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Scenarios for reducing poverty in Belgium, Greece and the United Kingdom

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Abstract

Poverty reduction remains a huge challenge for policy makers in Europe. In this paper, we outline three strategies for identifying effective policy reform packages for reducing income poverty in Europe: (1) reversing regressive reforms and using measures of 'poverty reduction / public budget trade-offs' to identify efficient and effective policy reforms; (2) upscaling existing policies; (3) breaking down policies into their elementary parts and combining policy options systematically for identifying the most effective policy design. All three strategies make use of the European microsimulation EUROMOD. We illustrate them with case studies of the United Kingdom, Greece and Belgium, three countries with a very different welfare state trajectory, and social outcomes. The paper shows that all three strategies are useful for identifying policy packages that work, and for producing evidence for more effective poverty-reducing policy reform packages. We also highlight the most important limitations of our approach.

Keywords: Poverty, Europe 2020, EU, social inclusion, social policy, fiscal policy, employment, microsimulation, EU-SILC

JEL codes: D3, D13, D30, H53, I38

1 Introduction

Tim Goedemé, Herman Deleeck Centre for Social Policy, University of Antwerp.

In spite of large redistributive efforts of welfare states, the reduction of poverty remains a huge challenge in Europe (e.g. Gábos, Branyiczki et al. 2015, European Commission 2016). If social researchers aim at contributing to improving the reduction of poverty in Europe, their analyses should not only be focused on identifying problems and policy weaknesses, but should also assess the feasibility and poverty-reducing effect of alternative policy scenarios. By doing so, they may contribute to more effective policy programmes, based on the best available evidence. This is precisely one of the major purposes of the FP7 funded ImPRovE project. In this paper, we bring together some of our efforts to design strategies for identifying policy scenarios that work, and put them to use for assessing policy reform scenarios for three countries: Belgium, Greece and the United Kingdom. For each of these cases, we make use of an alternative strategy to propose a policy reform package.

In the case of the United Kingdom, the authors start from past reforms, which have been found to be rather regressive in terms of their poverty-reducing impact. As a first step, these past reforms are 'abolished'. The analysis makes clear that this would lead to a reduction in poverty and an increase in the public budget. In a second step, the authors subsequently identify the most efficient way to reduce poverty with the additional budgetary resources. For doing so, they make use of the methodology developed by Leventi, Sutherland et al. (2016). More in particular, Leventi et al. show with microsimulations the budgetary and poverty-reducing effect of increases and decreases in a selection of policy parameters (e.g. benefit levels). On the basis of this information, it is possible to identify which parametric reform would have the biggest poverty impact, given the available budget. The second example highlights the case of Greece. More in particular, one specific policy reform is simulated, namely the introduction of a generalised guaranteed minimum income scheme. The authors start from the six-month pilot scheme that was initiated from November 2014 to May 2015 in 13 municipalities (one in each region), but extend this to the entire population in order to assess its potential poverty-reducing effect. The third case is concerned with the design of an effective in-work benefit which reduces poverty in Belgium, while not neglecting work incentives. In this case, a policy scheme is broken down in a series of parameters which define the design of the scheme. By varying the definition of each of these parameters in a number of ways, the analysis shows how the design of each of the individual policy parameters matters for the policy outcome and budgetary effect, and illustrates the interaction of various policy parameters. By doing so, an effective design of the in-work benefit can be identified.

With the approaches that we propose, several limitations should be kept in mind. In what follows, we highlight the three most important ones. First, in all cases, our focus is on current income poverty, measured with the at-risk-of-poverty indicator. We are well aware that also other benchmarks are relevant (e.g. Gábos and Goedemé 2016; Decancq et al. 2014), and some authors (also within the ImPRovE project) have undertaken attempts to assess the policy-reducing effects of social policies both on financial poverty and material deprivation (e.g. Notten 2015, Notten and Guio 2016). Nonetheless, we contend that, given the size of income redistribution taking place in European welfare states, a focus on financial poverty remains highly relevant and of central policy concern. Also, as a result of data limitations, we limit ourselves to a cross-sectional analysis of poverty, ignoring dynamics over

time (e.g. persistent poverty)[1] and poverty effects in the long term (e.g. with impacts on the next generation).

A second important limitation of the analyses presented in this paper, is that the focus is on fiscal and social policies of which the effect on financial poverty can be measured directly with the research instruments we use: household income survey data and the European microsimulation model EUROMOD. As a result, important policy domains and policy options remain out of sight, even though they have a major impact on the (economic) well-being of households. Examples include indirect taxes, taxes on wealth, but also (in-kind) housing programmes, (supply and demand-side) employment policy, education, health care and policy changes directed at influencing people's behaviour, for instance in relation to tax compliance, the take up of benefits or prevention of sickness and chronic diseases. In other words, our perspective on relevant policy scenarios and how scarce resources can be put to use, is limited by the toolbox we have at hand. This is not to say that other policy options are irrelevant or ineffective. They are not included here, because it is, at least for the time being, not feasible to estimate with a sufficient degree of precision their impact on financial poverty.

Finally, it is worth stressing that in two out of three cases, we primarily focus on 'first-order' effects. These are the so-called 'morning-after' effects of policy reforms, ignoring potential behavioural reactions and broader general equilibrium effects. To some extent, second-order effects are taken on board in the case of Belgium. Still, even though the apparatus for measuring policy effects is continuously improved, we work with estimates that are subject to measurement error and misspecifications. At the same time, it is the best evidence available, which is worthwhile putting on the table. To conclude, in spite of these limitations, we are convinced that the strategies for analysis employed in this paper are useful, and illustrate ways for providing a constructive, evidence-based input for the policy debate on efficient and effective measures to reduce poverty in Europe.

In what follows, we consecutively present the three cases in the following order: (1) the reversion and extension of past policy reforms in the United Kingdom, (2) the introduction of a generalised minimum income guarantee in Greece, and (3) the elaboration of an alternative scheme of in-work-benefits in Belgium.

2 Poverty-reducing policy directions for the UK: time for a U-turn?

Holly Sutherland and Paola De Agostini, ISER, University of Essex[2]

The evolution of tax-benefit policies in the UK in recent years has not contributed to poverty reduction and has mainly benefited the upper-middle of income distribution. De Agostini et al. (2015) show how the Coalition government in power in the period 2010-2015 introduced changes to direct taxes and

[1] For an overview of ImPRovE research in relation to short and medium term dynamics in financial poverty and material deprivation, see Gábos and Goedemé 2016.

[2] Thanks to Chrysa Leventi and Iva Tasseva for comments on an earlier draft. Our research is financially supported by the European Union Seventh Framework Programme (FP7/2012-2016) under grant agreement n° 290613 (ImPRovE project). This paper uses EUROMOD version G2.35. The process of extending and updating EUROMOD is financially supported by the Directorate General for Employment, Social Affairs and Inclusion of the European Commission. Family Resources Survey data are made available by the Department of Work and Pensions via the UK Data Archive. The usual disclaimers apply.

cash benefits that did not themselves contribute to fiscal consolidation in the post-financial crisis period but nevertheless managed to reduce the value of benefits paid out in such a way as to pay for substantial cuts in income taxes.

