Child Benefits and Child Poverty[*]

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Abstract

The purpose of the paper is to analyze the effects of changes in policy of child benefit provision on child poverty. In particular, we examine whether the introduction of means-testing schemes in the regions has improved targeting of child benefits. We test whether the probability of being paid depends negatively or positively on income, and whether this probability increased between 1996 and 1998 for the poor part of the population. In addition to probability analysis, we use direct poverty analysis, i.e., we decompose the change in poverty into changes in child benefits, and other factors. We carry out a comparative analysis among three groups of regions which differ with respect to the approach chosen to identify the needy families with children. We pay special attention to the relative efficiency of a variety of means-testing schemes.

In the 1990s, Russia has experienced a severe poverty increase: according to official statistics the poverty rate has changed from 14.3% in 1991 to 34.1% in 1999, and there are some non-official estimates according to which the increase was even larger. The poverty upsurge was accompanied by changes in the composition of the pool of the poor. As was shown by Mroz and Popkin (1997, 1999), Braithwaite (1997), and Rimashevskaya (1997) among others, a substantial part of the poverty rise can be attributed to the appearance of the so called "new poor", i.e., able to work individuals without dependents. Before the start of the reforms, poverty rate among this group was low because of low official unemployment and high enough minimal wage. As unemployment started to increase and minimal wage to decline, a substantial share of working age population became poor. The increase in the share of the "new poor" was accompanied by the relative decrease in poverty in traditionally poor categories, such as pensioners.[1] Despite these changes, families with children, and particularly families with many children remained in the group with a high poverty risk. In 1998 the share of poor families among families with children was 15% higher than average poverty rate. The difference was equal to 58% in the case of families with 3 and more children.[2]

In the Soviet Union child poverty was one of a few social issues addressed directly via means-tested payments to the poor families, the so called "material assistance". At the outset of the reforms, the situation changed. In 1991 in an attempt to diminish the adverse effect of the reforms on families with children the government introduced a special child support benefit to be paid to all families with children. However, substantial arrears in child benefits, accumulated already in the first years of the reform, made the benefit provision de-facto non-uniform. In 1996, only about 33% of all eligible families received child benefits[3]. Moreover, as shown in, e.g., Misikhina (1999), relatively rich families were getting a higher proportion of the benefits than poor families.

As early as 1995 some regional governments, confronted with the inability to pay out child support benefits, decided to limit the payments to only the poor families. In 1997-1998 this practice became widespread, and, as a result, a federal law was adopted, which limited payments to only the families with per capita income below the regional subsistence level. Within the same period, the responsibilities for paying the benefits were transferred from the mother's employer to the local social welfare office.

The purpose of the paper is to analyze the effects of these policy changes on child poverty. In particular, we examine whether the introduction of means-testing schemes in the regions has improved targeting of child benefits.

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[1] This situation has changed after the 1998 crisis. Dmitriev and Sourkov (1999) show that pensioners were one of the groups, that suffered the most from the crisis. Therefore, pensioners remained among the group of population that has a high risk of falling into poverty.

[2] Authors' estimations based on the 8th Round of the Russian Longitudinal monitoring Survey (RLMS). Poor families are defined as those with per capita income below subsistence level.

[3] Authors' estimations based on RLMS.

There is a number of papers which analyse the social benefit system in Russia and its impact on poverty. For example, Misikhina (1999) examines the distributional effect of major social benefits, including child support, and concludes that overall, social benefits in Russia are regressive rather than progressive. Richter (1999) analyses the impact of changes in pension and child benefit provision on poverty. He finds that changes in social policy in 1994-1998 have contributed to the increased poverty. Effectiveness of various means-testing schemes is analysed in a number of papers by Braithwaite (1999) based on the results of the World Bank pilot projects in three Russian regions.

To our knowledge, there have been no paper, examining changes in targeting of child benefits in the regions with different targeting schemes. This paper is the first attempt of this kind of analysis for Russia. We test whether the probability of being paid depends negatively or positively on income, and whether this probability increased between 1996 and 1998 for the poor part of the population. In addition to probability analysis, we use direct poverty analysis, i.e., we decompose the change in poverty into changes in child benefits, and other factors. We carry out a comparative analysis among three groups of regions which differ with respect to the approach chosen to identify the needy families with children. We pay special attention to the relative efficiency of a variety of means-testing schemes.

The paper is organized as follows: Section 1 provides a short historical overview of the changes in legislation and regulation and discusses the construction of variables used in the analysis. Section 2 presents the results of probit analysis. Decomposition results are considered in Section 3. Section 4 concludes.

1. Data and construction of variables

1.1. Changes in payments to families with children

The universal payments to families with children were introduced in April 1991 in order to compensate for the price increase. Before 1991 payments to families with children comprised maternity leave payments, payments to non-working mothers with children below 1.5 years, and means-tested benefits to children between 1.5 and 6 years from families with per-capita income below 2 minimal wages. Since 1991 all children below 16 (or students in general education below 18) became eligible for child benefits, with the size of the benefit being different for children below and above 6 years old. Single mothers were eligible for higher child benefits than two-parents families. The size of the benefit was changing over time, and as of now it is equal to 70% of the minimal wage.

Initially, there were both monthly and quarterly payments, although, in 1994 the quarterly payments were abolished, and payments to the families with children were unified into a single monthly payment. Speaking about financing of the benefits, originally means-tested benefits to children between 1.5 and 6 years, benefits to single mothers, to children whose parents were in the military service, and some other types of payments were paid from the Pension Fund, while the rest of the benefits were financed from the local and federal budgets or Social Insurance Fund. After unification of child benefits, payment liabilities were transferred to the regional and local budgets. Nowadays the child benefits should be financed from the regional and local budgets, with the only exception of maternity benefits and benefits to non-working mothers with children below 1.5 years of age, which are financed from the Social Insurance Fund.

Until September 1997 universal child support benefits were paid to mothers or other relatives at their place of work. However, substantial payments arrears were accumulated by 1997, and in order to solve the problem it was decided to transfer payments of child support benefits to local social security committees.

However, arrears in child benefit payments continued beyond 1997. In most regions child support benefits were paid irregularly, and substantial arrears were accumulated. In 1994 34% of families with children in the RLMS sample did not receive child benefits, and in 1998 this number reached 80%.

In order to diminish the adverse effect of benefit arrears on child poverty, some regional and local administrations started to introduce means-testing schemes of child benefits provision. Some regions, such as Nizhegorodskaya Oblast, established priorities in child benefit payments already in 1994-95. Tatarstan, which has a special agreement with the federal government, abolished most of the benefits stipulated by the federal law, and introduced means-tested poverty assistance schemes instead. A massive shift towards introduction of means-testing happened in Summer 1998, after the federal government issued a letter with a recommendation to restrict payments to the most needy families in case of the lack of funds. The restriction rules were not universal across regions: while some of the regions introduced simple maximum income requirement, others used combined income and indicator testing approach. Some rich regions, such as Moscow, did not introduce any means-testing and paid benefits to all families that applied for it. More detailed description of the regional policies is contained in subsection 1.3.

In 1998-99 the eligibility for payments was limited further. In 1998 the new federal law limited the payments to the families with per capita income below 2 poverty lines, and in 1999 the eligibility was confined even further - to the families with per capita income below 1 subsistence level. However, it is not clear whether there is an opportunity to implement any means-testing scheme effectively given a large share of non-official income, on the one hand, and large wage arrears, on the other hand (Braithwaite (1999)).

