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Impact of Family Benefits on Persistent Child Poverty in Estonia

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Abstract

The family's economic situation is one of the fundamental components of children's well-being. Although child poverty has been researched extensively, previous studies have mostly focused on specific points in time. This article focuses on the rate of persistent poverty among children in Estonia based on the definition put forward by Eurostat, and data from the Estonian Social Survey (ESS) covering the period from 2013 to 2018. In addition to annual poverty indicators, the Estonian dataset allows for the analysis of both persistent relative and persistent absolute poverty. For the first time, however, this analysis explores whether and to what extent family benefits help reduce persistent child poverty. In Estonia, family allowances increased in the second part of 2013, coinciding with a decrease in annual child poverty rates. This analysis aims to provide an answer as to whether this trend is the result of increased family benefits, and whether it has affected rates of persistent poverty.

Keywords

Estonia, persistent poverty, relative poverty, absolute poverty, family benefits, new childhood sociology, child well-being

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Introduction

Pursuant to the United Nations Convention on the Rights of the Child (1989), all children have the right to an adequate standard of living, as well as the right to benefit from social security measures. In Estonia, such measures include various family benefits and allowances, with child allowance being the primary measure to benefit all children. In addition, the UN Agenda for Sustainable Development aims to halve, by 2030, the share of men, women and children living below the poverty threshold as defined by national accounts.

There are various understandings and definitions of poverty, and most studies analysing child poverty focus on describing poverty at a specific point in time. However, Lister (2004:179) estimates that there are more people experiencing poverty in the longer term as opposed to those who experience it only at a certain point in time. In addition, poverty can also be either relative or absolute. In this regard, Estonia serves as an excellent example for case study because national statistics account for absolute poverty. Therefore, the present analysis covers both ‘persistent relative poverty’ and ‘persistent absolute poverty’.

Although social inclusion and exclusion indicators used in the European Union (EU) (European Commission 2015) include both the *at-risk-of-poverty rate* (hereinafter referred to as *relative poverty*) and the *persistent relative poverty rate*, the persistent poverty rates among children have not been sufficiently studied. At the same time, it is widely acknowledged that the effects of poverty are more severe the longer it lasts (Maître, Russell and Watson 2011; Jenkins and Van Kerm 2017), exacerbating the effects on children’s health (including mental health), emotional well-being and education, among others (Vaalavuo 2015).

Over the years, there have been multiple studies on child poverty. This paper, therefore, does not address the various factors behind poverty, instead the primary focus is on analysing the impact of family benefits. Poverty is measured by household income that includes income from paid employment as well as cash benefits or allowances (Statistics Estonia). On the other hand, poverty has been one of the focal issues in national social policy debate, i.e. whether the national social security system should support people in the event of different risks or should it, instead, focus on vulnerable groups (e.g. children) through the provision of different benefits and/or services, thus also preventing or mitigating poverty. Thus, poverty is seen as an indicator of the distribution and availability of economic resources (Alcock 2006:103). Therefore, it is important to study and analyse poverty in order to ascertain whether government intervention is sufficient for preventing or reducing poverty (including persistent poverty) (Alcock 2006; Maydell et al. 2006; Eurostat 2014; Thévenot 2017).

The present article looks at child poverty as part of overall child well-being and examines whether different financial benefits meant for children and also for families with children (hereinafter *family benefits*) have contributed to the reduction of persistent poverty among children, both in relative and absolute terms. Post-positivism serves as the epistemological starting point of the study, suggesting that social phenomena such as poverty can be measured objectively, yielding valuable input data for the examination of larger patterns and interrelationships. In view of the *new sociology of childhood* approach, the article focuses on child well-being in the here and now, which may also have an impact on their well-being in adulthood as well.

Persistent poverty is analysed using the methodology of European Statistical Office (Eurostat) for calculating persistent relative poverty, and the analysis is based on the data from the Estonian Social Survey¹ (ESS) 2013–2018 conducted by Statistics Estonia. The main objective of the analysis is to examine the

¹ The Estonian Social Survey (ESS) is part of Eurostat’s European Union Statistics on Income and Living Conditions Survey (EU-SILC).

impact of family benefits² on the reduction of persistent poverty among children – a topic that has not been previously analysed in such a manner either in Estonia or elsewhere, at least to the knowledge of the author. Once again, Estonia serves as an excellent case study example – the country’s family benefits system has undergone several changes since 2013, but their impact on child poverty, especially on the prevalence of persistent poverty among children, has yet to be analysed. Overall, compared to previous research on child poverty, the analysis based on Estonian data should provide valuable additional information contributing, both for Estonia and also internationally, to the policy-making process aimed at reducing child poverty, particularly because of the novel approach that focuses on:

- the extent of persistent poverty among children, comparing levels of absolute and relative poverty; and
- the impact of family benefits on the reduction of persistent poverty among children.

The main research question seeks to answer whether and to what extent family benefits contribute to the reduction of persistent poverty among children, and whether relative poverty is more persistent among children compared to absolute poverty.

The article comprises five subchapters. The following section presents an overview of the theoretical background and the results of previous research. Subsequently, a brief overview of the situation of child poverty and the family benefits system in Estonia is provided. Next, data, methodology, and the results of empirical research are presented under three separate subheadings: a) the impact of family benefits on annual poverty rates; b) the impact of family benefits on persistent poverty; and c) the impact of family benefits on child poverty based on the number of children in the household. The concluding section summarises the results and offers recommendations for further research into this area.

Previous Research on Child Well-Being and Child Poverty

Child Well-Being and Poverty

Child well-being can be examined through various dimensions. For example, according to Thornton (2001), child well-being is a complex and multifaceted concept that includes, among other things, the dimension of economic well-being, comprising such indicators as income, benefits, employment, living conditions, consumption and expenses, as well as housing.

Child well-being, including poverty, can be approached from two different perspectives: well-being in childhood and well-being in adulthood. When looking at well-being in childhood, it is important to ensure well-being throughout the individual’s entire childhood by supporting the child and family through various social protection measures. On the other hand, child well-being can also be viewed from a future perspective (also referred to as *well-becoming*) – that is, the child as a future adult or as a member of the next generation whose coping abilities as an adult (including poverty risk) are influenced by such factors as whether the child has completed education and is able to participate in the labour market as an adult (Ben-Arieh 2008; see also Kutsar 2008; Reinomägi et al. 2014). Therefore, any kind of support granted to children through the national social protection system is seen as an investment in the future (see Avram and Militaru 2016). In summation, it is important to ensure well-being in childhood, because it forms the basis for the future well-being, i.e. in adulthood (Ben-Arieh 2008). This paper focuses on childhood economic well-being analysed on the basis of household income under the theoretical framework of new childhood sociology that views children as people existing in the here and now, and sharing a common social environment with adults (Ben-Arieh 2008; Casas 2011).

² The impact of all social transfers is presented in the analysis as background information.