The main changes were:

Direct taxes and contributions

- a large real increase in the personal tax allowance, withdrawn for higher-rate taxpayers;
- a reduction in the top rate of tax from 50 per cent to 45 per cent;
- introduction of partial transferability of the personal allowance between spouses in married couples, applying to 10 per cent of the personal allowance and limited to basic rate taxpayers;
- an increase of 1 percentage point in the rate of National Insurance contributions (NICs), with the lower thresholds for employee and self-employed contributions increased by more than regular indexation;
- abolition of Council Tax benefit, with local authorities taking responsibility for any replacement "Council Tax support"; Council Tax itself was frozen or increases restricted, so that it generally fell in value in real terms.

Cash benefits

- adjustments to Child and Working tax credits so that they became less generous in real terms, and their reach up the income distribution was reduced;
- adjustment to hours of work conditions in Working Tax Credit to require more from couples with children, but less from older people and those receiving Carer's Allowance;
- a cut in real terms to Child Benefit and reductions for families with anyone earning more than £50,000 (and withdrawn entirely for those earning £60,000 or more);
- a substantial cut to the Winter Fuel Payment;
- more restrictive conditions for disability and incapacity benefits, with fewer people entitled, and contributory Employment and Support Allowance time-limited to one year and means-tested thereafter;
- major restrictions on the maximum amount of rent that may be covered by housing support for private sector; Housing Benefit for public sector tenants was reduced for tenants deemed to be under-occupying their accommodation; and the deductions made automatically for resident non-dependants were increased;
- introduction of a maximum cap on all working age benefits except for those in receipt of disability payments or Working Tax Credit;
- indexation of most working age benefits by 1 per cent 2012-15 instead of the customary index which would have resulted in larger increases.

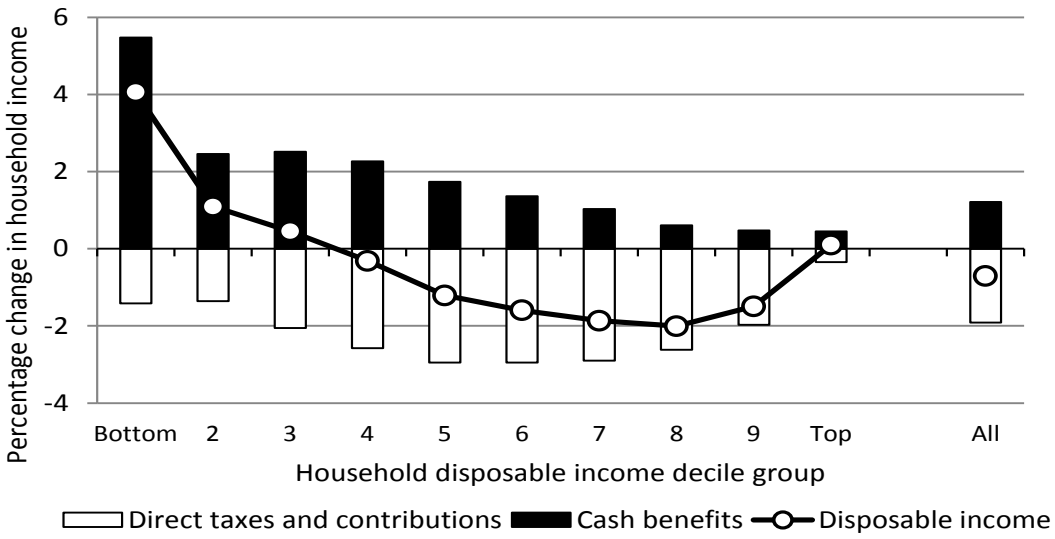
This combination had distributional effects, reducing the incomes of those with least and increasing the income of those in the middle and upper-middle part of the distribution. Gains for the top 10% were limited and the top 5% lost a little (De Agostini et al., 2015 Figure 4.1a). The at-risk-of-poverty rate increased by 1 percentage point more than it would have been without the policy changes.[3] This is before any account is taken of the changes that have been announced since May 2015 by the current

[3] Using a poverty threshold of 60% median income that moves according to the effects of policy changes on median income.

Conservative government which will further cut and restrict working age and child benefits and increase tax thresholds in real terms. The calculations are also before taking account of Universal Credit, the full introduction of which will result in some low income households losing, while others potentially gain (De Agostini et al., 2015 Figure 7.1).

In seeking approaches to changing policy in order to reduce poverty, this suggests that one fruitful starting point might be to reverse the changes of the period 2010 to 2015. Using EUROMOD for the UK and Family Resources Survey data we can do just that.[4] Figure 1 shows the distributional effect of returning to the policies of May 2010, assuming those policies would have been indexed for inflation (using the CPI) over the 5-year period. The percentage change in household disposable income due to the policy changes is shown for each decile group of the population according to their equivalised household disposable incomes under 2015 policies. Note that while the analysis covers the whole population, in order to focus on policies targeted on the non-pensioner population we have held pensions constant. The state pension increased in real terms over the period 2010-15 and we do not suggest reversing this change.

Figure 1. Percentage change in household income by household income decile group if 2010 tax-benefit policies were restored in real terms in 2015.



Notes: Pensions are held constant. Observations are ranked into decile groups using household disposable income in 2015, equivalised using the modified OECD equivalence scale. Source: Authors' calculations using EUROMOD G2.35.

The distributional effect of restoring the 2010 system in real terms is U-shaped with the lowest income decile groups gaining most as a proportion of their income, those in the middle losing most but the top quintile group losing less and the top decile group breaking even. The net effect of changes in income tax, National Insurance contributions and net Council Tax (shown by the white bars in the figure) is to increase them in real terms and to reduce household income accordingly, especially in the middle of the distribution. The net effect of changes to cash benefits (excluding pensions) shown by the back bars is to increase household incomes especially at the bottom of the distribution. This restoration of

[4] See Sutherland and Figari (2013) for more information about EUROMOD, De Agostini and Sutherland (2014) for detailed information about the simulation of UK policies in EUROMOD and De Agostini et al. (2015) for the specific assumptions used in this analysis.

the 2010 policy system would, according to our EUROMOD simulations, achieve a 1 percentage point reduction in the poverty headcount.

Overall the changes reduce household income by about 0.7 percent, to the benefit of the public finances (reversing the actual overall effect which was negative for the public finances, as mentioned above). This corresponds approximately to a gain of 0.24% of GDP. From a poverty-reducing perspective one could imagine spending these resources on additional policy reforms designed to increase the incomes of households below the poverty line. Of course there are many options. Making use of the analysis in Leventi et al. (2016) which calculates the cost-effectiveness in terms of poverty reduction of changes to selected policy "building blocks", we can provide rules of thumb as to how much additional poverty reduction we might expect if the 0.24% GDP "savings" were spent on each of the alternative policy building blocks, making the overall package revenue-neutral.[5]

Increasing the amounts of **child benefit** paid per child (by 38%) would reduce the poverty headcount by 0.7 percentage points.

Increasing the adult payment rates in Income Support and other **working age social assistance** benefits (by 22%) would reduce the poverty headcount by 1.2 percentage points.

Increasing **all benefit payments and tax thresholds** (here including pensions) by nearly 2% would reduce the poverty headcount by 0.7 percentage points.

Increasing the **income tax threshold** (by 8%) would reduce the poverty headcount by less than 0.1 percentage points.

