, were absorbing resources equal to nearly 6% of GDP (FAO, 2003). Targeting was based mainly on distributed product differentiation, with a larger subsidy attached to the lower quality products.

Benefits may also be targeted by means of the time costs involved or social stigmatisation. In the first case, the underlying assumption is that the opportunity cost of the time taken is proportional to the individual's wealth. This hypothesis is similar to the assumption in programmes using workfare targeting. In the second case, self-targeting is based on the assumption that individuals set greater store by their social status (affected by stigmatisation) when their income is high. This applies, for example, to public standpipes to supply water in urban areas. The time cost, transport effort and stigma attached to these standpipes makes them unappealing to the non-poor, who prefer to use private networks. Self-targeting can also be based on a distribution of food products by public health centres or state schools in countries where the better-off use private health establishments and private schools.

In this type of programme, the more valid the assumptions about the inferior or superior nature of the goods distributed, the lower the inclusion and exclusion risks. For example, if the stigmatisation on which the self-targeting mechanism is based is too costly socially speaking, the poor will refuse to participate in the programme. Stigmatisation can also erode the programme's impact on poverty in that it undermines self-esteem, defined by Rawls (1971) as a primary good. It therefore risks hampering the poor's capacities to acquire skills and break out of poverty (Besley and Kanbur, 1993).

The risk of non-participation by the poor also applies to programmes based on targeting by product quality differentiation. In the case of Tunisia, the introduction of less refined and highly subsidised brown sugar was a flop because the majority of consumers, including the poor, considered the darker sugar to be "dirty". Excessive time costs can also curb potential participation by poor households.

3.3.3 Quantity targeting

Self-targeting based on quantities consumed is a highly specific targeting method concerning essentially the distribution of water and electricity services. Supply subsidies are effectively a social policy instrument that can be used in poverty alleviation strategies, as in Honduras and Sri Lanka (Komives *et al.*, 2007). They serve to raise households' income, but also to make these services accessible to the poor. Komives *et al.* (2005) conduct an analysis of water services in 80 cities and electricity services in 50 countries worldwide. They estimate the prevalence of subsidised water and electricity rates at 80% and 70% respectively.

Quantity targeting uses increasing block tariff structures. The principle of increasing block tariffs (IBTs) is to supply a first highly subsidised block (theoretically corresponding to a "subsistence" quantity in the case of water), with the unit price rising with each successive block. Based on the assumption that poor households consume less water and electricity than the rich, this tariff structure enables the poor to pay a lower average cost.

Selection is therefore by consumption level, with the households able to "choose" their consumption block. Yet this choice is constrained by the number of people in the household – because the blocks generally apply to one connection without taking account of family size – and by the fact that connections are shared by a number of households in many countries without this being a formal arrangement. Consequently, the larger poor households that more frequently share a connection reach the unsubsidised consumption levels more quickly. However, the prerequisite for eligibility for these subsidies is connection to the water network or electricity grid, even though inequalities of access remain very strong in the developing countries, especially in sub-Saharan Africa.

The progressivity of the tariff, and the targeting performance of the resulting subsidies, will also depend on the extent of service consumption differences by standard of living. If a steep gradient is not applied, it will be hard to limit the inclusion errors where a large subsidised volume is concerned, or this would occur at the expense of a sharp rise in exclusion errors.

The costs induced by this type of targeting are associated here with the transparency and clarity of the tariff structures. Some tariffs comprise a large number of blocks, which are not always the same for water and sanitation. The households' capacity to anticipate total consumption is also associated with billing frequency. Consumption control mechanisms, such as filling up the tank with a set volume of water and prepayment meters, could make it easier for households to control their consumption, but they are still thin on the ground.

4 What lessons can be drawn from the poverty reduction policy targeting experiences?

This section presents an analysis of the different lessons that can be drawn from the poverty reduction policy targeting experiences. It first looks at measuring the efficiency of targeting and its link with the impact of policies on poverty. Then it asks who the targeting players should be before summing up the pros and cons of the different targeting methods.