When looking at child economic well-being it is also important to bear in mind that child poverty is not dependent on the child itself, instead it depends on the child's household, i.e., children have no control over the economic situation of their families, neither in terms of the family in which they are born nor what educational or employment choices their parents make (Bäckman and Ferrarini 2010). Thus, poverty affects not only the child but the entire household. Therefore, household income is directly linked to the child's individual well-being (TÁRKI 2011; Arcanjo, Bastos, Nunes and Passos 2013). As a general rule, annual relative child poverty rates are usually estimated on the basis of household income (Nygård, Lindberg, Nyqvist and Härtull 2019), but as the term itself suggests, it is a relative definition, describing overall income inequality. It fails, however, to indicate whether and for how many people this income is below or above the minimum standard of living (see also Nygård, Lindberg, Nyqvist and Härtull 2019; Chen and Corak 2008). In this respect, Estonia differs from other countries as it utilises the absolute poverty indicator in addition to the relative poverty indicator for measuring poverty.

At the same time, focusing on annual poverty rates does not provide sufficient information on the extent of child poverty. For example, there are children who may fall below the poverty threshold in a given year, but it fails to indicate whether they have been living in poverty for a longer period of time, i.e., several years (Bastos and Machado 2018). Consequently, it has been found that living in poverty on a permanent basis has more serious consequences as compared to short-term poverty, and that growing up in a poor household increases the likelihood of adult poverty, underscoring the case for reducing persistent poverty (Bastos and Machado 2018; Smith 2018; Bane and Ellwood 1986; Bellani and Bia 2017; Vaalavuo 2015; Jenkins and Siedler 2007). There have been several studies on the characteristics of child poverty, both in Estonia (e.g. Võrk and Paulus 2007; Võrk, Paulus and Leppik 2014) and elsewhere, demonstrating the impact of socio-demographic characteristics on child poverty, including the impact of being raised in a single-parent household (e.g. Biewen 2014; Bradbury, Jäntti and Lindahl 2019; Gornick and Jäntti 2012; Chen and Corak 2008). At the same time, there have not been many analyses that focus on persistent poverty or they employ methodology that differs from the one devised by Eurostat (e.g. Bane and Ellwood 1986; Jenkins 2000; Fouarge and Layte 2005; Vandecasteele 2010).

The Impact of Social Transfers

Household income and child economic well-being are also influenced by whether and how the government supports children and households with children. Thus, various financial support measures (i.e., *social transfers*) from the central government and the local authorities make up an important part of household income. Social transfers (i.e., social benefits or specific types of benefits) may be universal or means-tested cash benefits (family benefits, old-age pension, disability benefits, unemployment benefits, social assistance, housing allowances, sickness benefits, education related benefits, among others) paid periodically or lump-sum (Eurostat 2019). The scope of such support is one of the focal issues in social policy debates – whether and to what extent public support contributes to the better reallocation of economic resources and the reduction of poverty (Alcock 2006). In this context, an important distinction is made between the so-called new and old risks when designing social policy interventions. According to Taylor-Gooby (2005), such “old” risks mainly comprise horizontal redistribution (i.e., from working-age residents to children and retirees); whereas, the “new” risks are related to certain social groups at different stages of life, and unlike “old” risks, these “new” risks may carry over into the next phase of life (Taylor-Gooby 2005), i.e., child poverty may spill over into adulthood. In addition to the inadequacy of social transfers, there are also several other “new” risks that may affect child poverty, for example, opportunities available for parents to reconcile work and family life, single parenthood, etc. (Bonoli 2007; Taylor-Gooby 2005). Prior research has found that child and youth poverty rates are lower in countries that are better at mitigating these “new” risks (Esping-Andersen 2002).

Poverty rates are not the only indicators of the effects that social policy and other measures have on poverty. Additionally, it is important to look at the factors impacting the extent of poverty, as well as whether and to what extent the national social security system has managed to reduce it (Coppola and Di Laurea 2016). Previous studies have found that different types of social transfers have a significant effect on child poverty (see Matsaganis et al. 2006; Whiteford and Adema 2007; Avram and Militaru 2016; Chen and Corak 2008), although the effects vary across countries due to both socio-demographic factors and differences in welfare systems (e.g., Nygård, Lindberg, Nyqvist and Härtull 2019; Gornick and Jäntti 2012; Ferragina, Seeleib-Kaiser and Spreckelsen 2015). Often the focus is on the examination of interlinkages between social security expenditure and the extent of child poverty, and similarly, the situation varies considerably from one country to another, i.e., there are countries where both social security spending as a share of GDP and child relative poverty are low, and vice versa, i.e., child poverty rates remain high regardless of high spending (see Miežiene and Krutuliene 2019).

In most cases, the impact of social transfers has been examined by comparing poverty indicators before and after social transfers or using a micro-simulation model (Nygård, Lindberg, Nyqvist and Härtull 2019) to assess the differences in poverty rates and changes in income distribution, etc. In addition to a more general assessment of the impact of financial support, the impact of specific family benefits on poverty has also been examined. Previous studies have found that child poverty is primarily influenced by targeted support schemes (including means-tested benefits), but other studies have found universal benefits to exhibit a significant impact as well, especially when combined with measures aimed at specific target groups (Bárcena-Martín, Blanco-Arana and Pérez-Moreno 2018; Miežiene and Krutuliene 2019).

The studies conducted in Estonia or exploring child poverty in Estonia have primarily focused on annual poverty rates. For example, a micro-simulation model has been used to analyse the impact of family benefits on child poverty (see Vörk and Paulus 2007; Vörk, Paulus and Leppik 2014). In their first study, Vörk and Paulus (2007) found that family benefits had the greatest impact on the relative poverty of large families, and the smallest effect on single-parent families. Later, their next study found that children aged 0 to 2 are at the lowest risk of poverty, which was attributed to parental benefits that seemed to significantly reduce the risk of poverty until the child reaches the age of 1.5 years (Vörk, Paulus and Leppik 2014). Another reason was that in that age range the share of children living in a single-parent household is at the lowest. By contrast, the highest relative poverty rate was found in the age range between 13 and 17, which also had the highest share of single-parent households. In addition to these studies, there has also been some research into the impact of the social security system and taxes on income distribution as well as on relative child poverty (De Agostini, Paulus and Tasseva 2016).

Child Poverty and Family Benefits in Estonia

Estonia is one of the few countries where the annual and persistent relative poverty rate³ among children is lower than that of the overall population (OECD 2019, see also Sinisaar 2019). For example, based on the Eurostat data, in 2018⁴ the relative child poverty rate stood at 6.7 percentage points (pp), and persistent relative child poverty was 3.8 pp below the corresponding national figure. In addition to Estonia, there are eight other EU countries where the annual rate of persistent relative child poverty is lower than the corresponding indicator for the entire population. However, compared to the EU-27 average, both annual

³ The relative poverty rate shows the proportion of persons with an equivalised disposable income below the relative poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers. The persistent relative poverty refers to the population whose equivalised disposable income falls below the threshold of relative poverty in the last year observed, and at least in two other of the three years under observation. For a more detailed overview of the indicators, see the chapter on data and methodology.

⁴ Here and hereinafter, poverty rates are presented by survey year.

and persistent relative poverty among Estonian children in 2018 were 4.4 pp and 2.3 pp lower, respectively. Moreover, in 2018, the difference between relative poverty and persistent relative poverty among Estonian children was 3.4 pp. Only seven other EU countries reported even lower rates (Eurostat).