Furthermore, given the U-shaped nature of the net effects shown in Figure 1, one could imagine fine-tuning the policy package so that those at the top of the distribution was treated no better than those in the upper-middle. This would release further resources. For example if the top decile group were to lose 2% of its income in the same way as decile groups 6 to 8 this would correspond to a fiscal gain of about 0.17% GDP. If it were done by lowering the top and higher rate tax thresholds (for example) this is unlikely to have much effect on poverty measures since almost all higher rate taxpayers are in households with equivalised income above the median.[6] Combining this with the resources released by restoring the 2010 policy system (i.e. spending 0.41% of GDP) could result in poverty reduction as follows:

Increasing the amounts of **child benefit** paid per child (by 65%) would reduce the poverty headcount by 1.2 percentage points.

Increasing the adult payment rates in Income Support and other **working age social assistance** benefits (by 38%) would reduce the poverty headcount by 2.1 percentage points.

Increasing **all benefit payments and tax thresholds** (here including pensions) by 3% would reduce the poverty headcount by 1.2 percentage points.

[5] Assuming no changes in behaviour or macro-economic effects: these are first-round effect calculations.

[6] This calculation is based on the top decile group having a 24% share of total disposable income, according to EUROMOD. This is lower than that indicated by Household Below Average Income (HBAI) statistics (28% in 2012) at least partly because HBAI makes an adjustment to account for under-representation of top incomes. It is likely, therefore, that the amount of resources released by reducing the top decile group's income by 2% is larger than what is assumed here. Our figures for of the amount of poverty reduction that is possible to finance in this way are also likely to be underestimates.

Increasing the **income tax threshold** (by 13%) would reduce the poverty headcount by less than 0.2 percentage points.

The most effective option is to increase out-of-work means-tested benefits but this risks reducing the extent to which it pays to work in the labour market unless something is also done to increase low wages, such as increasing the minimum wage (which as shown by Leventi et al. (2016) would itself have a relatively a small effect on the poverty headcount in the UK).

Using the additional resources to Increase all tax and benefit thresholds would, interestingly, have a similar effect on the overall poverty headcount as increasing child benefit, although clearly the composition of the households brought out of poverty would be different in the two cases.

If the focus were not on poverty reduction but instead on the overall distributional effect, as shown in Figure 1, one option would be to not fully restore the lower 2010 level of the personal tax allowance. Reducing the losses in the middle of the income distribution, could make the policy U-turn less problematic politically. However, our results show that this would have very little impact on the incomes of those below the poverty threshold and would only reduce the poverty headcount by a negligible amount.

This illustration shows that reversing the policy changes introduced in 2010-2015, raising taxes in the top decile group and using the revenue to increase benefits in one way or another could reduce the population poverty headcount by between 2 and 3 percentage points without (first round) budgetary cost. Even without the additional tax increases, the headcount could be reduced by up to 2 percentage points by returning to the policy regime of 2010, if the resources released are used wisely.

3 Simulating a Guaranteed Minimum Income Programme in Greece[7]

Chrysa Leventi (University of Essex) and Manos Matsaganis (Politecnico di Milano)

Greece is one of the few European countries that have not yet established a guaranteed minimum income (GMI). A six-month pilot scheme was initiated from November 2014 to May 2015 in 13 municipalities (one in each region). An ex-ante poverty and fiscal evaluation study (Matsaganis and Leventi, 2015) was carried out on behalf of the World Bank, using the European tax-benefit model EUROMOD.[8] The study simulated the effects of a *nationwide* GMI programme mirroring the rules of the pilot scheme.

The eligibility rules of the pilot programme involved both an income and an asset test. The assets test provided that the taxable value of the main residence had to be below €90,000 (for single-person assessment units), increased by €15,000 for each additional dependent adult, plus €10,000 for each dependent minor, subject to an overall ceiling per assessment unit of €200,000. The incomes test provided that an assessment unit's disposable income had to be below €2,400 per year (for single-person assessment units), increased by €1,200 per annum for each additional adult, plus €600 per year for each child. In the case of single-parent families, the eligibility threshold for the first child is increased by €1,200 (rather than by €600) per year.

[7] This section is based on Matsaganis and Leventi (2015).
[8] See Sutherland and Figari (2013) for more information about EUROMOD.

Assessed incomes excluded 20% of earnings from dependent employment and were net of taxes and social contributions. Disability benefits were fully disregarded whereas all other social benefits were treated as income. The benefit rate was variable, equal to the difference between a recipient unit's assessed income and the eligibility income threshold (adjusted for the size and composition of each recipient unit), with a benefit withdrawal rate of 100%.

The simulations that were carried out relied on a set of assumptions:

- Full take-up, i.e. the benefit was awarded to all eligible assessment units;
- Adjustment of assessed incomes for under-reporting. Based on Leventi et al. (2013) it was assumed that wages and salaries were under-reported by 5%, self-employment earnings by 35%, and farming incomes by 80%.
- Simulation of the scheme on an unfunded basis. No increases in taxes and social contributions and/or reductions in other social benefits were assumed to take place in order to counterbalance the increased public spending.

The input dataset used was EU-SILC 2010, adjusted for changes in labour market conditions, market incomes and tax-benefit policies in the year 2013.[9] By way of sensitivity analysis the study also assessed the impact of a number of variations on the core policy scenario (such as no earnings disregard, 15% earnings disregard, flat benefit and no income under-reporting).

Table 1 provides results in terms of participation, costs, anti-poverty impact and work incentives under the core GMI scenario. Participation and costs were estimated at 1.2 million persons (or 10.95% of population) and €980 million (or 0.54% of GDP) respectively. The anti-poverty effects of the programme were found to be modest but not negligible. They were assessed using two different poverty thresholds: the first was set at 60% of median equivalised household disposables income (HDI) and the second at 40% of median equivalised HDI. More specifically, the headcount poverty rate fell by 0.6 and 1.0 percentage points (in terms of the 60% and the 40% poverty threshold respectively). The effect was found to be larger in terms of poverty gaps: the median income shortfall of those below the threshold shrank by 2.3 and 16.2 percentage points (again, as regards the 60% and the 40% poverty threshold respectively). Finally, with respect to work incentives, both average and median marginal effective tax rates were estimated to be higher (35.9% vs. 30.0% and 31.6% vs. 26.6% respectively) relative to the baseline.[10]

Sensitivity analysis showed that eliminating the 20% earnings disregard would have very similar effects on poverty and work incentives as the core GMI scenario. At the same time, the proportion of those facing marginal effective tax rates over 80% would increase somewhat relative to the core policy scenario (8.4% vs. 7.8%). The elimination of the earnings disregard would also slightly reduce participation and costs (from 10.95% to 10.63% of the population and from 0.54% to 0.53% of GDP respectively). On the other hand, assuming that all eligible units of assessment receive the maximum amount of benefit, as if their assessment incomes were equal to zero, would lead to significantly higher costs than in the core GMI scenario (€1,779 million or 0.98% of GDP). Finally, omitting the income under-reporting adjustment would amount to assuming that incomes reported by the relevant

[9] EU-SILC 2010, uprated to 2013, was the latest dataset available in EUROMOD at the time of writing of the report.

