# Distributional impacts of cash allowances for children: a microsimulation analysis for Russia and Europe<sup>1</sup>

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#### **Abstract**

This paper analyses programmes of cash allowances for children and compares their effectiveness in combating child poverty in Russia and four EU countries representing alternative family policy models – Sweden, Germany, Belgium and the United Kingdom. Using microsimulation models, this paper estimates the potential gains if the Russian system were re-designed along the policy parameters of these countries and vice versa. The results confirm that the poverty impact of the program design is smaller than that of the level of spending. Other conditions being equal, the best distributional outcomes for children are achieved by applying the mix of universal and means-tested child benefits, such as those employed by the UK and Belgium. At the same time, the Russian design of child allowances does not appear to be less effective in terms of its impact on child poverty when transferred to European countries in place of their current arrangements.

**Keywords:** family policy; child benefits; microsimulation; child poverty; income distribution; Russia; Europe.

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#### 1. Introduction

In the last two decades the level and evolution of child well-being and poverty have become an important concern for social policy all over the world (Bradbury and Jantii, 1999, Bradshaw and Finch, 2002, Chen and Corak, 2005, UNICEF, 2005, Bradshaw et al., 2007, UNICEF, 2007, Richardson et al., 2008, OECD, 2009, Bradshaw, 2010, UNICEF, 2013, Rainwater and Smeeding, 1995). In most OECD countries child poverty rates are higher than overall population poverty rates, though there are significant cross-country variations in the extent and intensity of poverty. Especially children in lone parent and large families are the subject of policy concern due to their overrepresentation among the poor (Salanauskaite and Verbist, 2013, Misra et al., 2007, Van Lacker et al., 2012).

Evidence suggests that economic indicators of well-being, in particular the distribution of income and poverty, are the key variables that affect the overall well-being of children. At the macro-level, income poverty and inequality indicators have been shown to be negatively correlated with other aspects of child well-being (UNICEF, 2007, Richardson et al., 2008, OECD, 2009, Pickett and Wilkinson, 2007). Micro-level studies have established a causal relationship between growing up in poverty and life chances of children, especially in terms of educational and cognitive outcomes, and that this causal relationship is likely to be stronger early in the lifecourse (Duncan et al., 1998, Phipps, 1999, Conti and Heckmann, 2012). Hence, increasing the income of families of young disadvantaged children is likely to be a key part of any portfolio of policy solutions to improve child well-being outcomes.

Public policies can be a decisive factor in guaranteeing the material well-being of children when the labour market has failed to provide them with the required means. Higher government spending on social programs for families with children is clearly associated with lower absolute and relative child poverty rates. At the same time, the variation in the way the national social protection programs are structured and delivered appears to account for most of the variation in child poverty in Europe (Bradshaw et al., 1993b, Bradshaw and Finch, 2002, UNICEF, 2005, OECD, 2009, Bradshaw, 2010).

Most research on the poverty impact of state policies for children and families has concentrated on OECD countries and 'old' EU member states. Research on family policies and child well-being in Russia is still quite rare, with few examples (Denisova et al., 2000, IBRD/WB, 2002, Notten and Gassmann, 2008, Ovcharova and Popova, 2005, Ovcharova et al., 2007, Popova, 2013b, UNICEF, 2011). The country though is highly interesting not only because of the fast changing socio-economic environment and demographic conditions, but also because of the unique combination of the socialist legacies and recent developments in family policy.

Compared to EU countries, Russia performs below average in all dimensions of child well-being and poverty, especially in terms of its economic situation and its health outcomes (UNICEF 2011). Negative child welfare developments in Russia are consequences of the economic crisis of the 1990s, which resulted in large-scale low-paid employment and a reduction in statutory support to families (Denisova et al., 2000, IBRD/WB, 2002). In a relatively short period of time Russia has moved from a centrally managed universal welfare provision to a residual neo-liberal welfare model (Manning and Tikhonova, 2004, Titterton, 2006, Cook, 2007, Cerami, 2009, Burawoy, 2001). The gap between children and the rest of the society continued to grow during 2000s, despite a twofold decline in the overall poverty headcount (Ovcharova and Popova, 2005, Notten and Gassmann, 2008). Children ended up being the poorest group in society (UNICEF 2011).

The risk of further depopulation due to very low fertility rates and extremely high mortality rates of the working age men (UNDP, 2009) became the main motivation behind the major revision of government financial measures concerning families with children in 2007, including an increase in the sizes and numbers of recipients of maternity allowances, the introduction of a generous bonus for the second baby and a weakening of the targeting mechanisms. Although these reforms should be treated as a serious achievement after 15 years of disregard of this area, they have improved the financial situation of a very small group of families with children (i.e. families with children under 1.5 years), while the majority are left without any significant public support (Ovcharova et al., 2007). The twofold reduction in the poverty headcount between 2000 and 2008 can be mainly attributed to the favourable macroeconomic background (UNICEF, 2011). The present Russian social protection system is characterized by poor funding, low level of social assistance, bad targeting performance and insufficient supply and quality of childcare institutions. The decentralization of social protection achieved through a series of major reforms in 2005 has

contributed to a further growth of the disparity in the well-being of children living in different regions of Russia.

All in all, the previous studies have concluded that it is unlikely that a large-scale reduction of child poverty in Russia could be achieved without a major tax-benefit reform, including a significant increase in spending on family and child-targeted policies. However, little is known about the impact of tax-benefit policies on child poverty in Russia in the late 2000s. The Russian tax-benefit system consists of numerous types of support available to a large circle of beneficiaries; they are regulated by a number of legislative acts that focus on certain types of assistance, rather than on vulnerable groups. Moreover, after the decentralization reform carried out in 2005, regions can implement their own social programmes, that differ in terms of design and generosity. This study aims to fill this gap by using the first full-scale tax-benefit microsimulation model for Russia (RUSMODi), which allows simulating most of the existing cash policies implemented at federal and regional level, for the nationally representative sample in 2010. Being the part of the tax-benefit model for the European Union (EUROMOD), the Russian model can be used for cross-country comparisons. This marks a striking difference with respect to all previous attempts to estimate the distributional impact of taxes and benefits in Russia.