Overall, the rate of persistent relative poverty is generally lower than the relative poverty rate for a given year (Jenkins and Van Kerm 2012). However, it is also important to examine the difference between the two. For example, if the national persistent poverty rate is significantly lower than the percentage of people living below the relative poverty threshold in the current year, we can infer that only a small share of people living below the poverty threshold in a given year have been in poverty for several years (Biewen 2014). However, if the poverty rate and the rate of persistent poverty for a given year are very close, then it indicates that a large proportion of people in poverty that year have also been in poverty in previous years (Webber and Clark 2017). Child poverty indicators behave similarly to population-level indicators, i.e., if the rate of relative child poverty for a given year is high, then the proportion of children living in persistent relative poverty is also high (see Webber and Clark 2017; TÁRKI and APPLICIA 2010).

The rate of relative child poverty in Estonia has undergone significant changes between 2013 and 2018 (Table 1). For example, based on the Statistics Estonia ESS data, the proportion of children living in relative poverty increased until 2015, but this indicator has been in a steady decline ever since, reaching 15.2% in 2018. For comparison, in 2013 this indicator stood at 18.5% and at 20% in 2015. However, similar trends cannot be reported for persistent relative poverty among children. Over the course of same period, this indicator has been in continuous fluctuation. In 2018, the share of children living in persistent relative poverty stood at 11.7%. It is evident that the difference between the annual relative poverty rate and the persistent relative poverty rate has decreased significantly, i.e., from 10.6 pp in 2013 to 3.4 pp in 2018. Taking into account the results of previous research we can infer that a large percentage of children who were in relative poverty in 2018 had already been in relative poverty in the preceding years as well (see Webber and Clark 2017; TÁRKI and APPLICIA 2010).

Table 1. The relative poverty rate and persistent relative poverty rate among children, 2013–2016 (%)

Survey year	Relative poverty rate	Persistent relative poverty rate, 2016	Persistent relative poverty rate, 2017	Persistent relative poverty rate, 2018
2013	18.5	11.2	12.3	11.7
2014	19.7			
2015	20.0			
2016	18.6			
2017	16.5			
2018	15.2			

Source: Statistics Estonia, Estonian Social Survey 2013–2018 (income years 2012–2017); weighted data⁵; all figures are statistically significant (significance level 0.05); author's calculations.

In the EU, there is no data on the share of people living below the absolute poverty threshold because no common methodology has been established and, thus, it is not measured. However, this indicator is measured in Estonia⁶, and according to Statistics Estonia, absolute child poverty (Table 2) has been on a steady decline since 2014, with the biggest change occurring between 2017 and 2018 when the absolute child poverty rate fell to 3.5% and 2.5%, respectively (it stood at 10.2% in 2013). At the same time, persistent absolute poverty⁷ increased until 2014 but has been on a gradual decline, reaching 0.2% in 2018 (as

⁵ The analysis uses longitudinal personal weights in order to mitigate the effect of sample loss. The confidence intervals of main estimates are presented in annexed tables.

⁶ The absolute poverty rate shows the proportion of persons with an equivalised disposable income below the absolute poverty threshold, which is calculated on the basis of expenditure. For a more detailed overview of the indicator, see the chapter on data and methodology.

⁷ The persistent absolute poverty rate shows the proportion of persons whose equivalised disposable income falls below the threshold of absolute poverty in the last year observed, and at least in two other of the three years under observation.

compared to 3.3% in 2013 and 5.1% in 2014). Thus, the numbers indicate that the share of children living in persistent absolute poverty is more than 12 times lower compared to the annual rate. On the other hand, the data also shows that until 2017, the difference between the persistent poverty rate and the absolute poverty rate for a given year was steadily narrowing. In 2018, however, the gap widened again, and given the low rate of persistent absolute poverty, we estimate that there has been an increase in the share of children who may have fallen below the absolute poverty threshold in a given year but not in previous years. These changes in child poverty indicators raise the question of whether and to what extent they have been impacted by the changes introduced in Estonian family benefits system during the same period.

Table 2. The absolute poverty rate and persistent absolute poverty rate among children, 2013–2016 (%)

Survey year	Absolute poverty rate	Persistent absolute poverty rate, 2016	Persistent absolute poverty rate, 2017	Persistent absolute poverty rate, 2018
2013	10.2	2.7	1.8	0.2
2014	9.7			
2015	9.1			
2016	5.1			
2017	3.5			
2018	2.5			

Source: Statistics Estonia, Estonian Social Survey 2013–2018 (income years 2012–2017); weighted data; all figures are statistically significant (significance level 0.05); author's calculations

The Estonian Family Benefits System

The Estonian family benefits system includes both one-off and periodic social transfers, and also social transfers meant for all families or only those that belong to certain target groups (e.g, single-parent child allowance). In 2017, Estonia offered nine different support measures⁸ related to children, with child allowance as the primary type. The Estonian child allowance is a universal social transfer that does not depend on the family's income or the employment status of the child's parents. The child allowance is paid until the child reaches the age of 16, and the payment continues until the child reaches the age of 19 if the child pursues further education. Thus, all children are entitled to child allowance up to the age of 16 years, and that includes a large share of 17 to 18 year-olds as well. Monthly benefits include child allowance, child care allowance, single parent's child allowance, conscript's child allowance, guardianship allowance, and allowance for a family with many children. Single non-recurrent benefits include childbirth allowance and adoption allowance. The Estonian family benefit system also includes parental benefit (paid only until the child attains 1.5 years of age).

The child allowance rates remained unchanged for several years, but as of 1 July 2013, the monthly allowance for the third (and more) child was raised from 57.54 to 76.72 euros (Table 3). From the beginning of 2015, the monthly child allowance for the third (and more) child is 100 per month. Since the beginning of 2016, child allowance for the first and second child has also increased gradually from 19.18 euros to 50 euros per month in 2017. In addition, since the second half of 2017, families with at least three children began to receive an allowance for families with many children, i.e., 300 euros per month for families with 3 to 6 children, and 400 euros per month for families with 7 or more children. This new type of allowance replaced the previous allowance for families with seven or more children, which amounted to 168.74 euros per month. This means that as of mid-2017, the amount of family benefits for households with three children came to a total of €520⁹ per month, compared to €120 per month for households with two children.

⁸ Please see the support measures: <https://www.sotsiaalkindlustusamet.ee/en/family-and-child-protection/kinds-family-allowances>.

⁹ For comparison, in 2017, the monthly minimum wage stood at €470.

Table 3. The amount of child allowance and allowance for families with many children, 2013–2017 (in EUR)

Allowance type	2013	01.07.2013	2014	2015	2016	2017	01.07.2017
Child allowance, monthly							
1st child	19.18	19.18	19.18	45.00	50	50	50
2nd child	19.18	19.18	19.18	45.00	50	50	50
3rd and subsequent child	57.54	76.72	76.72	100.00	100	100	100
Parent's allowance for families with seven or more children, monthly	168.74	168.74	168.74	168.74	168.74	168.74	–
Allowance for families with many children, monthly							
for families with 3 to 6 children	–	–	–	–	–	–	300
for families with 7 or more children	–	–	–	–	–	–	400

Source: Family Benefits Act.

Considering that the increase in Estonian family benefits has primarily targeted families with three or more children, and that prior research on the impact of social transfers on poverty (see, for example, Võrk and Paulus 2007) has found that those families have witnessed the most significant impact, this paper estimates that the impact of family benefits on the reduction of child poverty is expected to be greater for children living in households with three or more children (compared to single children or those that live in households with two children).