[10] For more information about the way marginal effective tax rates are calculated with EUROMOD see Jara and Tumino (2013).

households when they apply for participation in the scheme are at a level similar to the gross incomes observed in the EU-SILC dataset, rather than at the (lower) level of incomes declared in tax forms. This implies that far fewer assessment units would pass the income test. As a result, participation and costs would be significantly lower than in the core policy scenario: 754 thousand persons (or 6.82% of population) and €681 million (or 0.38% of GDP) respectively.

Table 1. Estimated budgetary and poverty effect of the introduction of a Guaranteed Minimum Income (GMI) in Greece

	Baseline	GMI core scenario
Participation		
no. of recipients	n/a	1,211,181
% of population	n/a	10.95%
Cost		
€ million	n/a	980.1
% of GDP	n/a	0.54%
Change in poverty rate		
60% of median	22.7	22.1
40% of median	11.5	10.5
Change in poverty gap		
60% of median	33.6	31.3
40% of median	46.2	30.0
Marginal effective tax rates		
average	30.0	35.9
median	26.6	31.6

Notes: The number of recipients is the total number of persons who are members of recipient units. The population in 2013 was 11,062,508 inhabitants. GDP in 2013 was €181.1 billion. The poverty rate is the proportion of population living in households with income below the poverty line (at 60% or 40% of the baseline median). The poverty gap is the difference between the poverty line and the median income of those below it, expressed as a percentage of the former. Income is net of taxes and contributions, and is adjusted for household size using the modified OECD equivalence scale. Marginal effective tax rates show the percentage of a 3% increase in gross labour income that is lost to extra taxes and social insurance contributions, as well as to reductions in entitlements to social benefits. Estimates are for individuals of working age (15-64), not just GMI recipients, with more than €1 of monthly earnings. The distribution of marginal effective tax rates is truncated at the lowest percentile (if negative). Estimated changes in poverty rates and poverty gaps are statistically significant at 99% confidence level. Standard errors around poverty estimates are based on the Taylor linearization using the DASP module for Stata, downloadable from http://dasp.ecn.ulaval.ca/.

Source: Eurostat (population); ElStat (GDP); EUROMOD (version G2.0).

These estimates are bound to differ from actually observed outcomes, were the programme to be implemented nationwide in the future.[11] This is due to a variety of factors, such as changes in market incomes and tax and benefit rules between the baseline year (2013) and the implementation year, different income under-reporting patterns than the ones hypothesised and different programme rules than the ones modelled here. In spite of these -largely inevitable- discrepancies, we believe these estimates can be useful to decision makers interested in evidence-based policy: they can help predict

[11] The new Stability Support Programme for Greece provides for a gradual roll-out of a nationwide GMI to be implemented by 2017.

outcomes, anticipate the likely effect of policy changes and identify possible improvements in programme design.

4 The effect of alternative designs of in-work benefits in Belgium[12]

Dieter Vandelannoote and Gerlinde Verbist, Herman Deleeck Centre for Social Policy, University of Antwerp

4.1 Introduction

Individuals with a low earnings potential or belonging to disadvantaged groups increasingly encounter difficulties in finding a job. They often face low work incentives and have a higher risk of being poor (Immervoll and Pearson, 2009; Marchal and Marx, 2015). The introduction of making-work-pay policies has been put forward as a way to increase net incomes without raising gross incomes and the cost of labour for the employer.[13] In-work benefits are at the core of these making-work-pay policies and have received considerable attention from both scholars and policy makers. The United Kingdom (Family Income Supplement, 1970) and the USA (Earned Income Tax Credit, 1975) where the first two countries to implement this type of making-work-pay policy. Various European countries followed their example in recent decades (for an overview see Kenworthy, 2015; OECD, 2010). The attractiveness of in-work benefits lies in their combination of creating employment incentives for disadvantaged groups, as well as providing extra income to support their living standards. The effectiveness of in-work benefits on these two aims depends on many factors, notably the size and design of the benefit, as well as the wider policy and socio-economic context. This wider context refers to the tax-benefit system as a whole, the prevalence and level of a minimum wage, the existence and extent of childcare provisions, the distribution of incomes and wages, etc. In this paper we focus on the design of in-work benefits, while controlling for size and the wider context. By looking at stylised design changes, we examine which characteristics of an in-work benefit 'make it work', in terms of both employment and poverty aims.

The majority of evaluations focus on the Anglo-Saxon experiences (see, among others, Blank et al, 2000; Chetty et al, 2013 for the USA and Blundell et al, 2000; Brewer et al, 2006 for the UK). In this study, we look at Belgium, a country with a relatively compressed income and wage distribution (see e.g. Marx et al, 2012). Several studies indicate that a major challenge for Belgium is to improve work incentives at the bottom of the income distribution (Immervoll and Pearson, 2009; Cantillon et al, 2015). Moreover, Belgium has, compared to other European countries, a moderate social floor and inadequate incomes for working households at minimum wage (Cantillon et al. 2015). These elements

[12] For a more extensive discussion of this section, see Vandelannoote and Verbist (2016). This section is part of a chapter that will be published in Cantillon, Goedemé and Hills (forthcoming) *Improving poverty reduction in Europe: Lessons from the past, scenarios for the future*.

[13] Another option is to increase minimum wages and to lower the labour cost for the employer by introducing wage subsidies. These subsidies to employers can be seen as the flip-side of in-work benefits paid to employees (Immervoll and Pearson, 2009). While some insights of the evaluation of wage subsidies can be interesting for the evaluation of making-work-pay policies, the design of employer subsidies raises a number of additional and separate issues. The same holds for minimum wages, another policy instrument which can be used to make employment financially more attractive for low-skilled workers. The focus of this paper will be on in-work benefits only.

make Belgium an interesting country to look at the impact of the design of in-work benefits on poverty figures and employment incentives. In this paper we summarise the effect of alternative specifications of an in-work benefit in Belgium. In order to identify the work incentive and poverty impact of the different design characteristics, we introduce a set of stylized in-work benefits. For poverty impact we distinguish both first and second order effects (i.e. without and with incorporating behavioral reactions). We do this on a representative sample of the population (Belgian SILC), making use of the tax-benefit microsimulation model EUROMOD. For an elaborate discussion of data, method and results, we refer to Vandelannoote and Verbist (2016).

4.2 Scenarios for simulations

Table 2 summarizes the different scenarios we simulate, focussing on three different categories of design characteristics: 1. Unit of assessment; 2. Income related characteristics; 3. Employment related characteristics. The first category looks at the distinction between individual and household based systems. As this distinction is crucial, it is taken up in all the simulations of alternatives. For the income related characteristics, we look at the impact of an income threshold (either based on gross income or on hourly wage), a tapering-out and a tapering-in phase. Regarding the employment related characteristics, we look at the introduction of an in-work benefit based on hours worked.