In addition to the introduction of priorities in child support payments, most of the regions (except Moscow and St.Petersburg) use to pay benefits in kind. Normally regional or local authorities appoint a group of stores, where eligible families can buy food in lieu of child benefit arrears in . In such cases, the stores are often compensated via offsets in their tax liabilities (tax credits) - or by crediting the value of food against their tax liabilities.

1.2. Household characteristics

To analyse the effects of the changes in child benefit provision on poverty the Russian Longitudinal Monitoring Survey (RLMS) dataset and the GosKomStat regional database are employed.

House data are from rounds 7 and 8 of RLMS. This dataset is easy available to researchers and is considered to be of a rather good quality. However, the dataset is believed to underrepresent the upper-income bracket of the population (Mroz and Popkin (1997)): poverty rates computed using RLMS data tend to be higher than those computed using other representative datasets (GosKomStat), and average income in RLMS is lower than that income in other datasets. Nevertheless, since we are mainly interested in relative changes in targeting, and RLMS is a panel dataset, this is of no particular concern in this paper.

A more important question is the choice of a proxy for household income. RLMS, as many other household datasets, suffers from substantial underreporting of income. The difference between average income and expenditure is as large as 40%. Therefore, it is argued widely that expenditure represents a better measure of income than income as it is measured in household survey data. We agree with this, and use expenditure as a proxy for income in most of our analysis. At the same time, to get an idea of what kind of the picture regional welfare offices would see if they introduced means-testing (based on information about officially reported income), we repeat some of the regressions using reported income, and compare these results to the results obtained using expenditure measure.

Expenditure is total expenditure as reported in the RLMS constructed variables file minus expenditure on durables and luxury goods, alimonies, tuition and loan payments, and expenditure on purchases of stocks and bonds. We believe that these excluded items are financed not only from the current income, but also from savings, and the share of savings in these expenditure is rather large. We also subtract help from relatives.[4] In addition, we compare income and expenditures, and in the cases where our expenditure measure turns out to be less than income we replace it by income.

Income is computed as a sum of wages and salaries (paid both in cash and in-kind), transfers from federal and local governments (pensions, child support, unemployment benefits, subsidies for fuel and apartments), other labor incomes and transfers, stipends, rental income, income from investments, alimony payments, aid from organizations, and gross household production.[5] We do not include proceeds from the sales of property, currency and jewelry, life stock and picking of fruit, mushroom, etc. as well as insurance payments because those items have a large dissaving component.[6]

Reported state payments for children are used as a measure of *child support benefits.* RLMS questionnaire does not have separate questions about maternity benefits and child support, and, therefore, we suspect that some or all maternity benefits can be reported as child support benefits. However, because of large sums of accumulated child benefit arrears, we can not make a distinction between these two different benefits.[7] To control for potential presence of maternity benefits, which are paid from a different source than child support benefits, we control for the number of children below 1.5 years of age. Another source of mismeasurement is regional programs of poverty support. Payments under such programs could be considered by some respondents as child support payments. Unfortunately, we are unable to control for the presence of such payments.

To take into account price differentials across regions, all the variables are deflated by the subsistence level in the region in question, and then normalized by the Russian-average subsistence level in November of the relevant year. The simplest equivalence scheme is used: all the variables are in per capita terms. This seems a reasonable simplification since equivalence scales based on economies of scale are not particularly relevant in the Russian case.[8] On the other hand, the official equivalence scale used by GosKomStat and based on biological considerations, with pensioners' needs deemed to be equal to only 60% of the needs of the adults, attracts a lot of reasonable critique..

1.3. Regional characteristics

Regional characteristics are obtained from a number of the Russian official statistical office's publications. Since most of 1998 variables had not yet been published by the time of writing, we use the 1997 figures instead. The regional wage arrears variable is constructed in the following way: a total sum of wage arrears in all enterprises, which have wage arrears, as reported by Goskomstat, is divided by the product of the average wage and the number of

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[4]Help from relatives, unless it is regulated by law, as is, e.g., the case of alimony payments, can not be verified by the social assistance agencies, so we do not include it in income as well. We also believe, that it is incidental rather than regular source of income for most families.

[5]We use gross rather thab net home production, as we are not sure if the latter is estimated correctly. Net home production estimated by RLMS has lots of negative entries and results in total negative income for a number of families, which does not sounds plausible.

[6]Exclusion of those items may lead to underestimation of income in some cases, e.g. in the case of payments of underreported wages in foreign currency, sales of which are reported accurately.

[7]The monthly child benefit is 70% of minimum wage, while maternity benefits are usually higher. Thus, if it has not been for benefit arrears, we could easily separate the two.

[8]Expenditure, which does not depend substantially on a household size, for example housing expenditure, accounts for a small portion of most of the Russian households' expenditure.

employees in the region. Thus, a proxy for the average number of months of wage arrears in the area is obtained. Even though the proxy may be biased downward (to the extent that the number of employees includes part-time workers), the relative ranking of the regions should not be severely biased as a result of such approximation.

To identify differences in regional policies with respect to child benefit payments, we have analyzed the regional legislation available in the Consultant Plus regional database. The regions represented in the RLMS sample could be divided into three groups according to the procedure adopted to identify the child benefits provision priorities (Table 6.1).[9]

The first group comprises the regions which practice simple maximal income requirement, i.e. only families with per capita income below regional subsistence level are eligible for the child benefit in the regions. To apply for the benefit, one needs to provide income confirmation documents every three months. Seventeen out of 38 primary sampling units fall into this group. We will call this group "means testing regions".

The second group consists of the regions which announced indicator targeting policy in child benefit provision. Under this policy, socially 'weak' categories of families with children are identified (e.g., single parent families, families with more than three children, families with disabled children, families with unemployed parents, with parents in the military service, etc.[10]). The families in the identified groups are eligible for the benefit provided their per capita income is below the regional subsistence level. Again, as in the case of means testing, income confirmation documents must be provided. Some regions (e.g., Amur krai) restricted access even further and set the critical income level at 0.5 of the regional subsistence level. Eleven regions fall into this group. We will call this group "indicator testing regions".

The third group includes the regions where no clear priorities in payments were set (at least according to the legislation sources available). This group is not homogeneous. It comprises relatively rich regions (Moscow and St. Petersburg) with almost zero arrears in social payments and rather poor regions with a significant proportion of arrears. There are ten regions in the group.

It should be emphasized that we have identified groups according to the differences in regional documentation, though we do not know whether the actual practice in the regions complies with regulations.

The regions in the groups are not homogeneous with respect to per capita income. The income ranking according to average per capita income of a family in RLMS sample is shown in Table 6.2[11]. As is seen from the Table, regions from each of the three groups could be found among rich and poor regions, though those with means testing are likely to be among the poorest. This implies that it is not the degree of "poverty" of the region that determines the choice of a particular benefit provision scheme, but some other reasons (the presence or the lack of pressure from particular groups of population, e.g.).

2. Changes in selection of the recipients

To get a rough idea of the effects of the changes in child benefit provision on poverty, and on targeting the poor in particular, we have estimated the average probability of receiving child benefit conditional on being eligible in the three groups of regions in 1996 and 1998 (Graph 6.1). In contrast to Richter (1999), [12] we consider all children below the age of 16,

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[9]RLMS encompasses 38 primary sampling units situated in 32 regions of Russia.

[10]There is some regional variation in identifying those categories.

[11]A ranking on the basis of regional per capita GDP yields very close results.

[12]His sample consisted of families, which positively answered the eligibility question in the RLMS questioner.

and students below 18, who continue their general education, as being eligible since they were eligible for the benefits under the original law. We believe this is the appropriate sample of families to analyze changes in targeting.

