

Title: Size matters: Targeting efficiency and poverty reduction effects of means-tested and universal child benefits in Russia

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## Size matters: Targeting efficiency and poverty reduction effects of means-tested and universal child benefits in Russia

This paper evaluates a policy change from universal to means-tested child allowances in terms of targeting efficiency and poverty reduction taking the introduction of means-tested child benefits in Russia as a case study. We use the Russia Longitudinal Monitoring Survey (RLMS) from 2000 to 2004 to analyze the impact of the reforms and to simulate the effects of various means-tested and universal child benefit schemes. Since the reforms in 2000, more children receive benefits and there is improved targeting of low income households. Nevertheless, both inclusion and exclusion errors are considerable and although the poverty reduction impact improved marginally since the reforms, its effect on child poverty is small. Our simulations show that universal schemes achieve additional poverty reductions in all indicators because previously excluded children now also receive a benefit. But size matters most; only by increasing benefit levels considerably, more substantial poverty reductions can be achieved.

Keywords: (chronic) poverty, child benefits, targeting efficiency, means test, universal, Russian Federation

### **<A> Introduction**

The debate whether universal or means-tested benefits are the preferred policy instrument in reducing (child) poverty is a longstanding one and centres around costs, incentives and the political economy (see for instance Atkinson, 1998; Barr, 1998; Besley, 1990; Besley and Kanbur, 1990). Under the condition of a constrained budget and assuming (near) perfect targeting, poverty is reduced more effectively and efficiently when benefits are targeted to the

poor based on means (e.g. Besley, 1990). Higher administrative costs, targeting errors and labour market disincentives reduce the efficiency and effectiveness of means-tested benefits (Atkinson, 1998; Van de Walle, 1998). Proponents of universal benefits argue that the costs related to means testing may outweigh the actual benefit. Using the introduction of means-tested child benefits in Russia in 2000 as a case study, this paper assesses the impact of a policy change from universal to means-tested child allowances in terms of targeting efficiency and poverty reduction.

### **<B> Universal versus means-tested cash benefits**

Strictly speaking, a policy maker has two choices to reduce child poverty: allocate a benefit to all children of a certain age-group, i.e. provide a universal benefit, or limit the eligibility to children of poor families. Under a given government budget constraint, allocating the benefits to poor children will result in a higher benefit for each eligible child, and hence, will have a larger effect on poverty reduction. However, targeting comes at a cost.

If benefits are targeted to the poor, the policy maker will have to determine an indicator that identifies the poor children. Governments have imperfect information about the true welfare level of households. It is difficult to find out whether a person or household belongs to the target group or not, and gathering such information is costly. In addition to screening costs, other inefficiencies arise as a result of imperfect targeting: some of the benefits will flow to children outside the target group while some children in the target group will not get a benefit. The former inefficiency is called 'leakage' or 'inclusion error' while the latter is known as 'exclusion error'. When screening costs are high and there are errors of in- and exclusion, universal benefits become more attractive as a benefit allocation mechanism. Moreover, as targeting becomes stricter in order to reduce leakage, screening costs rise further and exclusion

errors as well. Therefore, the decision between universal or targeted child benefits is ultimately a cost benefit analysis; when do the costs of targeting outweigh the benefits in terms of poverty reduction?

It makes sense that a targeting regime which aims at poverty relief needs to use poverty indicators as a screening device. There are, however, a number of pitfalls involved in poverty measurement that need to be considered. One issue is that poverty is a multidimensional concept; another is that there are various ways to measure each of these dimensions. Additionally, to determine whether a person is poor or not involves the (subjective) choice of a poverty threshold below which a person cannot fulfil his/her basic needs, has poor health or an unacceptable low standard of living. Firstly, this implies that it is *a priori* not clear who the target group is (one first needs to determine the relevant dimension(s)). Secondly, the target group differs in size and characteristics according to the chosen measurement method and poverty threshold.

The academic literature identifies other targeting costs such as incentive costs, social costs and political costs (Atkinson, 1998; Barr, 1998; Coady *et al*, 2004, Moene and Wallerstein, 2001; Gelbach and Pritchett, 1997; Sen, 1995). Incentive costs arise when households adjust their behaviour in order to meet eligibility criteria. These responses can involve a cost (i.e. a household reduces labour supply such that their income falls below the eligibility threshold) but can also be beneficial (i.e. school attendance increases because benefit eligibility requires the children to go to school). Strict targeting might also increase social costs such as stigma and reduce the available budget for transfers if the budget is politically determined.

In addition, poverty alleviation may not be the only objective of child and other social benefits. Most social protection systems have several functions. They alleviate poverty, smooth income over the life cycle, provide insurance against certain risks and redistribute welfare. A benefit that is said to be ‘poorly targeted’ based on the poverty objective may be effective in terms of another objective (Atkinson, 1998).

The trade off between the costs of targeting and the benefits in terms of poverty reduction for means-tested and universal child benefits implies that it is relevant to measure both effects for each policy instrument. However, quite some empirical contributions to the literature only focus on the effects of means-tested benefits or contrast the role of means-tested benefits to other parts of the welfare state such as social insurance programmes (Behrendt, 2000; Sainsbury *et al*, 2002; Nelson, 2004; Heady *et al*, 2001). Such analyses are useful in the sense that they provide information about how social protection programmes can complement each other or about the variation in impact of different means-tested schemes. However, they do not provide insights into the differences in impact of means-tested vis-à-vis universal cash benefit programmes for a specific group in the population.

Nevertheless some clues with respect to differences in targeting efficiency and poverty reduction impact between means-tested and universal benefits can be found in the literature. Matsaganis *et al* (2004) and Edmonds (2005) find that under means-tested programmes leakage of benefits to the non-poor is considerably lower than under a universal programme. Related to that is the result that a higher share of the benefits goes to the poor with means-tested child benefits. In a cross-national comparison of 122 anti-poverty interventions Coady *et al* (2004) show that in terms of median targeting performance both means-tested benefits and child benefits score highest as compared with other targeting methods. Thus, both means-

tested and child benefits distribute more resources to the poor than any other targeting method. However, because their definition of child benefit programmes includes all types of child benefits (universal, (proxy) means-tested, geographical etc.), it is not clear whether means-tested child benefits outperform universal benefits in terms of targeting efficiency.