The focus is on programmes of cash allowances for children and this study compares their effectiveness in combating child poverty in Russia and four EU countries – Sweden, Germany, Belgium and the United Kingdom (UK). These countries are selected as representatives of alternative family policy models (Gauthier 1996, Gauthier 2000). Using the microsimulation models, this paper estimates the potential gains if the Russian system were re-designed along the policy parameters of these countries and vice versa. Such an exercise rests on the idea of policy learning and provides policy relevant evidence on how a policy would perform, given different national socio-economic and demographic settings.

The rest of the paper is structured as follows. Section 2 discusses the literature on the impact of public policies on child poverty in cross-national perspective. Section 3 explains the methodology of policy swaps using the microsimulation models. Section 4 presents and analyses the results of microsimulation. Section 5 concludes and suggests some policy lessons.

## 2. Literature on the impact of public policies on child poverty

All industrialized countries introduced comprehensive policy packages for families with children (Bradshaw, 2010, Corak et al., 2005, Figari et al., 2011). Child poverty reduction is not the one and only objective of family policies; in fact there is evidence to suggest that concerns about declining fertility are the strongest motive for politicians to take real action in this area (Hantrais, 2004). Child poverty is, nevertheless, the most immediate outcome of family policies. The three factors that underlie changes in child poverty rates are demographic factors, labour markets and public sector effects. Demographic factors turn out to be less important than markets and the public sector (Adam et al., 2002, Chen and Corak, 2005, UNICEF, 2005). High child poverty rates are a strong indication that welfare states are not investing enough in public support for families with children in order to compensate for the labour market failures in this respect.

When one looks at the impact of different policy designs, rather than at the amount of spending, the picture is a good deal more complex. Compared to other areas of social policy, the designs of family policies demonstrate the highest level of diversity across and within welfare regimes. Various scholars disagree as to how to group particular states because of differences in the specific aspects of family policy emphasized in their frameworks (Bambra, 2004, Hantrais, 2004, Hantrais, 1999a, Hantrais, 1999b, Lewis, 2001, Lewis, 2006, Pascall and Lewis, 2004, Korpi, 2000, Lewis, 1992, Lister, 1994, Orloff, 1993, Rostgaard and Friedberg, 1998, Sainsbury, 1999, Taylor-Gooby, 1996, Gauthier, 1996, Gauthier, 2000).

The ongoing debate has focused on the questions of whether the funding and delivery of child benefits should be centralized or decentralized (Glennerster, 2009, Ferrera, 2005, McEwen and Moreno, 2005, Obinger et al., 2005, Pierson, 2001, Dubois and Fattore, 2009, Castles, 1999); whether they should vary by number and age of children, and family type (Bradshaw, 2006, Bradshaw, 2010, Bradshaw et al., 1993b, Bradshaw et al., 1993a, Bradshaw and Finch, 2002, Bradshaw et al., 2007, OECD, 2009); whether they should be universal or means/wealth-tested (Oorschot van, 2002, Pritchett, 2005, Gelbach and Pritchett, 1995, Moene and Wallerstein, 2001, Skocpol, 1991, Korpi and Palme, 1998).

This study employs the framework by Gauthier which identifies four distinct models of family policy that have emerged in Europe (Gauthier, 1996, Gauthier, 2000). Looking specifically at the family policy domain, Gauthier's typology produces four distinct Western family policy regimes that have emerged historically, as an interaction of three main factors:

public policies, demographic trends and the intermediate role of non-governmental actors. The advantage of this framework over other options proposed in the literature is that it emphasizes the causal link between the objectives of family policies, the instruments applied and the actual policy outcomes, which makes it the most robust framework in the context of impact evaluation. Four European countries – Sweden, Germany, Belgium and the UK – were selected as the representatives of alternative family policy models. The design of the tax-benefit systems of these countries differs considerably, reflecting the different aims of family policy (Table 1).

The pro-egalitarian family policy (Sweden) is aimed at promoting gender equality, so that both men and women are treated as earners and care providers. The main bulk of statutory funding is spent on universal public services, including institutional childcare. The system of social transfers is dominated by universal, not income-related, benefits, paid per child, and not varying with special circumstances. The pro-natalist family policy (Belgium) is concerned with the low fertility rate, hence, most policies are aimed at encouraging families to have more children. A large amount of funding is directed to childcare services in order to help mothers to reconcile employment and family life. Cash allowances are generous and most are not income-related, and are arranged so that benefit levels increase more than proportionally with each additional child, making the system more supportive of large families. The pro-traditional family policy (Germany) is mainly concerned with the preservation of the traditional 'male-breadwinner' family model. Cash benefits are generous, but public support for working parents is moderate; inadequate supply of childcare does not allow women to fully combine paid employment and family life. Finally, the noninterventionist" policy (the UK) considers families to be all-sufficient, so public support is targeted at the needy. Correspondingly, the main flow of social protection is channeled towards families through means-tested cash benefits. Statutory childcare facilities are not developed, as it is believed that the market will meet any needs that emerge.

As far as Russian is concerned, having inherited many features of the *pro-egalitarian* family policy model from the Soviet times, during the last 20 years Russia has been moving towards a *non-interventionist* regime. The period of the 1990s and early 2000s saw a devaluation of family related allowances and a reduction in the number of eligible families, due to the introduction of means-testing. The availability of preschool institutions – the main element of public support for working parents – has been rapidly deteriorating since the early 1990s. Currently the supply of such services, both in quantity and in quality, does not satisfy the

growing demand. Concerned with the upcoming demographic crisis, since the mid-2000s, the Russian government has emphasized, in its rhetoric, *pro-natalist* objectives, which are reflected in the strategy of the recently undertaken increases in the amounts and coverage of maternity allowances, the introduction of a generous bonus for the second baby and a weakening of the targeting mechanisms. However, even after these innovations, by European standards Russia spends little on family related policies (1.8% of GDP in 2010 compared to 2.6% on average for the four EU countries) and even less on cash benefits for families with children (0.6% of GDP versus 1.7% for the four EU countries).