4.1 The efficiency of targeting and its impact on poverty

A number of authors have defined targeting efficiency indicators with a view to identifying best targeting practices. Efficiency here is defined as the capacity of the targeting to minimise both inclusion errors and exclusion errors. The indicator defined by Coady, Grosh and Hoddinott (2004a, 2004b) is probably the most commonly used in the empirical literature. It consists of the normalised share of transfers received by the poorest p%, i.e. the share of transfers going to the poorest p% compared with the percentage they represent of the total population. These authors posit that this indicator can be interpreted as the ratio of the observed targeting outcome to the outcome of a

universal transfer with the same budget.[22] A value higher than 1 means that the poor receive more transfers through the targeted policy than through the universal transfer. The allocation is said to be "progressive". A value of less than 1 corresponds to a "regressive" allocation: the poor receive less in the way of transfers than they would have done if the same programme had not been targeted.

Like most of the targeting efficiency indicators built by weighting inclusion and exclusion errors in various ways, this indicator has its limits.[23] As pointed out by Ravallion (2007), it overevaluates the inclusion errors at the expense of the exclusion errors. Consequently, the evaluation of targeting performance attributes a greater weight to the capacity to keep spending down – by preventing the non-poor from benefiting from the programme – than to the capacity to reach all the poor targeted by the programme.

Secondly, this indicator does not evaluate the effect of targeting on the distribution of welfare among the poor or, more generally, on the entire population's welfare distribution. If vertical equity is to be achieved, when choosing between two programmes with the same proportion of inclusion and exclusion errors, it is preferable to opt for the programme that reaches the poorest of the poor rather than that which reaches the least poor of the poor. Likewise, a programme that includes non-poor bordering on the poverty line is preferable over a programme that includes non-poor at the tail end of the distribution curve. Moreover, for the sake of horizontal equity, it is advisable to treat all the poor with the same level of welfare exactly the same.

Lastly, this indicator appears to be weakly correlated with the impact of poverty reduction programmes. Ravallion (2007) seeks to evaluate, in the specific case of the Chinese *Di Bao* programme, the extent to which the targeting efficiency indicators are correlated with the programme's impact on monetary poverty. This programme pays urban households below a certain poverty line a cash allocation to help them break out of poverty. Ravallion draws on the fact that the programme was set up independently in each municipality, giving the municipal authorities a great deal of power over the definition of the poverty line for their town, the total sum of transfers and the implementation of the programme itself. He calculates a number of targeting efficiency indicators for the 35 major municipalities of China. In addition, he estimates the poverty impact that can be attributed to the programme by means of the variation in the number of poor before and after the programme's introduction. His findings suggest that there is no significant correlation between poverty reduction and the indicators most often used in the literature. Nevertheless, Ravallion shows that the more successful the towns at containing inclusion errors, the less successful they are at reducing poverty. Conversely, the lower the level of exclusion errors, the more the programme significantly reduces poverty. So it would seem that the weak capacity of the most frequently used indicators to reflect the impact of targeting on poverty reduction is due to their very weak correlation with the programme's coverage of the poor (if not even a negative correlation in certain cases).

The weak link between targeting efficiency as measured by the indicators used in the literature and the programme's impact on poverty suggests it would be advisable to opt for a targeting evaluation approach directly associated with the impact of targeting on poverty reduction. This recommendation was made by Cornia and Stewart back in 1995. It is also the message with which Ravallion concludes (2007, p. 19): "*If there is a single message from this study it is that analysts and policy makers would be better advised to focus on the estimable outcome measures most directly relevant to their policy problem. In the present context, impacts on poverty can be assessed with the same data and under the same assumptions as required by prevailing measures of targeting performance.*"

The idea of this approach is to measure a programme's targeting performances by comparing its poverty reduction impact with that of a counterfactual, i.e. a programme with the same budget, but different targeting. Many studies compare ex ante the poverty impacts of different programme implementation methods for a given country in order to guide decision-makers upstream or help them

[22] This interpretation is disputed by Ravallion (2007).
[23] For a more detailed presentation of the targeting efficiency indicators, see Lavallée *et al.*, 2009, p. 47.

revise the targeting methods for existing programmes. However, it is not so easy for this approach to compare programmes conducted in unrelated contexts with different budgets.