The proportion of poor children who receive child benefits does not look different from the average proportion. This is true for all the regions. However, in means-testing regions the chances for the poor families to get paid look a little better than in other regions. To develop a deeper understanding of the effects of changes in the practice of child benefit payments, we turn to probit analysis of the probability of getting paid conditional on being eligible.

Given that our main interest is to trace the effect of policy change between 1996 and 1998, we run regressions separately on 1996 and 1998 samples and compare the relevant coefficients. The regression results for the overall sample are presented in the Tables 6.3-6.5. The progressivity or regressivity of benefits is measured by the coefficient at the "expenditure before child benefits"[13] variable (e.g., Deaton (1997), Braithwaite (1999)). The positive sign of this coefficient means that payments are regressive, while the negative sign means that they are progressive. In most of the specifications we have tested, the coefficients were insignificant, and the result holds for both years, regardless of inclusion or exclusion of family or regional characteristics in the regression.[14] Hence, this type of test does not allow definite conclusions to be made.

To overcome the problem, we implemented a different procedure which allows looking directly at the effect of the policy changes on poor and non-poor families.

According to the new legislation only the families with per capita income below subsistence level (or even 1/2 or 1/3 of subsistence level in some regions) are eligible for the benefits. To test whether the regulation is binding, we control for family expenditure being below poverty line (specifications (3)-(8) in Tables 6.3 and 6.4). Three different poverty lines are used: regional subsistence level, half of the subsistence level, and one third of the subsistence level. As Tables 6.3 and 6.4 show, the relevant coefficient is insignificant in the regressions where we do not control for regional characteristics and family composition characteristics (equations (3), (5), and (7)). However, after controlling for the regional characteristics, the coefficient gets positive and significant in 1/2 and 1/3 of the subsistence level specifications in 1996, and in full subsistence level, and 1/3 of the subsistence level specifications in 1998. Hence, there is some evidence that, controlling for other factors, child benefits were to some degree targeted to the poor in both years, and in this sense the federal law simply legalised the regional practice of preferential provision of benefits to the poor.

One of the questions we are interested in is whether effectiveness of targeting depends on the procedure adopted to identify priority groups. Tables 6.6-6.8 report the results of probit regressions with control for the policy option implemented in the region. Progressivity

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[13]Following Braithwait (1999), we proxy pre-benefits expenditure by total expenditure minus child benefits, i.e., we set marginal propensity to consume out of child benefits equal one. We believe this assumption is reasonable due to the small size of the child benefit (in 1998 it was more than 10 times as small as the official subsistance level). Another way to proceed would be to estimate the marginal propensity to consume out of child benefits. However, due to the poor quality of the data and small size of the dataset, the results may be even less plausible than the simple assumption we make. For example, Richter (1999) attempted to estimate marginal propensity to consume out of income for Russia and got an estimate of 44%, which seems a suspiciously low number.

[14]Following Deaton (1997) and Richter (1999) we tried an instrumental variables estimator to take into account income measurement errors. In such specifications (not reported here), the relevant coefficient is positive and significant in 1996 and negative and significant in 1998. Therefore, IV specifications show that there was a substantial improvement in targeting child benefits between the two periods under consideration. However, the corresponding coefficient gets insignificant in the specifications, where we control for differences in regional policies.

or regressivity of the benefits is now measured by the respective interaction terms of the policy dummy with the expenditure variable and the dummy for families with income below poverty line.

The interaction term with expenditure variable is insignificant in most of the specifications for the means-testing regions and regions with indicator testing, and it is significant and negative in the regions which do not have any specific policy. The latter result holds in both 1996 and 1998.

If we look at the interaction term between regional dummies and poverty line dummies, we get a more interesting picture. For 1996 the coefficients at these dummy variables are insignificant in almost all of the specifications.[15] On the other hand, in 1998 the coefficient at the interaction term is positive and highly significant for means-testing regions (in the specifications with control for regional and family characteristics), and at the same time is negative and significant (in some specifications) for indicator-testing and all the rest regions. The Wald test on equality of the coefficients at the interaction terms does not reject the hypothesis that interactions terms coefficients are the same in 1996 specifications, but does reject the hypothesis at the 1% confidence level in 1998 specifications (with control for regional and family characteristics). This implies that targeting is significantly better in 1998 in the means-testing regions than in other regions.

Comparing the average probability of receiving benefits in the three groups of the regions, we can conclude that it is lower in the regions which have introduced either a simple income test or an indicator test (the coefficients at the relevant policy dummies are negative both in 1996 and 1998 regressions). The absolute values of the coefficients are significantly higher in 1998 than in 1996, implying that the average probability have decreased in both groups of the regions as compared to the third group.[16] Moreover, while the hypothesis that the coefficients at the dummies for means-testing and indicator testing regions are the same can not be rejected for 1996, it is rejected for 1998. [17] Hence, we can argue that in 1998 the coefficient at the policy dummy for simple income test regions is significantly lower than the relevant coefficient for indicator testing regions. Thus, the improvements in targeting in the regions which introduced simple maximal income requirement were accompanied by further relative decrease in average probability of getting paid. In the next section, we apply poverty rate decomposition method to evaluate the overall effect of policy change on poverty in different groups of regions.

It is worth noting here that in the regressions reported so far income is proxied by expenditure, while means testing in the regions is based on reported income. One would expect the progressivity of payments to be more visible in regressions with reported income[18] as compared to those with expenditure. Surprisingly, this is not the case. Repetition of the above regressions using income shows that the income variable coefficient is insignificant in all the regressions, and the same is true for the interaction term coefficients. [19] These results suggest that there is either some self-selection mechanism or some informal means-testing mechanism which allows isolation of more needy families on the basis other than officially reported income.

In addition to testing whether the changes in eligibility rules have resulted in changes in targeting effectiveness, we tried to test for the influence of the transfer of payments from the mother place of work to the social welfare offices.

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[15]It is positive and significant in the equation (6), i.e., in the case of half of the poverty line in the means-testing regions.

[16]The result holds even in the specifications where dummies for metropolitan areas are included.

[17]The test statistics are not reported in the paper.

[18]It sounds plausible that if a family reports some income to the social welfare office, it would report it to the RLMS as well.

[19]The results are not reported in the paper but available upon request.

When child benefits were paid by the mother's employer, wage arrears and arrears in child benefit were closely correlated. Moreover, since regional authorities used to practice tax arrears offsets vs transfers from the regional budgets to the enterprises to pay out child benefits, the probability of ever getting paid decreased dramatically for the families with parents who did not receive wages. This line of reasoning gets empirical support. For 1996 sample we find strong negative relationship between the probability of receiving child benefits and the number of working people in the family who had wage arrears (Tables 6.6, 6.7). For 1998 the effect is still there, though the magnitude of the effect is 3-4 time smaller: the relevant derivative estimated at the mean is approximately 1 in 1996 and is less than 1/3 in 1998. The replacement of the family-related variables with the regional variables [20] does not change the result: the relevant coefficient is negative and highly significant in all 1996 and is negative but insignificant in 1998 (Table 6.8). Hence, the transfer of payments to welfare offices seems to have improved the situation, other things being equal.

In addition, we have tested whether there is any effect of the presence of welfare office in the area of residence on the probability of getting paid. The idea is that this could reflect the easiness of application, and thus may affect self-selection. We find strong positive effect for the 1996 sample. One can expect this relationship to get even stronger for 1998 since from that time on most of the eligible families had to directly apply to such offices in order to get registered for the benefits. However, we do not find support for this prediction: the coefficient at the social welfare offices dummy is either insignificant in 1998 or the magnitude is much smaller where it is significant.