The problem of exclusion or undercoverage also receives attention in studies, albeit from different perspectives: Behrendt (2000) evaluates the poverty reduction impact of means-tested benefits and notes that recipient rates are ‘astonishingly low’ (i.e. exclusion rates are high, p. 31). Edmonds (2005), being more concerned about the targeting efficiency of means-tested child benefits in Slovenia, mentions that the problem of under coverage does not appear ‘to be so large that it could undermine the progressiveness of the means-tested programme’ (p. 195). Additionally, both studies report that leakage of means-tested benefits is mainly to the ‘near poor’ population and thus less of an efficiency problem. It is important to realize that the problem of under coverage represents a missed opportunity in terms of poverty reduction while at the same time it is the result of (increased) targeting efficiency.

The impact of means-tested and universal schemes on various poverty measures differs. Förster and Tóth (2001) identify a move from universal to means-tested benefits in Poland, Hungary and the Czech Republic during the mid-nineties and find that the impact on poverty in terms of incidence was reduced after reforms but that benefits were better targeted in terms of intensity and thus had a larger impact on the reduction of the poverty gap. In the study of Matsaganis *et al* (2004), which compares current (mostly means-tested) and simulated universal child benefit schemes in Southern European countries, the poverty reduction impact differs not only per poverty indicator but also per country. Unfortunately, it is not clear to what extent the poverty reduction effects can be attributed to the means-tested – universal

difference or to other differences in programme characteristics such as the type and level of benefits (flat-rate – progressive, smaller or larger) and differences in benefits according to the number of children. Nevertheless, Matsaganis' study shows another important point; other targeting criteria and/or benefit variations matter for the impact on poverty reduction and targeting efficiency. For instance, high poverty risk groups can be targeted by including their demographic characteristics as eligibility criteria. Greece, for instance, provides special benefits to households with 3 or more children. Another point that is addressed is that the programme implementation matters a lot, also for targeting efficiency and poverty reduction (Coady *et al*, 2004; Behrendt, 2000).

A final aspect is the adequacy of the benefit level. On the one hand, the amount of benefits matters; more generous benefits have a larger impact on poverty (Matsaganis *et al*, 2004), but higher benefits put a larger strain on the government budget. On the other hand, if the benefit is small, the costs of strict means-testing may outweigh the benefit, both for the beneficiary and the administrator.

Essential for the validation of the means test is the underlying objective. Does the means test aim at targeting the poor or is it meant to cut-off the wealthy households and redirect some of the resources to poorer households? The latter 'mild' targeting may offer an alternative that comes close to an optimum as discussed by Besley and Kanbur (1990). In addition, the amount of leakage of benefits to households close to the poverty line may not be considered as a cost under the presumption that the poverty line is not a stringent concept. This 'mild' evaluation takes into account that income may not be perfectly observable and that there is no such thing as a single poverty line.

## **<B> Russia - from universal to means-tested child allowances**

Our focus is on child benefits because, as in many other countries, children in Russia are particularly at risk of living in poverty. In 2003, the poverty incidence among children younger than 16 years old was 27% compared to the national average of 20%. Younger children have an even higher risk of living in poverty (World Bank, 2004).

Family allowances are the main instrument in most social protection systems to provide income support to families with children. They always played an important role in Russian (and Soviet) social policy. The objective of providing child allowances is to assist families in having and upbringing children (Karelova, 2003). The main law regulating child and family allowances was passed in 1995. Up to 1999, child allowances were officially allocated according the universal principle but as early as 1995 some regional governments decided to means-test child benefits (Denisova *et al*, 2002). In 1999, federal law officially introduced a means test for child allowances. The eligibility rules changed two more times before they were finally set and approved in the amended law (2000). In 2001, child allowances started to be financed from the federal budget.

Families with children below 16 years (or below 18 if they still go to school) and with average per capita income below the Minimum Subsistence Level (MSL) are entitled to a child allowance. The methodology for calculating the MSL is governed by federal law. Regions are free within the boundaries of the law to determine the content of the minimum consumer basket and adjust its composition to regional needs and habits. The income test for child allowances only takes the income of the parent(s) into account and divides the total family income by the number of family members, i.e. parent(s) and underage children. The application procedure is un-bureaucratic and simple. One of the parents has to apply for the

child allowance at the social protection authorities of her place of residence. The test includes all formal income from employment or self-employment including bonuses, all types of pensions, benefits and income such as alimony payments over the three months prior to the application. The applicant completes the application form, stating the total family income (no official documents or further income documentation have to be submitted) and providing the birth certificate for the child (Gassmann, 2003). The monthly benefit is 70 ruble per child from 18 months to age 16 (or 18 if still in high school) (International Social Security Association, 2004). In the case of a single parent or when one of the parents is avoiding alimony payments, the benefit is higher (140 and 105 ruble).

In this paper we compare means-tested and universal child allowance schemes both in terms of targeting efficiency and poverty reduction using the cross-section and panel dimensions of the Russia Longitudinal Monitoring Survey (RLMS) from 2000 to 2004. We analyze the core costs of targeting, namely leakage, exclusion errors and total benefit expenditures, and relate these to the benefits in terms of poverty reduction. We limit our focus because the data allow for a thorough analysis of these aspects while they do not provide information on the other factors in the debate, such as labour market disincentives, administrative or social costs. Although there are various other targeting methods, we focus on means-testing and compare the efficiency of this targeting method to one of universal provision in the context of child benefits in Russia. Finally, we simulate various means-tested and universal child benefit schemes using static micro simulation and analyze differences in poverty reduction and total benefit expenditures.

Our analysis contributes to the debate of universal versus means-tested benefits in a number of ways. Many studies focus either on targeting efficiency or on poverty reduction (Coady *et al*,

2004; Foster *et al*, 2001; Immervol *et al*, 2000; Edmonds, 2005). This paper studies both the costs and benefits. We also analyze the poverty reduction impact of these schemes in terms of chronic poverty. The chronically poor, measured in this paper as those households that have average expenditures below the poverty line over a given period, are of particular interest because of the potentially high costs that long-term poverty has on the development of children. By simulating alternative means-tested and universal schemes, our study further analyzes the potential poverty reduction that can be achieved by universal schemes.