According to the annual poverty rates released by Statistics Estonia, various family benefits, including the parental benefit, play an important part in reducing child poverty in Estonia. However, considering that the parental benefit is paid only for a relatively short period (approx. 1.5 years) after the child's birth, its impact on child poverty is markedly lower. Thus, we can infer that parental benefit would have an even smaller impact on persistent poverty, which is why the focus of the present paper is on the examination of the combined effect of various family benefits and allowances without distinguishing between different types.

Dataset and Methodology

The analysis is based on the data from the Estonian Social Survey (ESS) 2013–2018, conducted by Statistics Estonia as part of Eurostat's Income and Living Conditions Survey (EU-SILC). The EU-SILC is conducted in all EU countries following the same methodological principles with the aim of collecting comparable data on income and living conditions across the EU. Detailed data are collected on income components, social exclusion, housing, education and health. The EU-SILC and ESS provides cross-sectional data pertaining to a given time or a certain time period with variables on income, poverty, social exclusion and other living conditions and longitudinal data pertaining to individual-level changes over time, observed periodically over a four-year period (Eurostat; Statistics Estonia). This paper focuses on data from the ESS 2013–2018 survey because during that period several important changes were made in the Estonian family benefits system. Moreover, there have also been changes in methodology, and therefore, poverty indicators are not comparable to previous years. For example, since the 2013 survey, the data on income from employment and various social transfers is taken from national registries, not personal reporting as previously, resulting in a significant increase in poverty rates from 2012 to 2013. The survey sample includes all private households whose primary residence is registered in Estonia, including all household members who are not living permanently in institutions (e.g., children's or nursing homes). The survey is conducted retrospectively – that is, the 2018 survey collected income data for 2017, etc. (see also Peil and Hinno 2010).

In accordance with Eurostat's methodology (2019) for measuring persistent poverty, the dataset includes only the persons whose data is available for all four years under observation, and whose income data is not missing for any of those years. Household and household member identifiers are used to combine the datasets from the annual Estonian Social Survey, and to prepare a longitudinal database of persistent

poverty. Altogether, the persistent poverty dataset used in this study comprises data from three different panels:

- Longitudinal dataset from the Estonian Social Survey 2013–2016 with a sample of 3,044 people (incl. 499 children under the age of 18). The dataset includes income data from 2012 to 2015, and shall be used to calculate the persistent poverty rate for 2016;
- Longitudinal dataset from the Estonian Social Survey 2014–2017 with a sample of 3,185 people (incl. 557 children under the age of 18). The dataset includes income data from 2013 to 2014, and shall be used to calculate the persistent poverty rate for 2017.
- Longitudinal dataset from the Estonian Social Survey 2015–2018 with a sample of 2,864 people (incl. 492 children under the age of 18). The dataset includes income data from 2014 to 2017, and shall be used to calculate the persistent poverty rate for 2018.

This paper uses the following indicators for analysing child poverty rates both in relative and absolute terms:

- 1) **At-risk-of-poverty rate or relative poverty rate of children**,¹⁰ also referred to as the relative poverty rate after all social transfers, indicates the percentage of Estonians under the age of 18 whose equivalised disposable income falls below the relative poverty threshold. In Estonia, as in all other EU countries, the relative poverty threshold is set at 60% of the national median equivalised disposable income, using the following equivalence scales 1:0.5:0.3 (i.e., first household member aged 14 years or more counts as 1 person, each subsequent household member aged 14 year or more counts as 0.5 person, and each household member aged 13 or less counts as 0.3 person) (Eurostat).
- 2) **Absolute child poverty rate** refers to the percentage of Estonians under the age of 18 whose equivalised disposable income (including all social transfers) falls below the absolute poverty threshold. In Estonia, the absolute poverty threshold or subsistence minimum is calculated on the basis of expenditure, and the absolute poverty rate indicates the percentage of people whose monthly equivalised disposable income, using the following equivalence scales 1:0.7:0.5, falls below the absolute poverty threshold (i.e., first household member aged 14 years or more counts as 1 person, each subsequent household member aged 14 year or more counts as 0.7 person, and each household member aged 13 or less counts as 0.5 person) (Statistics Estonia; Tiit 2005; Laes 2013; Sinisaar 2015). The absolute poverty threshold, based on the methodology developed in 2004, comprises three primary components of expenditure: reference food basket (excluding alcohol and tobacco products), housing expenses, and personal non-food items (Tiit 2005).
- 3) **Persistent absolute or relative child poverty rate** refers to the percentage of the population under the age of 18 whose equivalised disposable income falls below the threshold of either relative or absolute poverty in the last year observed, and at least in two other years of the three years under observation (Eurostat 2019; Statistics Estonia).
- 4) **The relative or absolute rate of (persistent) child poverty before family benefits or all social transfers** indicates the percentage of people under the age of 18 whose equivalised disposable income falls below the poverty threshold if family benefits or all social transfers¹¹ are discounted from household income (Eurostat). This amounts to a hypothetical rate of poverty that looks at the economic situation of households without any social transfers.

¹⁰ Here and hereinafter, all household members under the age of 18 are considered to be children. A person's age is determined as at January 1st of the year of the survey.

¹¹ Generally, pensions (e.g., old-age and survivor's pension) are accounted as an equivalent of income from paid employment, and are, consequently, excluded from indicators reflecting the impact of all social transfers (Eurostat).

All poverty indicators used in the analysis are calculated on the basis of Eurostat methodology for calculating total disposable household income that includes income from work (both from paid employment as well as personal income from any other work performed), property income, social transfers, any regular payments from other households, as well as income tax refunds. Any regular payments made to other households, property taxes, and additional income tax paid, are deducted from this sum (Eurostat 2019).

Considering that no equivalent studies in Estonia or the EU have attempted to analyse the impact of social transfers on persistent poverty, the present paper takes guidance from Eurostat's methodology on annual poverty rates where the impact of benefits on poverty is calculated by deducting all social transfers or specific benefits from household income, and that figure is then used to re-calculate the poverty rate. Thus, the social transfers under examination in this paper have been deducted from annual total disposable household income (as reported in the surveys), and the resulting figures have been used to re-calculate the rates of (persistent) poverty. The effect that social transfers have on poverty is measured by comparing poverty rates before and after the allocation of social transfers, both in the case of annual poverty rates as well as persistent poverty rates. The impact of all social transfers excluding pensions is presented in the analysis as background information.

In addition, for the purposes of analysing the impact of family benefits and allowances, the family/children related allowances categorised by Eurostat under HY050N, shall also be deducted from the total disposable household income (code HY020) (Eurostat 2019). Furthermore, this analysis uses the micro-simulation approach to assess the potential impact of increased benefits, thereby establishing a theoretical situation where the increased family benefits introduced in early 2013 would have been in force throughout the whole period under observation, i.e., the benefits would not have increased, resulting in a lower total disposable household income. The analysis looks at the effect of social transfers both in relative (percentages) and in absolute terms (percentage points) in order to account for both the level of poverty as well as the extent of impact (Miežienė and Krutulienė 2019).

The extent of persistent child poverty and the impact of family benefits is analysed in this paper on the basis of descriptive statistics. In addition, poverty rates are supplemented with confidence intervals to account for any losses in the longitudinal dataset sample (Jenkins and Van Kerm 2017). All reported results are generalised to the total population, using corresponding longitudinal weights assigned by Statistics Estonia for respective datasets.

