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06|2022 Universal, targeted or both: Effects of different child support policies on labour supply and poverty - A simulation study

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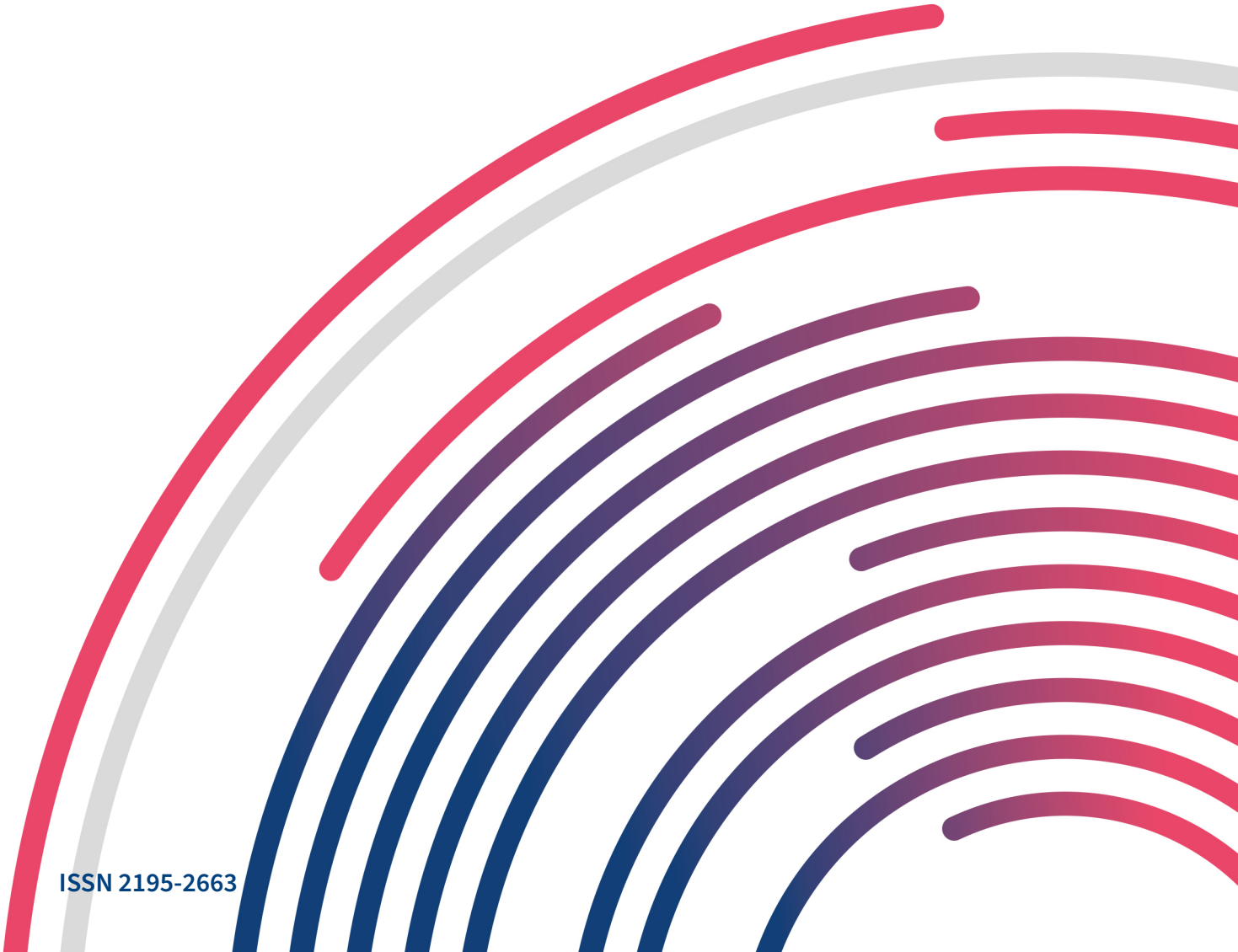

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Universal, targeted or both: Effects of different child support policies on labour supply and poverty - A simulation study

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Mit der Reihe „IAB-Discussion Paper“ will das Forschungsinstitut der Bundesagentur für Arbeit den Dialog mit der externen Wissenschaft intensivieren. Durch die rasche Verbreitung von Forschungsergebnissen über das Internet soll noch vor Drucklegung Kritik angeregt und Qualität gesichert werden.

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Contents

Abstract

We study a set of hypothetical reforms of child benefits in Germany, using a static tax-benefit microsimulation model augmented with endogenous labour supply and take-up choices (IAB-MSM). We distinguish between a reform of the universal non-means-tested child benefit, a reform of the mean-tested child benefit under the minimum income scheme, and a combination of both. Since the reforms are associated with different fiscal costs, we consider two different budget closures: an increase in the income tax or a consumption tax. The model simulates the impacts of the reforms on household income, poverty and labour supply. We find that improvements in the means-tested child benefit are well-targeted: They provide a high level of poverty reduction with a low fiscal impact at the cost of reduced labour supply incentives for low-income families. When unconditional benefits are increased, the effect on overall income inequality is more pronounced at the cost of reduced labour supply incentives for middle- and high-income families. Finally, when combined, the two approaches show synergies, particularly in the form of improved poverty reduction.

Zusammenfassung

Wir untersuchen hypothetische Reformen der wichtigsten Transferleistungen für Kinder in Deutschland: eine Reform des nicht bedarfsgeprüften Kindergeldes, eine Reform der Kinderregelbedarfe im Rahmen der Grundsicherung und eine Kombination aus beiden Leistungen. Mit Hilfe eines statischen Steuer-Transfer Mikrosimulationsmodells (IAB-MSM), das auch endogene Arbeitsangebots- und Inanspruchnahmeentscheidungen abbildet, untersuchen wir die Auswirkungen der Reformen auf die Einkommensverteilung, relative Armut und das Arbeitsangebot von Eltern. Da die Reformen mit unterschiedlichen fiskalischen Kosten verbunden sind, verwenden wir zwei alternative Ansätze zum Ausgleich des Staatshaushalts: eine Erhöhung der Einkommensteuer oder eine erhöhte Konsumsteuer. Wir zeigen, dass eine Erhöhung der Kinderregelbedarfe zu einer erheblichen Verringerung der relativen Armut bei gleichzeitig relativ geringen fiskalischen Kosten führt. Allerdings ist die Erhöhung der Kinderregelbedarfe mit einem Rückgang des Arbeitsangebots von Familien mit niedrigem Einkommen verbunden. Eine alternative Erhöhung des Kindergeldes wirkt sich vergleichsweise stärker auf den Rückgang der Einkommensungleichheit (gemessen am Gini-Koeffizienten) aus, allerdings auf Kosten geringerer Arbeitsanreize für Familien mit mittlerem und hohem Einkommen. Die Gegenfinanzierung der Reformkosten - insbesondere bei einer progressiv wirkenden Einkommensteuererhöhung - verstärkt den Rückgang der relativen Armut und der Einkommensungleichheit, während gleichzeitig das Arbeitskräfteangebot erheblich reduziert wird.

JEL

C15, D31, H53, I38

Keywords

child benefits, inequality, labour supply, microsimulation

1. Introduction

Recent reform proposals in the European Union (EU) have advanced the idea of a new "child guarantee". In 2015 the European Parliament asked the European Commission to "introduce a Child Guarantee so that every child in poverty can have access to free healthcare, free education, free childcare, decent housing and adequate nutrition" (Frazer/Guio/Marlier, 2020). Recently, the Employment, Social Policy, Health and Consumer Affairs Council has adopted the proposal on establishing a European Child Guarantee.[1] However, while the basic child guarantee emphasises the goal of guaranteeing children access to key services, policy approaches to combat child poverty and social exclusion and their underlying concepts are broad and can take different forms. Among various approaches, child-related income support payments to families represent the classic policy approach to addressing financial poverty and material deprivation among children (Dahl, 2020). Hence, income poverty plays an important role in evaluating the effectiveness of child-related benefit programmes. According to Eurostat and based on data from the EU Statistics on Income and Living Conditions (EU-SILC), 24.2 percent of children in the EU were at risk of poverty or social exclusion in 2020. The level, design and accessibility of child-related benefits have also gained importance in the political debate following the Corona crisis and the temporary adjustments made to social benefit systems in many countries (Baptista et al., 2021).

Within the EU, children in Germany have a moderate risk of poverty (Bruckmayer/Picken/Janta, 2020; Frazer/Guio/Marlier, 2020), but within Germany, children have an above-average risk of poverty, mainly due to living in single-parent households (Fertig/Tamm, 2010). Several political parties in Germany denounced that the current minimum income scheme would leave many children out of adequate protection. On top of the insufficient benefit level, the current system is also seen as too complex, which is reflected in low benefit take-up rates (Bruckmeier/Wiemers, 2011b, 2018a), meaning that many households who are entitled to a means-tested child benefit do not claim it. It is therefore not surprising that the idea of a "child guarantee" has also found its way into the German political debate. In its coalition agreement, the German government elected in 2021 sets out the introduction of a basic child allowance to protect children from poverty.

In this paper we examine the effects of increasing the level of two existing child-related benefits to families on the income distribution and child poverty in Germany. We distinguish between reforming universal, non-means-tested child benefits, reforming

[1] See Council of the EU Press release 14 June 2021, https://www.consilium.europa.eu/en/press/press-releases/2021/06/14/access-to-key-services-for-children-in-need-council-agrees-european-child-guarantee/.

mean-tested child benefits included in the minimum income scheme, and a combination of both. These stylised reform scenarios mimic important characteristics of actual proposals in the current political debate in Germany. In addition to changes in income, we report the fiscal costs of the reforms and present reform effects with and without refinancing. In the case of refinancing, we distinguish between financing the costs of the reform through an income tax increase and through a consumption tax increase. Assessing the fiscal impact of potential benefit reforms may become more important given the new fiscal pressures caused by the Corona crisis in many countries.

Our analysis employs the microsimulation model of the Institute for Employment Research, IAB-MSM, to simulate changes in the benefit system. IAB-MSM provides a detailed implementation of the German tax and benefit system and is based on rich survey data from the German Socio-Economic Panel (GSOEP). The GSOEP allows for a characterisation of each individual household (and of its individual members) that includes demographic information, employment status, current and past worked hours, different sources of income, housing conditions and region of residence.

Since children in most cases do not earn their own income, their economic situation is determined by the household to which they belong. Moreover, eligibility for means-tested child benefit policies also depends on the household's economic situation. This close link between the overall economic situation of a household and child benefit policies also implies that the latter may distort the behaviour of other members of the household. The way means-testing, the marginal benefit reduction rate for earned income, and interactions with other social policies are designed may affect parents' labour supply or consumption patterns in non-trivial ways. Therefore, our approach takes into account potential employment effects of increasing child benefits triggered by a change in labour supply. The IAB-MSM simulates changes in labour supply due to a policy reform based on an econometrically estimated labour supply model. Our model also allows us to take into account and endogenise benefit non-take-up, which is especially important for assessing the effect of an increase in means-tested benefits.