The remainder of the paper is structured as follows: we start with explaining the data and variables used in our analysis followed by a discussion of the poverty indicators and their trends from 2000-2004. Thereafter follows an analysis of targeting performance and poverty reduction effects of the current child benefit scheme in Russia. Finally, we simulate different policy options and compare their targeting performance with the current system, summarize our main findings and discuss their policy relevance.

### **<A> Data**

We use data from the Russia Longitudinal Monitoring Survey (RLMS) from 2000 until 2004.<sup>1</sup> The RLMS can be used for (repeated) cross-section as well as panel analyses. For most of our analyses we use the cross-section dimensions which are representative for the Russian population as a whole. We include those households that were observed at least in one round and had no missing observations on demographic, expenditure and income variables. We use the panel dimension of the RLMS to analyze the impact of child benefits on chronic poverty. Households are part of the panel if they participated in all 5 rounds and if they have no missing observations for the main variables. Comparison of the representative (weighted) cross-sections with the panel shows that in the panel urban households are underrepresented

while households with children are somewhat overrepresented. Income and expenditures are somewhat lower in the panel, but the main trends are similar.

The poverty status of a household is determined using the RLMS poverty lines and household expenditures. These poverty lines are based on regional age-gender specific food-baskets that are valued at regional prices and also include a non-food component. Individual poverty lines are aggregated to the household level and subsequently adjusted for economies of scale. We prefer to use expenditures instead of income because households have a tendency to underreport income from informal and semi-formal activities (Deaton, 1997). Total expenditures are composed of food and non-food goods and services and include expenditures on food both purchased and from home production), tobacco, clothing, fuel, health, services, luxury goods, rent, and utilities.

<T1> Table 1 here

We focus on households with children aged 16 years or 18 if still in school because they are potentially eligible for child benefits. For children under 18 months there is a ‘child care leave allowance’; this social insurance benefit is set at 500 ruble a month (70 ruble for unemployed workers). Although we want to analyze the impact of the child allowance for children of 18 months and older, we can only distinguish between the benefits received by these age categories from 2003 on. To maintain consistency over time we therefore decided to use the slightly larger group of households with children below 16 (or 18 if in high school) for our targeting and poverty impact analyses. The total number of households with children in this category is decreasing over time (Table 1). This is in line with demographic trends reported in

other datasets (World Bank, 2005). Households with children find themselves disproportionately more often in lower expenditure quintiles.

#### **<A> Prevalence of (chronic) poverty in families with children**

We analyze trends in poverty using incidence and poverty gap measures (Foster *et al*, 1984) as well as a spells-based chronic poverty indicator (Hulme and Sheperd, 2003). We calculate these poverty statistics for the RLMS poverty lines as well as for 150% of the RLMS poverty lines. We do this for two reasons. Firstly, poverty statistics are sensitive to the level of poverty threshold and we want to evaluate in what way changing the threshold level influences our poverty estimates. Secondly, the Russian authorities use a different threshold (Minimum Subsistence Level) to establish whether a family falls below the income threshold and is thus eligible for child benefits. The 150% RLMS cut-off is comparable to the Minimum Subsistence Level and thus better reflects the target group of the child benefit programme. We compared the average weighted RLMS poverty lines with that of the MSL in the Russian Household Budget Survey for the year 2000 and found that the MSL is about 50% higher.

<T2> Table 2 here

The expenditure-based estimates in Table 2 show that all poverty indicators declined until 2003, and rose again in 2004. In 2004, 12% of the Russian children was living in a poor household and the average shortfall of expenditures was 3.7%. Compared with the total population, children have a higher than average or average poverty risk, depending on the survey year (not shown here). Using the 150% threshold values most poverty indices more than double in value, a sign that the expenditure distribution around the poverty line is rather dense. A shift of the poverty line has a large impact on poverty indicators.

Our chronic poverty indicator is based on a combination of the number of poverty spells and the mean value of household expenditures vis-à-vis the poverty line. Households are classified in four categories: always poor, usually poor (mean expenditures under the poverty line), occasionally poor (mean expenditures above the poverty line) and never poor. Chronic poverty studies have shown that the experience of poverty is not homogenous over time; some individuals experience poverty only once, others regularly and some only know a life of poverty. Children living in chronically poor households are of particular concern because the sustained low level of household resources also increases the risk of living in poverty as an adult due to insufficient investment in health and human capital. In Russia, about one third of the panel households experienced poverty at least once in the period 2000-2004 (not shown here). Children have a higher than average risk to live in chronically or occasionally poor households. The 'occasionally poor' form the largest group with 34% while 8% can be classified as chronically poor. Using the higher poverty line, about 26% of the children live in chronic poverty and 40% experience occasional poverty spells.

#### **<A> Targeting efficiency of child allowances**

Even though quite some local administrations already introduced some form of means testing during the mid-nineties, only in 1999 child benefits became means-tested by federal law. We use the 2000 survey data as a benchmark year for our analysis as there have been no further changes in eligibility requirements since mid-2000. We measure targeting efficiency by using a range of indicators on child benefit coverage and adequacy; coverage indicators provide information on the beneficiaries while adequacy indicators give insight into the size benefits and the allocation of total benefits. To analyze whether child benefits indeed target poor children in Russia and to what extent, we relate our coverage and adequacy indicators to the

poverty status of the beneficiaries as well as the poverty threshold. This allows exploring to what extent beneficiaries belong to the target group (correct targeting) or not (leakage or inclusion error) and which part of the target group is excluded (exclusion error). We further complement the analyses of targeting efficiency by decomposing our indicators into expenditure quintiles. We do this for two reasons. Firstly, under a means-tested scheme, leakage of benefits to 'near poor' children is typically considered less problematic than leakage of resources to 'rich' children. Secondly, the poverty analysis in the previous section has shown that the size of the target population is very sensitive to the choice of the poverty line.

<T3> Table 3 here

Table 3 shows that benefit coverage increased over the whole period; the percentage of children receiving child benefits doubles from 33% in 2000 to 63% in 2004. From 2001 onwards, poor children are more likely to receive benefits. This suggests that there have been two effects. Firstly, there has been a general increase in the number of benefits provided. It is likely that the move from local to federal funding of (earmarked) benefits has been an important contribution in this respect.<sup>2</sup> Secondly, the increase in coverage of poor children as compared to overall coverage rates suggests that the means test indeed better targeted poor families.