This finding together with the disappearance of negative correlation between wage arrears and child benefit arrears, suggests that the institutional structure of child benefits provision improved between 1996 and 1998. The regions seem to have found ways of paying child support benefits even in the presence of large wage arrears, while the decreased importance of the presence of a social welfare office in the area testifies to the overall improvement in the administration of social benefit payments.

We get additional support for the hypothesis that in 1998 child benefit payments became less dependent on the regional economic situation. The negative relationship between the probability of receiving child benefit and the number of ILO-defined unemployed in the family, which was significant in 1996, gets insignificant in 1998. Regional GDP per capita shows a similar pattern.

Overall, we find that the de-facto introduction of means-testing by regional authorities improved the targeting of the poor between 1996 and 1998. However, the average probability of being paid conditional on being eligible declined, and this has probably contributed to the poverty increase. To estimate the overall contribution of the change in child benefit policy to the poverty increase, poverty analysis is implemented.

3. Effect on poverty

In the previous section we analyzed the effect of changes in the rules of payments of child benefits on the distribution of such benefits. In this section we will estimate the effect of the changes on child poverty.

Table 6.9 reports various child poverty measures for the whole sample and for the three groups of regions ("means-testing", "indicator-testing", "the rest"). As is seen from the Table, poverty increased in all the regions between 1996 and 1998, though the increase was uneven across different groups of regions. The regions that did not introduce any special policies experienced the highest increase in poverty. This could be partially explained by

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[20]We replace the number of family members by wage arrears with the average number of months of wage arrears in the region.

the fact that this group includes Moscow and St.Petersburg, which were hardest hit by 1998 financial crisis.

The relative ranking of the regions also changed between the two years. When official subsistence level is used as a poverty line, the highest poverty rate is observed in the means-testing regions in both 1996 and 1998. However, if poverty line is set at the half of the subsistence level, then the situation looks completely different: in 1996, it is the indicator targeting regions where the highest poverty rate is observed, and in 1998 the regions without any specific policy take the lead.

Changes in child benefits provision were not the only factor that affected child poverty in this period. Household income declined between the fall of 1996 and 1998, particularly after the August 1998 financial crisis. Income distribution is probably changed as well. To isolate the effect of changes in child benefits, we decomposed child poverty indicators into three components: decline in pre-benefits income, changes in the distribution of pre-benefits income, and changes in child benefits.

The sample used in decompositions is limited to the families whose demographic structure did not change between 1996 and 1998. This allows changes in demographic structure of the population to be disregarded. The Shapley method proposed by Shorrocks (1999) is used for decomposition. The advantage of the Shapley method is that it allows exact decomposition into factor effects, while, e.g., Datt and Ravallion (1992) method usually leaves unexplained residuals and results in exact decomposition only occasionally.[21]

As expected, a decline in pre-benefits income is the factor that played by far the most important role in the observed increase in child poverty between 1996 and 1998 (Table 6.10). On the other hand, the modest decline in income inequality in most regions during this period contributed to a slight decline in child poverty. Changes in child benefit provision added to the increased poverty. On average, the proportion of children living in families with income below the official subsistence level increased by 1.4 percentage points due to the changes in child benefit payments. The increase in poverty happened mainly due to the increase in severe poverty: changes in benefit payments resulted in a 1.1percentage point increase in the share of children with per capita income below half of the official subsistence level. The poverty gap has increased by 0.9 and 0.5 respectively.

However, the results are not homogeneous across the three groups of the regions. The adverse effect of changes in child benefit provision was the largest in the regions which did not introduce any specific payment policy (Table 6.10). Poverty rate increased by 2.6 percentage points in those regions if full subsistence level is used, and by 1.9 percentage points if half of the subsistence level is used. FGT(1) and FGT(2) measures produce similar results.

Indicator-testing regions perform much better if full subsistence level is set as the poverty line. Changes in child benefit rules did not have any effect on the poverty rate (FGT(0) measure), and the contribution to the poverty increase according to the other two measures was relatively low in the indicator-testing regions as compared to the others. One should remember, though, that FGT(0) and FGT(1) poverty indicators are not sensitive to redistribution between more and less poor families with income below the poverty line. Because of this indicator-testing regions could show better results even if they failed to target the very poor families, and, say, pay benefits to the families with income just below the poverty line.

If the poverty line is set at the subsistence level, the means-testing group is between of the two extremes, implying that the aforementioned improvements in targeting in those

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[21]In contrast to Datt and Ravallion (1992) decomposition, which computes the impact of each factor, holding all other factors fixed at the base period level, the Shapley decomposition takes an average of factor contributions for all possible values of other factors.

regions are likely to have been outweighed by the overall decline in payments. However, if the poverty line is set at a half of the subsistence level, then for two measures out of three, i.e. for FGT(0) and FGT(2), it is means-testing regions that have performed relatively better. Though the changes in child benefit provision have contributed to poverty increase in those regions as well, the increase was smaller than in the other two groups. The better performance of means-testing regions in this case can be attributed to the significantly better targeting of the poor. Nonetheless, even in these regions it is not only relatively less poor families which suffered from the decline in the overall benefit payments, but the very poor ones as well.

It is necessary to stress here that we do not want to interpret our results in terms of relative efficiency of, say, means-testing vs indicator targeting in general. Regions seem to have a lot of discretion in terms of policy implementation. Moreover, policy choice may be endogenous with respect to the willingness of regions to improve targeting in a concrete situation.

It would be interesting to compare our results with the ones in Braithwaite (1999), where the World Bank pilot projects are discussed. However, this is hardly possible as we do not have detailed information on means-testing rules implemented, and besides, the policy options tested by the World Bank were usually much more complicated than the policies used to target child benefits.

4. Conclusion

In this paper we analyze the effect of the reforms of child benefit payment on poverty.

We find that the probability of getting paid conditional on being poor improved between 1996 and 1998, particularly in the regions which introduced a simple income test. However, the overall impact of the changes in child benefit provision on child poverty was negative, i.e., it contributed to poverty increase, with the decrease in payments being the main cause of the trend.

The adverse impact of the reforms is observed in all the three groups of regions. However, the magnitude of the contribution is lower in the regions that introduced so called "indicator-testing", i.e., combined income and indicator tests. However, when changes in poverty for 1/2 of the poverty line are computed, the increase in child poverty turns out to be the smallest in the regions which introduced a simple income test. The explanation appears to be that regions in the group were the most successful in delivering child benefits to the poorest families. This is consistent with our finding that the largest improvement in probability of getting paid conditional on being poor is observed in the regions which introduced a simple income test.

Our paper also finds that as a result of transfer of responsibilities of child benefit payments from the mother's employer to the social welfare offices, the correlations between payment probability and wage arrears weakened substantially. At the same time the relation between the presence of the social welfare office in the area of residence and the probability of getting paid has weakened as well. We conclude from these results that the overall institutional structure of the child benefits payments system improved during the period under study.

Comparison of the regression results, where income is proxied by expenditure, with those where reported income is used, suggest that there is either strong self-selection or the local authorities apply some informal means-testing which allows the isolation of more needy families on the basis other than officially reported income.

While we show that regions which introduced simple income test reached the best results in terms of improvements in targeting, we do not think that it was a particular policy choice

that led to the improvement. We believe, rather, that a policy choice was endogenous to the willingness of the regional administrations to improve the situation with child benefit payments. Regions which chose simple income test have, on average, higher rate of child poverty than other regions. In this sense they were more in need of child benefit targeting than other regions. Hence, it may be not the particular policy choice but rather correct incentives of the regional and local administrations which allow to improve the targeting of the social benefits.