Our paper contributes to the literature in several ways. First and foremost, we extend the relatively small amount of research on this topic for Germany and relate it to the most recent reform proposals. In a broader perspective, our paper is also related to studies that focus on the effectiveness of the design of social benefits in reducing poverty, as we provide an in-depth analysis of the two components of a basic child income (unconditional and means-tested benefits) and the different outcomes obtained in terms of income distribution, poverty risk and labour supply. In contrast to many microsimulation studies, we explicitly include labour supply effects in our analysis and thus also contribute to the literature examining the relationship between welfare benefits for children and the labour supply of their parents. The paper is structured as follows. Section 2 presents an overview

of the institutional background and the previous research on child benefits. Section 3 describes the IAB-MSM model and the database. Section 4 introduces the current German policy context, which provides our baseline scenario, and details the three reform scenarios that we simulate in IAB-MSM. Section 5 discusses the main results from our simulations and provides guidance for policy-makers. Section 6 concludes.

2. Institutional background and related literature

The motivations behind child support policies are both ethical and economic. From an ethical point of view, children are passive agents, which means they bear the consequences of other people's decisions. It seems unfair, then, to leave children unprotected from mistakes they could never avoid. An economic motive lies in the concept of "equality of opportunities": a level playing field for the young implies that allocation of talent works at its best, compared to a situation with strong path-dependencies due to the economic situation of the households of origin, which might trap young people into poverty and low-skill human capital endowments (so much that some authors proposed to interpret children, or parenting, as a public good: Folbre 1994, England/Folbre 1999). Child support policies can help providing children with a fair level and quality of economic support, education and health care, thus at least partly compensating for deficiencies in the household of origin or due to random events that might adversely affect a child's life. Moreover, as in most OECD countries the participation of women to the workforce is lower than for men, and even lower when looking at participation rates of mothers, child care support policies may bear the effect of reducing barriers preventing mothers to participate in the labour market (see, e.g., Haan/Wrohlich 2011, Bick 2016).

In relative terms, Germany fares well when compared to other European member states. According to a publication by the European Commission's DG Employment (Bruckmayer/Picken/Janta, 2020), Germany ranks 9th among the 28 EU member states in terms of the share of children below 18 years old who are considered at risk of poverty or social exclusion. Other indicators presented in Frazer/Guio/Marlier (2020) comparing the European countries report a relatively robust performance of the German welfare system for children, with low percentages of children in deprivation or receiving inadequate levels of healthcare or education. Similar results were published in Gornick/Nell (2018) using the Luxembourg Income Study Database data for 2010, where Germany was found to have one of the lowest child poverty rates among the 24 high- and medium-income surveyed countries. One concern, however, is the high share (the fourth-highest among the EU28

countries) of children living in single-adult households, as these usually face fixed costs that absorb a larger share of their income and also encounter more difficulties in reconciling work and family life, making them more likely to work part-time or stay inactive. Indeed, previous studies (e.g., Fertig/Tamm 2010) have identified single parenthood and parents' employment status as some of the most important drivers for persisting children poverty in Germany. Moreover, Frazer/Guio/Marlier (2020) also indicates a large percentage of children in households confronted with housing cost overburden, the latter defined as having housing costs large than 40 percent of the total disposable household income (Germany ranks the fifth-highest country among he EU28).

In the context of a continental welfare regime, the family policy approach in Germany is classified as traditional, with a focus on generous cash benefits rather than on promoting the (equal) labour force integration of parents. However, in recent decades, family policy has moved towards a dual-earner model, especially by increasing spending on public child care (Ferragina/Seeleib-Kaiser, 2014). The German tax and benefit system includes several policies that, either directly or indirectly, address children. We focus on the two quantitatively most important financial benefits available for children: the universal, unconditional child benefit (*Kindergeld*) and the means-tested benefit for children included in the basic income system (*Kinderregelbedarf*).

Kindergeld is granted as an unconditional standard child benefit. Its level depends on the number of children living in the household. As there is no means test, the benefit purely redistributes income from childless families to families with children. In 2021 *Kindergeld* amounted to 219 euro for the first and second child, 225 euro for the third child and 250 euro for each additional child. Typically, the standard benefit is paid out to each entitled household on a monthly basis. All parents with children under 18 years old are eligible, and under certain conditions *Kindergeld* can also be received for children between the ages 18 to 25. In 2020, standard child benefits were paid out for 16.3 million children. The *Kindergeld* is linked to the child allowance in the income tax system. As part of the yearly household's tax return, the tax office checks whether the tax savings from the child allowance exceed the *Kindergeld*. In this case, the household's tax liability is reduced by the difference between the tax value of the child allowance and the (already paid out) *Kindergeld*. As long as the tax savings due to the child allowance remain below the *Kindergeld*, the household receives the *Kindergeld* only. This applies to households that pay no or only low income tax, e.g., the unemployed and low-income earners. Thus, the *Kindergeld* provides a lower limit for the child benefit granted through the child tax allowance. It is to note that proponents of a reform of child benefits criticise that this benefit is not well targeted as richer households benefit more from the tax allowance per child than low-income households from the *Kindergeld*.

Among the means-tested benefits available in Germany, the child-related benefits that cover the regular living costs of children (*Kinderregelbedarf*) are the most important. The *Kinderregelbedarf* is included in the social assistance schemes for older people (SGB XII) and for the working-age population (SGB II, which we refer to in the following as ALG2). The ALG2 regime is a means-tested benefit aimed at guaranteeing a household's minimum income to cover basic existential, housing and heating needs, also for households without any children. Housing and heating costs are proportionally assigned to the children living in the household. ALG2 is defined by the needs of the core family (including children) and is reduced by the incomes of all family members. Almost all kind of incomes are considered, and for earned income a certain amount is exempted from the means test. In 2020, about 1.85 million minor children lived in households receiving ALG2. The monthly benefit covering children's living costs is age-dependent and is between 283 € and 373 € for minor children in 2021. Hence the means-tested child benefit is above the *Kindergeld*, but the *Kindergeld* is fully taken into account in the means test. Additionally, ALG2 is also wealth-tested.[2] The level of the minimum income is often criticised as insufficient to ensure above all the social participation of the beneficiaries. In terms of relative poverty, a study by Lietzmann/Wenzig (2020) shows that about 70 percent of children below the age of 15 living in ALG2 households are at risk of poverty (this is in case when the households' income is below 60 percent of the national median income).

Our analysis is related to several strands of the literature. First, we contribute to studies that, based on microsimulation methods, examine (ex-ante) the effect of the tax benefit system or of more specific child related transfers on income and poverty of children either by analysing benefit incidence or reform outcomes (Christl/De Poli/Varga, 2022; Urban/Pezer, 2018; Popova, 2016; Levy/Matsaganis/Sutherland, 2013; Salanauskaite/Verbist, 2013; Figari/Paulus/Sutherland, 2009). The use of microsimulation techniques is necessary in order to be able to properly account for the preexisting heterogeneity in the economic condition of a household in terms of demographic composition, employment status of its members, and situation with respect to other policies (i.e., the entire tax and benefit system including health care, pensions, unemployment benefits and social benefits). Microsimulation techniques can therefore be used to simulate reform scenarios and the corresponding interactions between the various parts of the tax and benefit system. Our study extends the few studies available on this topic for Germany to date and relates to the current reform discussion (Blömer/Litsche/Peichl, 2021; Bonin/Reuss/Stichnoth, 2016; Rainer et al., 2013; Becker/Hauser, 2012). Bonin/Reuss/Stichnoth (2016) employ a dynamic microsimulation model, calibrated using the 2009 wave of the SOEP data, to compute the actualised monetary value of family benefits in Germany over the life cycle. One key finding is that transfers to households increase significantly on average as a function of the number of children and decrease with the duration of single parenthood. About half of the average

[2] Moreover, another supplementary child allowance (*Kinderzuschlag*) is available for those indigent households who have income exceeding the limits for SGB XII and/or SGB II entitlement.

benefit is due to child benefits or, in a few cases, child tax allowances. These results not only stress the importance of child benefits and tax allowances for the overall poverty relief policy in Germany, but also the relevancy of sole parenthood in affecting the economic conditions of households with children. In two recent reports, Blömer/Litsche/Peichl (2021) and Blömer (2022) present the effects of implementing a proposal by the currently co-governing party "Bündnis 90/Die Grünen" and the "Bertelsmann Stiftung" to introduce a basic child benefit in Germany. They find a significant reduction in poverty, high reform costs, and negative labour supply effects for both reform proposals. In contrast to our study, they do not elaborate on the impact of different components of a basic child benefit (unconditional and means-tested benefit), but only examine the impact of the reform proposal as a whole. Another added value of our study in contrast to Blömer/Litsche/Peichl (2021) and Blömer (2022) is that we also simulate different refinancing scenarios, which is an important aspect of the policy as child benefit reforms entail significant fiscal costs.

Most of the microsimulation studies are static in the sense that they do not take into account behavioural adjustments, e.g., in terms of labour supply. By explicitly including possible labour supply effects of benefit reforms in our analysis, we also contribute to the literature examining the relationship between child-related welfare benefits and parents' labour supply. Such behavioural effects due to changes in labour supply can relevantly change the distributional and poverty impact of a reform of child benefits, as found in other studies using microsimulation techniques (e.g., Christl/De Poli/Varga 2022). Empirical literature provides ex-post evidence on the impact of child-related benefits on labour supply, often focusing on female labour supply (Wang, 2021; Magda/Kieczewska/Brandt, 2020; Schirle, 2020; Hener, 2016). By exploiting changes in the benefit system within a difference-in-differences framework, these studies suggest that more generous child-related benefits negatively affect women's labour force participation. Our results confirm this relationship in general, although we find heterogeneous effects for different household types and income groups depending on the particular benefit examined. In contrast to many other studies, we examine the effects of increased child benefits on child poverty both before and after potential adjustments in parents' labour supply. The observed negative correlation between public spending on transfer programmes and the poverty rate suggests a poverty-reducing effect of increasing benefit levels (Nygård et al., 2019; Chzhen, 2017). Nevertheless, the poverty-reducing effect could be significantly reduced by adverse labour supply responses.

A large body of literature has focused on the Earned Income Tax Credit (EITC) in the U.S. and, in particular, on its effects on labour supply. The EITC is a temporary earnings subsidy for low- to moderate-income households, whose amount is also a function of eligible children in the household. A majority of this literature points to a large rise in the employment of single mothers due to the EITC (see, e.g., Meyer/Rosenbaum 2001) and to a

reduction in the labour supply of secondary earners (Haan/Wrohlich, 2011).[3] The reform scenarios we simulate for Germany are not directly comparable to the EITC. Nevertheless, the results obtained for the EITC are suggestive of a large elasticity on the extensive margin for single-parent households, which we also detect in our simulated scenarios.

In addition to analysing benefit or spending levels, design features of benefit programmes are in the focus of research, either by analysing the correlation between the institutional setting and poverty outcomes or by simulations studies. One aspect of the design of transfer programmes is whether child-related benefits are granted universally or targeted to specific subgroups based on the income or personal characteristics of the parents or the child. Which design of the benefit system is more effective in reducing or avoiding poverty cannot be answered in general terms, as this also depends on country-specific features of family policies and the interaction with the whole tax and benefit system. A comparative analysis of different design features of child benefit systems in several EU countries by Van Lancker/Van Mechelen (2015) reveals that in general universal benefit systems combined with a targeting towards low-income groups are associated with lower child poverty levels. Making use of policy swaps, Popova (2016) simulates which benefit policy approaches would achieve the highest poverty reduction under a fixed budget compared to the status quo in Russia. She concludes that a policy mix of means-tested and universal benefits would be the most effective. Analysing these two types of transfers separately allows us to isolate the influence of the different design features of the benefit programmes. As for poverty reduction, our simulation confirms Popova's (2016) result by finding the highest poverty-reducing effect – with and without various forms of budget-balancing – for the combination of an increase in both the universal and means-tested benefits. Moreover, we find that negative labour supply effects of increasing the means-tested child benefit on low-income households are counteracted by positive incentive effects of increasing the unconditional benefit.