The errors of exclusion decreased over time. Still, more than a quarter of all poor children have not received a child benefit in 2004. It is not clear whether these children were denied a benefit when their parents filed an application or whether the parents decided not to file an application. Under-coverage, or non-take up, may be the result of indirect costs incurred by potential beneficiaries, such as lack of information about the benefit or perceived unease of

applying for a 'poverty' benefit. The only insight that the RLMS provides is whether the household thinks it is eligible for child benefits. In 2004, 32% of the non-poor households with children thought they were not eligible as compared to 23% of the poor households. This suggests that lack of information might indeed be one reason for non-take up. Opportunity costs also have to be considered. It may simply not be worth the effort to apply for a benefit, taking into account that a parent has to visit at least once the local social assistance office and provide the necessary documentation. Even in poor households, child benefits contribute merely 2.5% to the household budget in 2004. The nominal amount of a child allowance in 2004 is 80 ruble. The value allowance has been decreasing in real terms since 2000, mainly because child benefits are not indexed for inflation. This provides indirect support for the theory that the optimal policy for the poor is not necessarily a policy that targets benefits as narrowly as possible (Moene & Wallerstein, 2001; Gelbach & Pritchett, 1997; Atkinson, 1995; Sen, 1995). Theoretically, a certain degree of targeting is optimal to maximize social welfare. However, changes in the degree of targeting have second round effects on the size of the available budget if the budget is politically determined. The share allocated to the poor is reduced. Hence, in the absence of altruistic voters, a strongly residual welfare state is unsustainable, according to Moene and Wallerstein (2001).

Inclusion errors remain considerable after the introduction of the means test. About half of the children of the three richest welfare quintiles have received child allowances in 2004. Using the higher poverty line, which corresponds better to the poverty threshold used by Russian authorities, about half of the benefits flow to poor households in 2000 but this share declines to about a third in 2004. From the decomposition into quintiles we can see that over the observed period almost 50% of the benefits are going to children of the poorest 40% of the population. Leakage in terms of benefit money is even more pronounced than in terms of

benefit coverage. Interesting is that the trend is opposite. In 2000, the share of total benefits received by poor households was 46 % compared to 33 % in 2004. These findings support the theory that targeting comes at a cost. Targeting performance is reduced by inclusion and exclusion errors. The considerable amount of leakage to non-poor children can be explained by inertia on the one hand, and identification problems, on the other hand. It took time for local benefit administrators to adjust the benefit allocation to the new rules. It is also possible that once families become eligible, they continue receiving benefits even after their income situation has improved (above the threshold). Benefits granted under the old (universal) system may not have been cancelled, but are grand-fathered out. More important, though, is the identification problem. Income based means testing is characterized by asymmetric information. The administrator depends on the information supplied by the applicant as long as there is no reliable information verification system. In the Russian system, only formal income is taken into account for the eligibility assessment. Informal income and assets are not taken into account. Although this could be interpreted as a form of mild targeting, the current means test does not manage to accurately assess the welfare level of households leading to substantial inclusion and exclusion errors. Political economy aspects may play an additional role in a decentralized system where benefit allocation is the responsibility of local administrators.

In addition to the descriptive indicators of targeting efficiency we also test if there is statistical evidence for the changes in the targeting efficiency of child benefits. We estimate a binary model with child benefit receipt as a dependent variable and a number of explanatory variables such as the number of eligible children and other demographic characteristics, the logarithm of nominal income minus child benefits, a dummy variable taking the value of one if at least one household member is unemployed, a dummy for female headed households, and dummies

indicating a semi-urban and rural dwelling place and the primary sampling units. Income includes all earnings from (self-) employment and social transfers. We only include households that have children in the eligible age category i.e. under age 16 or 18 if the child is still in high school.

#### <T4> Table 4

The estimation strategy is rather straightforward; for each cross-section we use binary regressions to estimate a number of models. In the first model the main explanatory variables are the number of children in the eligible age category and household income. The second model includes in addition to the number of children in the eligible age category and household income, a number of control variables that potentially can be correlated with the dependent variable. As we repeat the estimation for each year, changes in sign, magnitude and significance of the estimated parameters can be interpreted as indicators for policy change. The results are reported in Table 4 and display the marginal effects of a change of each independent variable on the probability to receive child benefits, all else being equal.

As expected, the number of eligible children in the household is positively correlated with benefit receipt for all models and every survey year; households with more children are more likely to receive a child benefit. The likelihood of receiving child benefits with an additional child increases from 10% in 2000 to 21% in 2002 and then drops to a value of around 10% in 2004. The estimated marginal effects for household income are very small and insignificant in 2000 but increase in magnitude and become significant at a 1% level from 2001 on. The negative sign of the coefficient confirms the progressiveness of child benefits; as income increases the probability of child benefit receipt drops.

In the second model, the estimates for the unemployment and most of the estimates for rural/semi-urban dummies are insignificant. The effect of having a female household head is significant in 2001 and 2002 and points to an increased probability of receiving child benefits. There is also an interesting pattern in the explanatory power of the primary sampling dummies; the joint explanatory power of these location dummies is very high in 2000 but decreasing thereafter, being insignificant at in 2002 and significant on a 5% level in 2003 and 2004. We believe that these dummies control for regional differences in the implementation and financing of child benefits for two reasons. Firstly, these dummies control for the fact that some regions are faster/slower in the implementation of the reforms. Secondly, only in the course of 2001, child allowances are fully financed from the federal budget via a compensation fund. The decrease of explanatory power in the coefficients of the primary sampling units might reflect the financial harmonization of the child benefit programme in the Russian Federation.

#### **<A> Impact of child allowances on (chronic) poverty**

This section evaluates the potential benefits of targeted child benefits in terms of poverty reduction from 2000 to 2004. So far, we have seen that the size of child allowances is rather modest and that its real value is decreasing over time. However, if more of the benefits are going to poor children, we can expect the poverty gap to decrease. It is unclear what the effect on the poverty incidence will be as the poverty rate only changes if a household crosses the poverty line. We analyze the impact of child benefits on poverty by comparing expenditures before and after child benefits. This is a static analysis; it does not take into account any behavioural changes of households in the absence of child benefits nor any responses to changes in the benefit level or eligibility criteria. We investigate the poverty reduction impact

of the benefit on the incidence of poverty, the poverty gap and the incidence of chronic poverty, both in terms of the total population as well as of children only.<sup>3</sup> We only report the results for children, but the trends are comparable to those of the total population.