#### Table 1 about here

#### 3. Methods and data

The final child poverty outcomes are though highly country specific due to complexities of the overall national policy systems, socio-demographic environments and original income distributions. Microsimulation models are the only means to disentangle the poverty impact of these interlinked factors. This paper uses EUROMOD – the static tax-benefit model of the EU (Sutherland, 2001, Lietz and Mantovani, 2007, Sutherland et al., 2008, Figari and Sutherland, 2013) and RUSMOD – the static tax-benefit model for Russia which is fully compatible with EUROMOD (Popova, 2013a). Static microsimulation models, such as EUROMOD and RUSMOD, quantify the consequences at the micro-level of changes in taxbenefit policies, given that the characteristics of the underlying population remain constant, and vice versa (Immervoll and O'Donoghue, 2009). In practical terms, they represent a computer code that calculates disposable income for each micro-unit (individual or household) in a representative sample of the population. The calculation is made up of components of income taken from the micro-data directly (e.g. employee earnings) combined with the components simulated by the model (tax liabilities and benefit entitlements). Microsimulation models allow for a detailed analysis of the revenue and distributional effects of an individual policy, or of the whole policy system, before and after a real or a hypothetical reform. In contrast to the traditional analysis of raw survey data, microsimulation models are up-to-date in respect of the latest changes in policies and take full account of interactions between all elements of the tax-benefit system, including the 'hidden' part of the welfare state, i.e. indirect (tax) transfers. In contrast to the 'typical cases'

approach, which is, for instance, applied by OECD in their Taxing Wages series (OECD, 2014), the output of microsimulation can be generalized to the population of the country.

The first main limitation associated with using static microsimulation models, such as EUROMOD and RUSMOD, is that they can only predict the first-order consequences of policy changes, i.e. the 'morning after' changes in economic well-being and poverty of households with children (Bourguignon and Sparado, 2006). Evaluation of long-term effects of policy reforms (e.g. changes in labour market participation or in demographic behaviour) is beyond the scope of this study. The second limitation is that EUROMOD and its spin-off RUSMOD in their current version do not simulate non-cash policies. Hence our simulation exercises are limited to the assessment of impact of cash transfers for families with children. At the same time, this kind of analysis is still highly relevant. Firstly, cash policies directly affect the material well-being of children - and shape outcomes such as poverty and inequality (Bradshaw, 2012). The child's family income is a key dimension and is widely known to be strongly correlated to other aspects of well-being (UNICEF, 2007, Richardson et al., 2008, OECD, 2009). Secondly, cash transfers can be quantified and measured at the micro-level and hence can be used in cross-country analysis. Thirdly, they arguably demonstrate the highest level of diversity across European welfare states. Non-cash benefits as a percent of GDP are far more equal across nations than are cash benefits (Smeeding and Rainwater, 2002).

Table 2 describes EUROMOD and RUSMOD input data. For Russia, they are derived from the national household survey RLMS-HSE. Sweden, Germany and Belgium use EU-SILC as a basic input dataset. The UK uses a national household survey – the Family Resources Survey 2008/2009. For all countries the policy systems of 2010 are simulated and used here<sup>iii</sup>.

#### Table 2 about here

EUROMOD has been previously used to evaluate the poverty effectiveness of state support to families in the EU countries (Corak et al., 2005, Figari et al., 2011, Levy et al., 2013). Several studies attempted to estimate the cost-effectiveness of specific policy instruments by 'borrowing' different elements of family policies from other EU countries and comparing their effects with those of the original systems (Levy, 2003, Levy et al., 2008, Salanauskaite and Verbist, 2013) This paper takes a similar approach in Russia. Although an inquiry into

the cumulative impact of family policies is of high interest this study analyses only a part of the existing child benefit package due to data limitations<sup>iv</sup> and difficulties in replicating some of the simulated allowances in other countries<sup>v</sup>. The focus is on <u>cash allowances and tax credits</u> that are: (1) formally targeted at families with children; (2) provided on a regular basis (i.e. each week or month); and (3) simulated in all five countries under study. Table 3 summarizes each country's approach regarding cash allowances and tax credits for children, in detail. For all countries the policy systems of 2010 are simulated and used here.

#### Table 3 about here

All European countries under study have a unified national design for programmes of child allowances. It is only in Russia that this programme is decentralized; according to the federal regulations the allowance must be provided in all regions, but the amounts are set by regional authorities. Although RUSMOD simulates policy rules at the regional level, to ensure meaningful cross-country policy swaps this paper assumes that the average benefit amounts apply in all regions of Russia<sup>vi</sup>.

Amounts of child benefits per child may vary depending on the number of children, the age of a child and the family type – reflecting different goals of family policy. For example, in Sweden and the UK the amounts get smaller with each additional child, assuming decreasing 'marginal costs of children'. In contrast, in Belgium the amounts paid per child increase with the rank of the child within the family, in Russia the amounts increase starting from the 3<sup>d</sup> child, in Germany – starting from the 4<sup>th</sup> child. The age-related supplements (implying higher costs of older children) are available in Sweden and Belgium. The supplements for lone-parent families are available in Belgium, the UK and Russia.

In relation to the discussion on universalism and targeting as modes of welfare allocation, Sweden and Russia represent, respectively, a purely universal and purely selective approach, as far as child allowances are concerned. The other cases use a mix of universal and meanstested programmes. Germany leans towards a universalistic approach, with a small proportion of means-tested benefits. Belgium, with equally important universal and means-tested elements, is in the middle of the said continuum. The UK relies heavily on means-testing, providing a small flat-rate universal benefit for all children vii.

Three simulation scenarios are discussed in this paper. Firstly, in order to assess the effectiveness of the selected transfers to children, in terms of reducing child poverty given national circumstances, they were 'removed' from the tax-benefit systems (Reform 1). The rest of the national policies remain in place and may compensate for the removed programmes viii. By comparing poverty outcomes with and without selected transfers we can evaluate their redistributive impact. Secondly, child allowances were 'swapped' from Sweden, Germany, Belgium and the UK to Russia. The first swap is fully budget-neutral, i.e. monetary amounts are firstly converted from the national currency of the 'donor' country into the Russian national currency (ruble) using PPPs and then adjusted by scaling them down so that the aggregate expenditure on child benefits in Russia remains unchanged (Reform 2.1). In this way the borrowed policy is fully 'adapted' to national circumstances. In the second implementation, the budget for child allowances is increased up to the average budget of similar programmes in the four EU countries (Reform 2.2).