3. Methodology and data

We employ the Tax-Transfer Microsimulation Model of the Institute for Employment Research (IAB-MSM). The IAB-MSM is based on the *Steuer-Transfer-Mikrosimulationsmodell* (documented in Jacobebbinghaus/Steiner 2003) of the Centre for European Economic Research (ZEW) and is calibrated using data from the German Socio-Economic Panel

[3] Although more recent evidence (i.e., Kleven 2019) casts doubts on the latter result and suggests instead that the empirical findings from 1990 data were mostly due to confounding factors. Therefore, the link between the EITC and the observed increase of labour supply for single mothers would be, at best, much smaller than previously thought.

(GSOEP). In this section we summarise the main characteristics of IAB-MSM, leaving more detailed descriptions to the technical documentation of the model and previous papers which are also based on its use (Arntz et al., 2007; Blos et al., 2007; Wiemers/Bruckmeier, 2009; Wiemers, 2015; Bruckmeier/Wiemers, 2018a).

IAB-MSM is a tax and benefit microsimulation model of German households. Households' gross income is taken from the data and, starting from it, the model computes taxes, deductions and transfers based on the legal regulations in the status quo or in the simulated reform scenario. Income is differentiated between earnings from employment, self employment, capital, rents and pensions. The model then calculates social security contributions, tax liabilities, various benefits (for children, unemployment, housing, social purposes), and then the algebraic sum provides net disposable income. In particular, IAB-MSM takes into account the complex decision tree that determines eligibility for a number of social benefits in Germany, namely social assistance for older and not employable persons (SGB XII), social assistance for employable persons between 15 and 64 years (SGB II), housing allowance (*Wohngeld*), the supplementary child allowance (*Kinderzuschlag*).[4] The model permits to evaluate the most beneficial policy to which a household is eligible, and to simulate non-take-up by potential claimants. For this study, we use the German tax and benefit rules for the year 2021, on the basis of which the baseline scenario is created with the IAB-MSM.

The households in the IAB-MSM come from the GSOEP, a representative annual household panel study in Germany (see Haisken-DeNew/Frick 2005 and Wagner/Frick/Schupp 2007 for the documentation). In order to be able to calculate benefit entitlements, the model requires a large variety of data on the demographic and economic composition of the households. The GSOEP includes the required demographic variables, information on the various income sources of both persons and households. In this paper we use GSOEP v36. After sample selection and cleaning of the raw data, approximately 12,000 households remain for use with the IAB-MSM. We calibrate the weights supplied with the GSOEP to account for the households excluded from our sample and to match aggregate statistics on total spending and revenues for individual taxes or policies in 2021. Given the focus of the present paper it is worth mentioning that although children below the age of 17 are not directly interviewed in the GSOEP, they are nevertheless visible: from the answers of other members of the households, their number, age and some relevant characteristics become known.

The IAB-MSM also includes an empirically estimated discrete-choice labour supply model based on van Soest (1995). The 7 categories of the response variable are defined based on the number of hours worked in a week (rounding figures to the nearest observed value): 0,

[4] See Bruckmeier/Wiemers (2018a) for a more detailed account of the interdependencies of means-tested benefits in Germany.

10, 15, 20, 30, 40 or 50 hours. For singles it is assumed that they can choose between these 7 categories, for couples 49 joint weekly working hour combinations are possible. The econometric specification relies on a standard neoclassical labour supply model with leisure and consumption (net income) determining the utility function. The utility function is bounded by the budget constraint given by the net income, which is calculated for each working hour category with the respective gross labour income and the tax-benefit-calculator of the IAB-MSM. Additionally, the model controls for various individual and household characteristics as well as fixed costs of part-time and full-time work. The model is estimated separately for single men, single women, single parents, and couples.

It is well documented in the international literature that not all eligible households actually receive the benefits (Eurofound, 2015). This is especially true for means-tested benefits such as ALG2 (Bruckmeier/Wiemers, 2011a, 2018b). To model a more realistic picture, we present simulation results that take into account non-take-up of ALG2 benefits. We control for the interaction between benefit take-up and labour supply by introducing a random parameter into the households utility function that accounts for unobserved heterogeneity in the take-up costs in the line of Brewer et al. (2006). However, since it is also a declared goal of the government to increase the take-up of ALG2 and the reformed means-tested benefits to children, results based on the assumption of full ALG2 take-up are additionally shown in Appendix A.2. Under the full take-up assumption, all eligible households are assumed to always receive the most monetarily advantageous combination of benefits to which they are entitled.

The analysis so far offered in the literature has ignored the possibility of a rise in taxation in order to finance the reforms. Such compensations of the public budget may happen in a large variety of ways. In order to get a general magnitude of the effects at play, we designed two budget closures. The first closure (BBI) increases the income tax burden by a factor[5] equal for all households to compensate for revenue losses. It can be therefore thought of as a leftist complementary policy which is meant to further aim at a more equal income distribution.[6] The second closure (BBC) generates a balanced budget by raising the consumption tax.[7] The BBC reform is therefore closer to proposals from right wing parties aiming at minimising distortions caused by the tax system on individual choices.

[5] This factor varies over the policy scenarios and is found by iteratively recalculating the households' budget constraint and the labour supply response.

[6] Since income tax in Germany is only paid if the taxable income exceeds an allowance for the household and the income tax rate is piecewise quadratic in a large range of taxable income, the BBI closure has a progressive effect.

[7] Since consumption is not modelled directly in the IAB-MSM, the increase in consumption tax is approximated by multiplying disposable income by a factor that is constant for all households. Again, the factor varies over scenarios and is found by iteratively solving the IAB-MSM. In our static labour supply model, there is no saving motive, and thus disposable income equals consumption. Therefore, our BBC closure has a proportional effect on households' income, whereas a "real" consumption tax would have a regressive effect.

4. Policy scenarios

In recent years, various parties and organisations have put forward proposals for the introduction of a basic child allowance in Germany. Most of the proposals include the following basic features:

- A means-tested component, the level of which is higher than the current level in the basic income system (ALG2)
- An unconditional component, the level of which is equal to the maximum of income tax savings due to the child allowance granted by the income tax.

The first point is obviously aimed at combating child poverty, while the second aims at eliminating disparities in child benefits and tax-allowance between high- and low-income earners, which are often perceived as unfair. Other features of a basic child benefit that are addressed in many proposals are the take-up of the benefits, the treatment of parents' earned income, and the integration of the basic child allowance into a system of family support, thus removing it from the basic income system.

However, in the absence of a government proposal for the exact design, we analyse the two benefit components based on the existing system: the unconditional standard child benefit (*Kindergeld*) and the means-tested child benefit included in ALG2 (*Kinderregelbedarf*). Our reform scenario (1) increases the *Kindergeld* to 315 euro for each child, regardless of the number of children in the household and their age. This amount equals the benefit obtained from the tax allowance by a household paying the maximum marginal income tax rate in 2021. Hence, reform scenario (1) effectively substitutes the tax allowance for all households with the increased *Kindergeld*. The unequal treatment of high- and low-income households is thus abolished in this reform scenario, which is one of the core elements of current reform proposals.

Our reform scenario (2) addresses political demands to increase the minimum income and simulates an increase in the (*Kinderregelbedarf*). Because the calculation of the benefits is based on a statistical model using the national income and consumption survey, the calculation method would have to be changed to increase the benefit. We rely on a recalculation of the benefit level for children for the year 2021 by Becker/Held (2021), which is supported by several social welfare associations in Germany. According to this calculation, the ALG2 benefit for children below 6 years would stay constant. Since the goal of improving income for poor families would not be achieved, we increase the amount for children in this age group by the amount that would be achieved with the increased child benefit, which corresponds to 315 euro. For the other age-groups we follow Becker/Held

(2021) and simulate an increase to 385 euro for children between 6 and 13 (up from 309 euro in 2021), and to 444 euro for children between 14 and 17 (up from 373 euro in 2021). Therefore, contrary to reform scenario (1) where *Kindergeld* provides a fixed amount per child, the benefit in scenario (2) is age-dependent. Under this reform scenario, the general tax allowance is also raised proportionally to the increase in the *Kinderregelbedarf* to reflect a larger overall value for the minimum existential income.

Finally, reform scenario (3) combines the effects of both previous scenarios (1) and (2). Thus, all households receive an increased *Kindergeld* and, moreover, households under the ALG2 regime benefit from increased child-related grants. The combination of scenario (1) and (2) corresponds to the potential income effects of the proposed basic child allowance: Low-income households with children without further (earned) income are financially better off compared to the status quo. As earned income increases, ALG2 benefits are reduced until the household receives only the unconditional standard child benefit. Table 1 summarises the values used for the *Kindergeld* and *Kinderregelbedarf*, per child in the household, in the baseline (status quo) and the three reform scenarios.

Table 1.: *Summary of the baseline and simulated reform scenarios*

	Baseline	Reform scenario (1)	(2)	(3)
Kindergeld per child	Eur 219-250 (based on age)	Eur 315	Eur 219-250 (based on age)	Eur 341
Kinderregelbedarf per child	Eur 283-373 (based on age)	Eur 283-373 (based on age)	Eur 315-444 (based on age)	Eur 315-444 (based on age)

Source: Own representation.

For those households who have income above the maximum eligibility threshold set for the ALG2 benefit but still encounter difficulties in covering all expenses, Germany has alternative benefits, which offer an allowance for living costs (*Wohngeld*) and a supplementary child allowance (*Kinderzuschlag*). While our reform scenarios do not change these other policies in a direct way, it is important to stress that several interactions happen anyway. For instance, the law considers the *Kindergeld* benefit as part of the income calculated for the means testing of the ALG2, which means that increasing *Kindergeld* (as in our reform scenarios (1) and (3)) also reduces the number of eligible households to ALG2 and may push some households into the *Wohngeld* + *Kinderzuschlag* regime. The latter change happens in scenario (1) even though, contrary to scenarios (2) and (3), it does not reform ALG2 at all. Excluding children from the basic income system, as politically demanded, would increase this effect even more and parents could leave ALG2 with even less earned income than under the status quo. How this affects income and labour supply cannot be determined until the benefit-reduction rate in the basic child benefit system is known. Since the benefit reduction rate is in most cases lower if the household receives *Wohngeld* and *Kinderzuschlag* instead of ALG2 in the status quo, our simulation results give

an indication of the direction of the labour supply effect.[8] This holds if the effective marginal tax rate, resulting from the income tax and the benefit reduction rate inherent in the *Wohngeld* and the (new) basic child benefit, is below the current marginal tax rate under ALG2, which is also a political goal. In our analysis, we focus mainly on the effect of increasing benefit levels and cannot comment on other possible reform elements, such as a change in the effective marginal tax rate or excluding children from the basic income system. The latter could also have a greater impact on parents' labour supply if they are no longer subject to the ALG2 activation regime due to the their children's neediness.

5. Results

In this section, we present our simulation results. All the results in Sections 5.1 - 5.3 do not compensate for the budgetary costs of the simulated reforms. In Section 5.4, we will also present and discuss results obtained by reform scenarios that include compensatory tax measures to obtain budget parity. Furthermore, the results in all tables and figures in this section are simulated under the assumption of partial take-up, using the method described in section 3. Selected results under the assumption of full take-up are reported in Appendix A.2 to allow for comparison.