<F1> Figure 1 here

Figure 1 shows the pre and post benefit poverty rates as well as the absolute and relative poverty reduction effects for Russian children. The overall impact on poverty is rather small but statistically significant. The reduction of child poverty incidence for recipient households varies between 0.6 (2003) and 1.6 (2002) percentage points. The relative change in poverty varies from 5.2 % in 2000 to 11.9 % in 2002. The impact of child allowances on the mean proportionate poverty gap among children is declining in an absolute sense; in 2000 child benefits still reduced the mean poverty gap with 0.6 percentage points compared to a reduction of only 0.2 percentage points in 2004. In a relative sense there is no such trend. This is contrary to the findings of Förster and Tóth (2001) who found that the impact on poverty incidence was reduced but with an increased effect on the poverty gap after the change from universal to means-tested benefits in Poland, Hungary and the Czech Republic. Changing the poverty line does not change much; the percentage point poverty reductions using the 150% RLMS poverty line are of similar magnitude, but now both relative and absolute impact on poverty incidence are increasing over time (not shown here).

Did the introduction of mean-testing influence the poverty reduction impact of these indicators? When we compare the poverty reduction effects using the year 2000 as a benchmark, we see that the reduction in the number of poor children is lowest in 2000 and higher in most other years. This holds for both poverty lines. The trend in terms of poverty gap

is less clear but 2000 is one of the lower years in terms of percentage poverty gap reduction. Using the higher poverty line, the poverty gap reduction in 2000 is clearly the lowest. It is however not clear to what extent this improvement is the result of the introduction of a means test or simply of the large increase of overall benefit coverage.

Even though the overall poverty reduction impact is modest for all indicators, child benefits in Russia have the largest poverty reduction impact on chronically poor children (a relative reduction of 15.3%). Without child benefits, 9.8% of the children would live in chronic poverty, but child benefits reduce chronic poverty with 1.5 percentage points to 8.3%. This reduction is similar using the higher poverty line. The percentage of children experiencing occasional poverty declines with 0.8 percentage points for the lower poverty line but rises with 0.3 percentage points for the higher poverty line (results not shown).

#### **<A> Is there a trade-off? Simulating alternative child benefit programmes**

The rather modest impact of child benefits on poverty is not the least due to the low benefit value. Taking the means-testing capacities of public authorities as a given; what would be the poverty reduction effect when introducing a universal scheme? And, what impact would a change in the level of benefits have? We investigate the poverty impact of a range of alternative child benefit programmes and compare it with the current situation. We simulate five alternative scenarios, starting with a universal benefit at the current benefit level. For the other four scenarios we increase the benefit level and simulate means-tested and universal eligibility rules. The underlying idea for these simulations is that the child benefit should cover a substantial share of the costs of a child living at the poverty line. We decided to use a child weight of 0.3 per adult equivalent (modified OECD equivalence scale) to indicate the cost share of the child.

The RLMS poverty lines are already specified at a household level. To obtain the ruble value of a child's share of the poverty line in 2004, we use the average single male poverty line to obtain a value for the adult equivalent poverty line level. Then, we multiply this poverty line by 0.3. Note that the level of child benefit differs by region. The following scenarios are simulated; both applying means-tested and universal eligibility rules:

A benefit that covers half of the poverty line child costs

(0.15 equivalent adult, about 280 ruble)

A benefit that covers the entire poverty line child costs

(0.3 equivalent adult, about 560 ruble)

We use the data for 2004 as our benchmark and analyze the impact of benefits on children between 18 months old and 16 years (18 if still in school). For the means-tested scenarios we assume that the same households receive a benefit as those under the current mean-tested scheme. To obtain estimates for the total costs of each benefit option we use the 2004 population data as provided in the UNICEF TransMONEE data (2005).<sup>4</sup> The 2004 GDP data are retrieved from the statistical appendix of the IMF country report on Russia (2005).

<T5> Table 5 here

The impact on child poverty under current and simulated policy options is summarized in Table 5. In comparison to the current programme, poverty incidence and poverty gap among children would be further reduced with 0.1 percentage point if all children would receive a benefit of 70 ruble (irrespective of the poverty line used). The 70 ruble universal scheme achieves slightly higher chronic poverty reduction rates while the effects of a budget neutral

scheme are less clear cut (not shown here). Table 5 also summarizes the total benefit expenditures per scheme. We estimate current expenditures on child benefits by multiplying the number of children in Russia with the child coverage rate and the nominal benefit value per child. Monthly expenditures in the current programme are about 1,300 million ruble, which represent 0.008% of Russia's nominal GDP in 2004 and 0.09% of federal social expenses. Benefit expenditures would rise with approximately 162% compared to current expenditures for the 70 ruble universal scheme, but it would eliminate the exclusion errors and reduce administrative costs. We assume 100% take up rates under the universal schemes, thereby possibly overestimating total benefit expenditures. Administration costs are not included.

The overall poverty reduction impact of a universal scheme along the current lines is modest. Only a significant increase of the benefit level results in considerably higher poverty reduction impacts. Providing a child benefit which is equal to 15% of the male adult poverty line (about 280 ruble) would reduce poverty incidence with 10 to 15%, and close the poverty gap with 20% if the benefit is means-tested and 31% if the benefit is universally provided. A universal child benefit equal to 30% of the male adult poverty line would reduce the poverty gap by half. The universal scheme outperforms the means-tested scheme. It is the most expensive scenario but has the largest impact. The rate of reduction depends on the level of the poverty line; the biggest impact refers to the lower poverty line. Since we assume that only the households currently receiving a means-tested child benefit will benefit from an increased benefit level, the poverty reduction effects for the simulated means-tested scenarios may be an underestimation, as the benefit increase is likely to induce more households to file an application. The same applies to the total benefit expenditures. Targeting benefits to poor children is more attractive from a budgetary perspective and is a serious alternative to

universal benefits if poor households can be correctly identified. A means test based on income may not be appropriate in the Russian situation. Other targeting methods, such as proxy-means testing may provide a viable alternative. The poverty reduction effects are similar for chronic poverty, particularly the chronically poor benefit from an increase in the benefit level, both in an absolute and relative sense (not shown here).<sup>5</sup> Naturally, the costs for these scenarios are considerably higher than for the current programme. However, even the boldest scenario requires only one tenth of a percent of GDP and 1.2% of federal social expenses.