Overall, our analysis allows some conclusions regarding potential efficiency of the introduction of different means-testing schemes to be drawn. As shown, the ability of the currently applied schemes to correctly identify the poor is rather limited. Moreover, the identification procedure itself seems to be not so crucial for the success or the failure of the targeting. It is rather the regional authorities' incentives to pay out the benefit that matter. Thus, the social sphere reform effort should be concentrated on the improvement of administering of the existing schemes, rather than on reforming the schemes themselves.

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6. Appendix

Table 6.1: Division of RLMS Regions According to the Announced Child Benefit Provision Policy

	Meansp Testing Group		Indicator Targeting Group		No Clear Testing Group
1	Altay krai 34	1	Amur obl 38	1	Kaluga obl 10
2	Altay kray 33	2	Komi rep 5	2	Kurgan obl 26
3	Chelyabinsk obl 25	3	Komi rep 4	3	Moscow city 2
4	Chelyabinsk ob 30	4	Krasnoyarsk krai 37	4	Penza obl 13
5	Chuvashia rep. 12	5	Krasnoyarsk krai 35	5	Perm obl 29
6	Kabardino-Balk 20	6	Moscow obl 3	6	St Petersburg 1
7	Krasnodar krai 24	7	Nizhny Novgorod 11	7	Tatarstan rep 16
8	Krasnodar kray 22	8	Stavropol krai 23	8	Tomsk obl 31
9	Leningrad obl 6	9	Tambov obl 15	9	Tula obl 9
10	Lipetsk obl 14	10	Tver obl 8	10	Tyumen obl 32
11	Orenburg obl 28	11	Volgograd obl 19		
12	Primorsky krai 36				
13	Rostov obl 21				
14	Saratov obl (Volsk) 18				
15	Saratov obl (Saratov) 17				
16	Smolensk obl (Smolensk) 7				
17	Udmurtiya (Glazov) 27				

Table 6.2: Ranking of RLMS Regions According to Average Per Capita Income, 1996

Region (psu)	Average per capita income of h/h in the region (RLMS)	
Saratov obl (Volsk) 18	390116.2	*
Udmurtiya (Glazov) 27	394089.5	*
Amur obl (raboch.pos.) 38	401225.6	**
Altay krai (selo Kurya) 34	444421.9	*
Chelyabinsk obl (selo Miasskoe) 30	493475.7	*
Leningrad obl (Volosovo) 6	518561.8	*
Penza obl (raboch.pos.) 13	543685.3	
Orenburg obl (Orsk) 28	555651.3	*
Krasnodar krai (stanitsa) 24	559410.1	*
Saratov obl (Saratov) 17	573973.1	*
Chuvashia rep. (Shumerlya) 12	581877.9	*
Kurgan obl (Kurgan) 26	596139.8	
Komi rep (Syktivkar) 4	598975.5	**
Tula obl (Tula) 9	601043.1	
Volgograd obl (raboch.pos.) 19	628995.3	**
Tambov obl (g.Uvarovo) 15	629739.3	**
Tatarstan rep (Kazan) 16	631171.5	
Kaluga obl (poselok) 10	645762.2	
Krasnoyarsk krai (g.Nazarovo) 37	652067.1	**
Tver obl (Rzhev) 8	660623.3	**
Tomsk obl (Tomsk) 31	662775.9	
Smolensk obl (Smolensk) 7	670227.4	*
Kabardino-Balk (poselok) 20	697614.4	*
Perm obl 29	708587.8	
Altay kray (Biisk) 33	718763.8	*
Primorsky krai (Vladivostok) 36	727883.0	*
Stavropol krai (g.Georgievsk) 23	770011.7	**
Krasnoyarsk krai (Krasnoyarsk) 35	828425.6	**
St Petersburg 1	837642.6	
Rostov obl (g.Bataisk) 21	846174.3	*
Nizhny Novgorod 11	851487.3	**
Moscow obl 3	855839.3	**
Lipetsk obl (Lipetsk) 14	865697.3	*
Chelyabinsk obl (Chelyabinsk) 25	939075.3	*
Moscow city 2	946370.8	
Komi rep (g.Usinsk) 5	966402.1	**
Krasnodar kray (Krasnodar) 22	971595.7	*
Tyumen obl (g.Surgut) 32	1181139.0	

(*) Regions with means testing
(**) Regions with indicator targeting
( ) Regions with no clear testing

Table 6.3: Probit regressions in 1996, no control for regional policies

Dependent variable: the probability to receive child benefits, conditional on being eligible.

	(1)	(2)	full (3)	full (4)	half '(5)	half (6)	third '(7)	third (8)
expenditure before child benefits	0.0005	-0.0004	0.0002	-0.0004	0.0006	-0.0001	0.0005	-0.0003
	(0.0007)	(0.0003)	(0.0008)	(0.0004)	(0.0006)	(0.0003)	(0.0006)	(0.0003)
social welfare office	0.464	0.336	0.458	0.337	0.470	0.334	0.466	0.333
	(0.152)**	(0.059)**	(0.151)**	(0.059)**	(0.151)**	(0.059)**	(0.151)**	(0.059)**
GDP per capita		0.0031		0.0031		0.0034		0.0032
		(0.0025)		(0.0025)		(0.0025)		(0.0025)
Metropolitan area		0.954		0.953		0.954		0.954
		(0.087)**		(0.087)**		(0.087)**		(0.087)**
rural area		-0.058		-0.057		-0.071		-0.065
		(0.052)		(0.052)		(0.052)		(0.052)
share of workers with second employment		-0.253		-0.253		-0.262		-0.257
		(0.124)*		(0.124)*		(0.124)*		(0.124)*
share of ILO unempl. in family		-0.595		-0.596		-0.636		-0.618
		(0.229)**		(0.229)**		(0.229)**		(0.229)**
share of registered unemployed in family		0.030		0.031		0.030		0.023
		(0.314)		(0.314)		(0.314)		(0.314)
share of workers with wage arrears in family		-0.992		-0.990		-1.030		-1.007
		(0.119)**		(0.120)**		(0.120)**		(0.120)**
share of workers in the family		0.126		0.124		0.168		0.154
		(0.118)		(0.120)		(0.119)		(0.119)
expenditure below poverty line			-0.066	-0.005	0.091	0.183	0.051	0.147
			(0.085)	(0.042)	(0.131)	(0.058)**	(0.174)	(0.079)*
Constant	-0.890	-0.681	-0.837	-0.677	-0.920	-0.739	-0.899	-0.707
	(0.197)**	(0.113)**	(0.205)**	(0.119)**	(0.200)**	(0.115)**	(0.191)**	(0.114)**
Observations	6257	6257	6257	6257	6257	6257	6257	6257

Robust standard errors in parentheses. significant at 5% level; * significant at 1% level

Reported coefficients are derivatives at the mean.

In all regressions, family demographic composition variables were included, but corresponding coefficients are not reported

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Table 6.4: Probit regressions in 1998, no control for regional policies

Dependent variable: the probability to receive child benefits, conditional on being eligible.