5.1. Labour supply responses

Table 2 shows the simulated changes in labour supply for the three reform scenarios. The changes are further disaggregated by weekly working hours and family status. For the increase in the unconditional benefit (*Kindergeld*) in scenario (1), we find very different effects between men and women in couple households. For women, we observe a shift towards part-time work, i.e., hours categories below 40 hours, resulting in an overall negative effect on labour supply of 23 thousand persons working full-time.[9] These results are in line with an ex-ante study of a strong increase in the regular child benefit in Germany in 1996 based on individual survey data by Hener (2016). He finds a strong negative effect on the intensive margin of mothers' labour supply and estimates that a reallocation towards more part-time work leads to a reduction in mothers' weekly working hours by 2.3 hours. In Haan/Wrohlich (2011), the authors employ GSOEP data and find that an increase in unconditional child benefits would bear a reduction in (working) women's labour supply.

[8] With high earned income, the rate is currently 100 percent in ALG2, which means that an additional euro net wage reduces the benefit by one euro.
[9] Working full-time is defined as 40 work hours per week.

The picture is the opposite for single parents, mainly women, compared to mothers living with a partner. Scenario (1) leads to a significant labour supply response for lone parents, in that both more mothers take up employment (participation effect) and more work 30 or 40 hours per week. For male partners in couples, we simulate that the increase in *Kindergeld* leads to a positive effect on total labour supply, although the effect is small at only about 5 thousand full-time equivalents. We also simulate a positive income effect, which leads to a decrease of work in the 50 hours category. However, this does not lead to more part-time work. Instead, the 40 hours category increases, which could indicate the strong preference of male partners for full-time work.

The overall impact of scenario (2) is smaller because the reform is limited to a much smaller group. As the non-work income of ALG2 recipients increases, we find negative effects on individual labour supply for all family types. This general pattern of labour supply response to an increase in means-tested benefits was also found in Blömer (2022). The study finds that an increase in means-tested child benefits has a large negative effect on labour supply, which he explains with strong substitution effects that make non-work financially more attractive than work.

In scenario (3), which combines scenarios (1) and (2), the negative labour supply effects in scenario (2) outweigh the (overall) small positive effects in scenario (1). Thus, we determine an overall decrease in labour supply of 19 thousand persons working full-time when both benefits are increased.

Looking at the results achieved with full take-up of means-tested benefits (see Table A.26), it becomes clear that taking into account endogenous take-up significantly affects some results. In scenario (1), the positive labour supply effects are more pronounced for men in couples and single parents, whereas the effects differ less for women in couple households. Since the additional child benefit in scenario (1) is counted against means-tested benefits the household would receive when not working, working more hours becomes more attractive than not working. Under reform scenario (2), on the other hand, the negative effects are amplified, as the increase in ALG2 benefits increases non-labour income for a larger number of households. This could explain the stronger negative labour supply effects that Blömer (2022) find for an increase in means-tested benefits, as they assume full take-up of these benefits. From an economic perspective, this suggests a conflict in terms of effective income support and minimising negative labour supply responses.

Next, we look at the labour supply effects stratified by income deciles based on the baseline income distribution. This differentiation is particularly important with regard to the distributional and poverty effects of the reforms, which can be both amplified and reduced by labour supply reactions. Table 3 shows the participation effect in the upper part and the overall labour supply change in the lower part broken down by income deciles.

Table 2.: *Changes in labour supply, unbalanced budget, partial take-up*

	Couples (men)	Couples (women)	Single parents	Total
		Scenario (1)		
Part. effect	4.8	-9.1	21.2	17.0
10 hours	-3.5	5.0	-5.4	-3.9
15 hours	-0.9	7.0	-0.9	5.3
20 hours	-3.8	8.6	3.5	8.3
30 hours	3.5	3.1	11.3	17.9
40 hours	25.7	-29.6	12.7	8.7
50 hours	-16.2	-3.2	-0.1	-19.4
Full-time equiv.	5.0	-23.1	21.2	3.1
		Scenario (2)		
Part. effect	-10.4	-10.8	-8.1	-29.4
10 hours	2.6	-2.2	1.3	1.7
15 hours	0.6	-3.9	0.1	-3.1
20 hours	3.1	-5.5	-0.4	-2.8
30 hours	-0.7	-3.5	-4.6	-8.7
40 hours	-19.1	2.9	-4.3	-20.5
50 hours	3.0	1.3	-0.2	4.1
Full-time equiv.	-13.4	-2.8	-7.8	-24.0
		Scenario (3)		
Part. effect	-0.6	-21.6	19.4	-2.8
10 hours	0.4	5.0	-4.8	0.6
15 hours	-0.4	6.2	-2.0	3.8
20 hours	-3.4	9.1	3.2	8.9
30 hours	4.0	0.0	10.4	14.4
40 hours	17.5	-38.6	12.7	-8.4
50 hours	-18.5	-3.4	-0.1	-22.0
Full-time equiv.	-4.5	-34.7	20.0	-19.1

NOTE. — Changes in labour supply compared to the baseline. Numbers expressed in 1,000 persons. Part. effect = participation effect (negative change in the 0 hours category). Full-time equiv. = full-time equivalents (change in labour supply expressed in 1,000 persons with a 40 hour working week).
Source: IAB-MSM.

Scenario (1) has a positive and relevant effect on labour supply in the second decile, both on labour force participation and on the overall effect. For all other deciles we find negative labour supply responses due to an income effect. The first income decile is only mildly affected by all three reform scenarios. Consequently, the rise in labour supply in the second decile alone accounts for the overall positive effect of scenario (1). Moreover, all positive

labour supply reactions found for scenario (1) for men in couple households and single parents come from low-income households in the second decile. This contrasts with the findings from Haan/Wrohlich (2011), who report a negative effect of an increase in the regular child benefit on both employment and worked hours across the entire population. This discrepancy can be explained by the fact that our microsimulation model (in contrast to Haan/Wrohlich 2011) also takes into account that some households who were in the phase-out range of ALG2 entitlements (and who mostly fall into the second income decile), will be pushed out of ALG2 eligibility because the (increased) universal child benefit is completely deducted from entitlements. For households pushed out of ALG2, the increase in the *Kindergeld* acts like a reduction in the effective marginal tax rate. Studies on the previously mentioned EITC (Whitmore Schanzenbach/Strain, 2021), which provides a tax credit supplement to earnings, also found an increase in the labour supply of single mothers and of couples with children (especially couples with two or more children, due to the policy design being more generous for them than for single-child couples, see Kleven 2019).

For scenario (2) we find that the increased benefit obtained under ALG2 decreases labour supply for the beneficiaries (who mostly fall into the first and second income deciles). Furthermore, scenario (2) shows that the increased tax allowance for higher income deciles increases their labour supply.

5.2. Effects on the income distribution and on relative poverty

In Figure 1 the bar graphs show the change in equivalised disposable household income before and after accounting for endogenous take-up and labour supply responses. Income changes are presented by income deciles measured for the total population. In reform scenario (1), households from the lower end of the income distribution, except for the second decile, benefit the most, and as household income increases, the relative income gain decreases. Without accounting for behavioural changes, households in the first decile are those benefiting the most, with an increase in the average equivalent household income of around 3 percent. In absolute values (figures are not shown here to economise on space), we find the largest average income change in the third and sixth income deciles. Figure A.11 in Appendix A.1 shows the same results only for the group of households affected by the reforms, i.e., households with at least one child that is entitled to the benefits. The results are comparable to those related to the total population.

For lower income groups, the increase in the child benefit often reduces received means-tested benefits, which dampens the income effect in these groups. Since the income benefit from the standard benefit increase outweighs the tax benefit from the child allowance at higher incomes, the income effect is smallest in the tenth decile. Generally the

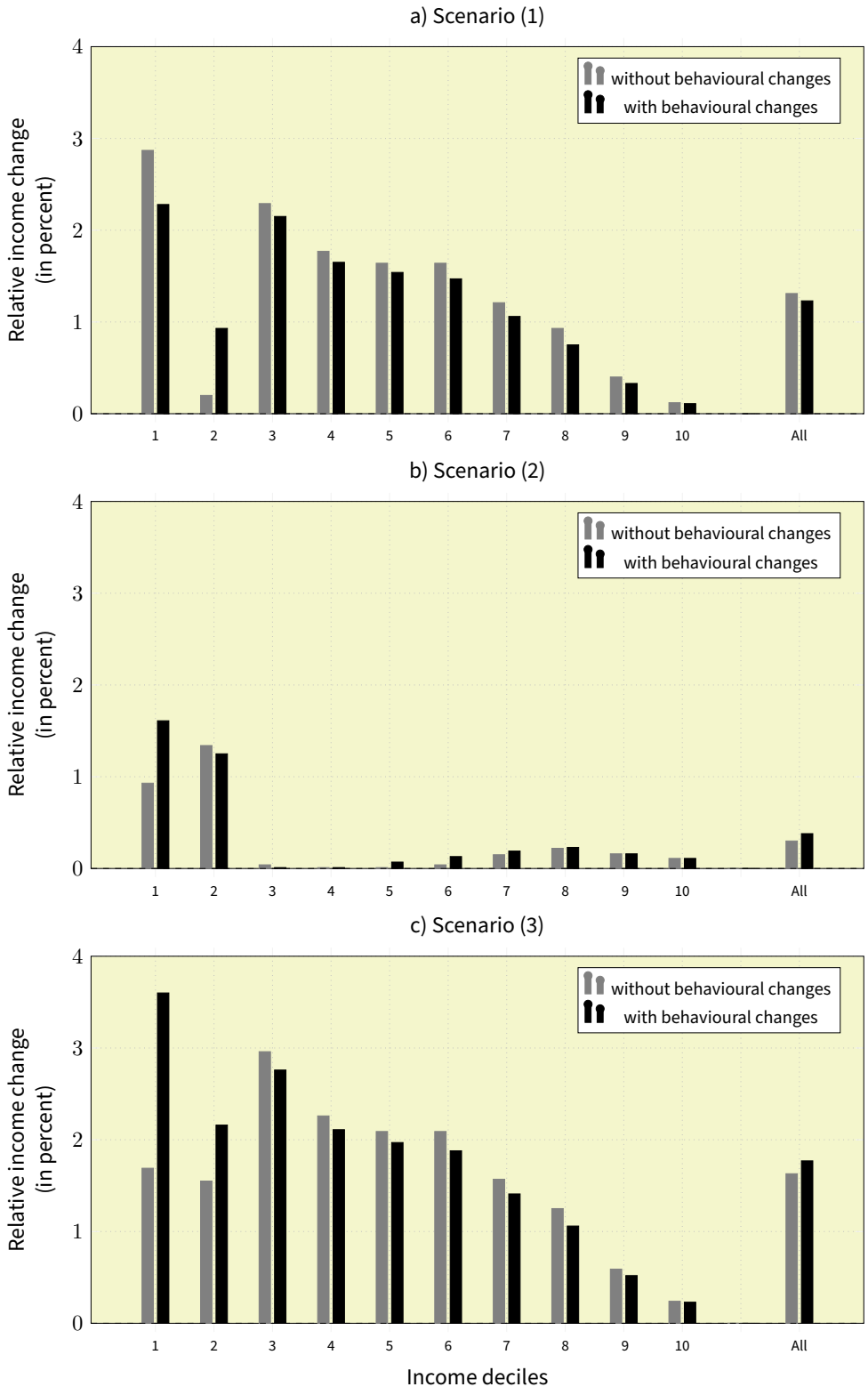
Table 3.: *Changes in labour supply by income decile, unbalanced budget, partial take-up*