The impact of swapped policies is evaluated by comparing a set of programme characteristics and measures of income distribution before and after implementation of a certain scenario. Income is expressed in monthly terms and equivalised using the old OECD equivalence scale, which is closer to the empirical equivalence scale derived for Russia than the modified OECD equivalence scale ix. This study uses the concept of poverty applied by Eurostat, whereby the poverty line is set at 60% of median equivalised disposable income. This poverty threshold based on the baseline simulation of the 2010 Russian tax-benefit system is 221.4 euros per month per equivalised person. The poverty thresholds in the baseline simulation for European countries are as follows: 961.5 euros for Sweden, 828.2 euros for Germany, 791.9 euros for Belgium and 726.8 euros for the UK. Poverty thresholds are fixed at the baseline level in all the simulations. The tables presented below display the baseline policy indicators and relative changes in the indicators between the simulated scenarios and the <u>baseline</u> scenarios (in %), for the entire population, for children under 18 years, and for various types of households with children. Statistically significant (average) changes in indicators are highlighted in grey. A paired t-test was applied to assess the statistical significance of the difference of the means of the variables in the baseline and the simulated scenarios (Goedemé, Van den Bosch et al. 2013).

In the baseline simulation (Table 4) poverty rates for children under 18 years ranged from 15% in Sweden to 25.6% in the UK, with Belgium and Germany being somewhere in the middle (15.8% and 16.9%, respectively). The gap between poverty rates for children and for

the entire population ranged from 1.3 times in Germany, to 1.4 times in Sweden and Belgium, to 1.5 times in the UK. The highest income gap ratios for children are observed in the UK (26.8%) and Sweden (26.2%), and the lowest are in Belgium (18.5%) and Germany (15.2%). However, in terms of poverty depth children in European countries at least do not fall behind the rest of the poor population; in fact in Germany and Belgium income gap ratios for children are lower than for the entire population. In Russia the child poverty headcount amounts to 19.8% and the income gap ratio - to 28.3%. It is worthy to note, the poverty threshold used in Russia in absolute terms is at least 3 times as low as the ones in the selected EU countries. If the Russian poverty threshold was applied in EU countries, their poverty headcounts would be substantially reduced. Similar situation arises when poverty headcounts are compared across the enlarged EU using poverty thresholds at 60% of national median income, due to disparities in the absolute living standards between the Old and New member states (Whelan and Maitre, 2010). At the same time, the analysis by Whelan and Maitre (2009) supports the view that as far as poverty is concerned the predominant frame of reference for the European population is a still national one. That is why in this study we opted for keeping national poverty thresholds in all the simulations. Since all the comparisons between the simulated and baseline scenarios are made in relative terms at the national level, relative poverty thresholds will not affect our conclusions regarding the impact of policies on distributional outcomes.

Of particular interest are couples with 3+ children and lone-parent families because they are most susceptible to falling into poverty, due to their vulnerable position in the labour market (Table 4). In all European countries in our sample, the probability of being poor for lone parent households is at least 2 times as high as the average national figures (2.1 times in the UK, 2.5 times in Germany and 2.9 times in Sweden and Belgium). Poverty rates for families with 3+ children are also higher than average (1.4 times in Belgium, 1.7 times in Germany and Sweden and 2.3 times in the UK). In Russia lone parents appear to be less vulnerable than those in Europe, because typically they live in three-generation households. Yet their risk of poverty is 1.5 times as high as the national average. The most problematic group in Russia is families with 3+ children, whose poverty rate is 1.7 times higher than the national average. In other words, child poverty is not an exclusively Russia's problem; the relative poverty profile is quite similar in all the countries under study, despite much higher absolute poverty rates in Russia.

## 4. The distributional impact of alternative child benefit schemes

## 4.1 Baseline policies

A reasonable level of spending and coverage levels of a policy are essential for achieving any significant distributional outcome. Estimates shown in Table 4 (Reform 1) demonstrate that in terms of overall spending on regular cash transfers for children, the leader is the UK, where they amount to 1.5% of GDP. Two continental countries – Germany and Belgium – spend similar shares of their GDP on child related cash allowances – 1.3 and 1.2%, respectively. Sweden's expenditure on cash benefits for children is considerably lower (0.7% of GDP). Russia is a laggard in terms of expenditure (0.12% of GDP) due to extremely low benefit amounts. The vertical efficiency of child allowances (measured as the share of the overall budget going to the poor) is rather low in continental European countries, ranging from 23.3% in Sweden to approximately 30% in Germany and Belgium, and high in the UK (57.2%). Russia is lagging behind, with only 38.6% of the budget going to beneficiaries who are poor, despite the fact that the Russian programme is the only fully means-tested one.

#### Table 4 about here

If it were not for cash transfers to children, all the European countries under study would have considerably higher inequality and poverty levels, for all the groups of interest. On average in the four European countries, the reduction in the Gini coefficient amounts to 6.2%, while the national poverty rate and the poverty depth figures are reduced by 19 and 12%, respectively. The average reduction in the poverty headcount for children under 18 years amounts to 44%, while the income gap is reduced by 25% on average. The schemes employed by EU countries are very effective in terms of reducing poverty in vulnerable groups. There is a 60% reduction in the poverty headcount and a 34% reduction in the income gap of families with 3+ children under 18 years. The poverty headcount of lone parent families is reduced by 38% on average, while their income gap ratio is reduced by 27%.

It appears that, within national circumstances (composition of the population and original pre-transfer distribution of income), the Belgian programme outperforms the rest (including the most expensive British programme) in terms of reducing the depth of poverty for children under 18 years, large families and lone parent families. The British scheme is however the

most effective one in reducing national poverty figures, and it is also among the most effective schemes in terms of reducing poverty for lone parent families. The German scheme falls behind the Belgian and the British ones, due to its smaller impact on the poverty depth figures. Germany has established effective policies for large families, but lags in terms of the protection of lone parents. The Swedish programme of child benefits plays a smaller role in reducing poverty and has almost no impact on poverty gap measures. As far as Russia is concerned, the programme of cash transfers for children does not appear to have any statistically significant impact on national inequality and poverty measures, as well as measures for children under 18 years. The groups which gain from this programme are large families (whose poverty gap drops by 11.1%) and lone parents (whose poverty headcount drops by 10.8%).