Table 2. Overview of simulations

	Individual (a)	**Household (a)**
Lump sum: weight (b)	• Individual	• Modified OECD equivalence scale • [Household] • [Number of household members]
Threshold based on gross income (b)	• Minimum wage of a full-time worker • [1.5 * minimum wage of a full-time worker]	
Threshold based on hourly wage (b)	• [12€/hour] • 15€/hour	
Tapering-out based on gross income (b)	• [rate of 10%] • rate of 30% • [rate of 70%]	
Tapering-in based on gross income (b)	• rate of 20% • [rate of 30%]	
Tapering-in based on hours worked (c)	X	

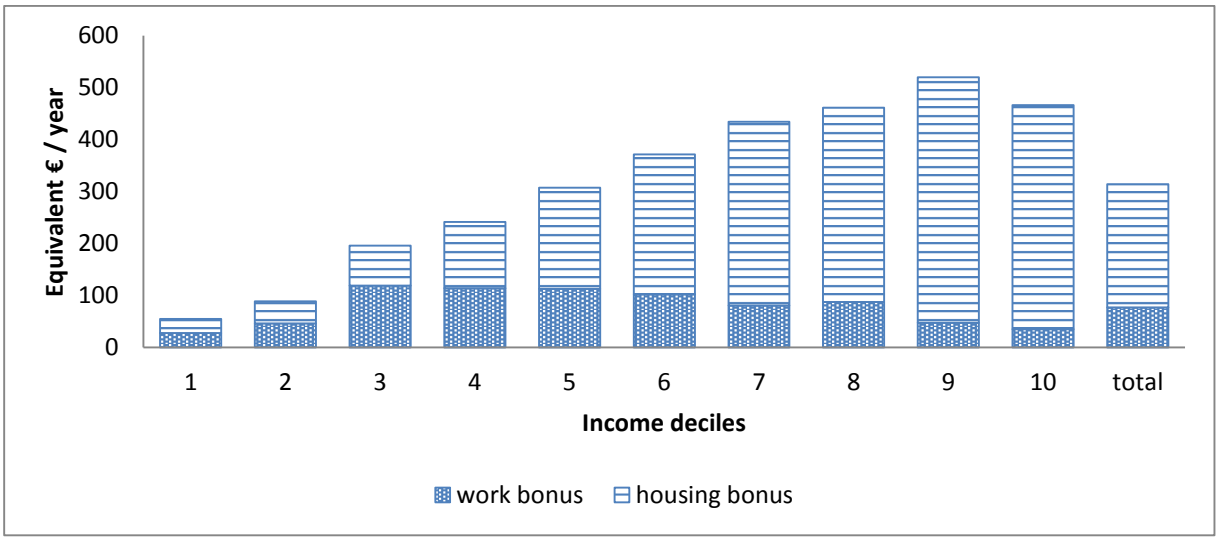
Note: Scenarios between brackets are sensitivity checks.
(a): unit of assessment / (b): income related characteristics / (c): employment related characteristics.

The simulations are performed step-by-step. We start with a lump sum for everyone at work. We then make the policy more complex by introducing, consecutively, an income threshold, a tapering-out and a tapering-in phase. In order to make our results as 'clean' as possible, we introduce the stylized in-work benefits as benefits that have no interactions with other elements of the Belgian tax-benefit system, with

the exception of social assistance (as this is income dependent, we take the newly introduced in-work benefit into account when calculating the amount of social assistance received by the household). Besides a central scenario, we have also performed a number of sensitivity checks (scenario's between brackets in Table 3) to test the robustness of our results.

Our starting point is the abolition of the main in-work benefit in Belgium, the work-bonus (for an evaluation see Vanleenhove, 2014), which corresponds to a budget of 600 million euro in 2014. However, resulting impacts on poverty and work incentives of the different simulations are relatively small, thus showing little impact of changes in design characteristics[14]. In order to free up more budget, we have also abolished the housing bonus, corresponding to an extra 1.6 billion euro in 2014. Hence, we have a budget of 2.2 billion euro (0.5% of GDP) available for the implementation of a new in-work benefit. We impose budget neutrality of the different simulations in the first-order, i.e. without taking possible labour supply effects into account. We have opted to abolish the housing bonus for two reasons: 1) it is mainly beneficiary to richer households (see Figure 2) and 2) it has been criticised on several occasions for its distortionary effects on the housing market (see e.g. OECD, 2015), implying that the budget could be put to a better use. In sum, mainly the higher income deciles pay for the new in-work benefit. We also calculate the budgetary effects of taking account of the behavioural effects, thus showing potential changes in revenue resulting from changes in work incentives.

Figure 2: Distribution of the budget made available for the new in-work benefit (abolishing of the housing bonus and work bonus), Belgium 2014



Source: own calculations based on EUROMOD (underlying data BE-SILC 2012).

4.3 The impact of the design characteristics of an in-work benefit on poverty

We show the following outcome indicators of the different stylised in-work benefits: 1) poverty headcount and poverty gap (fgt0 and fgt1), first order; 2) changes in labour supply; 3) poverty headcount and poverty gap, second order and 4) yearly governmental gains/losses due to labour supply effects[15]. Poverty

[14] The results of these simulations are available from the authors upon request.

[15] As individuals start working or decide to work more hours, the government has to pay less social benefits and receives more social security contributions and personal income taxes. The opposite is true when negative

headcount and poverty gap are shown for individuals between 20-64 years old, as they are the main target group of the in-work benefit. The poverty line is defined as 60% of median equivalent disposable income (of the total population). Poverty rates are shown both on the basis of a fixed poverty line, as well as one that is recalculated on the basis of the changed income distribution (a so-called 'floating' poverty line).

4.3.1 First order poverty effects

In comparison to a system without an in-work benefit, the introduction of a ***lump sum*** in-work benefit has a positive significant effect on both the poverty headcount and poverty gap when using a fixed poverty line; the effect is somewhat stronger for a household based compared to an individual system (Table 3). An individual lump sum is more beneficial for one person households and for couples where both partners are at work, while a household system is better for larger families and for couples where only one partner works. The latter are more often found in the bottom of the income distribution, and hence a household lump sum in-work benefit is somewhat more targeted towards the bottom, resulting in better poverty results. In the central household scenario, we have used the modified OECD scale to take account of household size when determining the level of the benefit. As a sensitivity check, we compare the results with two 'extreme' scenarios, notably using an equivalence scale that equals the number of household members (i.e. multiplying the monthly benefit with household size and thus more favourable for larger families) or using as equivalence scale 1 (i.e. each household receives the same amount and thus more favourable for small families). As larger families are more often found in the bottom of the income distribution, the first system yields better poverty results (both with a fixed and floating poverty line).

In a second step, we introduce an ***income threshold***, so only working individuals with a gross income below the threshold receive the in-work benefit. Results are compared with the lump sum simulations. The threshold is set equal to the gross minimum wage of a full-time worker in Belgium (€1,502/month). Using an individual threshold, 19% of all working individuals receive the benefit. When we take a household perspective, the threshold equals €1,502 multiplied with the equivalence scale of each household. Only households with at least one person at work and with a total gross household income below the threshold receive the benefit, corresponding to 20.7% of these 'working' households. Introducing an income threshold has a significant positive impact on poverty results, both using a fixed and floating poverty line, with the household based system outperforming the individual one. As a sensitivity check, we multiplied the previous income threshold with 1.5 (€2,253/month) which results in higher eligibility rates: 36.5% of all working individuals or 40.6% of all households with at least one working person now receive the in-work benefit. Given imposed budget neutrality this implies that the level of the in-work benefit is reduced, resulting in lower poverty reduction potential in comparison to the simulation with the tighter income threshold. The household system still outperforms the individual one.