Results

The Impact of Family Benefits on Annual Poverty Rates

Although the Estonian family benefits increased slightly in the second half of 2013, their effect on the 2014 poverty figures was not significant.¹² However, 2015 ushered in a higher increase in family benefits, which had a marked effect on poverty reduction. The relative and absolute child poverty rates (without family benefits) would have been 8.5 pp and 7.2 pp higher in 2016, i.e., the poverty reduction effect in relative terms¹³ on relative poverty was 31% and on absolute poverty 59% (Figure 1, Table A1¹⁴ and Table A2). Additionally, it is evident that with the introduction of a new type of allowance for families with many

¹² In this context, and henceforth, it is important to bear in mind that 2016 refers to the year of the survey and the income it reflects if for 2015. This means that if family benefits increased in 2015, the effect will be reflected in the poverty rates reported in the 2016 survey.

¹³ The effect of social transfers on the reduction of the poverty rate in percentages (calculated by comparing poverty rates before family benefits and after all social transfers).

¹⁴ Tables with an "A" are in the Appendix.

children, the overall impact of family benefits on poverty reduction also increased. For example, without family benefits, the 2018 relative child poverty rate would have been 10.6 pp, and absolute poverty would have been 4.9 pp higher (i.e., family benefits reduced relative poverty rate by 41% and absolute poverty by 66%, see Table A2). At the same time, it must be taken into account that the impact of family benefits is contingent upon other factors as well, e.g., changes in total household income, which mostly comprises the parents' income from work. The more their income increases, the greater the likelihood that the family will move farther away from the poverty line, which, in turn, will also affect the extent of the impact of family benefits.

In order to distinguish the potential impact of increased family benefits, this paper utilizes a micro-simulation approach to create a hypothetical situation where child benefits would have remained at 2013 levels (as at January 1st, 2013) throughout the entire period under observation and without the addition of allowance for families with many children, introduced in 2015. This hypothetical situation demonstrates that the impact of family benefits on child poverty would have been significantly lower between 2016 and 2018 (the effect on poverty rates in earlier years was not significant). If there had not been an increase in family benefits, the relative child poverty rate for 2016 would have stood at 20.1% and the absolute child poverty rate at 6.3%. As expected, a markedly increased impact is evident in 2018 when the relative child poverty rate would have been 4.4 pp higher (the poverty reduction effect in relative terms was 22%). What is more, the impact on absolute poverty would also have been smaller in such circumstances – more children would have been below the absolute poverty line.

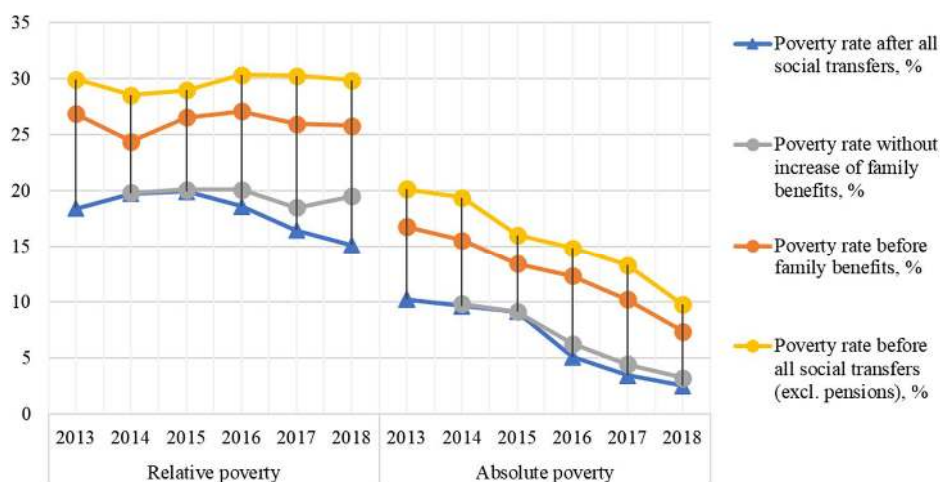


Figure 1. Relative and absolute poverty rate among children before family benefits and after social transfers, 2013–2018 (%)

Source: Statistics Estonia, weighted data from the Estonian Social Survey 2013–2018 (income years 2012–2017); these figures are statistically significant (significance level 0.05); author's calculations.

The Impact of Family Benefits on Persistent Poverty

Taking into consideration that the reduction of prolonged periods of living in poverty is critical in order to ensure the well-being of children, the primary focus of this analysis is to assess the impact of family benefits on persistent poverty. The data indicates that both persistent absolute poverty as well as persistent relative poverty among children would have been significantly higher without family benefits. Furthermore, the comparison of the three panels demonstrates that the impact had increased by 2018 (Figure 2, Table A3 and Table A4). When comparing the two poverty indicators – relative and absolute poverty – the relative effect of family benefits is greater in terms of reducing persistent absolute poverty (Table A4). Moreover, Figure 2 demonstrates that the effect of family benefits on poverty reduction increased significantly in 2018, i.e., without family benefits, the persistent absolute child poverty would have been 5.5 pp and the persistent

relative child poverty rate would have been 7.9 pp higher (poverty reduction effect in relative terms was 97% and 40%, respectively). However, it is important to note with regard to the estimates of both relative and absolute impact that although the 2018 persistent absolute poverty rate was statistically significant, its absolute value was only 0.2%. Additionally, the difference in the impact of the increase in family benefits on persistent absolute and relative poverty is also confirmed by the hypothetical situation where the benefits did not increase.

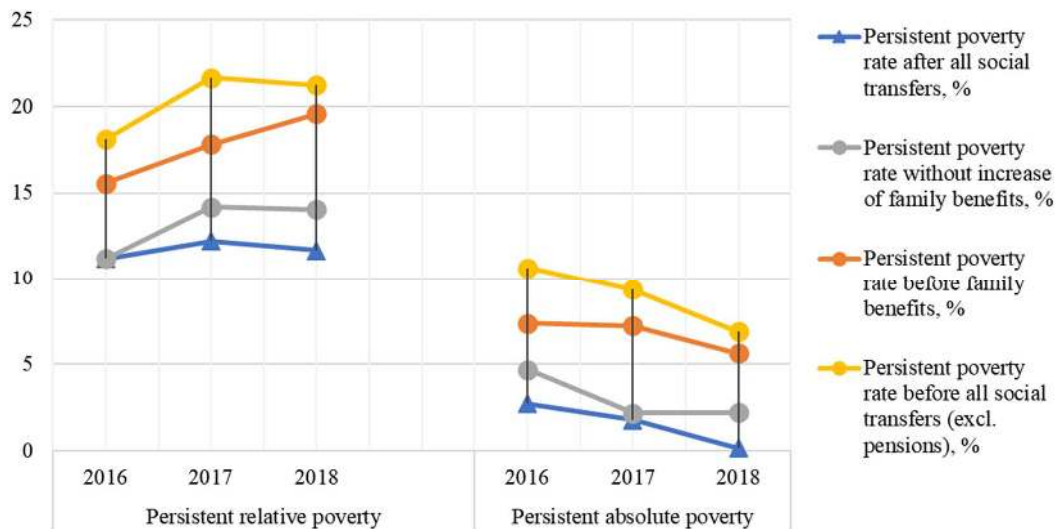


Figure 2. Persistent relative and absolute poverty rate among children before family benefits and after social transfers, 2016–2018 (%)

Source: Statistics Estonia, weighted data from the Estonian Social Survey (panels for 2013–2016, 2014–2017, 2015–2018; income years 2012–2016); these figures are statistically significant (significance level 0.05); author's calculations.