The fact that Sweden does not come out as the best approach to alleviate child poverty, despite having the lowest national and child poverty headcounts before cash allowances for children are applied, might firstly appear counterintuitive. However, it should be emphasized that cases for cross-country policy swaps were selected not based on an outcome, but on the varying design of cash transfers for children. The actual child poverty outcomes are the result of an interaction of several factors, including the distribution of earnings, the demographic composition of the population and public policies. The latter, in their turn, are comprised of many interlinked elements, cash child allowances being just one of them. This paper does not aim to explain poverty rates in various countries, instead it attempts to find the most efficient policy design for child allowances in Russia controlling for other factors, including other taxbenefit policies in place.

#### 4.2 Policy swaps

In this section microsimulation models are applied in order to find the most efficient policy design of cash allowances for children in Russia, i.e. the one that achieves the best distributional outcomes under the fixed budget. The results of the budget-neutral policy 'borrowing' (Reform 2.1) which implies no increase in total costs compared to the baseline Russian settings is shown in Table 5. However, the implementation of this reform implies enlarging the programme coverage. Firstly, the Russian child benefit is means-tested, while all the EU countries under study have established quasi-universal programmes which may or may not be additionally topped up by means-tested payments. In addition, in Germany and Belgium, the age threshold for qualifying as a dependent child is substantially higher than in

Russia. These higher age thresholds result in a 1.8-1.9 times increase in the number of beneficiaries under the Swedish and British scenarios and a 2.2 times increase under the German and Belgian scenarios. Given the fixed budget, the average per capita expenditures per child-beneficiary decrease in proportion to the increased expenditures on the extra beneficiaries. The vertical efficiency of the policy drops from 38.6% for the baseline Russian scheme to 21-22% for the schemes adopted from Sweden, Germany and Belgium, and to 27.8% for the British scheme.

#### Table 5 about here

As demonstrated by Table 5, given the small budget of child allowances in Russia, any changes in the programme design to incorporate rules of programmes of EU countries would not be advisable, because they either would not have any statistically significant impact on inequality and poverty outcomes or would even reduce the programme's impact (as in case of the income gap of large families).

Table 6 shows the results of implementation of the designs of child allowances employed in the EU countries in Russia, assuming a full-scale budget increase (Reform 2.2). The final budget is fixed at the level of 1.23% of the Russian GDP. This figure was computed as the average spending on child benefits in relation to GDP in the four European countries included in our study. Thus the original budget of child allowances in Russia is multiplied by 10. Compared to the baseline implementation (Table 4) this kind of simulation is more suitable for comparing the efficiency of various programme designs, given that the budget for all schemes is fixed at the same level. Due to the varying age thresholds for children in each system, the resulting increase in the mean expenditures per beneficiary compared to the baseline Russian settings, ranged from 4.4-4.6 times under the Belgian and German schemes, to 5.5 times under the British scheme, and to 5.7 times under the Swedish scheme. By definition all monetary parameters of the programme, including monetary thresholds for income tests, are multiplied by the same factor. Compared to the budget-neutral swap (Reform 2.1), the percentage of the budget going to the poor (i.e. vertical efficiency) has increased from 21-22% to 23-24% under the Swedish, German and Belgian schemes, and from 28 to 33% under the British scheme.

#### Table 5 about here

Under the ten-fold budget increase, the programme of child benefits inevitably achieves much better outcomes for Russian children, but there are still four potential designs to choose from. It appears that, despite quite different policy designs, the Swedish, German and Belgium schemes, applied in Russia, achieve quite similar results as far as inequality and poverty outcomes are concerned. There are no statistically significant reductions in the Gini index and in the national poverty rate, but there is a 6-8% reduction in the national poverty gap. Compared to this, the British design is almost 1.5 times more effective in terms of reducing the income gap ratio. In terms of the poverty headcount for children under 18 years, the Swedish and Belgian schemes come close, providing a 20% reduction in the poverty headcount and a 13-15% reduction in the income gap, compared to the baseline simulation. But they are outperformed by the British scheme, which provides an almost 30% reduction for both poverty indicators. As far as families with 3+ children are concerned, the Swedish and British designs reduce poverty incidence by over one third, but again the British system achieves a greater reduction (37.6%) in the poverty gap. For another vulnerable group – lone parents – the British system clearly outperforms the other three on both poverty indicators.

In addition to the Reform 2.2 an opposite reform has been carried out (results are not shown here, but available from the author on request). In that reform the design of the Russian programme of child allowances was applied to the European countries, while budget of the Russian scheme was inflated up to the level characteristic for each of these countries. With the adoption of the Russian scheme, the number of potential beneficiaries was reduced by approximately one third in Sweden and Germany, by 20% in Belgium and by 10% in the UK. Consequently, the mean expenditures per child-beneficiary were increased by those factors. The Russian design helped to increase the progressivity of spending on child benefits in all continental European countries included in the study. A statistically significant reduction in the poverty headcount for all the groups of interest was achieved in Sweden, Germany and (although to a lesser extent) Belgium, although without major reductions in the income gap. In contrast, swapping the Russian child benefit scheme to the UK has had a higher impact on poverty depth measures. Simultaneously, due to the design of Russian programme, this reform worsened the position of couples with 1 and 2 children, both in terms of poverty incidence and, especially, the depth of poverty.

## 5. Conclusions and policy implications

This study is the first attempt to apply the microsimulation method to an assessment of the distributional impact of cash transfers for children in Russia, within a European comparative setting. To accomplish this task, this study has applied RUSMOD and EUROMOD – the taxbenefit microsimulation models for Russia and the EU. These microsimulation models were applied to estimate the counterfactual outcomes (that is, outcomes for participants had they not been exposed to the programme and had they been exposed to a different programme). Though a number of limitations is associated with using such models, the main advantage is their compatibility and comprehensive structure in handling and quantifying the effects of cross-national policy transfers.