Another way of implementing income selectivity is to apply a threshold based on hourly wages; this can only be implemented at the individual level. We implement 2 different thresholds: €15 (41.9% of all individuals at work are eligible) or €12 (27.4%). When using the €15 threshold, the benefit mainly goes to working individuals in the middle of the income distribution, illustrating that individuals with a low hourly wage are not necessarily concentrated in the lowest income deciles. With the €12

work incentives are created. This applies of course under the assumption that each person can work his/her desired amount of work (so no possible labour demand constraints are accounted for).

threshold, the in-work benefit is somewhat more directed towards lower income families. The stricter the hourly wage threshold, the higher the probability to target poor individuals and the higher the benefit level can be, which should result in higher poverty reduction. In practice, we find that using a threshold based on either gross income or hourly wage results in comparable results.

Table 3: Individual (IND) / Household (HH) based in-work benefit: impact on poverty headcount and poverty gap, working age adults 20-64y old, first order, fixed and floating poverty line, Belgium 2014.

Simulation	Compared to	Poverty headcount (% point Δ)				Poverty gap (% point Δ)			
		fixed		floating		fixed		floating	
		IND	HH	IND	HH	IND	HH	IND	HH
Policies 2014		11.26%				3.07%			
No in-work benefit	Policies 2014	0.30*		-0.26*		0.08*		-0.08*	
Lump sum:									
Individual	No in-work benefit	-0.30*	-	0.06	-	-0.12*	-	0.01	-
HH equival. scale		-	-0.56*	-	-0.08	-	-0.17*	-	-0.02
HH as one		-	-0.61*	-	-0.12	-	-0.17*	-	-0.04
HH #of HH members		-	-0.64*	-	-0.21*	-	-0.19*	-	-0.05
***Threshold*:**									
Income (1)	Lump sum (equivalence scale for HH)	-1.25*	-1.74*	-1.08*	-1.9*	-0.33*	-0.39*	-0.31*	-0.45*
[Income (1.5)]		-0.80*	-0.80*	-0.63*	-0.72*	-0.18*	-0.18*	-0.16*	-0.15*
[Hourly wage 12€]		-0.86*	-	-0.75*	-	-0.23*	-	-0.22*	-
Hourly wage 15€		-0.58*	-	-0.40*	-	-0.14*	-	-0.12*	-
Tapering-out:									
[10%]	Threshold: income (1)	0.44*	0.57*	0.47*	0.78*	0.13*	0.16*	0.13*	0.22*
30%		0.26*	0.33*	0.29*	0.34*	0.05	0.08*	0.06*	0.10*
[70%]		0.19*	0.18*	0.2*	0.17*	0.02	0.04	0.03	0.05
Tapering-in:									
20%	Tapering-out: 30%	0.17*	0.19*	0.17*	0.23*	0.08*	0.10*	0.09*	0.10*
[30%]		0.17*	0.18*	0.17*	0.18*	0.05	0.06*	0.05	0.06*
Hours worked		0.03	-	0.03	-	0.02	-	0.02	-

Note: Scenarios between brackets are sensitivity checks
** = statistical significant at confidence interval level of 0.05, calculations based on method developed by Goedemé et al, 2013*
Source: own calculations based on EUROMOD (underlying data BE-SILC 2012)

In a third step, we introduce a ***tapering-out*** phase, which is designed to avoid poverty traps resulting from income thresholds. We work with three rates, a central scenario of 30% (i.e. for every gross euro earned above the income threshold, the in-work benefit diminishes with €0.3, until it equals zero) and two sensitivity check rates (10% and 70%). The impact of introducing a tapering-out crucially depends on the choice of the threshold. Using a generous threshold, many recipients will receive the in-work benefit, which is relatively low (given the budget neutral environment[16]) and introducing a tapering-out zone will thus have little impact. The exact opposite is true for a tighter threshold. Results are

[16] Releasing the budget neutrality restriction would come at an additional yearly first order governmental cost of respectively €326 million (70%), €774 million (30%) or €2.9 billion (10%) in the individual system and €279 million (70%), €623 million (30%) or €1.9 billion (10%) in the household system.

presented here using an income threshold equal to €1,502/month. Tapering- out leads to an increase in poverty outcomes. The slower one tapers out (i.e. the lower the rate), the stronger the reduction of both the poverty headcount and poverty gap.

As a final step, we introduce a ***tapering-in***, which has the aim to avoid that individuals with small incomes benefit from the system, assuming that these small incomes are often second-earner additional earnings. We work with two rates, a central scenario of 20% (i.e. for every gross euro one earns, one receives €0.2 until the maximum amount of the in-work benefit is reached) and a sensitivity check rate (30%). As for the tapering-out, the impact of a tapering-in depends on the threshold used. With a low threshold the tapering-in zone is limited and the in-work benefit per person is relatively low (given budget neutrality[17]) and thus, generating limited poverty effects. The exact opposite is true for higher threshold corresponding to a longer tapering-in zone. Results are presented here using an income threshold equal to €1,502/month. Introducing a tapering-in phase has a significant negative impact on poverty figures in both an individual and a household based system. The lower the tapering-in rate, the larger this negative impact (both for a fixed and floating poverty line). Tapering-in can also be based on hours worked for an individual based scenario (i.e. someone who works half-time will only receive 50% of the in-work benefit). We compare our results with a simulation with an individual threshold equal to €15/hour and a tapering-out of 30%. The introduction of a tapering-in based on hours worked has a small negative impact on individuals lower in the income distribution. This is due to the fact that part-time workers are more often found in lower income deciles. Hence, poverty changes are negligible.

4.3.2 The impact on work incentives

We now look at the labour supply effects of our stylized in-work benefit scenarios. The percentage point change in the probability of working 0, 19, 30, 38 or 50 hours per week are presented in Table 4 and 5. We also show the budgetary impact for the government. Second order poverty outcomes are presented in the next section.

Compared with giving no in-work benefit at all, the introduction of a simple ***lump sum*** in-work benefit generates positive work incentives. A lump sum that takes no account of the number of household members (either the individual system or the household as one) generates stronger work incentives than a household system that does so. Taking account of the number of household members puts considerable strain on the financial incentives of partners to start working or work more hours. The revenue generated through employment effects is thus higher with the individual lump sum (+€300 million/year) and the household as one (+€147 million) than with a household system that depends on household size either by using an equivalence scale (+€102 million) or by giving all household members equal weight (+€77 million).

Introducing an ***income threshold*** has mixed effects on work incentives: at the extensive margin, it becomes more interesting for persons below the income threshold to start working, as the difference in income between not working and working increases. At the intensive margin, people decide to work fewer hours in order to remain below the income threshold and thus be eligible for the benefit. We

[17] Releasing the budget neutrality restriction would come at an additional yearly first order governmental cost of respectively €321 million (30%), €460 million (20%) in the individual system and 197 million (30%), €324 million (20%) in the household system.

thus see a lower probability of working 0 hours and full-time, and an increase in the probability of working part-time. Moreover, a household based system does not give an incentive for the partner in a couple to start working, as total gross household income can then surpass the income threshold, resulting in the loss of the in-work benefit. That is why we see an increase in the probability of not-working in a household based system. Lowering the threshold does not result in positive labour supply effects. In both an individual and household based system, households are encouraged to lower their amount of hours worked in order to remain eligible for the benefit. We hardly see an effect at the extensive margin with the individual variant. There is even an increase of working zero hours in the household variant. For single females, who are mainly found at the bottom of the income distribution, the probability of working zero hours decreases. But for couples a disincentive is given to the partner to start working. These two opposite trends results in an increase in the probability of working zero hours and also in a relatively high budgetary cost of €1,1, resp. €1,6 billion/year in an individual, resp. household based system. One way to avoid these negative effects on work incentives at the intensive margin is to use a threshold based on gross hourly wages: eligibility is then no longer dependent on the number of hours worked. When using the €15 per hour threshold, we find no significant changes in work incentives, and consequently, hardly a change in the government budget. A stricter threshold of €12 has a small negative impact, but also in this case the budgetary consequences are very limited.