	(1)	(2)	full (3)	full (4)	half '(5)	half (6)	third '(7)	third (8)
expenditure before child benefits	-0.079	0.080	0.375	0.570	-0.124	-0.0057	0.068	0.261
	(0.587)	(0.239)	(0.701)	(0.282)*	(0.585)	(0.256)	(0.558)	(0.245)
social welfare office	0.181	0.132	0.19	0.141	0.182	0.130	0.177	0.132
	(0.151)	(0.067)*	(0.154)	(0.067)*	(0.150)	(0.067)*	(0.151)	(0.067)*
GDP per capita		-0.010		-0.009		-0.010		-0.010
		(0.002)**		(0.002)**		(0.002)**		(0.002)**
Metropolitan area		2.072		2.077		2.073		2.081
		(0.103)**		(0.104)**		(0.103)**		(0.103)**
rural area		0.097		0.100		0.092		0.107
		(0.057)*		(0.057)*		(0.057)		(0.057)*
share of workers with second employment		0.565		0.570		0.570		0.555
		(0.147)**		(0.147)**		(0.147)**		(0.147)**
share of ILO unempl. in family		0.207		0.192		0.208		0.220
		(0.257)		(0.257)		(0.257)		(0.257)
share of registered unemployed in family		-0.393		-0.392		-0.383		-0.464
		(0.412)		(0.412)		(0.412)		(0.413)
share of workers with wage arrears in family		-0.278		-0.342		-0.260		-0.322
		(0.157)*		(0.158)*		(0.158)*		(0.157)*
share of workers in the family		-0.116		-0.064		-0.136		-0.047
		(0.136)		(0.137)		(0.138)		(0.138)
expenditure below poverty line			0.14	0.163	-0.026	-0.055	0.154	0.217
			(0.123)	(0.052)**	(0.155)	(0.057)	(0.190)	(0.072)**
Constant	-1.254	-1.097	-1.379	-1.269	-1.243	-1.062	-1.280	-1.169
	(0.191)**	(0.141)**	(0.213)**	(0.151)**	(0.200)**	(0.145)**	(0.188)**	(0.143)**
Observations	5456	5456	5456	5456	5456	5456	5456	5456

Robust standard errors in parentheses. significant at 5% level; * significant at 1% level

Reported coefficients are derivatives at the mean.

In all regressions, family demographic composition variables were included, but corresponding coefficients are not reported

Table 6.5: Probit regressions, no control for regional policies

Dependent variable: the probability to receive child benefits, conditional on being eligible.

	1996	1996	1996	1996	1998	1998	1998	1998
		full	half	third		full	half	third
	(1)	(2)	(3)	(4)	'(5)	(6)	'(7)	(8)
expenditure before child benefits	-0.0002	-0.00004	0.0001	-0.0001	0.236	0.692	0.141	0.419
	(0.0003)	(0.0004)	(0.0003)	(0.0003)	(0.235)	(0.282)**	(0.254)	(0.243)*
social welfare office?	0.347	0.347	0.346	0.344	0.136	0.141	0.137	0.132
	(0.059)**	(0.059)**	(0.059)**	(0.059)**	(0.070)*	(0.070)*	(0.070)*	(0.070)*
average wage debt in the region	-0.443	-0.451	-0.462	-0.450	-0.114	-0.128	-0.113	-0.120
	(0.056)**	(0.057)**	(0.056)**	(0.056)**	(0.081)	(0.081)	(0.081)	(0.081)
share of children	-0.084	-0.084	-0.084	-0.083	0.035	0.035	0.035	0.034
	(0.010)**	(0.010)**	(0.010)**	(0.010)**	(0.013)**	(0.013)**	(0.013)**	(0.013)**
share population with income below poverty line	-0.0046	-0.0044	-0.0048	-0.0047	-0.011	-0.010	-0.011	-0.011
	(0.0029)	(0.0029)	(0.0029)*	(0.0029)	(0.0038)**	(0.0038)**	(0.0038)**	(0.0038)**
unemployment rate in the region	0.043	0.043	0.043	0.043	-0.053	-0.055	-0.053	-0.051
	(0.011)**	(0.011)**	(0.011)**	(0.011)**	(0.014)**	(0.014)**	(0.014)**	(0.014)**
expenditure below poverty line		0.040	0.201	0.138		0.146	-0.056	0.194
		(0.042)	(0.058)**	(0.079)*		(0.052)**	(0.056)	(0.070)**
GDP per capita	0.014	0.014	0.014	0.014	-0.021	-0.020	-0.021	-0.021
	(0.004)**	(0.004)**	(0.004)**	(0.004)**	(0.003)**	(0.003)**	(0.003)**	(0.003)**
metropolitan area	0.219	0.214	0.205	0.217	1.869	1.857	1.869	1.875
	(0.102)*	(0.102)*	(0.102)*	(0.102)*	(0.128)**	(0.129)**	(0.128)**	(0.128)**
rural area	-0.131	-0.137	-0.148	-0.140	0.157	0.152	0.154	0.158
	(0.054)**	(0.054)**	(0.054)**	(0.054)**	(0.063)**	(0.063)**	(0.063)**	(0.063)**
Constant	1.137	1.123	1.110	1.116	-0.605	-0.737	-0.572	-0.642
	(0.197)**	(0.198)**	(0.197)**	(0.197)**	(0.230)**	(0.235)**	(0.233)**	(0.231)**
Observations	6257	6257	6257	6257	5456	5456	5456	5456

Robust standard errors in parentheses.   significant at 5% level; * significant at 1% level

Reported coefficients are derivatives at the mean.

In all regressions, family demographic composition variables were included, but corresponding coefficients are not reported

Table 6.6: Probit regressions for 1996, controlling for regional policies

Dependent variable: the probability to receive child benefits, conditional on being eligible.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
dummy for meanstesting	-0.148	-0.093	-0.159	-0.092	-0.162	-0.092	-0.152	-0.087
	(0.087)	(0.023)**	(0.114)	(0.033)**	(0.097)	(0.026)**	(0.092)	(0.025)**
dummy for indicator test	-0.143	-0.104	-0.148	-0.097	-0.133	-0.077	-0.148	-0.098
	(0.096)	(0.024)**	(0.115)	(0.034)**	(0.097)	(0.027)**	(0.095)	(0.025)**
dummy for meanstesting*exp.	0.0004	0.0002	0.0003	0.0002	0.0005	0.0004	0.0004	0.00027
	(0.0005)	(0.00017)	(0.0005)	(0.0002)	(0.0005)	(0.0002)*	(0.0005)	(0.00017)
dummy for indicator test*exp.	0.00007	-0.0001	-0.0001	-0.0002	-0.00001	-0.0002	0.0001	-0.0001
	(0.0004)	(0.0002)	(0.0006)	(0.0002)	(0.0003)	(0.0002)	(0.0003)	(0.0002)
dummy for no test*exp.	-0.0009	-0.0018	-0.001	-0.0019	-0.0009	-0.0017	-0.0009	-0.0018
	(0.0004)*	(0.0002)**	(0.0006)	(0.0003)**	(0.0004)*	(0.0002)**	(0.0004)*	(0.0002)**
social welfare office	0.146	0.112	0.144	0.113	0.149	0.115	0.147	0.111
	(0.048)**	(0.019)**	(0.047)**	(0.019)**	(0.048)**	(0.019)**	(0.048)**	(0.019)**
dummy for meanstesting*below pov.line (+)			-0.026	-0.011	0.075	0.106	0.011	0.054
			(0.039)	(0.021)	(0.065)	(0.031)**	(0.086)	(0.046)
dummy for indicator test*below pov.line (++)			-0.038	-0.023	-0.050	-0.036	0.020	0.026
			(0.065)	(0.027)	(0.102)	(0.037)	(0.138)	(0.050)
dummy for no test*below pov.line (+++)			-0.048	-0.011	0.00002	0.100	-0.030	0.077
			(0.059)	(0.031)	(0.084)	(0.048)*	(0.101)	(0.061)
share of workers in the family		0.074		0.067		0.084		0.083
		(0.042)		(0.043)		(0.043)*		(0.043)
share of workers with wage arrears in family		-0.375		-0.370		-0.392		-0.381
		(0.043)**		(0.043)**		(0.043)**		(0.043)**
share of ILO unempl. in family		-0.222		-0.226		-0.251		-0.234
		(0.082)**		(0.082)**		(0.082)**		(0.082)**
share of registered unemployed in family		0.04		0.043		0.050		0.040
		(0.113)		(0.113)		(0.113)		(0.113)
share of workers with second employment		-0.09		-0.089		-0.086		-0.091
		(0.044)*		(0.044)*		(0.044)		(0.044)*
test (+)=(++)			0.03	0.13	0.9	8.22**	0	0.17
test (+)=(++)=(+++)			0.1	0.14	1.05	8.92*	0.12	0.45