Impact of Family Benefits on Child Poverty based on the Number of Children

It is widely recognised that people living in households with fewer working-age members and more dependent members (e.g., children, unemployed) are at a higher risk of poverty. Considering that the allowance for families with many children, introduced in 2017, is reflected in the poverty rates for 2018, it can be surmised that the increase in family benefits has had a significant impact, in particular, on children who have several siblings (Figure 3 and Table A5).

Throughout the years and similarly to many other countries, Estonian children who have several siblings, have been at the highest risk of poverty. However, during the period under observation, there has been a significant reduction in the relative poverty rate among children living in families with three or more children – from 24.7% in 2013 to 16.5% in 2018 (Figure 3). Moreover, during the same period, there has also been a reduction in the relative poverty rate among children who do not have siblings, and those who have only one sibling.

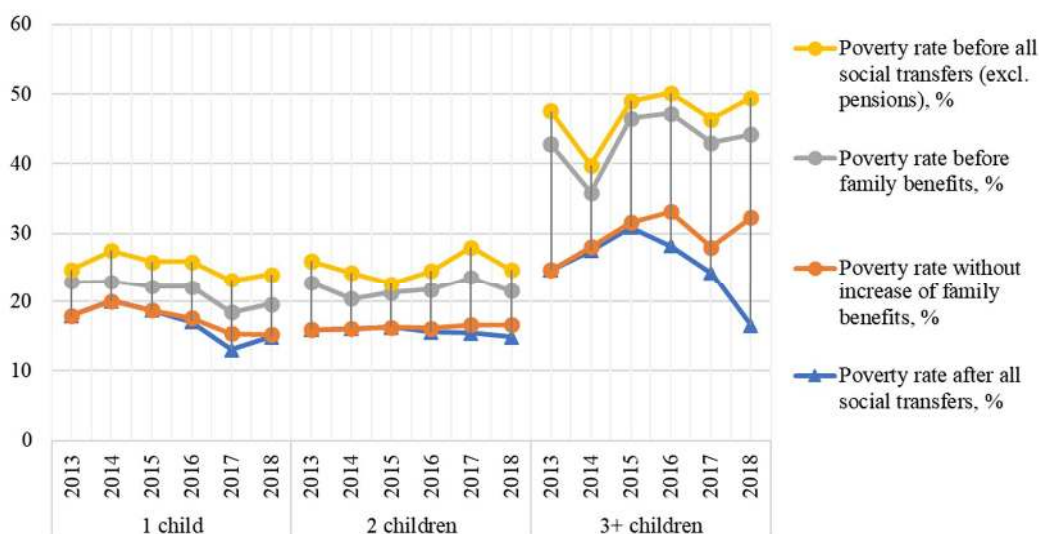


Figure 3. The relative poverty rate among children before family benefits and after social transfers based on the number of children in the household, 2013–2018 (%)

Source: Statistics Estonia, weighted data from the Estonian Social Survey 2013–2018 (income years 2012–2017); these figures are statistically significant (significance level 0.05); author’s calculations.

Most importantly, the data indicate an even more marked reduction in the extent of absolute poverty – from 14.4% in 2013 to 2.4% in 2018 – among children living in households with three or more children (see Figure 4 and Table A5). Additionally, there has also been a reduction in absolute poverty among single children or children living with one sibling, although in those cases the rate of reduction is lower. Thus, it is possible to surmise that poverty rates among children living together with several siblings have been affected by the increase in child benefits for the third and any subsequent children and by the newly introduced additional allowance for families with many children. At the same time, it is important to bear in mind that those figures are also affected to some extent by the increase in child benefits for the first and second child (since 2015) because those transfers also affect the total amount of household family benefits and consequently also the net income that is used to calculate poverty rates.

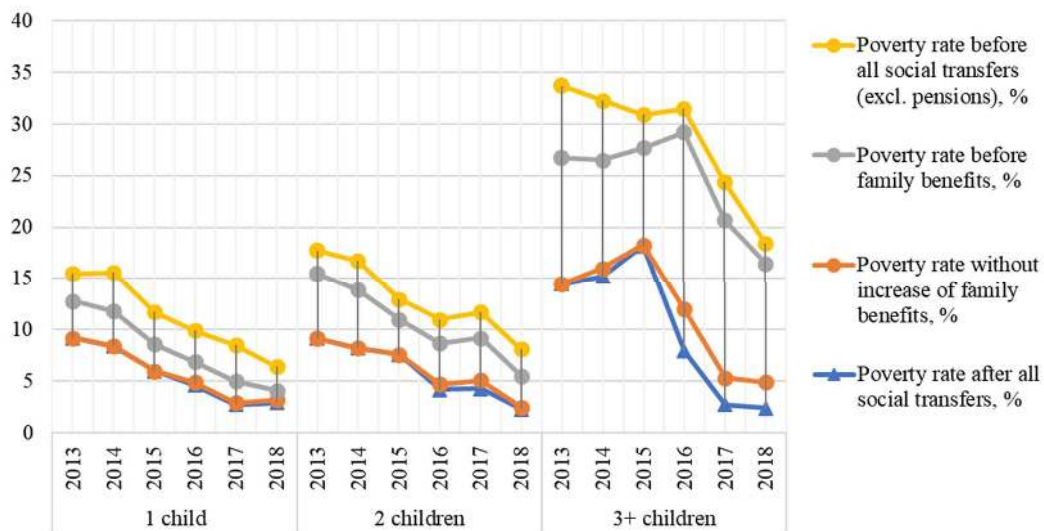


Figure 4. The absolute poverty rate among children before family benefits and after social transfers based on the number of children in the household, 2013–2018 (%)

Source: Statistics Estonia, weighted data from the Estonian Social Survey 2013–2018 (income years 2012–2017); these figures are statistically significant (significance level 0.05); author’s calculations.

The impact of family benefits on the situation of children living in households with three or more children is even more strongly evident when looking at data on persistent relative poverty (Figure 5 and Table A6). Namely, the data indicate that without family benefits there would be an increase in the persistent relative poverty rate of single children and children living with one sibling; however, it would be even more marked for households with three or more children. An important indicator of the significance of family benefits is the fact that the persistent relative poverty rate among children living in households with three or more children without all social transfers is equivalent to the situation without family benefits, i.e., family benefits constitute the most critical part of the impact of social transfers for those families (Table A6). Comparatively, such effect is not evident with regard to indicators of persistent relative poverty among children living in households with one or two children. However, by 2018, the share of children living below the absolute poverty threshold was so small that poverty rates after all social transfers are not statistically reliable. At the same time, it is also evident that without any family benefits at all the absolute poverty rate for children living in households with three or more children would be close to 25%.