Table 4: Individual in-work benefit: impact on work incentives, Belgium 2014

Simulation	Compared to	Hours worked (% point change)					Budgetary cost/gain
		0	19	30	38	50	Million euro / year
Policies 2014:		21.6%	11.3%	10.2%	44.7%	12.2%	
No in-work benefit:	Policies 2014	0.54*	0.03	-0.1	-0.48*	0.01	-494
Lump sum:	No in-work benefit	-0.74*	0.19*	0.12*	0.39*	0.05	+ 300
Threshold:							
Income (1)	Lump sum	-0.3*	2.04*	-0.05*	-1.41*	-0.28*	-1,107
[Income (1.5)]		-0.22*	1.26*	0.27*	-0.92*	-0.4*	-818
[Hourly wage 12€]		0.24*	-0.04	-0.03	-0.13*	-0.03	-31
Hourly wage 15€		0.01	0	0	-0.02	0.01	-12
Tapering-out:							
[10%]	Threshold: income (1)	0.1	-0.86*	0.43*	0.47*	-0.14*	+248
30%		0.13*	-0.39*	0.17*	0.18*	-0.09	+97
[70%]		0.17*	-0.25*	0.08	0.06	-0.06	+47
Tapering-in:							
20%	Tapering-out: 30%	-0.28*	0.53*	0.09	-0.23*	-0.1	-98
[30%]		-0.18*	0.36*	0.05	-0.15*	-0.07	-75
Hours worked		0.18*	-0.94*	0.17*	0.53*	0.06	+158

Note: Scenarios between brackets are sensitivity checks
** = statistical significant at confidence interval level of 0.05, calculations based on method developed by Goedemé et al, 2013*
Source: own calculations based on EUROMOD (underlying data BE-SILC 2012)

Table 5. Household in-work benefit: impact on work incentives, Belgium 2014

Simulation	Compared to	Hours worked (% point change)					Budgetary cost/gain
		0	19	30	38	50	Million euro / year
Policies 2014:		21.6%	11.3%	10.2%	44.7%	12.2%	
No in-work benefit:	Policies 2014	0.54*	0.03	-0.1	-0.48*	0.01	-494
Lump sum:							
HH equival. scale	No in-work benefit	-0.55*	0.15*	0.09	0.29*	0.02	+102
HH as one		-0.73*	0.18*	0.11	0.4*	0.03	+147
HH #of HH members		-0.48*	0.14*	0.08	0.24*	0.01	+77
Threshold:							
Income (1)	Lump sum (equivalence scale)	0.63*	1.36*	-0.33*	-1.21*	-0.46*	-1,551
[Income (1.5)]		0.23*	0.69*	0.16*	-0.57*	-0.51*	-1,058
Tapering-out:							
[10%]	Threshold: income (1)	0.07	-0.63*	0.12*	0.58*	-0.16*	+304
30%		0.23*	-0.39*	0.08	0.22*	-0.14*	+101
[70%]		0.28*	-0.3*	0.06	0.11*	-0.14*	+57
Tapering-in							
20%	Tapering-out: 30%	-0.06	0.08	0.04	-0.01	-0.04	-42
[30%]		-0.04	0.06	0.02	0	-0.03	-35

Note: Scenarios between brackets are sensitivity checks
** = statistical significant at confidence interval level of 0.05, calculations based on method developed by Goedemé et al, 2013*
Source: own calculations based on EUROMOD (underlying data BE-SILC 2012)

For the ***tapering-out*** two factors influence work incentives: introducing a tapering-out results in a lower maximum amount of the in-work benefit, creating a negative incentive at the extensive margin, mainly for persons at the bottom of the income distribution. We thus see an increase in the probability of working zero hours. But it also gives an incentive to work more hours, illustrated by an increase in the probability of working full-time. The lower the tapering-out rate, the stronger these two effects play. Tapering-out generates larger work incentives in a household system than in an individual one, both at the extensive (as benefits for households at the bottom of the income distribution are lowered, which are households with high labour supply elasticities) and intensive margin (introducing a tapering-out zone has a positive effect on income deciles 4 and 5, where labour supply elasticities are still relatively high). The budgetary impact is positive, because financial gains at the intensive margin are larger than the budgetary losses at the extensive margin.

The impact of the ***tapering-in*** on work incentives is higher for the individual based system than for the household system, where its impact is not significant. Implementing a tapering-in phase gives an incentive to individuals to increase their working hours when they only work a few hours and are in the tapering-in zone (working more hours not only generates a higher income from work but also a higher in-work benefit). We also notice a work disincentive for persons who work full-time: as the maximum amount of the benefit increases due to the introduction of a tapering-in, it becomes more interesting to lower the amount of hours work in order to become/remain eligible for the in-work benefit. For the government budget, the tapering-in results in a cost, due to the fact that the disincentive for full-time workers has a larger impact than the incentives for individuals at the bottom

of the hours-of-work distribution. In order to avoid this net negative work incentive, using a tapering-in based on hours of work appears to be a good solution. It generates a positive incentive at the intensive margin, as the amount of the in-work benefit received increases proportionally. At the extensive margin, however, it becomes less interesting to start working part-time, resulting in an increase in the probability of working zero hours. As the gain at the intensive margin is more important than the loss at the extensive margin, the budgetary impact is positive (a gain of €158 million/year).

4.3.3 The second order impact on poverty

These labour supply reactions have an impact on disposable income, which might affect poverty outcomes of the policies. A comparison of Table 6 with Table 4 shows how poverty outcomes changes when incorporating these behavioural reactions.

Introducing a ***lump sum*** in-work benefit has stronger poverty reducing effects when considering labour supply changes compared to looking at the first order impact. For almost all scenarios we now find significant reductions in poverty, with a stronger effect when measuring with a fixed compared to a floating poverty line. This can be explained by the fact that persons in the bottom of the income distribution will react strongest to the lump sum in-work benefit (they have the highest labour supply elasticities). As with the first order outcomes, household based systems have a stronger poverty impact than the individual based. The simulation with the equivalence scale equal to 1 generates the best work incentives; it is more favourable for smaller families and the higher in-work benefits result in the strongest impact on household disposable income and poverty outcomes.

The poverty impact of introducing an ***income threshold*** is much smaller in the second order than in the first order. For an individual based system, we only find significant but small effects for the poverty gap measure; this system generates work incentives for individuals with a low individual wage, who are mainly found in the middle and higher in the income distribution, yielding little impact on poverty outcomes. For the household based system all changes are significant, but much smaller than in the first order; this is due to the fact that the household based system creates negative work incentives for the partner in the household, causing certain households to fall below the poverty line. First order and second order poverty outcomes are very similar when using hourly wage for the threshold, which is logical given that this measure has very limited work incentive effects.