These simulations illustrate a number of relevant issues. Total benefit expenditures on benefits are higher under universal programmes but potentially less efficient. However, a point that received far less attention in the universal – means-tested debate is that when targeting is not perfect (i.e. there are errors of exclusion), universal schemes outperform means-tested schemes in terms of poverty reduction. The additional poverty reduction is achieved because those who were by error excluded under the means-tested scheme now do receive a benefit. While keeping the capacity of means testing constant, this paper estimated and compared both effects. The results show that the difference in poverty reduction effect between means-tested and universal benefits increases as the benefit level increases. Whether the additional benefit expenditures are worth the extra poverty reduction is a decision to be made by society. But there is clearly a trade-off.

An important limitation of our simulations is that we can only speculate what the effect of these schemes would be on the respective administration costs and take-up rates. Moving from the current scheme to the 70 ruble universal benefit scheme would have two opposing effects: firstly administration costs rise as more households apply under the universal child benefit

scheme and secondly, decrease as a result of the abolishment of the income test. With current coverage rates (56% of the households), local administration offices can expect a 79% increase in applications if every household with children in this category would actually apply. It is *a priori* not clear whether the increment in administration costs due to more applications outweighs the decreased costs due to a reduced workload. A general increase in the benefit level will increase administrative costs in both scenarios compared to current expenditures on administration; comparing to the current scheme higher benefits induce more households to file an application.

### **<A> Conclusion**

Using the 2000 introduction of means-tested child benefits in Russia as a case study, this paper assesses the impact of a policy change from universal to means-tested child allowances in terms of targeting efficiency and poverty reduction. We focus on the core costs of targeting, namely leakage, exclusion errors and total benefit expenditures, and relate these to the benefits in terms of poverty reduction.

The analysis of targeting efficiency shows an improvement in overall coverage rates (more children receive child benefits) and evidence of improved targeting to children living in low income households (poor children or children in lower expenditure deciles are more likely to receive benefits). Nevertheless, both inclusion and exclusion errors are considerable; in 2004 one third to a quarter of the poor children does not receive benefits while the benefit coverage rate of children in the three highest expenditure quintiles is still 50%.

The impact of child benefits on poverty has been small over the whole period, but we find some evidence that the poverty reduction effect has increased somewhat as compared to the

benchmark year (2000). It is not clear to what extent this improvement is due to the introduction of a means test or due to the increase of overall benefit coverage. The simulations of universal and means-tested schemes for 2004 show that when targeting is not perfect (i.e. there are errors of exclusion), universal schemes achieve additional reductions in poverty. And above all, size matters; increasing benefit levels considerably, makes the poverty reduction impact more substantial. Moreover, differences in poverty reduction effect between means-tested and universal benefits increase as the benefit level increases, with universal benefits outperforming means-tested benefits.

We find it difficult to argue why a programme with benefits as low as current benefit levels, should be means-tested. Given the characteristics of the expenditure distribution in a country such as Russia, where inequality is high and the welfare differences between households at the lower end of the distribution are small, many benefits leak to ‘near’ poor households. Leakage is also lower because households with children are disproportionately more present at the lower part of this distribution. Moreover, the road of economic transition in Russia has been rather bumpy and led to a surge in uncertainty, also in terms of living standards (Notten and de Crombrugghe, 2006). In that respect, even when child benefits are modest, they can assist families with children to smooth consumption by providing a stable source of cash income.

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<sup>1</sup> For detailed information on the RLMS project see [www.cpc.unc.edu/projects/rlms/home.html](http://www.cpc.unc.edu/projects/rlms/home.html).

<sup>2</sup> Denisova *et al* (2000) note that funding problems greatly reduced child benefit provision in the mid-nineties.

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<sup>3</sup> Extreme outliers of reported child benefits were excluded for the calculation of the poverty gap.

<sup>4</sup> In 2004, Russia's population was 144 million of which 20.9% was younger than 18 years. The total benefit expenditures are slightly overestimated since all children under 18 years are included.

<sup>5</sup> The simulation results in terms of chronic poverty are available upon request.

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Table 1: Households with children below 16 or 18 if in high school

	2000	2001	2002	2003	2004
# of households with children	1,280	1,269	1,232	1,207	1,136
# of children	1,836	1,795	1,728	1,683	1,580
Households with child (%)	42.5	41.0	40.1	39.1	35.8
Excluding children under 18 months (%)	40.9	39.2	38.2	37.2	34.0

*Source:* Own calculations based on the RLMS.

Table 2: Poverty in Russia, all children, 2000 - 2004

	2000	2001	2002	2003	2004
<b>100% RLMS Poverty line</b>					
Poverty incidence	25.6	14.7	11.9	9.5	11.7
Poverty gap	8.8	4.9	4.1	2.9	3.7
<b>Chronic poverty</b>					
Always poor			1.4		
Usually poor			6.9		
Occasionally poor			34.0		
<b>150% RLMS Poverty line</b>					
Poverty incidence	43.9	30.3	27.8	21.6	26.7
Poverty gap	17.7	10.5	9.4	7.0	9.1
<b>Chronic poverty</b>					
Always poor			7.6		
Usually poor			17.9		
Occasionally poor			39.7		

*Notes:* Poverty incidence and poverty gap are calculated using the Foster-Greer-Thorbecke class of decomposable poverty indices (1984). Poverty incidence refers to the percentage of poor individuals. The poverty gap measures the mean proportionate expenditure shortfall over the total population. Chronic poverty; always poor (expenditures every period under the poverty line), usually poor (mean expenditures  $\leq$  poverty line), occasionally poor (mean expenditures  $>$  poverty line).

*Source:* Own calculations based on the RLMS.