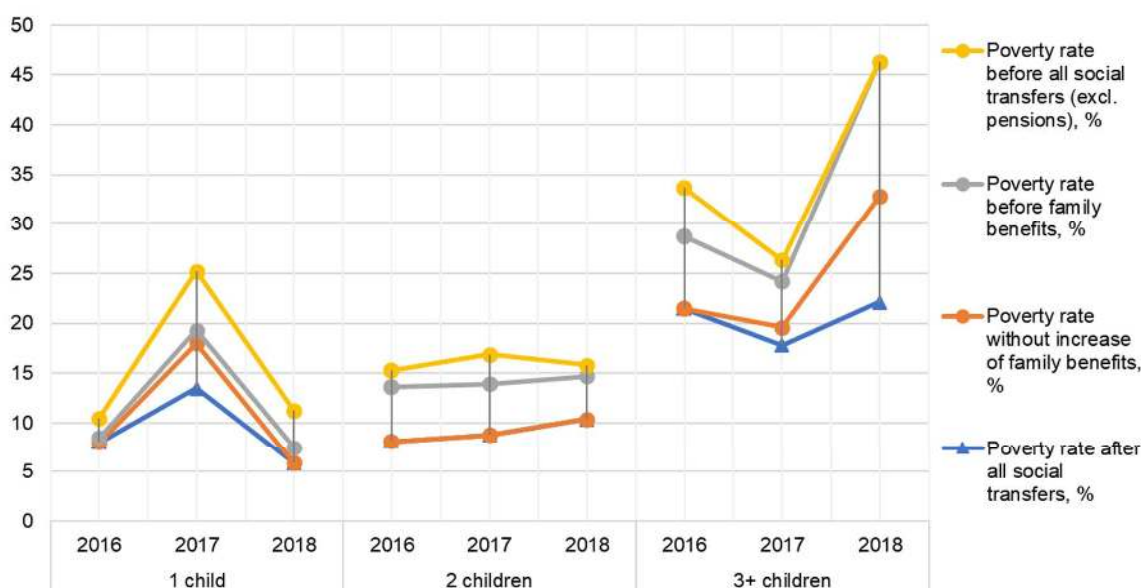


Figure 5. The persistent relative poverty among children before family benefits and after social transfers based on number of children in the household, 2016–2018 (%)

Statistics Estonia, weighted data from the Estonian Social Survey (panels for 2013–2016, 2014–2017, 2015–2018; income years 2012–2016); these figures are statistically significant (significance level 0.05); author’s calculations.

Conclusions

This article is the first to address the impact of family benefits on persistent poverty, providing valuable new input for both the planning process of the EU’s social exclusion and poverty reduction programmes, as well as for planning the activities of various programmes in Estonia. In recent years, children’s economic well-being has become a prominent topic of discussion in Estonia, both in terms of shaping various social protection benefits as well as related services (the latter are usually not taken into account when analysing the impact of poverty, including in this paper). In Estonia, the rates of national family benefits have been increasing since 2013, primarily targeting larger families with three or more children, although the benefits for families with one or two children have also slightly increased.

According to the Estonian Social Survey 2013–2018, both annual child poverty and persistent poverty have decreased. The analysis indicates that has been primarily due to increased family benefits. Over the course of the period under observation, the impact of family benefits on the reduction of both relative and absolute

poverty among children has been on the rise in Estonia. At the same time, the impact of family benefits on absolute child poverty has increased in relative terms; however, when analysing the impact in percentage points, the impact seems to have diminished to some extent. Nevertheless, the analysis of the hypothetical situation demonstrated that if family benefits had not increased, the rates of absolute child poverty would have been significantly higher in absolute terms. Thus, the impact of family benefits on the reduction of relative child poverty has increased over the period considered both in absolute as well as in relative terms. On the other hand, the situation is different when looking at persistent child poverty. In cases of both persistent relative poverty as well as persistent absolute poverty, the impact of family benefits on poverty reduction has increased both in percentage shares as well as in percentage points. At the same time, in addition to reducing the number of children living in poverty, it is important for the government to contribute to the minimisation of the number of people who live at risk of poverty, i.e., the family's income should not veer so close to the poverty line that even minor changes would push the family back below the threshold.

This analysis focused on whether and to what extent family benefits contributed to the reduction of the share of children who would be at risk of poverty without them – that is, children who did not live below the poverty line, but who would come close to the poverty line, without those social transfers, that even minor changes in household income would thrust them into poverty. Such analysis might provide further information also on the reasons why the rate of persistent relative poverty among children has not changed significantly over the period under observation.

In Estonia, the increases in family benefits have primarily targeted families with three or more children, and previous research on the impact of benefits on poverty (e.g., Vörk and Paulus 2007) has found that based on the number of children, those families have benefitted the most. The results confirm that targeted social transfers, such as those for families with three or more children, have a significant impact on the reduction of child poverty. In addition, both annual and persistent poverty data demonstrate that child poverty is affected by the number of dependants in the family (in this context, the number of children under the age of 18). While in the past, children who lived in families with several siblings were the most at risk of poverty, those numbers have declined in recent years. This change has been evident since the increase in child benefits and therefore it can be surmised that the above-mentioned changes have had a positive impact on the reduction of child poverty. Nevertheless, the present analysis has several limitations. First, the paper focused only on the impact of family benefits without examining other factors affecting children's descent into poverty. Secondly, it is important to bear in mind that additional measures for assessing persistent absolute poverty are needed because persistent absolute poverty rate among children has fallen to such levels that do not allow for a more detailed analysis of statistically significant estimates.

The analysis focused on family benefits, but subsequent research would need to look further into the impact on child poverty borne by such factors as, for example, parents' work intensity, salaries, etc. What is more, the analysis did not analyse the cost-effectiveness of social transfers – that is, how much the government spends on family benefits and its impact on the reduction on child poverty. Overall, children's economic well-being should be analysed consistently from different perspectives.

Appendix

Table A1. Annual poverty rates among children before family benefits and after social transfers, 2013–2018

	2013		2014		2015		2016		2017		2018	
	Poverty rate, %	CI 95% (±)	Poverty rate, %	CI 95% (±)	Poverty rate, %	CI 95% (±)	Poverty rate, %	CI 95% (±)	Poverty rate, %	CI 95% (±)	Poverty rate, %	CI 95% (±)
Relative poverty												
Relative poverty rate after all social transfers, %	18.5	1.5	19.7	1.5	20.0	1.5	18.6	1.5	16.5	1.4	15.2	1.3
Relative poverty rate without increase of family benefits, %			19.8	1.5	20.1	1.5	20.1	6.5	18.5	1.5	19.5	1.5
Relative poverty rate before family benefits, %	26.9	1.7	24.4	1.7	26.5	1.7	27.1	1.6	26.0	1.6	25.8	1.6
Relative poverty rate before social transfers (excl. pensions), %	29.9	1.7	28.5	1.7	29.0	1.7	30.3	1.7	30.3	1.7	29.9	1.7
Absolute poverty												
Absolute poverty rate after all social transfers, %	10.2	1.2	9.7	1.1	9.1	1.1	5.1	0.8	3.5	0.7	2.5	0.6
Absolute poverty rate without increase of family benefits, %			9.8	1.1	9.1	1.1	6.3	0.9	4.4	0.8	3.2	0.7
Absolute poverty rate before family benefits, %	16.8	1.4	15.6	1.4	13.4	1.3	12.3	1.3	10.2	1.1	7.4	1.0
Absolute poverty rate before social transfers (excl. pensions), %	20.2	1.6	19.4	1.5	16.1	1.4	14.9	1.4	13.3	1.3	9.8	1.2

Source: Statistics Estonia, Estonian Social Survey 2013–2018 (income years 2012–2017); these figures are statistically significant (significance level 0.05); CI 95% – confidence intervals; author's calculations.