The introduction of a ***tapering-out*** has a negative effect on first order poverty figures. But when we take second order effects into account, this negative effect disappears and the poverty impact becomes very limited and mainly insignificant (both in an individual and household based system).

While a ***tapering-in*** phase has an increasing impact on first order poverty figures, we now find a small poverty reducing effect on both the poverty headcount and poverty gap when taking account of labour supply reactions in the individual system. This follows from the fact that persons working a limited amount of hours have an incentive to increase their working hours, resulting in some cases in a disposable income above the poverty line. Second order poverty results are very limited and not significant when hours worked are used.

Table 6: Individual (IND) / Household (HH) based in-work benefit: impact on poverty headcount and poverty gap, working age adults 20-64y old, second order, fixed and floating poverty line, Belgium 2014.

Simulation	Compared to	Poverty headcount (% point Δ)				Poverty gap (% point Δ)			
		fixed		floating		fixed		floating	
		IND	HH	IND	HH	IND	HH	IND	HH
Policies 2014		11.26%				3.07%			
No in-work benefit	Policies 2014	0.28*		-0.33*		0.18*		0.04	
Lump sum:									
Individual	No in-work benefit	-0.65*	-	-0.14*	-	-0.22*	-	-0.11*	-
HH equival. scale		-	-0.65*	-	-0.26*	-	-0.24*	-	-0.13*
HH as one		-	-0.75*	-	-0.29*	-	-0.27*	-	-0.16*
HH #of HH members		-	-0.64*	-	-0.11	-	-0.23*	-	-0.10*
***Threshold*:**									
Income (1)	Lump sum (equivalence scale for HH)	-0.05	-0.57*	-0.18*	-0.88*	-0.06*	-0.13*	-0.09*	-0.22*
[Income (1.5)]		-0.07	-0.44*	-0.14*	-0.41*	-0.11*	-0.11*	-0.14*	-0.14*
[Hourly wage 12€]		-0.76*	-	-0.69*	-	-0.18*	-	-0.17*	-
Hourly wage 15€		-0.56*	-	-0.38*	-	-0.12*	-	-0.11*	-
Tapering-out:									
[10%]	Threshold: income (1)	-0.13	0.15*	0.02	0.26*	-0.04	0.02	-0.03	0.04
30%		-0.10	0.05	0.03	0.10*	-0.03	0.01	-0.03	0.01
[70%]		-0.06	0.08	-0.01	0.10*	-0.01	0.01	-0.02	0.01
Tapering-in:									
20%	Tapering- out: 30%	-0.16*	-0.09	-0.27*	-0.11*	-0.07*	-0.02	-0.07*	-0.02
[30%]		-0.11	-0.09	0.13*	-0.07	-0.05	-0.02	-0.04	-0.01
Hours worked		0.04	-	-0.06	-	0.01	-	0.01	-

Note: Scenarios between brackets are sensitivity checks
** = statistical significant at confidence interval level of 0.05, calculations based on method developed by Goedemé et al, 2013*
Source: own calculations based on EUROMOD (underlying data BE-SILC 2012)

4.4 Conclusion

This chapter focusses on the impact of the design of an in-work benefit on poverty and employment outcomes in Belgium. We do not only look at first order poverty effects but also second order effects are considered, as we use a discrete labour supply model to estimate possible work incentive effects. Both size and design matter when it comes to gauging work incentives and poverty effects of in-work benefits. Sufficient budget is needed to reach significant changes in outcomes and the way the benefit is designed is crucial. In line with other studies we find that an individual based in-work benefit generates better work incentives than a household one, as the latter does not give financial incentives to the second partner in the household to start working or to work more hours. Our results also show the complex interactions between the different outcomes, as well as some trade-offs between employment and poverty indicators, as well as between labour supply outcomes at the intensive and the extensive margin. It is difficult to find a design that performs best in terms of both work incentives and poverty outcomes. According to our results a system that would reconcile both aims in the most

satisfactory way for the Belgian context would be an individual based system that uses hourly wages as a threshold. This would perform reasonably well in terms of work incentives, but also in reducing poverty. One might consider combining it with a tapering-out and a tapering-in, though second order poverty outcomes turned out to be limited. The current Belgian system of the work bonus resembles these design characteristics, but is currently to small in size to generate substantive effects. It might be advisable to raise the budgetary effort in order to have a stronger employment and poverty impact.

5 Conclusion

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It is possible to significantly reduce poverty and to design more effective policy reform packages, while taking budgetary constraints into account. In this paper, we show several ways in which research can contribute to identifying poverty-reducing poverty reforms, making use of the European microsimulation model EUROMOD. In an application to the United Kingdom, Sutherland and De Agostini show how reversing regressive reforms and using measures of 'poverty reduction / public budget trade-offs' can be a useful strategy for identifying efficient and effective policy reform packages, taking budget constraints into account. In contrast, Leventi and Matsaganis show how the upscaling of an existing pilot scheme for a guaranteed minimum income in Greece, could lead to a substantial reduction in the poverty gap by raising the incomes of hundreds of thousands of very poor families, accounting for nearly 11% of population. Finally, Vandelannoote and Verbist show how a more effective in-work benefit scheme can be designed for Belgium, by breaking down policies into their elementary parts and combining policy options systematically to identify the most effective policy design, while taking account of work incentives.

We are convinced that these analyses can be put to use for producing better informed and more effective, evidence-based, policies. At the same time, policy makers should not forget about the limitations of the setup of the approaches we propose: we focus exclusively on measures of financial poverty and short-term poverty effects; all simulations are subject to data and specification errors; and, maybe most importantly, the analyses are limited to policy options that can be simulated on the basis of income survey data and the microsimulation models currently available. In other words, some policy options remain out of sight not because they are irrelevant, but because of the toolbox we can use for the analysis. Nonetheless, we are strongly convinced that a wider application of the techniques we propose would mean an important step forward for the design of more effective policy reform packages in the future.

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ImPRovE: Poverty Reduction in Europe. Social Policy and Innovation

Poverty Reduction in Europe: Social Policy and Innovation (ImPRovE) is an international research project that brings together ten outstanding research institutes and a broad network of researchers in a concerted effort to study poverty, social policy and social innovation in Europe. The ImPRovE project aims to improve the basis for evidence-based policy making in Europe, both in the short and in the long term. In the short term, this is done by carrying out research that is directly relevant for policymakers. At the same time however, ImPRovE invests in improving the long-term capacity for evidence-based policy making by upgrading the available research infrastructure, by combining both applied and fundamental research, and by optimising the information flow of research results to relevant policy makers and the civil society at large.

The two central questions driving the ImPRovE project are:

> How can social cohesion be achieved in Europe?
>
> How can social innovation complement, reinforce and modify macro-level policies and vice versa?

The project runs from March 2012 till February 2016 and receives EU research support to the amount of Euro 2.7 million under the 7th Framework Programme. The output of ImPRovE will include over 55 research papers, about 16 policy briefs and at least 3 scientific books. The ImPRovE Consortium will organise two international conferences (Spring 2014 and Winter 2015). In addition, ImPRovE will develop a new database of local projects of social innovation in Europe, cross-national comparable reference budgets for 6 countries (Belgium, Finland, Greece, Hungary, Italy and Spain) and will strongly expand the available policy scenarios in the European microsimulation model EUROMOD.

More detailed information is available on the website http://improve-research.eu.

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