This paper argues that Russian policy makers can learn from international experiences, in order to improve the well-being of Russian children. The policy systems differ across Russia and the four European countries selected for the analysis, in terms of the volume of spending and the design of their non-contributory cash transfers to children. The literature points to the level of spending and the design of programmes as the two main determinants of child poverty. This study confirms that for Russia the size of the budget is more important than the the design of child allowances. Yet, conversely, at the high level of spending which is characteristic for European welfare states, the design effect can be more important. In other words, the comparative effects of spending level and of design are highly dependent on the national policy context (socio-demographic circumstances, labour market conditions, and 'pre-social policy' interventions). For example, the Belgian scheme of child allowances outperforms the German and the British schemes in terms of all poverty depth indicators because it is better fit to tackle poverty of the vulnerable groups, despite the lower level of spending in Belgium.

Controlling for the programme budget, the best child well-being outcomes were not achieved by means of expanding the coverage (as in Germany) and by 'purely' universal transfers (as in Sweden). A policy mix comprising both universal and means-tested benefits (as in the UK and Belgium) appears to be much more efficient in terms of child poverty reduction. The means-tested elements are necessary for alleviating the poverty depth of those groups that are detached from the labour market, and concentrated at the bottom of income distribution. This confirms the main conclusion made in the literature regarding the trade-off between

universalism and targeting. In most successful countries, welfare provision is mostly universalistic, while targeting is treated as an instrument for making universalism more effective. In other words, within the universal policy design there are some extra benefits for low-income groups, providing the 'fine-tuning' of the fundamentally universalist policies (Skocpol, 1991)

The major problem with the Russian child benefit scheme is the negligible budget, rather than the design itself. The Russian scheme does not appear to be less effective in terms of its impact on child poverty outcomes, when transferred to any of the four European countries in replacement of their current arrangements. The only really major design related problem is a neglect of couples with 2 children; these could benefit from more comprehensive treatment of their needs, especially as the promotion of second parity births has been declared one of the priorities of the national strategy of demographic development.

It should be noted, that a number of limitations had to be introduced in this paper in order to facilitate comparative analysis and to maintain meaningful policy 'swaps'. Firstly, the analysis in this paper has focused on non-contributory cash allowances for families with children, omitting the rest of the child related cash benefits and non-cash policies. The cross-country analysis of policy effects may be biased, because of the varying role played by non-cash income across the different welfare regimes. Secondly, the analysis is concentrated on improving the material well-being outcomes for children from poor families, rather than all children. The reform scenarios that have been found most effective, involve an increase in the targeting accuracy of child benefits, which implies reducing benefits for non-poor households with children and redirecting the released resources to the poor.

As far as more general limitations are concerned, the practical implementation issues in introducing more targeting have been left out of the picture. The evidence from application of means-tested programs in OECD countries demonstrates that although they demand less resources than universal programs, they are characterized by a number of problems, e.g. produce errors of inclusion and exclusion, require high administrative expenditure, decrease incentives to work, etc. (Moffitt, 1983). The other consideration that should not be ignored is a trade-off between the degree of low-income targeting and the size of redistributive budgets (Pritchett, 2005). Targeting and budgets are not independent: the budgets tend to decrease while targeting increases, as the average voter is less inclined to support the programs from which they do not have any benefit (Moene and Wallerstein, 2001). Finally, it is important to remind that the simulations results obtained from EUROMOD and RUSMOD capture only

the first-order consequences of various options of the reform of cash child allowances. Possibly, if they were able to take into account the behavioral response (e.g. possible changes in the take up of means-tested benefits after increasing the targeting accuracy and raising the child benefit amounts), the advantages of a choice in favor of more targeting would be less evident. These issues are left for future research.

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Table 1: Comparison of various models of family policy in the selected countries

	Sweden	Germany	Belgium	UK	Russian Federation
Spending on social benefits for families and children, % of GDP, 2010*	3.1	3.2	2.2	1.9	1.8
including spending on cash benefits	1.5	2.2	1.8	1.3	0.6
Family policy model	pro-egalitarian	pro-traditional	pro-natalist	non- interventionist	non- interventionist with strong pro-natalist rhethoric
Policy objectives	promote gender equality	preserve traditional family	raise fertility rates	maintain minimum intervention to families	raise fertility rates
Level of support:					
Support for working parents	High	medium	medium	low	low
Cash benefits	Medium	high	high	high	low
Child care services	High	low	high	low	medium
Universalism/selectivity	Universal	mostly universal	universal and means-tested	mostly means-tested	mostly means- tested

Sources:

Own analysis based on Gauthier (1996)

\* for European countries - EUROSTAT data (http://epp.eurostat.ec.europa.eu/portal/page/portal/population/data/database), date of extraction: 25 Jan 2014; for Russia - own estimates based on the Federal State Statistics Service (FSSS) data about the number of recepients and average size of payments, the Social Insurance Fund data, the Pension Fund data, the data on implementation of the Consolidated Budget and regional laws on the budgets implementation.

Table 2: The underlying datasets used in EUROMOD and RUSMOD

Country	Sweden	Germany	Belgium	United Kingdom	Russian Federation
Policy year	2010	2010	2010	2010	2010
Source database(s)	EU-SILC	EU-SILC	EU-SILC	Family Resources Survey	RLMS-HSE
Period of data collection	January- December 2008	April-August 2008	July-December 2008	April 2008 - March 2009	October- December 2010
Income reference period <sup>10</sup>	2007	2007	2007	2008-2009	2010
N of households	7,491	13,312	6,300	25,088	6,324
N of individuals	18,663	28,904	15,108	57,276	16,918

Source: EUROMOD country reports, see: <a href="https://www.iser.essex.ac.uk/euromod/resources-for-euromod-users/country-reports">https://www.iser.essex.ac.uk/euromod/resources-for-euromod-users/country-reports</a>

Table 3: The design of child cash allowances/tax credits in the selected countries, 2010