Table A2. Effect of family benefits on annual poverty rates among children, 2013–2018

	2013	2014	2015	2016	2017	2018
Relative effect (percentage)						
Effect of all social transfers (excl. pensions) on relative poverty	38	31	31	39	46	49
Effect of family benefits on relative poverty	31	19	25	31	37	41
Effect of increased family benefits on relative poverty		1	1	7	11	22
Effect of all social transfers (excl. pensions) on absolute poverty	49	50	43	66	74	74
Effect of family benefits on absolute poverty	39	38	32	59	66	66
Effect of increased family benefits on absolute poverty		2	0	19	22	22
Absolute effect (percentage points)						
Effect of all social transfers (excl. pensions) on relative poverty	11.5	8.8	9.0	11.7	13.8	14.7
Effect of family benefits on relative poverty	8.4	4.7	6.6	8.5	9.5	10.6
Effect of increased family benefits on relative poverty		0.1	0.1	1.5	2.1	4.4
Effect of all social transfers (excl. pensions) on absolute poverty	9.9	9.7	6.9	9.8	9.8	7.2
Effect of family benefits on absolute poverty	6.6	5.9	4.3	7.2	6.8	4.9
Effect of increased family benefits on absolute poverty	0	0.2	0.0	1.2	1.0	0.7

Source: Statistics Estonia, Estonian Social Survey 2013–2018 (income years 2012–2017); these figures are statistically significant (significance level 0.05); author's calculations.

Table A3. Persistent poverty rates among children before family benefits and after social transfers, 2016–2018

	2016		2017		2018	
	Poverty rate, %	CI 95% (±)	Poverty rate, %	CI 95% (±)	Poverty rate, %	CI 95% (±)
Persistent relative poverty						
Persistent relative poverty rate after all social transfers	11.2	3.1	12.3	3.0	11.7	2.9
Persistent relative poverty rate without increase of family benefits	11.2	3.1	14.2	3.1	14.1	3.1
Persistent relative poverty rate before family benefits	15.6	3.6	17.8	3.4	19.6	3.6
Persistent relative poverty rate before social transfers (excl. pensions)	18.1	3.8	21.7	3.6	21.2	3.8
Persistent absolute poverty						
Persistent absolute poverty rate after all social transfers	2.7	1.6	1.8	0.9	0.2	0.8
Persistent absolute poverty rate without increase of family benefits	4.7	1.9	2.2	1.2	2.2	1.3
Persistent absolute poverty rate before family benefits	7.4	2.6	7.2	2.6	5.6	2.2
Persistent absolute poverty rate before social transfers (excl. pensions)	10.7	3.2	9.3	2.8	6.9	2.5

Statistics Estonia, Estonian Social Survey (panels for 2013–2016, 2014–2017, 2015–2018; income years 2012–2016); these figures are statistically significant (significance level 0.05); CI 95% – confidence intervals; author’s calculations.

Table A4. Effect of family benefits on persistent poverty rates among children, 2013–2018

	2016	2017	2018
Relative effect (percentage)			
Effect of all social transfers (excl. pensions) on persistent relative poverty	38	43	45
Effect of family benefits on persistent relative poverty	28	31	40
Effect of increased family benefits on persistent relative poverty	0	14	17
Effect of all social transfers (excl. pensions) on persistent absolute poverty	74	81	98
Effect of family benefits on persistent absolute poverty	63	75	97
Effect of increased family benefits on persistent absolute poverty	42	18	93
Absolute effect (percentage points)			
Effect of all social transfers (excl. pensions) on persistent relative poverty	6.9	9.4	9.5
Effect of family benefits on persistent relative poverty	4.4	5.6	7.9
Effect of increased family benefits on persistent relative poverty	0.0	2.0	2.4
Effect of all social transfers (excl. pensions) on persistent absolute poverty	7.9	7.6	6.7
Effect of family benefits on persistent absolute poverty	4.6	5.4	5.5
Effect of increased family benefits on persistent absolute poverty	2.0	0.4	2.0

Statistics Estonia, Estonian Social Survey (panels for 2013–2016, 2014–2017, 2015–2018; income years 2012–2016); these figures are statistically significant (significance level 0.05); author’s calculations.

Table A5. Annual poverty rates among children before family benefits and after social transfers based on the number of children in the household, 2013–2018

No of children	Year	Relative poverty rate after all social transfers, %	Relative poverty rate without increase of family benefits, %	Relative poverty rate before family benefits, %	Relative poverty rate before all social transfers (excl. pensions), %	Absolute poverty rate after all social transfers, %	Absolute poverty rate without increase of family benefits, %	Absolute poverty rate before family benefits, %	Absolute poverty rate before all social transfers (excl. pensions), %
1 child	2013	17.9		22.9	24.8	9.2		12.8	15.5
	2014	20	20	23	27.5	8.4	8.4	11.8	15.6
	2015	18.7	18.7	22.2	25.9	6	6	8.6	11.7
	2016	17	17.6	22.1	25.9	4.6	4.9	6.9	9.9
	2017	13	15.3	18.4	23.2	2.7	2.9	5	8.5
	2018	14.8	15.2	19.6	24.1	2.9	3.2	4.1	6.4
2 children	2013	15.9		22.7	26	9.1		15.5	17.7
	2014	16	16	20.4	24.3	8.2	8.2	13.9	16.7
	2015	16.2	16.2	21.3	22.7	7.6	7.6	11	13
	2016	15.5	16.1	21.7	24.6	4.2	4.7	8.7	11
	2017	15.4	16.6	23.6	28	4.3	5.1	9.2	11.7
	2018	14.8	16.6	21.5	24.7	2.3	2.5	5.5	8.1
3+ children	2013	24.7		42.8	47.5	14.4		26.7	33.7
	2014	27.5	28.1	35.9	39.8	15.2	16	26.5	32.3
	2015	30.9	31.6	46.5	49	18.2	18.3	27.7	30.9
	2016	28.2	33.1	47.2	50.2	7.9	12	29.2	31.5
	2017	24.3	28	43	46.4	2.7	5.3	20.7	24.4
	2018	16.5	32.3	44.2	49.5	2.4	4.9	16.5	18.4

Source: Statistics Estonia, Estonian Social Survey 2013–2018 (income years 2012–2017); these figures are statistically significant (significance level 0.05); author's calculations.

Table A6. The persistent relative poverty rate among children before family benefits and after social transfers based on the number of children in the household, 2013–2018

	1 child			2 children			3+ children		
	2016	2017	2018	2016	2017	2018	2016	2017	2018
Persistent relative poverty rate after all social transfers, %	8.0	13.5	5.9	8.1	8.8	10.4	21.5	17.8	22.1
Persistent relative poverty rate without increase of family benefits, %	8.0	18.0	5.9	8.1	8.8	10.4	21.5	19.6	32.8
Persistent relative poverty rate before family benefits, %	8.5	19.3	7.5	13.6	13.9	14.7	28.7	24.2	46.3
Persistent relative poverty rate before all social transfers (excl. pensions), %	10.5	25.2	11.2	15.3	16.9	15.8	33.7	26.3	46.3

Statistics Estonia, Estonian Social Survey (panels for 2013–2016, 2014–2017, 2015–2018; income years 2012–2016); these figures are statistically significant (significance level 0.05); author's calculations.

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