4.2 Who should do the targeting?

One of the main problems with targeting is obtaining information on the poor's living conditions and needs. A method often proposed to overcome this problem is to decentralise the evaluation of household living standards and the selection of welfare programme recipients to local organisations. The main argument in support of this decentralisation process is that local organisations (non-governmental organisations, local government and local communities) have more access to the information required (Coady, Grosh and Hoddinott, 2004a; Conning and Kevane, 2002). In other words, it is easier and cheaper for them to obtain information on household living conditions than it is for the central administration. They are held to be better informed about the members of their community and better placed to recognise the "real" poor. For their part, the households are said to find it harder and be less inclined to hide their real standards of living from the local authorities. This grassroots access to information is put forward as grounds for the decentralisation of the targeting process on the basis that it substantially improves targeting performance by reducing inclusion and exclusion errors along with the costs of identifying and monitoring the poor.[24]

In a study on the Albanian Ndihme Ekonomika (NE) social assistance programme, Alderman (2002) shows that communities use locally available information to allocate welfare benefits. In this programme, decisions regarding beneficiary selection and the amount of benefits allocated to each household are decentralised to commune level. The households first of all apply for the programme. Then an administrator selects the households and determines the amount to be allocated to each household on the basis of its size, land assets, and the wages and pensions it receives. Lastly, an elected committee makes the final welfare allocation decisions. It not only has the power to add or eliminate beneficiaries, but it makes the actual decision on the amount allocated to each household. It is at this stage that the information available to the committee members comes into play. Alderman shows that criteria other than household size, assets and income are taken into account to allocate benefits and better target the poor. Such factors are hard for a household survey to grasp and have nothing to do with labour market participation or assets. For example, the committee members may be aware that a given household has resources (such as savings abroad) that it was not bound to declare to participate in the programme. Or it may know that certain households have fallen on hard times due to the loss of part of their harvest, for example, which their land ownership cannot possibly reflect.

However, the main worry about decentralisation is that communities might divert the resources intended for the poor. There is nothing to say that they will actually handle vulnerable groups in a suitable manner. Their main concern is not necessarily the success of the programme. For example, a mayor or local politician's priority could well be to be re-elected, a teacher's might be the quality of his relationship with his pupils, and so on.

Many studies have shown that the risk of capture by local elites grows with inequalities. For example, in a study of a decentralised food-for-education programme in Bangladesh, Galasso and Ravallion (2005) find that the villages with the highest land inequalities are the worst at targeting the poor. Bardhan and Mookherjee (2006) analyse decentralised programmes conducted in the State of West Bengal in India over the 1978-1998 period. Their study finds that land inequalities reduce performance in terms of targeting agricultural input credit and distribution programmes (seeds, fertiliser and pesticides). They also show that local government in areas with the highest inequalities tends to choose less efficient public employment programmes in terms of job creations. Araujo *et al.* (2008) draw on data on social fund investments in Ecuador to show that, where inequalities are high, the communities' choices give rise to projects benefiting the entire community rather than projects targeting the poorer individuals. They observe that the latrine projects, in particular (investments intended for the poor), were conducted in less unequal villages.

[24] Decentralised targeting is sometimes called "community-based targeting" in the literature.

Such a finding may, at first glance, appear paradoxical. It would normally be expected to be easier to pinpoint the poor in highly unequal communities and identify their needs. Galasso and Ravallion (2005) explain this finding in terms of the relative power of the poor in the local decision-making process: the greater the inequalities, the less voice the poor have in the decision-making processes. In other words, the more unequal the initial distribution of resources, the greater the non-poor's chance of cornering the resources intended to help the poor. In such a situation, the local political economy tends to perpetuate the inequalities. This conclusion is also echoed in another criticism of decentralised targeting, which argues that this beneficiary selection mechanism tends to perpetuate the local power structures and exclude certain individuals from the social programmes for ethnic or moral reasons (Conning and Kevane, 2002).
Nevertheless, these studies generally tend to put their conclusions into perspective. They point out that, although there is indeed a risk of poverty alleviation programme benefits being diverted in certain villages with high levels of inequality, the real problem does not lie there. It lies in the central government's allocation of the resources to the local communities. Galasso and Ravallion (2005) find that the central government's allocation of resources among the villages in Bangladesh is neutral to poverty, i.e. it does not depend on the communities' poverty levels. They also show that the programme's targeting performances are on the whole due to the allocation of resources within the village rather than the distribution of resources among the villages. Bardhan and Mookherjee (2006) draw similar conclusions. They find that the central level tends to allocate fewer resources to villages where poverty, inequalities and the proportion of low-caste individuals are high. Such findings put the case for a more transparent and equitable process when allocating resources from central government to the local authorities.