	Sweden	Germany	Belgium	United Kingdom	Russian Federation
Names of benefits included in simulation:	Child benefit (Barnbidrag) (bch_s)	Child benefit (Kindergeld) (bch_s) and Additional child benefit (Kinderzuschlag) (bchot_s)	Child Allowance (Kinderbijslag / Allocations familiales) (bch_s)	Child Benefit (bch_s) Child Tax Credit (bfamt_s)	Child allowance under 16(18) years (Ежемесячное пособие на ребенка) (bch_s)
Design	Centralised	Centralised	Centralised	Centralised	Decentralised
Type of allowance	Only universal allowance	Universal allowance + income-tested allowance	Universal allowance + income-tested allowance	Universal allowance + income-tested tax credit	Only incometested allowance
Benefit unit	Nuclear family	Nuclear family	Nuclear family	Nuclear family	Nuclear family
Child age threshold	16 years (18 if in secondary school)	18 years (25 if in full-time education and does not earn more than a specified amount)	18 years (25 if in full-time education, not married and does not earn more than a specified amount	16 years (19 if in school)	16 years (18 if in full-time education)

Benefit amounts:

By the number of children in family	decrease with each additional child	increase starting with the 4 <sup>th</sup> child	increase with each additional child until the 4th one	decrease with each additional child	increase starting from the 3d child in several regions
By the age of the child	increase with age	no	increase with age	increase for children under 1 year	increase in several regions
By the type of family	No	no	supplement for lone parents	supplement for lone parents	supplement for lone parents

Source: EUROMOD and RUSMOD policy rules

Table 4: Policy characteristics and distributional impact of cash child allowances, <u>Baseline</u> versus <u>Reform 1</u>

Country	Sweden	Germany	Belgium	United Kingdom	Russian Federation
Name of scenario:	baseline	baseline	baseline	baseline	baseline
Policy characteristics:					
Beneficiaries, % of population	22.9%	21.7%	25.9%	21.1%	10.4%
Mean expenditure per beneficiary, euros	119.6	183.2	156.5	202.5	9.7
Expenditure, % of GDP	0.71%	1.29%	1.20%	1.50%	0.12%
Vertical efficiency, % of the budget spent on the poor	23.3%	29.8%	29.6%	57.2%	38.6%
Baseline policy indicator and % change in the i	ndicator due to th	e reform:			
Name of scenario:	reform 1	reform 1	reform 1	reform 1	reform 1
Gini coefficient	0.237	0.273	0.232	0.331	0.409
% change	-4.5%	-5.5%	-9.2%	-8.7%	-0.5%
Poverty headcount, all population	10.7%	12.7%	11.3%	16.9%	16.3%
% change	-14.9%	-17.7%	-24.5%	-29.8%	-2.2%
Income gap ratio, all population	26.0%	18.1%	21.2%	27.6%	27.1%
% change	-0.1%	-7.1%	-25.6%	-28.3%	-2.2%
Poverty headcount, children under 18 years	15.0%	16.9%	15.8%	25.6%	19.8%
% change	-34.8%	-58.1%	-55.4%	-55.8%	-5.3%
Income gap ratio, children under 18 years	26.2%	15.2%	18.5%	26.8%	28.3%
% change	-0.3%	-28.8%	-49.6%	-44.7%	-4.8%
Poverty headcount, couples with 1 child	7.6%	17.8%	8.6%	12.6%	15.7%
% change	-2.5%	-13.6%	-11.4%	-37.7%	-2.5%

Income gap ratio, couples with 1 child	30.3%	17.8%	23.3%	27.5%	27.3%
% change	-3.8%	-10.8%	-15.1%	-15.3%	0.2%
Poverty headcount, couples with 2 children	6.9%	11.2%	11.2%	17.9%	19.7%
% change	-28.9%	-65.0%	-33.3%	-51.9%	-1.0%
Income gap ratio, couples with 2 children	24.3%	15.4%	19.6%	25.1%	30.7%
% change	3.1%	-13.6%	-29.2%	-33.8%	-3.4%
Poverty headcount, couples with 3+ children	18.3%	21.9%	15.4%	38.3%	34.0%
% change	-49.6%	-99.5%	-82.1%	-46.1%	-7.2%
Income gap ratio, couples with 3+ children	26.5%	14.4%	15.9%	26.4%	32.2%
% change	-1.0%	-50.4%	-66.7%	-54.2%	-11.1%
Poverty headcount, lone parents	31.0%	32.0%	32.8%	35.1%	21.2%
% change	-29.9%	-33.2%	-54.4%	-70.4%	-10.8%
Income gap ratio, lone parents	24.3%	15.4%	18.5%	27.8%	25.5%
% change	-1.0%	-20.8%	-51.2%	-43.5%	-3.6%

Notes:

Statistically significant changes (at the 95% significance level) are highlighted in grey

Poverty headcount = the number of people with incomes below poverty line, % of the population; Povery gap = the average shortfall in income of the poor from the poverty line, % of poverty line

Reform 1 = policies are 'removed' from the tax-benefit systems

Source: Own calculations using EUROMOD and RUSMOD

Table 5: Policy characteristics and distributional impact of child allowances, <u>Reform 2.1</u> versus <u>Baseline</u>

Country	Russian Federation	Sweden	Germany	Belgium	United Kingdom
Name of scenario	baseline	reform 2.1	reform 2.1	reform 2.1	reform 2.1
Policy characteristics:					
Beneficiaries, % of population	10.4%	18.3%	22.6%	23.7%	18.8%
Mean expenditure per beneficiary, euros	9.7	5.5	4.4	4.2	5.3
Expenditure, % of GDP	0.12%	0.12%	0.12%	0.12%	0.12%
Vertical efficiency, % of the budget spent on the poor	38.6%	21.8%	21.2%	21.9%	27.8%
Baseline policy indicator and % change in the i	ndicator due to th	e reform:			
Gini coefficient	0.409	0.410	0.410	0.410	0.410
% change		0.2%	0.2%	0.2%	0.1%
Poverty headcount, all population	16.3%	16.5%	16.5%	16.4%	16.4%
% change		0.7%	1.2%	0.6%	0.3%
Income gap ratio, all population	27.1%	27.5%	27.4%	27.4%	27.3%
% change		1.5%	1.2%	1.4%	1.1%
Poverty headcount, children under 18 years	19.8%	20.1%	20.3%	20.1%	19.9%
% change		1.7%	2.8%	1.8%	0.8%
Income gap ratio, children under 18 years	28.3%	29.2%	29.2%	29.3%	29.1%
% change		3.3%	3.4%	3.5%	3.1%
Poverty headcount, couples with 1 child	15.7%	15.6%	15.8%	15.8%	15.7%
% change		-0.5%	0.8%	1.3%	0.0%