Table 3: Targeting efficiency of child benefits, 2000 - 2004

	2000	2001	2002	2003	2004
<b>Benefit Coverage</b>					
# of children, % of which	1,280	1,269	1,232	1,207	1,136
- receives child benefits	32.5	49.8	57.8	60.9	62.9
- is poor and receives child benefits (100% RLMS poverty line)	31.7	60.3	73.6	78.8	67.0
- is poor and receives child benefits (150% RLMS poverty line)	31.3	58.5	68.4	74.3	73.4
<b>Children receiving child benefit per expenditure quintile (%)</b>					
I	34.2	61.2	71.0	74.8	74.3
II	29.0	59.7	62.7	74.3	72.5
III	36.5	49.4	59.9	60.7	60.0
IV	30.5	43.7	53.5	54.8	58.0
V	31.8	34.4	39.5	39.0	45.2
<b>Benefit Adequacy</b>					
<b>Child allowance per child (median)</b>					
Nominal ruble	60	70	73	70	80
Real 1992 ruble	85	84	76	65	66
<b>Total benefit as % of household expenditure for poor household (median)</b>					
- Poor (100% RLMS Poverty line)	6.9	5.9	5.0	4.3	3.9
- Poor (150% RLMS Poverty line)	5.3	4.0	3.6	2.9	2.5
<b>Benefit share to the poor as % of total benefits (excluding outliers)</b>					
- Poor (100% RLMS Poverty line)	25.1	18.2	17.1	13.6	14.4

- Poor (150% RLMS Poverty line)	46.5	37.2	33.6	28.6	32.6
Benefit share per quintile as % of total benefits (excluding outliers)					
I	26.9	25.1	26.7	26.1	28.8
II	20.5	26.0	20.8	26.6	22.9
III	18.5	19.8	21.4	20.0	17.8
IV	16.3	16.8	18.4	16.2	16.6
V	17.8	12.3	12.6	11.2	13.9

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*Notes:* We excluded extreme outliers in reported child benefit values. Most outliers can be explained by birth grants or ‘child care leave allowance’ provided to children less than 18 months, which we unfortunately can only distinguish from child benefits to children above 18 months in 2003.

*Source:* Own calculations based on the RLMS.

Table 4: Probit regressions (child benefit receipt, yes=1/no=0), 2000-2004

	2000	2001	2002	2003	2004
# of households	1,261	1,259	1,223	1,195	1,132
Model 1					
Log income before child benefits	-0.017 (-0.015)	-0.081 (0.018)**	-0.06 (0.017)**	-0.1 (0.020)**	-0.091 (0.022)**
Number of children in eligible category					
	0.1 (0.019)**	0.175 (0.024)**	0.21 (0.026)**	0.151 (0.025)**	0.101 (0.032)**
Model 2					
Log income before child benefits	-0.027 (-0.018)	-0.052 (0.020)**	-0.036 (-0.019)	-0.071 (0.023)**	-0.059 (0.022)**
Number of children in eligible category					
	0.101 (0.021)**	0.176 (0.025)**	0.214 (0.029)**	0.145 (0.027)**	0.081 (0.033)**
At least one unemployed person	0.072 (-0.045)	0.059 (-0.048)	-0.017 (-0.05)	0.05 (-0.053)	0.023 (-0.052)
Head of household is female	0.064 (-0.058)	0.165 (0.057)**	0.146 (0.055)**	0.046 (-0.058)	0.016 (-0.059)
Household living in semi-urban area	0.16 (-0.089)	-0.08 (-0.086)	0.023 (-0.095)	-0.241 (-0.097)*	-0.08 (-0.103)
Household living in rural area	0.115 (-0.067)	0.163 (0.069)*	0.056 (-0.071)	0.121 (-0.075)	0.059 (-0.075)
Dummies indicating primary sampling unit (38-1=37 dummies)	Not reported				

F-test on joint significance of primary sampling units, critical value (p-value)	32.81** (0.000)	13.12** (0.000)	2.59 (0.108)	8.35* (0.015)	7.24* (0.027)
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*Notes:* The model can be written as  $\Pr[Y = 1 | x] = \lambda(\beta'x)$ , where  $Y$  = dependent variable,  $\lambda$  = standard normal cumulative distribution function,  $x$  = vector of explanatory variables and  $\beta$  = vector of parameters to be estimated. The model is estimated for households that have children in the eligible age category. Estimations are displaying marginal effects. Robust standard errors in parentheses. \*\* Significant at a 1% level. \* Significant at a 5% level. Included in all estimations but not reported: variables on demographic composition of household

*Source:* Own calculations based on the RLMS.

Table 5: Simulation: Poverty reduction per programme type, all children, 2004

	100% RLMS poverty line		150% RLMS poverty line	
	Incidence	Poverty gap	Incidence	Poverty gap
# of children		1,487		
# of households		1,079		
Means-tested benefits of 70 ruble per child (current situation)				
[Cost: % of current programme = 100, % of GDP = 0.008, % of social expenses = 0.09]				
Before allowance	12,3	3,9	27,4	9,4
After allowance	12,1	3,7	26,8	9,1
<i>Absolute change</i>	-0,2	-0,2	-0,6	-0,3
<i>Relative change</i>	-1,6	-5,1	-2,2	-3,2
Universal benefits of 70 ruble per child				
[Cost: % of current programme = 162, % of GDP = 0.013, % of social expenses = 0.15]				
After allowance	12,0	3,6	26,7	9,0
<i>Absolute change</i>	-0,3	-0,3	-0,7	-0,4
<i>Relative change</i>	-2,4	-7,7	-2,6	-4,3
Universal child benefit of 0,15 equivalent adult per child				
[Cost: % of current programme = 654, % of GDP = 0.051, % of social expenses = 0.58]				
After allowance	10,4	2,7	24,8	7,7
<i>Absolute change</i>	-1,9	-1,2	-2,6	-1,7
<i>Relative change</i>	-15,4	-30,8	-9,5	-18,1
Means-tested child benefits of 0,15 equivalent adult per child				
[Cost: % of current programme = 392, % of GDP = 0.030, % of social expenses = 0.35]				
After allowance	10,9	3,1	25,4	8,2
<i>Absolute change</i>	-1,4	-0,8	-2,0	-1,2

<i>Relative change</i>	-11,4	-20,5	-7,3	-12,8
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Universal child benefit of 0,3 equivalent adult per child

[Cost: % current expenses = 1,300, % of GDP = 0.101, % of social expenses = 1.17]

After allowance	6,9	1,8	22,5	6,1
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<i>Absolute change</i>	-5,4	-2,1	-4,9	-3,3
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<i>Relative change</i>	-43,9	-53,8	-17,9	-35,1
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Means-tested child benefits of 0,3 equivalent adult per child

[Cost: % of current expenses = 770, % of GDP = 0.061, % of social expenses = 0.70]

After allowance	8,2	2,5	23,6	7,1
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<i>Absolute change</i>	-4,1	-1,4	-3,8	-2,3
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<i>Relative change</i>	-33,3	-35,9	-13,9	-24,5
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*Notes:* 0.15 equivalent adult is 280 ruble and 0.30 equivalent adult is 560 ruble

*Source:* IMF (IMF, 2005; p. 3 and p.19) GDP in 2004: 16,751 billion ruble; Federal Government expenditures on social policy: 154 billion ruble. Own calculations based on the RLMS.