Another risk of decentralisation lies in the generation of horizontal inequalities wherein the poor are treated differently depending on where they live. Looking again at the Chinese *Di Bao* programme, Ravallion (2009) shows that wealthier municipalities apply less restrictive eligibility criteria than poorer municipalities. Consequently, the poor in rich cities fare better from the programme than the poor in poor municipalities. This puts a strong brake on the programme's impact on poverty reduction.

4.3 Choosing the right targeting method for the circumstances

Few available comparative studies evaluate the relative performances of the different targeting methods. This dearth is due to the fact that it is hard to put together a database on targeted policy performances across a broad enough spectrum of geographic, institutional and cultural situations, targeting methods and poverty reduction policy types to be able to separate out the effects of these different elements.

The study by Coady, Grosh and Hoddinott (2004a, 2004b) is probably the most comprehensive cross-cutting analysis of targeting performances. These authors compare 122 targeted poverty alleviation programmes in 48 developing countries. They use the normalised share of transfers received by the poorest 40% of individuals as their targeting performance indicator. Despite the considerable limitations of this indicator, as discussed in the previous section, this study presents three major findings.

Firstly, the authors find that targeting is an efficient instrument for concentrating the benefits of the policies among the poor. Half of the programmes studied allocate at least 25% more transfers to the poor than the same programmes delivered in a non-targeted manner: "*In this sense, targeting works,*" (Coady, Grosh and Hoddinott, 2004b, p. 81). However, targeting is "regressive" in one-quarter of the programmes. In addition, the average performance of the targeted programmes studied is less than 1, i.e. "regressive".

Secondly, targeting performances are highly sensitive to the context surrounding policy implementation. First of all, they are positively correlated with the extent of democracy in the countries. In other words, the greater the people's voice in the government's choices, the more

accountable the government is to the people and the media for its actions,[25] and the better the targeting performances. Large income distribution inequalities subsequently raise the targeting performances, since it is normally easier to identify the poor when inequalities are high as they stand out clearly from the non-poor. Lastly, targeting performances depend on the country's level of wealth, which the authors say reflects the country's institutional capacities to design and conduct a targeted policy. In sub-Saharan Africa, for example, the median targeted programme transfers 8% fewer resources to the poor than would have been transferred by the same type of non-targeted programme. Conversely, the "best" targeting performances are found in the Latin American and transition countries where institutions are stronger.

The third conclusion that the authors come to is that no targeting method is strictly preferable to another in terms of targeting performance: *"There is no clearly preferred method for all types of programs or all country contexts"* (Coady, Grosh and Hoddinott, 2004a, p.84). In effect, in their sample of targeted programmes, only 20% of the variance between the different targeting performances is explained by the choice of targeting methods. The remaining 80% is due to differences within one and the same targeting method.

This finding therefore underscores the importance of taking joint account of a range of considerations when choosing a targeting method: the objectives of the poverty reduction policy, especially the poverty definition used, and the programme's proposed scale and duration, as well as the institutional environment, the data available, the country's central and local administrative capacities, and the behavioural responses of the potential beneficiaries.

Although it is not possible to rank the different targeting methods, the existing empirical literature can be used to present their relative advantages and disadvantages along with the contexts to which they appear to be the best suited. Table 3 does just this, based on the experiences analysed by Coady, Grosh and Hoddinott (2004a).

Table 3: Comparison of targeting methods

Targeting method		***Main advantages***	***Main disadvantages***	***Suitable context***
Individuals or households	By means testing	- Few inclusion and exclusion errors - Little risk of generating horizontal inequity	- Substantial disincentive effects on households - High beneficiary identification costs (public and private)	- Administrative system sufficiently developed to set up control and checking procedures - Transfer sums large enough to justify the high costs of identification or use of this identification by other programmes - Suitable for monetary poverty reduction policies, but does not cover other aspects of poverty
	By proxy-means testing	- Few disincentive effects on households	- Hard to rally political support because the selection criterion is not	- Administrative system sufficiently developed for beneficiary selection (information collection

[25] The level of democracy as defined and used by Coady, Grosh and Hoddinott corresponds to the Voice and Accountability indicator defined by Kaufman *et al.* (1999).