	Scenario (1)	Scenario (2)	Scenario (3)
Part. effect			
Decile 1	-3.5	-6.3	-5.0
Decile 2	41.1	-24.8	28.5
Decile 3	-4.3	-1.2	-6.2
Decile 4	-3.9	0.2	-4.9
Decile 5	-3.4	0.5	-4.2
Decile 6	-4.8	1.4	-6.0
Decile 7	-2.5	0.5	-2.8
Decile 8	-0.9	0.2	-1.0
Decile 9	-0.7	0.1	-0.9
Decile 10	-0.2	0.0	-0.2
Total	17.0	-29.4	-2.8
Full-time equiv.			
Decile 1	-2.9	-6.1	-5.3
Decile 2	44.0	-26.1	30.7
Decile 3	-4.2	-1.1	-6.6
Decile 4	-4.7	0.2	-5.6
Decile 5	-4.2	2.6	-4.9
Decile 6	-7.0	3.4	-8.5
Decile 7	-6.3	1.9	-6.7
Decile 8	-7.8	0.8	-8.1
Decile 9	-3.3	0.2	-3.5
Decile 10	-0.4	0.1	-0.5
Total	3.1	-24.0	-19.1

NOTE. — Changes in labour supply (sum over all household types) by income deciles compared to the baseline. Numbers expressed in 1,000 persons. Deciles based on net equivalent income. Net equivalent income is calculated with the modified OECD scale. Part. effect = participation effect (negative change in the 0 hours category). Full-time equiv. = full-time equivalents (change in labour supply expressed in 1,000 persons with a 40 hour working week). Source: IAB-MSM.

change in unconditional *Kindergeld* affects all income deciles, with the largest increase in disposable income in absolute terms happening for the middle income deciles. This holds at least up to the sixth decile, after which the changes start to decline (not shown). Scenario (1) aims at better positioning families with children who do not benefit maximally from the child tax allowance due to their low tax burden, thus favouring middle income groups (in absolute values) and lower income groups (in relative values).

Figure 1.: *Relative change in equivalised household income by income deciles, partial take-up, unbalanced budget*



NOTE. — Relative change in mean household equivalent net income by income deciles compared to the baseline. The equivalent income is calculated based on the modified OECD scale. Results are calculated assuming partial take-up. Without behavioural change = working hours choice probabilities and the conditional take-up probabilities are fixed at their levels in the baseline scenario. With behavioural change = choice probabilities change according to the predictions of the labour supply model. All = Mean change over deciles. Source: IAB-MSM.

The changes induced by reform scenario (2) are more polarised at the extremes of the income distribution and concentrated on the lowest two deciles, as the benefit is targeted towards the poorest households. We also find small positive income effects for higher income households. The reason for the latter lies in the increased tax allowance for children, which is not means-tested and therefore benefits also the middle and especially higher deciles.

Scenario (3) is found to always produce the largest change in disposable income with highest income gains in the third and smallest in the tenth decile. Note that this finding refers to the total population. If we focus on the households with children only, the income effect turns progressive (see figure A.11), as a disproportionately large number of single people live in the first decile and hence do not benefit from the reforms.

Behavioural changes, both due to changes in labour supply and take-up, have the strongest effects on the simulated income change in the first two deciles. As discussed in Section 5.1, labour supply changes are the strongest in the second decile in both reform scenarios (1) and (2) and they work toward different directions, increasing household income in scenario (1) and decreasing it in scenario (2). For middle and high income groups behavioural adjustments always reduce income gains mainly produced by reform scenario (1).

Looking at the effects of the reforms on relative poverty, Table 4 reports a set of indicators measuring income inequality. These are the Gini coefficient and the poverty rates measured as percentage of households below 60 percent and below 50 percent of the median income (poverty lines), with the corresponding change compared to the baseline. To isolate the effect on the poverty rates, we fix the poverty lines to the median income observed in the baseline. Again, the results refer to the total population. Results are obtained after accounting for labour supply changes induced by the respective reform scenario.

Taken together, these indicators suggest that all reforms scenarios simulated here are capable of reducing inequality, but do so in different ways. Compared with scenario (2), reform scenario (1) leads to a greater reduction in inequality, as measured by the Gini coefficient, and to a slightly greater reduction in poverty when defined relative to 60 percent of the median income. This is due to scenario (1)'s non-targeted design: All income deciles are affected by the reform, but especially middle incomes, as shown in the previous Section 5.2.

Interestingly, the poverty rate in reform scenario (1) actually slightly increases when using a narrower definition of relative poverty based on 50 percent of median income. Because the poverty line remains unchanged in all reform scenarios, this cannot be explained by an increase in median income through scenario (1). The explanation for this result is found in a simulated change in the take-up of means-tested benefits after an increase in the

non-means-tested *Kindergeld*. If the *Kindergeld* increases, the simulated entitlements from other benefit systems, foremost the basic income system for children and their parents, ALG2, are reduced to the same extent. Therefore, some households with low entitlements to ALG2 may choose not to claim these benefits after the reform. Receiving ALG2 includes not only monetary costs but also non-monetary costs, for example due to social stigma. Our model of ALG2 take-up assumes that, for each possible choice of weekly hours of work at which the household is eligible for ALG2, the household compares the net utility of claiming ALG2 (i.e., taking into account the cost of take-up) with the utility in the case of non-take-up, and chooses the take-up option that yields the highest utility. In scenario (1), the utility of the non-take-up option increases while the net utility of the take-up option remains unchanged. In some cases, this leads to households foregoing their ALG2 entitlement, even though this results in a worse monetary position than when receiving the benefit.

This explanation is supported by the fact that, when assuming full take-up of means-tested benefits in our model, we do not find an increase in the 50 percent poverty rate, whereas poverty rates are already significantly lower in the baseline (see Table A.25). This result points to a trade-off in terms of poverty reduction when an unconditional, not-means-tested benefit does not meet the minimum income and households have to apply for additional means-tested benefits.

The effect of both reform stages, shown by reform scenario (3), on the 60 percent poverty rate is strong, with a decrease of 4.7 percent or almost 1 percentage point. The poverty-reducing effects of both scenarios (1) and (2) are amplified to a small extent when combined, which could also be due to the different labour supply responses to scenarios (1) and (2). It is also to note that although reforms (1) and (2) both achieve a reduction in poverty rates (as said, when looking at rates based on 60 percent of median income), scenario (1) is much more costly for the public budget. As shown in the next section, the revenue cost of reform scenario (1) is indeed about four times larger than scenario (2).

Again, if we do not focus on the entire income distribution but only on households with children, the poverty-reducing effects of the reform scenarios are more pronounced. For example, reform (3) simulates a decline in the 60 percent poverty rate of families of 14.2 percent (see Table A.11 in the Appendix).

5.3. Revenue impact

Table 5 reports the changes for the government budget, broken down in such a way that the first set of rows (Panel A) reports changes compared to baseline values without taking behavioural effects into account. The second set of rows (Panel B) also takes behavioural

Table 4.: *Inequality and poverty indicators, partial take-up*

	Reform scenarios			
	Baseline	(1)	(2)	(3)
Gini coefficient				
Level (in percent)	30.27	29.96	30.19	29.84
Abs. diff (in pp)	.	-0.31	-0.08	-0.43
Rel. diff (in percent)	.	-1.01	-0.28	-1.43
Poverty rate (60%)				
Level (in percent)	19.71	19.31	19.42	18.78
Abs. diff (in pp)	.	-0.39	-0.29	-0.93
Rel. diff (in percent)	.	-2.00	-1.46	-4.70
Poverty rate (50%)				
Level (in percent)	13.68	13.78	13.31	13.20
Abs. diff (in pp)	.	0.10	-0.37	-0.48
Rel. diff (in percent)	.	0.73	-2.70	-3.51

NOTE. — Absolute and relative differences in Gini coefficient and poverty rates compared to the baseline. Poverty rates are relative to 60% and 50% of median net equivalent income. The net equivalent income is calculated based on the modified OECD scale. pp = percentage points. Source: IAB-MSM.

effects into account, and the third set of rows (Panel C) shows the difference between the previous two panels, therefore representing the part of the overall change that is only due to behavioural effects. Finally, Panel D shows the overall revenue effects, again broken down into an effect without behavioural adjustment and the behavioural effect. We present the results for the fiscal change in ALG2 (for which funds to cover housing and heating costs are shown separately), housing benefits (*Wohngeld*), social assistance for older people and the non-working population, supplementary child allowance (*Kinderzuschlag*) and the unconditional child benefit (*Kindergeld*). In addition, the change in tax liability and in social security contributions by employees and employers, which include all branches of social security (pension, health insurance, care insurance, and unemployment insurance). The latter are primarily affected by the changes in labour supply induced by the respective reform scenario.

The results show that total costs for scenario (1) by far exceed the costs for scenario (2). The total costs after taking into account behavioural responses amount to around 13.5 billion euro for scenario (1), almost four times higher than the total costs for scenario (2) (3.5 billion euro). Recalling the results on the poverty reducing effects of both reforms, it becomes clear that the increase in means-tested child benefits is a much more efficient instrument for poverty reduction expressed in monetary costs. However, the decrease in ALG2 expenditure shows that some households can reduce their dependency on basic income support through scenario (1), which could also be a policy objective. The high costs of scenario (1) are predominantly due to the increased regular child benefit.

Labour supply effects simulated for scenario (2) have a strong impact on ALG2 expenditure: They amount to 1.2 billion euro without behavioural adjustments, and the behavioural effect almost doubles ALG2 expenditure to 2.2 billion euro (costs for standard requirements and accommodation). Due to the high ALG2 benefit reduction rates, decreases in earned income after negative labour supply responses are almost fully reflected in an increase in benefits.

Table A.12 reports the changes in the number of households receiving different social benefits. As anticipated given the design of our reform scenarios, under scenario (1) because the number of beneficiaries of *Kindergeld* increases, 37 thousand households[10] leave the ALG2 regime, most of them receiving the housing benefits (*Wohngeld*) and child benefits (*Kinderzuschlag*). The opposite happens under scenario (2) where the increased minimum income brings more households into ALG2. Focusing on the reform effects on children in different benefit systems (Table A.13), we find that 86 thousand children leave ALG2 after scenario (1). The positive labour supply effect amplifies this result significantly to almost 300 thousand. Under reform 2, however, a maximum of 236 thousand more children receive ALG2. Due to the positive labour supply effects of scenario (1) in the second income decile, the increase in both benefits in scenario (3) still leads to a reduction of children receiving ALG2 by 182 thousand.

The comparison of table 5 and table A.28 in Appendix A.2 suggests that the cost of the reforms (2) would be larger in case of a full take-up. The reason is that, assuming full take-up, more households benefit from the reform and the negative labour supply responses are larger. In contrast, the simulated total costs for scenario (1) under full take-up are lower.

5.4. Reform effects under a balanced budget

In the following, we present results obtained when the reform costs are offset by an increase in the income tax (BBI) or by an increase in consumption taxes (BBC), using the method explained in section 3. Table A.14 in Appendix A.1 reports fiscal effects for each reform scenario and closure type, where total costs are (approximately) balanced after taking into account the behavioural adjustments.

We start with a description of the effects on the Gini coefficient and the poverty rates under BBI and BBC in Table 6. In addition, the table also shows the results under an unbalanced budget (UB) for comparability. As expected, refinancing through the income tax, due to its

[10] Because own income of a household is primarily deducted from ALG2 covering living costs, the change in the number of households receiving ALG2 accommodation costs is the relevant figure for the change in ALG2 recipient households.