Robust standard errors in parentheses.   significant at 5% level; * significant at 1% level

Robust standard errors in parentheses. Reported coefficients are derivatives at the mean.

In all regressions, family demographic composition variables were included, but corresponding coefficients are not reported.

Regressions (2-4) and (6-8) also include dummies for metropolitan areas, rural areas, and GRP per capita

Table 6.7: Probit regressions for 1998, controlling for regional policies

Dependent variable: the probability to receive child benefits, conditional on being eligible.

	(1)	(2)	full (3)	(4)	half (5)	(6)	third (7)	(8)
dummy for meanstesting	-0.193	-0.117	-0.386	-0.34	-0.234	-0.177	-0.224	-0.143
	(0.088)*	(0.021)**	(0.133)**	(0.037)**	(0.099)*	(0.026)**	(0.093)*	(0.023)**
dummy for indicator test	-0.187	-0.12	-0.253	-0.212	-0.177	-0.118	-0.186	-0.114
	(0.068)**	(0.019)**	(0.089)**	(0.026)**	(0.079)*	(0.023)**	(0.073)*	(0.021)**
dummy for meanstesting*exp.	0.028	-0.006	0.288	0.259	0.080	0.056	0.121	0.087
	(0.226)	(0.079)	(0.220)	(0.093)**	(0.196)	(0.083)	(0.190)	(0.081)
dummy for indicator test*exp.	0.187	0.182	0.12	0.12	-0.032	-0.047	0.130	0.115
	(0.190)	(0.116)	(0.222)	(0.141)	(0.242)	(0.129)	(0.199)	(0.121)
dummy for no test*exp.	-1.159	-1.166	-1.858	-1.967	-1.364	-1.448	-1.240	-1.204
	(0.534)*	(0.187)**	(0.961)	(0.245)**	(0.639)*	(0.210)**	(0.572)*	(0.196)**
social welfare office	0.042	0.043	0.041	0.041	0.041	0.041	0.039	0.041
	(0.037)	(0.016)**	(0.037)	(0.016)**	(0.037)	(0.016)**	(0.038)	(0.016)**
dummy for meanstesting*below pov.line (+)			0.101	0.105	0.037	0.043	0.121	0.127
			(0.035)**	(0.022)**	(0.061)	(0.022)*	(0.084)	(0.032)**
dummy for indicator test*below pov.line (++)			-0.019	-0.017	-0.127	-0.130	-0.073	-0.077
			(0.049)	(0.024)	(0.038)**	(0.016)**	(0.059)	(0.030)*
dummy for no test*below pov.line (+++)			-0.106	-0.12	-0.058	-0.079	-0.052	-0.021
			(0.061)	(0.018)**	(0.058)	(0.021)**	(0.069)	(0.037)
share of workers in the family		-0.013		-0.002		-0.035		-0.007
		(0.035)		(0.035)		(0.035)		(0.036)
share of workers with wage arrears in family		-0.089		-0.098		-0.091		-0.098
		(0.041)*		(0.041)*		(0.041)*		(0.041)*
share of ILO unempl. in family		0.052		0.053		0.045		0.044
		(0.067)		(0.066)		(0.066)		(0.067)
share of registered unemployed in family		-0.093		-0.064		-0.088		-0.115
		(0.106)		(0.105)		(0.106)		(0.107)
share of workers with second employment		0.142		0.15		0.147		0.143
		(0.038)**		(0.038)**		(0.038)**		(0.038)**
test (+)=(++)			3.71	13.28**	5.81*	30.82**	3.6	16.17
test (+)=(++)=(+++)			8.15*	52.47**	5.87	36.53**	4.41	19.7

Robust standard errors in parentheses. significant at 5% level; * significant at 1% level

Robust standard errors in parentheses. Reported coefficients are derivatives at the mean.

In all regressions, family demographic composition variables were included, but corresponding coefficients are not reported.

Regressions (2-4) and (6-8) also include dummies for metropolitan areas, rural areas, and GRP per capita

Table 6.8: Probit regressions, controlling for regional policies

Dependent variable: the probability to receive child benefits, conditional on being eligible.

	1996	1996 full	1996 half	1996 third	1998	1998 full	1998 half	1998 third
	(1)	(2)	(3)	(4)	'(5)	(6)	'(7)	(8)
dummy for meanstesting	-0.079	-0.095	-0.085	-0.077	-0.105	-0.323	-0.168	-0.134
	(0.024)**	(0.0335)**	(0.026)**	(0.025042)**	(0.022)**	(0.037)**	(0.027)**	(0.024)**
dummy for indicator test	-0.115	-0.150	-0.105	-0.121	-0.101	-0.196	-0.102	-0.098
	(0.024)**	(0.032)**	(0.027)**	(0.025141)**	(0.020)**	(0.027)**	(0.024)**	(0.022)**
dummy for meanstesting*exp.	0.0003	0.0003	0.0005	0.0003	0.023	0.270	0.080	0.116
	(0.0002)	(0.0002)	(0.0002)**	(0.0002)	(0.078)	(0.093)**	(0.082)	(0.080)
dummy for indicator test*exp.	-0.0001	0.00007	-0.00004	0.00002	0.220	0.154	-0.0034	0.158
	(0.0002)	(0.00022)	(0.0002)	(0.0002)	(0.115)	(0.141)	(0.128)	(0.120)
dummy for no test*exp.	-0.002	-0.0017	-0.0015	-0.0016	-1.091	-1.873	-1.393	-1.136
	(0.0002)**	(0.0003)**	(0.0002)**	(0.0002)**	(0.187)**	(0.243)**	(0.211)**	(0.196)**
social welfare office	0.113	0.113	0.114	0.112	0.037	0.037	0.037	0.036
	(0.019)**	(0.019)**	(0.019)**	(0.019)**	(0.017)*	(0.016)*	(0.017)*	(0.017)*
dummy for meanstesting*below pov.line (+)		-0.0037	0.097	0.021		0.097	0.044	0.123
		(0.021)	(0.031)**	(0.044)		(0.021)**	(0.021)*	(0.031)**
dummy for indicator test*below pov.line (++)		0.033	0.014	0.090		-0.020	-0.128	-0.078
		(0.030)	(0.041)	(0.054)		(0.024)	(0.016)**	(0.029)**
dummy for no test*below pov.line (+++)		-0.031	0.060	0.022		-0.121	-0.082	-0.037
		(0.030)	(0.047)	(0.057)		(0.018)**	(0.020)**	(0.034)
unemployment rate in the region	0.017	0.017	0.017	0.017	-0.013	-0.0127	-0.013	-0.012
	(0.004)**	(0.004)**	(0.004)**	(0.004)**	(0.004)**	(0.0038)**	(0.0038)**	(0.0038)**
average wage debt in the region	-0.149	-0.152	-0.152	-0.153	-0.038	-0.029	-0.034	-0.036
	(0.020)**	(0.020)**	(0.020)**	(0.020)**	(0.021)	(0.021)	(0.021)	(0.021)
share of children in the region	-0.032	-0.033	-0.032	-0.032	0.011	0.010	0.011	0.010
	(0.004)**	(0.0037)**	(0.0037)**	(0.004)**	(0.003)**	(0.003)**	(0.0034)**	(0.003)**
	(0.001)	(0.0011)	(0.0011)	(0.0011)	(0.0010)*	(0.0010)*	(0.001)**	(0.001)**
test (+)=(++)		1.04	2.55	0.99		12.73**	30.29**	16.28**
test (+)=(++)=(+++)		2.34	2.57	1.16		50.5**	36.91**	21.01**