		- Low risk of manipulation of information to meet the selection criterion - Selection of beneficiaries based on a lightweight survey	always well understood - Rigid criterion poorly suited to standard-of-living changes - Reflects the average household's standard of living well, but not so well the others - Requires the collection of information to identify the beneficiaries	and application of the criterion) - Transfer sums large enough to justify the high costs of identification or use of this identification by other programmes - Suitable for chronic poverty alleviation policies. Unsuited to policies addressing vulnerability
	By the communities	- Captures information available solely at local level - Consideration of specific needs at local level	- Potentially high political cost (risk of manipulation of the selection criteria, risk of undermining social cohesion in the community) - The local stakeholders' goals are not necessarily the same as the programme's goals - High risk of horizontal inequity	- Small-scale programme (few beneficiaries possible, small sums distributed, short programme duration) - If the aim is to incorporate a more subjective dimension into the concept of poverty - Well-defined communities with strong social cohesion
Categorical	All	- Administratively simple and moderate cost - Few disincentive effects and little stigma	- Risk of generating horizontal inequity	- Modest administrative capacities - Categories chosen sufficiently correlated with poverty
	Geographic		- Targeting efficiency highly dependent on the quality of the available data	- Homogeneous poverty levels within geographic areas and heterogeneous between areas
	Demographic	- Often popular		- Availability of exhaustive demographic data - Poverty concentrated within a demographic group
Self-targeting		- Targeting cost virtually zero	- Strong stigma - Sometimes high private costs	- Institutional or administrative capacities not very developed

		- Inclusion of vulnerability in the definition of poverty - Consumption and labour supply behaviour highly different between poor and non-poor and similar among poor to limit horizontal inequity

Source: The authors, adapted from Coady, Grosh and Hoddinott (2004a)

Given the methods' individual weaknesses and complementarities, many poverty alleviation policies use a number of them in tandem. For example, two-step targeting is commonly used: geographic areas are first of all targeted by poverty level, and then individuals or households or even demographic groups are targeted within these areas. Other combinations are possible, such as demographic targeting followed by individual targeting or, as in the case of the Mexican *Oportunidades* programme, geographic targeting following by proxy-means testing coupled with community-based targeting, or again in Mexico, where the government targeted priority zones within which the poor self-target to obtain products consumed mainly by the poor. Combining the different methods optimises policy targeting, as shown by Coady, Grosh and Hoddinott (2004a, 2004b).

Conclusion

This study reviews poverty reduction targeting performances in developing countries. An in-depth analysis of studies on this subject leads us to a first conclusion. We believe that the issue of the merits of targeting, always a subject of hot debate in the literature, is fuelled more by ideological positions than by any observation of the widespread failure of targeted policies. In fact, where resources are scarce, targeting appears to be an effective tool for poverty reduction provided that the methods used to target the poor are well-suited to the context in which they are implemented. Given that a mismatch between targeting methods and local realities can make a targeted policy less effective than a universal policy, the choice of mechanisms to identify the poor is of paramount importance.

There is no easy answer to the question of the choice of targeting methods. Given the current state of knowledge, no targeting method stands out as being a cut above the rest in absolute terms. When choosing a targeting method, many aspects of the situation on the ground have to be taken into consideration. This review points up the wealth and relative flexibility of the palette of targeting methods. In addition, it presents an analytic framework to guide targeted poverty reduction policymakers in making the best choice.

From a more theoretical standpoint, this review highlights the need to take forward research on the evaluation of targeted policies. Top of the list in this regard is thinking on targeting performance indicators. The most commonly used indicators at present provide little information on the poverty reduction impacts of the different targeting methods. Yet it is vital for targeting methods to be compared in the light of their contribution to the end goal of poverty alleviation policies. Secondly, very few comparative studies on targeting methods cover a broad enough spectrum to be able to separate out the different effects of context on the efficiency of the targeting methods. Work is called for in this area to refine the findings of these meta-analyses and test their robustness to other methodological choices. Another possible avenue of research is to take advantage of recent advances in policy impact evaluation by setting up experimental procedures to make a strict comparison of the different targeting methods.

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