Income gap ratio, couples with 1 child	27.3%	27.4%	27.1%	27.0%	27.0%
% change		0.6%	-0.6%	-1.1%	-0.8%
Poverty headcount, couples with 2 children	19.7%	19.4%	19.7%	19.7%	19.7%
% change		-1.0%	0.0%	0.0%	0.0%
Income gap ratio, couples with 2 children	30.7%	31.1%	31.0%	30.9%	30.7%
% change		1.3%	1.0%	0.6%	0.0%
Poverty headcount, couples with 3+ children	34.0%	34.7%	34.7%	32.9%	33.6%
% change		2.1%	2.1%	-3.4%	-1.3%
Income gap ratio, couple with 3+ children	32.2%	35.0%	35.9%	37.0%	35.9%
% change		8.7%	11.4%	14.9%	11.4%
Poverty headcount, lone parent families	21.2%	22.5%	22.8%	22.5%	21.8%
% change		6.3%	7.7%	6.3%	3.1%
Income gap ratio, lone parent families	25.5%	26.3%	26.2%	26.4%	26.3%
% change		3.2%	2.7%	3.5%	3.0%

Notes:

Statistically significant changes (at the 95% significance level) are highlighted in grey

Reform 2.1 = Child allowances from Sweden, Germany, Belgium and the UK are transferred to Russia, budget neutral swap

Source: Own calculations using EUROMOD and RUSMOD

<sup>&</sup>lt;sup>i</sup> This paper used RUSMOD and EUROMOD version F6.0. RUSMOD has been constructed using the EUROMOD platform (version F5.37). EUROMOD is continually being improved and updated and the results presented here represent the best available at the time of writing. Any remaining errors, results produced, interpretations or views presented are the author's responsibility. The process of extending and updating EUROMOD is financially supported by the Directorate General for Employment, Social Affairs and Inclusion of the European Commission [Progress grant no. VS/2011/0445]. We make use of micro-data from the EU Statistics on Incomes and Living Conditions (EU-SILC) made available by Eurostat under contract EUSILC/2011/55 and contract EU-SILC/2011/32. The usual disclaimers apply.

ii Originally the model was called 'pro-family but non-interventionist'. This study refers to this model as the 'non-interventionist' model, because it is unlikely to find an example of 'anti-family' family policy model.

iii Whenever income reference dates are 'older' than the analyzed policies, the adjustment factors are used to update income levels to a respective policy year. For example, in the British model the policy rules of 2010 are applied to the population of 2009, but with income levels updated to 2010. For Sweden, Germany and Belgium the policy rules for 2010 are applied to the population of 2008 with the income reference period of the year 2007. In Russia the policy year simulated and the income reference period are the same (2010), so updating was

<sup>&</sup>lt;sup>iv</sup> Currently, EUROMOD neither includes nor simulates in-kind benefits or public services. Due to the lack of data on contribution histories, the insurance-based cash allowances (such as unemployment benefits, maternity/parental allowances) cannot be simulated everywhere. Education related allowances were simulated for Germany only; in the rest of the countries they depend on a number of conditions that are unknown (such as parental income or the achieving of learning objectives by the student, etc.) Housing benefits exist in all countries under study, but they could not be simulated in Germany and Belgium.

<sup>&</sup>lt;sup>v</sup> Social assistance programmes in Russia and Sweden have specific elements related to the presence of children, while in Germany, Belgium and the UK they depend on the means test alone. Childcare subsidies are not available in all the countries, because of the different level and quality of supply of in-kind services. Finally, in contrast to tax credits, that are basically cash benefits provided through the tax system, tax allowances and deductions are problematic to replicate in another country, because they are embedded into national tax systems which differ considerably across the five countries under study. The major difference is that Russia has a flat income tax rate, while all European countries apply (although to a different degree) a progressive tax schedule.

vi To replicate this instrument in other countries the average amounts per child were computed, by dividing the total costs of the programme for each category of recipients (e.g. two-parent families, lone parent families, large families, etc.) by the total number of recipients in the category.

vii It is noteworthy, since 2013 changes were introduced to child benefit in the UK: child benefit which was not taxable until 2013 is now effectively taxed for parents who pay income tax at the 40% (or higher) marginal rate (annual income over £50,000). In addition, from 2013 child benefit is subject to the benefit cap, which applies when weekly entitlement to certain specified benefits exceeds a threshold of £500 a week for couples and lone parents or £350 a week for singles.

viii The results thereinafter show the net effects of reforms of child allowances, i.e. the effects after the interactions of child allowances with the rest of the tax-benefit system. It is worthy to note, that in contrast to Russia, in European countries child allowances are typically not included in the means test for other social benefits and are not taxable, hence there are fewer interactions.

<sup>&</sup>lt;sup>ix</sup> The structure of household consumer expenditures in Russia differs from that in a mature market economy. The share of spending on rent and utilities is substantially lower, while the share of spending on food is higher. resulting in lower economies of scale. A scientifically derived equivalence scale for Russia based on a nationally representative survey of household expenditure for mid-2000s had an elasticity coefficient e=0.78, which is close to an old OECD equivalence scale (e=0.73). The application of the modified OECD scale (e=0.53) has had the effect of eliminating any differences between child and overall poverty rates, making the situation with regards to child poverty look quite unproblematic in all countries under study except the UK. Given that the main focus of this research is child well-being, in this study we opted for using an old OECD scale.

<sup>&</sup>lt;sup>10</sup> It is important to note that in the Russian and the UK data the income reference period is the previous month, whereas in the other countries annual income is used. At the same time, the income for means-tests is measured over the different period (for example, in Russia it is either 3 or 6 months). Due to differences in the income reference periods, the eligibility for means-tested benefits could be both over- and under-estimated during the cross-country policy 'swaps'.