Robust standard errors in parentheses.   significant at 5% level; * significant at 1% level

Reported coefficients are derivatives at the mean.

In all regressions, family demographic composition variables were included, but corresponding coefficients are not reported

Regressions (2-4) and (6-8) also include dummies for metropolitan areas, rural areas, and GRP per capita

Table 6.9: Descriptive statistics of FGT family indices

Regions	No. HH	No. children	Value in Poverty line	1996 ? PL	Value in Poverty line	1998 ? PL
Head count ratio (FGT(0))						
All	732	1113	40.52	11.95	55.26	22.46
Means	323	489	49.49	13.5	58.08	22.29
Ind	208	320	36.88	14.69	52.5	20.94
Other	201	304	29.93	6.58	53.62	24.34
Poverty gap ratio (FGT(1))						
All	732	1113	14.55	3.65	23.14	7.12
Means	323	489	17.57	3.93	24.79	7.19
Ind	208	320	14.2	4.46	21.44	6.66
Other	201	304	10.05	2.36	22.27	7.49
Poverty severity (FGT(2))						
All	732	1113	7.39	1.74	12.75	3.42
Means	323	489	8.75	1.92	13.47	3.29
Ind	208	320	7.73	1.77	11.79	3.35
Other	201	304	4.82	1.45	12.62	3.68

Table 6.10: Shapley decomposition of the changes in poverty indices

| Regions	Poverty line	FGT(0) changes			
			Factor contributions		
		Total change	Growth	Distribution	Child benefits
All	1	14.735	16.292	-2.935	1.378
Means	1	8.589	8.589	-1.432	1.432
Ind	1	15.625	19.844	-4.219	0
Other	1	23.685	22.314	-1.206	2.577
All	1/2	10.512	8.536	0.898	1.078
Means	1/2	8.793	5.487	2.522	0.784
Ind	1/2	6.25	9.74	-4.792	1.302
Other	1/2	17.764	12.939	2.906	1.919
Regions	Poverty line	FGT(1) changes			
			Factor contributions		
		Total change	Growth	Distribution	Child benefits
All	1	8.589	8.316	-0.62	0.893
Means	1	7.221	5.421	0.967	0.833
Ind	1	7.234	9.53	-2.709	0.413
Other	1	12.221	10.122	0.603	1.496
All	1/2	3.464	3.077	-0.149	0.536
Means	1/2	3.255	1.971	0.79	0.494
Ind	1/2	2.199	3.435	-1.723	0.487
Other	1/2	5.133	3.67	0.778	0.685
Regions	Poverty line	FGT(2) changes			
			Factor contributions		
		Total change	Growth	Distribution	Child benefits
All	1	5.368	4.944	-0.209	0.633
Means	1	4.711	3.266	0.867	0.578
Ind	1	4.056	5.534	-1.894	0.416
Other	1	7.803	6.07	0.787	0.946
All	1/2	1.672	1.461	-0.11	0.321
Means	1/2	1.379	0.927	0.182	0.27
Ind	1/2	1.587	1.795	-0.53	0.322
Other	1/2	2.232	1.62	0.208	0.404

Average Probability to Receive Ch B Last Month, Regions with Means Testing, 1996
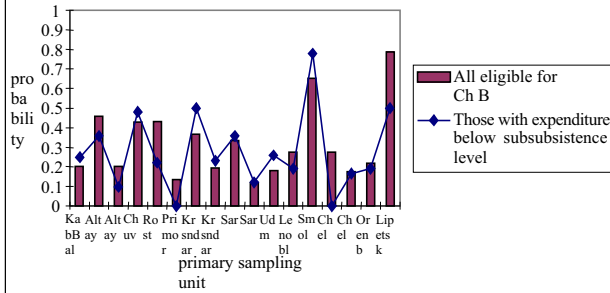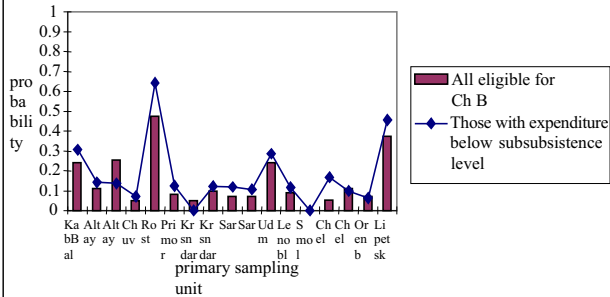

Average Probability to Receive Ch B Last Month, Regions with Indicator Testing, 1996
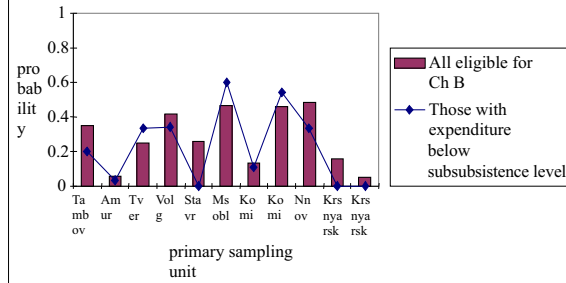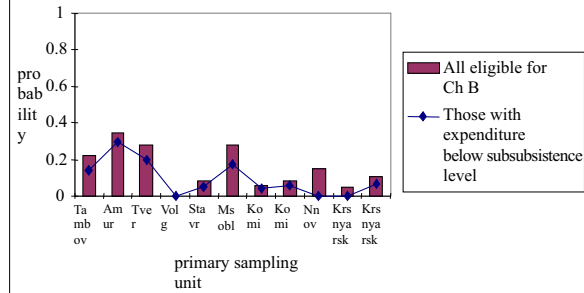

Average Probability to Receive Ch B Last Month, Regions with No Clear Testing, 1996
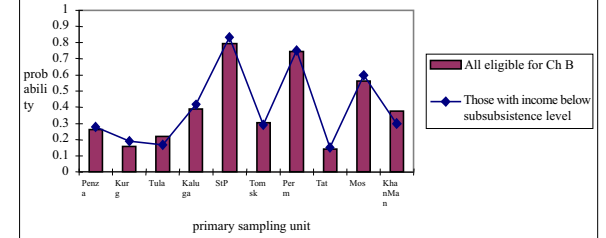
Average Probability to Receive Ch B Last Month, Regions with Means Testing, 1998

Average Probability to Receive Ch B Last Month, Regions with Indicator Testing, 1998

Average Probability to Receive Ch B Last Month, Regions with No Clear Testing, 1998