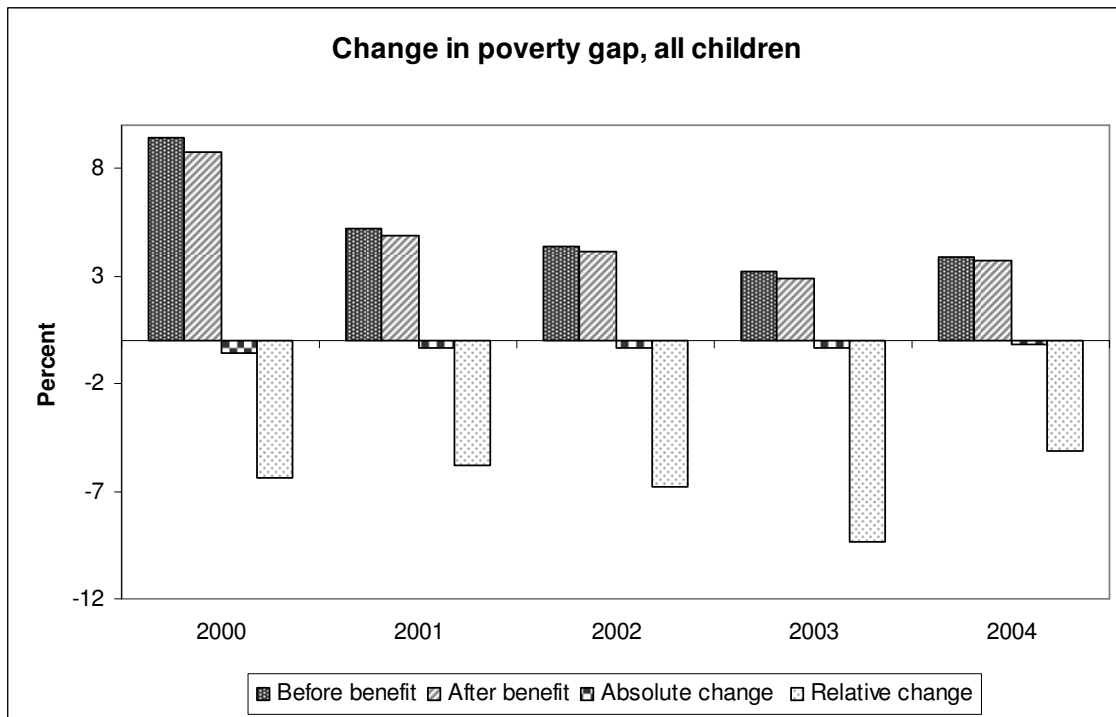
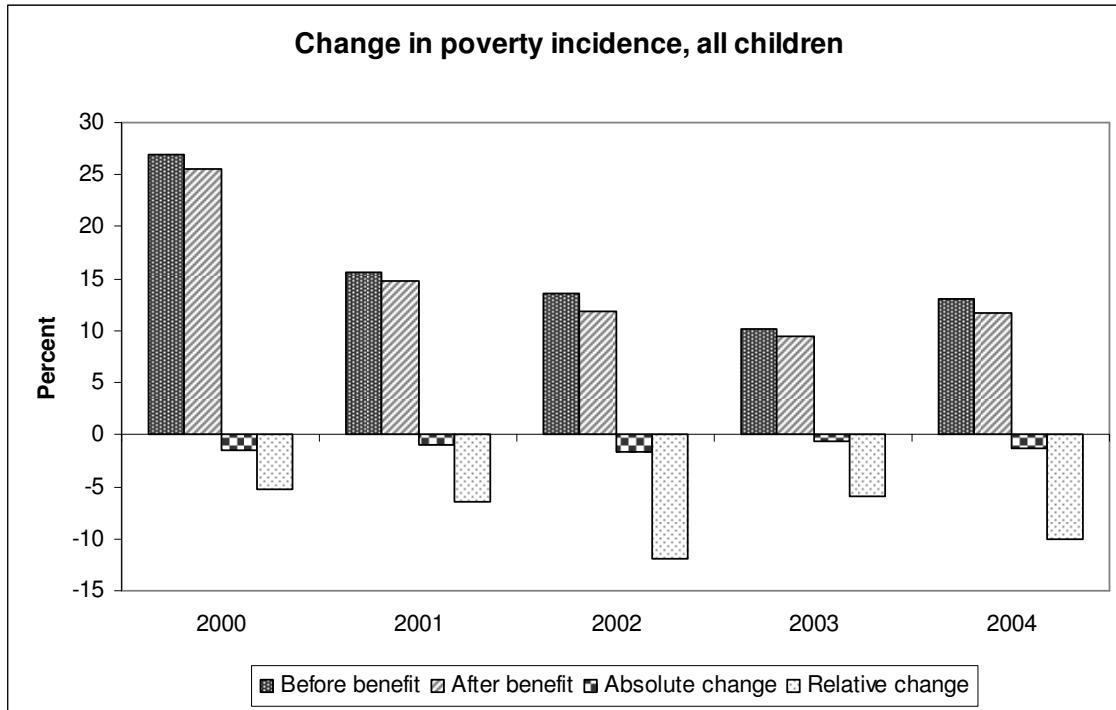


Figure 1: Poverty reduction impact of child benefits (100% RLMS poverty lines), 2000-2004  
 Source: Own calculations based on the RLMS.