Table 5.: *Fiscal effect (in million Euro), unbalanced budget, partial take-up*

	Reform scenarios		
	(1)	(2)	(3)
(A) Changes before labour supply effects			
Expenditures			
ALG2 (living costs)	-1,345	900	-914
ALG2 (accommodation costs)	-398	310	-291
Housing benefits	16	-158	-60
Social assistance	-28	142	106
Supplementary child allowance	209	-171	125
Kindergeld	17,724	0	22,566
Revenues			
Income taxes	2,230	-1,334	2,230
SSC employees	0	0	0
SSC employers	0	0	0
(B) Changes after labour supply effects			
Expenditures			
ALG2 (living costs)	-1,950	1,447	-1,508
ALG2 (accommodation costs)	-1,196	760	-1,021
Housing benefits	56	-178	-30
Social assistance	-69	212	132
Supplementary child allowance	254	-219	144
Kindergeld	17,724	-0	22,566
Revenues			
Income taxes	1,643	-1,272	1,556
SSC employees	-130	-96	-261
SSC employers	-151	-91	-278
(C) Labour supply effect (B) - (A)			
Expenditures			
ALG2 (living costs)	-605	547	-593
ALG2 (accommodation costs)	-798	450	-730
Housing benefits	40	-20	30
Social assistance	-42	69	26
Supplementary child allowance	45	-49	19
Kindergeld	-0	-0	-0
Revenues			
Income taxes	-587	62	-674
SSC employees	-130	-96	-261
SSC employers	-151	-91	-278
(D) Totals (expenditures - revenues)			
Sum (excl. labour supply) (A)	13,948	2,357	19,302
+ Labour supply effect (C)	-492	1,123	-36
= Sum (incl. labour supply) (B)	13,456	3,480	19,266

NOTE. — Differences in fiscal revenues/expenditures (in million Euro) compared to the baseline. ALG2 = unemployment benefit II (SGB II). Social assistance = social assistance scheme for pensioners. *Kindergeld* = non-means-tested child benefit. SSC = social security contributions. Source: IAB-MSM.

progressive design, amplifies the negative effect on income inequality, which is reflected in a stronger decline of the Gini coefficient under BBI compared to UB. This applies to both scenario (1) and scenario (2). By contrast, refinancing via a consumption tax slightly weakens the reducing effect on the Gini coefficient in scenario (1).

Adjusting the income tax has only a minor impact on the poverty rates compared to the results obtained without refinancing (UB): The 60 percent poverty rate increases by a maximum of 0.08 under BBI (scenario 3) and the 50 percent poverty rate increases by at most 0.12 percentage points (scenario 3). Not surprisingly, refinancing via a consumption tax (BBC) has a higher impact on poverty rates than refinancing via BBI: With the former, the 60 percent poverty rates increases by 0.47 percentage points compared to the UB results in scenario (3). Refinancing with either BBI or BBC has the smallest impact compared to UB in scenario (2), which reflects the relatively low fiscal costs of scenario (2).

Interestingly, even after compensating to reach budget neutral reforms, reform scenario (3) outperforms the scenarios (1) and (2) in terms of its ability to reduce inequality and poverty rates based on 60 percent of median income, both under BBI and BBC. When looking at the narrower poverty rates based on 50 percent of median income, however, reform scenario (2) outperforms the other under BBC.

Table 6.: *Inequality and poverty indicators under different budget regimes, partial take-up*

	Reform scenarios											
	Baseline			(1)			(2)			(3)		
	UB	BBI	BBC	UB	BBI	BBC	UB	BBI	BBC	UB	BBI	BBC
Gini coefficient												
Level (in percent)	30.27	30.27	30.27	29.96	29.68	29.99	30.19	30.11	30.19	29.84	29.41	29.88
Abs. diff (in pp)	.	.	.	-0.31	-0.59	-0.28	-0.08	-0.16	-0.08	-0.43	-0.86	-0.39
Rel. diff (in percent)	.	.	.	-1.01	-1.96	-0.92	-0.28	-0.52	-0.25	-1.43	-2.83	-1.29
Poverty rate (60%)												
Level (in percent)	19.71	19.71	19.71	19.31	19.36	19.46	19.42	19.44	19.45	18.78	18.86	19.25
Abs. diff (in pp)	.	.	.	-0.39	-0.35	-0.25	-0.29	-0.27	-0.26	-0.93	-0.85	-0.46
Rel. diff (in percent)	.	.	.	-2.00	-1.77	-1.25	-1.46	-1.37	-1.32	-4.70	-4.33	-2.34
Poverty rate (50%)												
Level (in percent)	13.68	13.68	13.68	13.78	13.85	14.04	13.31	13.32	13.32	13.20	13.32	13.62
Abs. diff (in pp)	.	.	.	0.10	0.17	0.36	-0.37	-0.36	-0.36	-0.48	-0.36	-0.06
Rel. diff (in percent)	.	.	.	0.73	1.23	2.61	-2.70	-2.63	-2.61	-3.51	-2.64	-0.42

NOTE. — Absolute and relative differences in Gini coefficient and poverty rates compared to the baseline. Poverty rates are relative to 60% and 50% of median net equivalent income. UB = unbalanced budget, BBI = balanced budget by adjusting income tax, BBC = balanced budget by adjusting consumption tax. The net equivalent income is calculated based on the modified OECD scale. pp = percentage points. Source: IAB-MSM.

Tables 7 and 8 report the same information as Table 3, which is the labour supply effect obtained by the three reforms, this time for the cases with balance budget closures. Although there are quantitative differences in the numbers reported throughout Tables 3, 7 and 8, they all show that scenario (1) increases labour supply significantly for the second decile while scenario (2) has the opposite effect. Both consumption tax and income tax financing reduce the positive labour supply effect found for scenario (1) in the second decile by about the same amount. The negative effect on the labour supply of low-income households in scenario (2) is also more pronounced in both forms of balanced budget financing. However, due to its progressive structure, financing via an income tax leads to significant negative effects on the labour supply of middle and high income groups via the substitution effect. For scenario (1), the total labour supply effect thus changes from 3.1 thousand additional full-time working persons in the labour market without refinancing (UB) to 93.3 thousand less full-time working individuals (BBC) and a negative effect of 180 thousand individuals working less when the reform is refinanced through the income tax (BBI). The negative labour supply effects of an increase in the non-means-tested benefit on labour supply are thus substantially amplified by the inclusion of refinancing.

6. Conclusions

In this paper we study three hypothetical reforms of poverty-relief policies to support children in Germany. These three scenarios are designed to capture salient characteristics of reform proposals currently debated in the political arena, with the aim to study their distributional impact and efficacy in better supporting children compared to the status quo. We also consider three possible alternatives: that the reforms are introduced without preserving budget parity; that they are introduced together with a compensatory rise in income taxes; finally, that budget parity is restored via a flat-rate tax on disposable income (i.e., by a consumption tax). We employ a behavioural microsimulation model in order to simultaneously account for labour supply effects, endogenous non-take-up of the benefits, budgetary effects, and distributional impacts of the three policies.

In order to draw general conclusions, some results are worth stressing. First, to the extent that such proposals are meant mainly as a poverty-relief instrument, we find that improvements in the (means-tested) ALG2 components related to children are high-powered and well-targeted. They manage to reach significant reductions in poverty rates even though their budgetary impact is relatively small. Accordingly, refinancing the reform has little impact on distributional effects due to the relatively low fiscal cost. When unconditional benefits are increased, the effect on overall income inequality is more

Table 7.: *Changes in labour supply by income decile, balanced budget (through consumption tax adjustment), partial take-up*

	Scenario (1)	Scenario (2)	Scenario (3)
Part. effect			
Decile 1	-18.5	-10.4	-28.1
Decile 2	29.7	-27.9	11.3
Decile 3	-6.5	-1.9	-9.7
Decile 4	-5.5	-0.2	-7.3
Decile 5	-5.3	0.2	-6.6
Decile 6	-6.5	1.1	-8.6
Decile 7	-3.6	0.3	-4.4
Decile 8	-1.5	0.1	-2.1
Decile 9	-1.3	-0.1	-1.9
Decile 10	-0.6	-0.1	-0.9
Total	-19.6	-38.8	-58.2
Full-time equiv.			
Decile 1	-18.6	-10.4	-28.4
Decile 2	31.3	-29.4	11.7
Decile 3	-7.4	-2.0	-11.7
Decile 4	-7.3	-0.4	-9.5
Decile 5	-7.8	1.9	-9.5
Decile 6	-10.1	2.8	-13.0
Decile 7	-8.7	1.4	-10.8
Decile 8	-10.4	0.1	-12.0
Decile 9	-5.8	-0.3	-7.1
Decile 10	-2.1	-0.2	-3.1
Total	-46.9	-36.6	-93.3

NOTE. — Changes in labour supply (sum over all household types) by income deciles compared to the baseline. Numbers expressed in 1,000 persons. Deciles based on net equivalent income. Net equivalent income is calculated with the modified OECD scale. Part. effect = participation effect (negative change in the 0 hours category). Full-time equiv. = full-time equivalents (change in labour supply expressed in 1,000 persons with a 40 hour working week). Source: IAB-MSM.

pronounced. However, with significantly higher fiscal costs, a clear poverty-reducing effect can be achieved as well. Since an increase in unconditional benefits imposes very high fiscal costs, refinancing through an income tax amplifies the achieved redistributive effects.

Concerning non-take-up of means-tested benefits, the results point to a trade-off in terms of poverty reduction when an unconditional, not means-tested benefit does not reach the minimum income and households have to apply for additional means-tested benefits. After increasing unconditional benefits, some households may choose not to claim means-tested

Table 8.: *Changes in labour supply by income decile, balanced budget (through income tax adjustment), partial take-up*

	Scenario (1)	Scenario (2)	Scenario (3)
Part. effect			
Decile 1	-17.1	-9.4	-23.6
Decile 2	27.4	-28.5	9.2
Decile 3	-8.9	-2.6	-13.1
Decile 4	-8.2	-0.9	-11.4
Decile 5	-7.9	-0.6	-10.3
Decile 6	-10.7	0.3	-15.5
Decile 7	-5.5	-0.2	-7.7
Decile 8	-3.2	-0.2	-5.0
Decile 9	-3.3	-0.3	-5.1
Decile 10	-2.4	-0.4	-4.1
Total	-40.0	-42.8	-86.5
Full-time equiv.			
Decile 1	-20.3	-9.7	-28.3
Decile 2	26.6	-30.8	5.6
Decile 3	-12.4	-3.1	-18.1
Decile 4	-12.5	-1.8	-17.2
Decile 5	-14.7	0.1	-20.1
Decile 6	-18.3	1.0	-25.2
Decile 7	-16.2	-0.0	-21.8
Decile 8	-17.3	-2.0	-22.1
Decile 9	-12.6	-2.1	-16.7
Decile 10	-10.0	-1.9	-16.1
Total	-107.7	-50.1	-180.0

NOTE. — Changes in labour supply (sum over all household types) by income deciles compared to the baseline. Numbers expressed in 1,000 persons. Deciles based on net equivalent income. Net equivalent income is calculated with the modified OECD scale. Part. effect = participation effect (negative change in the 0 hours category). Full-time equiv. = full-time equivalents (change in labour supply expressed in 1,000 persons with a 40 hour working week). Source: IAB-MSM.

benefits, although they would lose income. One approach to avoid this would be to simultaneously take measures to increase the use of means-tested benefits.

As far as labour supply effects are concerned (which may be a major concern, to the extent that entry into the labour force implies long-term improvements in the conditions of poorer households), our findings suggest that raising the non-means-tested child benefit (*Kindergeld*) would improve labour force participation among low-income households, especially among single parents, while having a negative impact on labour supply for

middle- and high-income households. The negative effects of an increase in the non-means-tested benefit on labour supply are substantially amplified by the inclusion of refinancing, especially when an increase in the income tax is considered. On the contrary, we find that reforms based on means-tested benefits tend to depress labour supply for the lowest two income deciles. The negative effects are amplified when full take-up of means-tested benefits is assumed, indicating a conflict in terms of effectiveness of income support through low non-take-up and minimising negative labour supply responses.

Interestingly, when combined, the two approaches show synergies in the form of a lower negative impact on labour supply and improved poverty reduction. Non-means-tested benefits then have the same effect as a reduction in the effective marginal tax rates for recipients of means-tested benefits, as non-means-tested benefits are considered in the means test. This result suggests that a more efficient policy design might combine a reform of both, means-tested and non-means-tested benefits for children in order to achieve minimal labour supply reductions and more targeted poverty relief. Alternatively, an increase in means-tested benefits could be combined with a reduction in the transfer withdrawal rate. With respect to a non-means-tested benefit equal to the subsistence level of children (universal minimum income), our results indicate that this would be associated with very high costs, strong negative labour supply effects, but also significant poverty reduction.

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A. Appendix: Tables and Figures

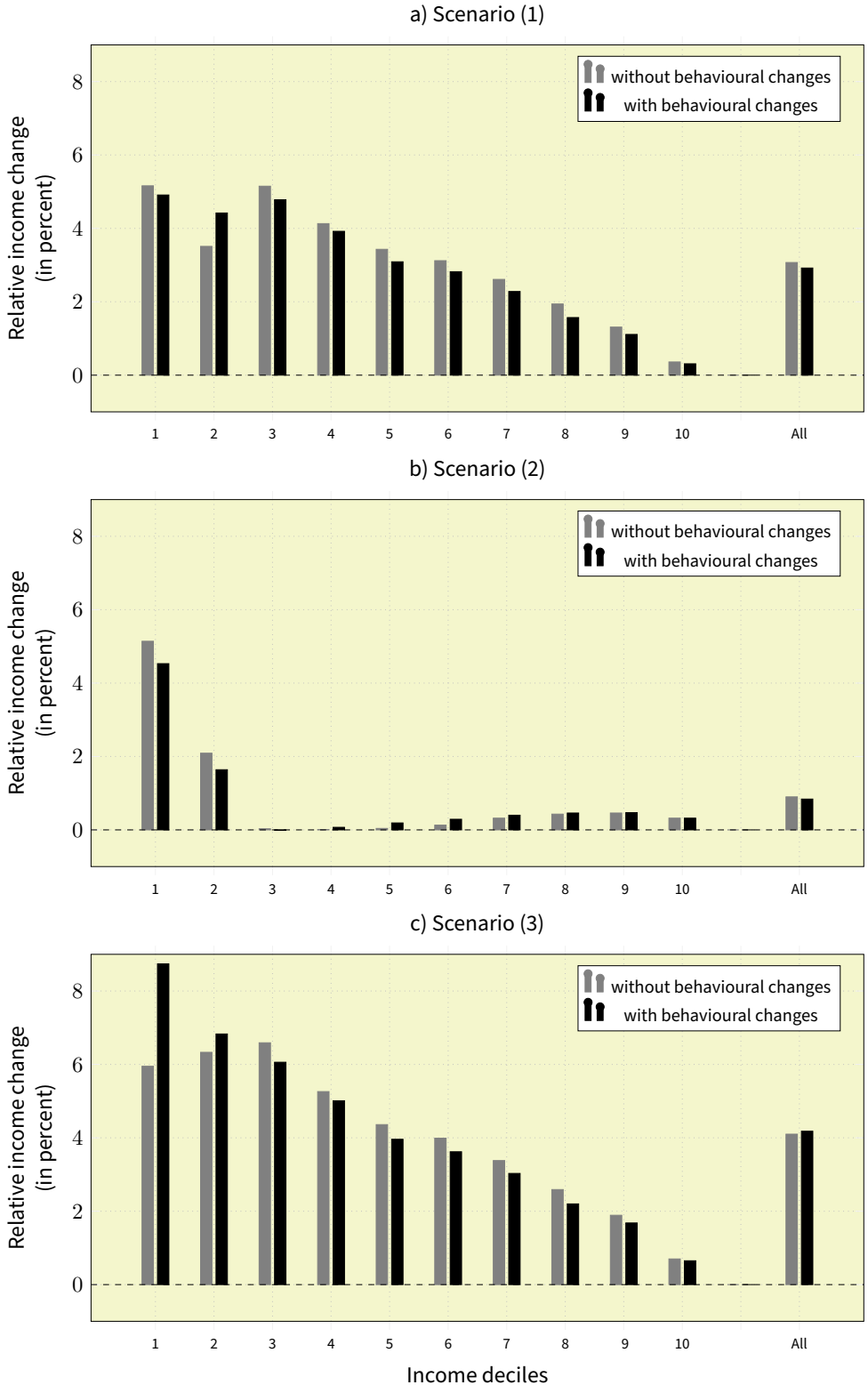
A.1. Additional tables and figures for simulation results under partial take-up

Table A.11.: *Inequality and poverty indicators, affected population only, partial take-up*

	Reform scenarios			
	Baseline	(1)	(2)	(3)
Gini coefficient				
Level (in percent)	28.30	27.51	28.12	27.21
Abs. diff (in pp)	.	-0.79	-0.18	-1.09
Rel. diff (in percent)	.	-2.79	-0.63	-3.86
Poverty rate (60%)				
Level (in percent)	16.00	15.03	15.29	13.73
Abs. diff (in pp)	.	-0.97	-0.70	-2.27
Rel. diff (in percent)	.	-6.04	-4.40	-14.19
Poverty rate (50%)				
Level (in percent)	9.29	9.53	8.43	8.16
Abs. diff (in pp)	.	0.24	-0.86	-1.13
Rel. diff (in percent)	.	2.63	-9.28	-12.20

NOTE. — Absolute and relative differences in Gini coefficient and poverty rates compared to the baseline. Poverty rates are relative to 60% and 50% of median net equivalent income. The net equivalent income is calculated based on the modified OECD scale. pp = percentage points. Results refer to the population living in households affected by the reform scenarios, i.e., families having at least one child entitled to *Kindergeld* or ALG2. Source: IAB-MSM.

Figure A.11.: *Relative change in equivalised household income by income deciles, affected population only, partial take-up, unbalanced budget*



NOTE. — Relative change in mean household equivalent net income by income deciles compared to the baseline. The equivalent income is calculated based on the modified OECD scale. Results are calculated assuming partial take-up. Without behavioural change = working hours choice probabilities and the conditional take-up probabilities are fixed at their levels in the baseline scenario. With behavioural change = choice probabilities change according to the predictions of the labour supply model. All = Mean change over deciles. Results refer to the population living in households affected by the reform scenarios, i.e., families having at least one child entitled to *Kindergeld* or ALG2. Source: IAB-MSM.

Table A.12.: *Change in number of households (in 1,000), unbalanced budget, partial take-up*

	Reform scenarios		
	(1)	(2)	(3)
(A) Changes before labour supply effects			
ALG2 (living costs)	-56	24	-28
ALG2 (accommodation costs)	-37	45	-47
Housing benefits	9	-38	-9
Supplementary child allowance	37	-42	23
(B) Changes after labour supply effects			
ALG2 (living costs)	-171	87	-134
ALG2 (accommodation costs)	-161	107	-162
Housing benefits	26	-46	4
Supplementary child allowance	55	-55	34
(C) Labour supply effect (B) - (A)			
ALG2 (living costs)	-115	62	-106
ALG2 (accommodation costs)	-124	63	-116
Housing benefits	17	-9	13
Supplementary child allowance	18	-13	11

NOTE. — Differences in households (in 1.000) receiving a positive amount of each item in the table compared to the baseline. ALG2 = unemployment benefit II (SGB II). Source: IAB-MSM.

Table A.13.: *Change in number of children (in 1,000), unbalanced budget, partial take-up*

	Reform scenarios		
	(1)	(2)	(3)
(A) Changes before labour supply effects			
ALG2 (living costs)	-105	53	-60
ALG2 (accommodation costs)	-86	98	-50
Housing benefits	12	-80	-33
Supplementary child allowance	86	-95	51
(B) Changes after labour supply effects			
ALG2 (living costs)	-300	192	-227
ALG2 (accommodation costs)	-296	236	-233
Housing benefits	35	-96	-18
Supplementary child allowance	114	-125	58
(C) Labour supply effect (B) - (A)			
ALG2 (living costs)	-195	139	-167
ALG2 (accommodation costs)	-209	138	-182
Housing benefits	23	-16	15
Supplementary child allowance	28	-30	8

NOTE. — Differences in children (in 1.000) who live in households which receive a positive amount of each item in the table compared to the baseline. ALG2 = unemployment benefit II (SGB II). Source: IAB-MSM.

Table A.14.: *Fiscal effect (in million Euro) under different balanced budget assumptions, partial take-up*

	Reform scenarios								
	(1)			(2)			(3)		
	UB	BBI	BBC	UB	BBI	BBC	UB	BBI	BBC
(A) Changes before labour supply effects									
Expenditures									
ALG2 (living costs)	-1,345	-1,345	-1,345	900	900	900	-914	-914	-914
ALG2 (accommodation costs)	-398	-396	-398	310	310	310	-291	-276	-291
Housing benefits	16	16	16	-158	-158	-158	-60	-60	-60
Social assistance	-28	-28	-28	142	142	142	106	106	106
Supplementary child allowance	209	218	209	-171	-168	-171	125	126	125
Kindergeld	17,724	17,724	17,724	0	0	0	22,566	22,566	22,566
Revenues									
Income taxes	2,230	18,802	2,230	-1,334	2,863	-1,334	2,230	26,135	2,230
SSC employees	0	0	0	0	0	0	0	0	0
SSC employers	0	0	0	0	0	0	0	0	0
Consumption tax	.	.	14,417	.	.	3,703	.	.	20,700
(B) Changes after labour supply effects									
Expenditures									
ALG2 (living costs)	-1,950	-1,840	-1,931	1,447	1,478	1,457	-1,508	-1,354	-1,478
ALG2 (accommodation costs)	-1,196	-1,110	-1,173	760	784	768	-1,021	-890	-989
Housing benefits	56	60	53	-178	-178	-179	-30	-24	-34
Social assistance	-69	-69	-69	212	212	212	132	133	133
Supplementary child allowance	254	267	249	-219	-216	-220	144	152	139
Kindergeld	17,724	17,724	17,724	-0	-0	-0	22,566	22,566	22,566
Revenues									
Income taxes	1,643	16,838	1,311	-1,272	2,614	-1,346	1,556	23,373	1,071
SSC employees	-130	-891	-424	-96	-270	-166	-261	-1,384	-695
SSC employers	-151	-912	-442	-91	-266	-160	-278	-1,404	-710
Consumption tax	.	.	14,402	.	.	3,702	.	.	20,669
(C) Labour supply effect (B) - (A)									
Expenditures									
ALG2 (living costs)	-605	-495	-586	547	578	557	-593	-440	-564
ALG2 (accommodation costs)	-798	-714	-775	450	474	458	-730	-613	-698
Housing benefits	40	45	37	-20	-19	-20	30	35	26
Social assistance	-42	-41	-41	69	69	69	26	27	27
Supplementary child allowance	45	49	40	-49	-48	-49	19	26	15
Kindergeld	-0	-0	-0	-0	-0	-0	-0	-0	-0
Revenues									
Income taxes	-587	-1,963	-919	62	-249	-11	-674	-2,762	-1,159
SSC employees	-130	-891	-424	-96	-270	-166	-261	-1,384	-695
SSC employers	-151	-912	-442	-91	-266	-160	-278	-1,404	-710
Consumption tax	.	.	-15	.	.	-0	.	.	-32
(D) Totals (expenditures - revenues)									
Sum (excl. labour supply) (A)	13,948	-2,612	-469	2,357	-1,837	-1,346	19,302	-4,586	-1,398
+ Labour supply effect (C)	-492	2,610	476	1,123	1,839	1,354	-36	4,585	1,401
= Sum (incl. labour supply) (B)	13,456	-3	6	3,480	2	8	19,266	-2	3

NOTE. — Differences in fiscal revenues/expenditures (in million Euro) compared to the baseline. UB = unbalanced budget. BBI = balanced budget by adjusting income tax. BBC = balanced budget by adjusting consumption tax. ALG2 = unemployment benefit II (SGB II). Social assistance = social assistance scheme for pensioners. *Kindergeld* = non-means-tested child benefit. SSC = social security contributions. Source: IAB-MSM.

A.2. Additional tables and figures for simulation results under full take-up

Table A.25.: *Inequality and poverty indicators, full take-up*

	Baseline	Reform scenarios (1)	(2)	(3)
Gini coefficient				
Level (in percent)	29.17	28.82	29.10	28.69
Abs. diff (in pp)	.	-0.34	-0.06	-0.48
Rel. diff (in percent)	.	-1.18	-0.22	-1.63
Poverty rate (60%)				
Level (in percent)	18.51	17.43	18.12	16.95
Abs. diff (in pp)	.	-1.09	-0.39	-1.57
Rel. diff (in percent)	.	-5.86	-2.09	-8.46
Poverty rate (50%)				
Level (in percent)	11.49	10.76	10.86	10.25
Abs. diff (in pp)	.	-0.73	-0.62	-1.24
Rel. diff (in percent)	.	-6.32	-5.41	-10.78

NOTE. — Absolute and relative differences in Gini coefficient and poverty rates compared to the baseline. Poverty rates are relative to 60% and 50% of median net equivalent income. The net equivalent income is calculated based on the modified OECD scale. pp = percentage points. Source: IAB-MSM.

Table A.26.: *Changes in labour supply, unbalanced budget, full take-Up*

	Couples (men)	Couples (women)	Single parents	Total
		Scenario (1)		
Part. effect	22.5	-4.3	36.4	54.6
10 hours	-4.9	0.9	-6.2	-10.3
15 hours	-0.4	10.5	-0.3	9.7
20 hours	-5.9	11.3	6.7	12.0
30 hours	5.4	2.6	19.3	27.3
40 hours	46.6	-25.3	18.7	40.0
50 hours	-18.2	-4.1	-1.8	-24.2
Full-time equiv.	23.5	-18.8	32.6	37.4
		Scenario (2)		
Part. effect	-22.9	-12.0	-19.6	-54.5
10 hours	3.0	-1.1	2.9	4.8
15 hours	1.3	-5.0	-0.4	-4.0
20 hours	7.0	-6.6	-1.7	-1.3
30 hours	-0.7	0.2	-9.4	-10.0
40 hours	-33.4	-0.1	-10.0	-43.6
50 hours	-0.1	0.6	-0.9	-0.4
Full-time equiv.	-29.3	-4.7	-18.5	-52.6
		Scenario (3)		
Part. effect	22.4	-29.5	22.5	15.4
10 hours	0.4	1.9	-5.0	-2.7
15 hours	0.0	11.4	-2.1	9.3
20 hours	-3.0	11.1	5.7	13.7
30 hours	5.5	-13.3	14.2	6.4
40 hours	42.6	-35.9	12.3	19.0
50 hours	-23.2	-4.6	-2.6	-30.4
Full-time equiv.	16.4	-41.4	20.6	-4.5

NOTE. — Changes in labour supply compared to the baseline. Numbers expressed in 1,000 persons. Part. effect = participation effect (negative change in the 0 hours category). Full-time equiv. = full-time equivalents (change in labour supply expressed in 1,000 persons with a 40 hour working week). Source: IAB-MSM.

Table A.27.: *Changes in labour supply by income decile, unbalanced budget, full take-Up*

	Scenario (1)	Scenario (2)	Scenario (3)
Part. effect			
Decile 1	21.2	-12.0	12.2
Decile 2	50.5	-41.5	27.7
Decile 3	2.1	-2.1	-0.6
Decile 4	-4.4	-0.6	-5.8
Decile 5	-4.1	0.4	-5.4
Decile 6	-4.4	0.8	-5.2
Decile 7	-3.1	0.4	-3.5
Decile 8	-1.1	0.1	-1.4
Decile 9	-1.6	0.0	-2.2
Decile 10	-0.4	-0.0	-0.6
Total	54.6	-54.5	15.4
Full-time equiv.			
Decile 1	17.1	-11.5	8.3
Decile 2	59.4	-45.2	36.4
Decile 3	1.6	-2.4	-1.6
Decile 4	-5.4	-0.6	-6.9
Decile 5	-6.0	2.0	-7.5
Decile 6	-7.7	2.4	-9.0
Decile 7	-7.6	1.8	-8.4
Decile 8	-8.1	0.7	-8.8
Decile 9	-4.8	0.2	-5.5
Decile 10	-1.2	-0.1	-1.5
Total	37.4	-52.6	-4.5

NOTE. — Changes in labour supply (sum over all household types) by income deciles compared to the baseline. Numbers expressed in 1,000 persons. Deciles based on net equivalent income. Net equivalent income is calculated with the modified OECD scale. Part. effect = participation effect (negative change in the 0 hours category). Full-time equiv. = full-time equivalents (change in labour supply expressed in 1,000 persons with a 40 hour working week). Source: IAB-MSM.

Table A.28.: *Fiscal effect (in million Euro), unbalanced budget, full take-up*

	Reform scenarios		
	(1)	(2)	(3)
(A) Changes before labour supply effects			
Expenditures			
ALG2 (living costs)	-2,081	1,485	-1,403
ALG2 (accommodation costs)	-539	671	-231
Housing benefits	17	-281	-155
Social assistance	-59	334	258
Supplementary child allowance	278	-440	3
Kindergeld	17,722	0	22,564
Revenues			
Income taxes	2,217	-1,328	2,216
SSC employees	0	0	0
SSC employers	0	0	0
(B) Changes after labour supply effects			
Expenditures			
ALG2 (living costs)	-2,529	1,971	-1,664
ALG2 (accommodation costs)	-1,169	1,081	-648
Housing benefits	161	-330	-64
Social assistance	-61	338	259
Supplementary child allowance	554	-575	165
Kindergeld	17,722	0	22,564
Revenues			
Income taxes	1,588	-1,361	1,453
SSC employees	64	-269	-165
SSC employers	26	-259	-194
(C) Labour supply effect (B) - (A)			
Expenditures			
ALG2 (living costs)	-448	486	-261
ALG2 (accommodation costs)	-630	410	-417
Housing benefits	144	-50	91
Social assistance	-2	4	1
Supplementary child allowance	276	-135	163
Kindergeld	-0	0	-0
Revenues			
Income taxes	-629	-33	-764
SSC employees	64	-269	-165
SSC employers	26	-259	-194
(D) Totals (expenditures - revenues)			
Sum (excl. labour supply) (A)	13,121	3,098	18,819
+ Labour supply effect (C)	-121	1,275	700
= Sum (incl. labour supply) (B)	13,000	4,373	19,519

NOTE. — Differences in fiscal revenues/expenditures (in million Euro) compared to the baseline. ALG2 = unemployment benefit II (SGB II). Social assistance = social assistance scheme for pensioners. *Kindergeld* = non-means-tested child benefit. SSC = social security contributions. Source: IAB-MSM.

Table A.29.: *Change in number of households (in 1,000), unbalanced budget, full take-up*

	Reform scenarios		
	(1)	(2)	(3)
(A) Changes before labour supply effects			
ALG2 (living costs)	-70	60	-33
ALG2 (accommodation costs)	-66	97	-42
Housing benefits	10	-79	-41
Supplementary child allowance	63	-94	16
(B) Changes after labour supply effects			
ALG2 (living costs)	-156	120	-80
ALG2 (accommodation costs)	-162	156	-107
Housing benefits	64	-100	-5
Supplementary child allowance	141	-137	73
(C) Labour supply effect (B) - (A)			
ALG2 (living costs)	-86	60	-47
ALG2 (accommodation costs)	-96	59	-64
Housing benefits	54	-21	36
Supplementary child allowance	78	-43	57

NOTE. — Differences in households (in 1.000) receiving a positive amount of each item in the table compared to the baseline. ALG2 = unemployment benefit II (SGB II). Source: IAB-MSM.

Table A.210.: *Change in number of children (in 1,000), unbalanced budget, full take-up*

	Reform scenarios		
	(1)	(2)	(3)
(A) Changes before labour supply effects			
ALG2 (living costs)	-139	149	-65
ALG2 (accommodation costs)	-135	225	-4
Housing benefits	13	-179	-119
Supplementary child allowance	129	-221	4
(B) Changes after labour supply effects			
ALG2 (living costs)	-294	275	-145
ALG2 (accommodation costs)	-303	344	-115
Housing benefits	104	-217	-70
Supplementary child allowance	282	-317	107
(C) Labour supply effect (B) - (A)			
ALG2 (living costs)	-156	126	-80
ALG2 (accommodation costs)	-168	119	-111
Housing benefits	91	-38	49
Supplementary child allowance	154	-95	103

NOTE. — Differences in children (in 1.000) who live in households which receive a positive amount of each item in the table compared to the baseline. ALG2 = unemployment benefit II (SGB II). Source: IAB-MSM.

Table A.211.: *Inequality and poverty indicators, affected population only, full take-up*

		Reform scenarios		
	Baseline	(1)	(2)	(3)
Gini coefficient				
Level (in percent)	26.95	26.05	26.83	25.75
Abs. diff (in pp)	.	-0.89	-0.11	-1.19
Rel. diff (in percent)	.	-3.32	-0.43	-4.43
Poverty rate (60%)				
Level (in percent)	15.01	12.35	14.06	11.18
Abs. diff (in pp)	.	-2.66	-0.95	-3.83
Rel. diff (in percent)	.	-17.71	-6.32	-25.55
Poverty rate (50%)				
Level (in percent)	5.79	4.01	4.40	2.89
Abs. diff (in pp)	.	-1.78	-1.39	-2.90
Rel. diff (in percent)	.	-30.68	-23.96	-50.02

NOTE. — Absolute and relative differences in Gini coefficient and poverty rates compared to the baseline. Poverty rates are relative to 60% and 50% of median net equivalent income. The net equivalent income is calculated based on the modified OECD scale. pp = percentage points. Results refer to the population living in households affected by the reform scenarios, i.e., families having at least one child entitled to *Kindergeld* or ALG2. Source: IAB-MSM.

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