

HERMAN DELEECK CENTRE FOR SOCIAL POLICY

Tess Penne, Ilse Cornelis, Bérénice Storms

REDUCING OUT-OF-POCKET COSTS TO IMPROVE THE ADEQUACY OF MINIMUM INCOME PROTECTION?
REFERENCE BUDGETS AS AN EU POLICY INDICATOR:
THE BELGIAN CASE.

WORKING PAPER

No. 19.06

April 2019



University of Antwerp Herman Deleeck Centre for Social Policy centrumvoorsociaalbeleid.be

REDUCING OUT-OF-POCKET COSTS TO IMPROVE THE ADEQUACY OF MINIMUM INCOME PROTECTION? REFERENCE BUDGETS AS AN EU POLICY INDICATOR: THE BELGIAN CASE.

Tess Penne, Ilse Cornelis, Bérénice Storms

Corresponding author: Tess Penne

Herman Deleeck Centre for Social Policy, University of Antwerp

Email-address: <u>tess.penne@uantwerpen.be</u>

Abstract

The right to adequate minimum income protection is one of the key principles included in the European Pillar of Social Rights (EPSR). The EPSR takes a right-based and normative approach, aiming specifically at fulfilling people's essential needs, not only by guaranteeing sufficiently high income levels, but also by promoting labour market inclusion and access to affordable goods and services of good quality. This paper takes the EPSR as a starting point to propose a needs-based indicator that assesses the adequacy of minimum income protection including these three dimensions in a comprehensive way. We argue that Reference Budgets (RBs), priced baskets of goods and services that represent an adequate living standard, are well-suited to construct such an indicator. To illustrate this empirically, we use RBs for adequate social participation in Belgium which have been constructed for the first time in 2008 and have been regularly updated since then. Through a combination of hypothetical household simulations of essential out-of-pocket costs and designated tax-benefits for families living on different minimum income schemes, we are able to assess the adequacy of minimum income protection for a range of household types over the period 2008-2017. The paper shows that, the proposed indicator is a useful policy tool for both ex-ante and ex-post evaluations of the adequacy of social policy measures in light of the social protection and inclusion rights included in the Pillar. Starting from a framework of what it means to live a life in human dignity, RBs reveal how adequacy of minimum incomes and incentives to work not only depend on the level of social benefits and minimum wages but also on the costs people need to make to access essential goods and services.

Keywords: minimum income protection, adequacy, social policy indicator, reference budgets, hypothetical household simulations, accessibility

Acknowledgement

The authors are grateful to Tim Goedemé and Bea Cantillon for their valuable comments and suggestions. We would also like to thank participants of the 25th FISS conference in Sigtuna for their feedback to an earlier version of this paper. The yearly update of reference budgets in Belgium is carried out by researchers at CEBUD, Thomas More. The Hypothetical Household Tool (HHoT) has been jointly developed by the University of Essex and the University of Antwerp as an application of the EUROMOD software. The results presented in this paper are based on EUROMOD version H1.0+. EUROMOD is maintained, developed, and managed by the Institute for Social and Economic Research (ISER) at the University of Essex, in collaboration with national teams from the EU member states. The process of extending and updating EUROMOD is financially supported by the European Union Programme for Employment and Social Innovation Easi (2014-2020). Tess Penne acknowledges financial support from the Research Foundation – Flanders. The results and their interpretation are the authors' responsibility.

INTRODUCTION

For a long time, adequate minimum income protection has been at the center of EU social policy (Zeitlin and Vanhercke 2018; Vandenbroucke et al. 2013; Marx and Nelson 2013), being one of the most important tools for preventing and combatting poverty in Europe (e.g. Nelson 2013; Cantillon et al. 2019). The EU Council Recommendation (1992) was a first step to urge Member States to recognize the basic right to an adequate minimum income protection, defined as 'sufficient resources and social assistance to live in a manner compatible with human dignity'. In the years 2000, the Lisbon Summit introduced a shift from passive social protection to work-oriented active investment (Vandenbroucke and Vleminckx 2011). Besides adequate incomes, social inclusion policies appeared more prominent on the agenda. The 'Active Inclusion' Recommendation (Commission 2008) stressed the right to an adequate minimum income, but added the importance of labour market integration and access to services (Zeitlin and Vanhercke 2018; Frazer and Marlier 2016). This trend has been continued and strengthened with the EU2020 strategy, focusing on adequate social protection and social inclusion, including 'access to resources, rights and services needed for participation in society' (Commission 2015).

The most recent policy framework, bringing together all these elements, is the European Pillar of Social Rights (Commission 2017). The EPSR is directly aimed at fulfilling people's essential needs, enfolding a set of 20 rights and principles in three chapters: (1) equal opportunities and access to the labour market, (2) fair working conditions, and, (3) social protection and inclusion (Commission 2017). In the EPSR, and particularly in the third chapter, an adequate income that ensures a life in dignity is a key commitment. It includes the right to an adequate minimum wage (principle 6), adequate social protection (principle 12) and adequate unemployment benefits (principle 13). An adequate minimum income protection is approached broadly, emphasizing the importance of labour market participation and access to goods and services of good quality (Commission 2017). This is particularly reflected in Principle 14: "Everyone lacking sufficient resources has the right to adequate minimum income benefits ensuring a life in dignity at all stages of life, and effective access to enabling goods and services. For those who can work, minimum income benefits should be combined with incentives to (re)integrate into the labour market." (principle 14, Commission 2017) In addition, several other rights in the EPSR refer to access to affordable goods and services of good quality. For instance: the right to quality and inclusive education, training and life-long learning (principle 1), the right to affordable early childhood education and care of good quality (principle 11), the right to timely access to affordable, preventive and curative health care of good quality (principle 16), access to social housing or housing assistance of good quality (principle 19) and the right to access essential services of good quality, including water, sanitation, energy, transport, financial services and digital communications (principle 20).

This paper aims to propose an indicator which assesses the adequacy of minimum income protection, including the impact of access to affordable goods and services, while not losing sight of work incentives. Currently, EU policy makers, and social policy researchers (e.g. Nelson 2013; Van Mechelen and Marchal 2013), use mainly income-based indicators to assess the adequacy of minimum incomes. With the Lisbon Strategy, the Open Method of Coordination was installed as a soft governance framework with a common set of social indicators to measure social progress (in terms of policy outcomes) in the different Member States (Atkinson et al. 2002). The same social indicators were largely adopted by the EU2020 strategy and the 'Social Scoreboard' used to monitor performances related to the EPSR. The most important indicator to assess the adequacy of minimum income protection is the at-risk-of-poverty threshold (arop60), set at 60 per cent of the national median equivalent disposable household income. Despite its advantages, such as its statistical comparability to measure income poverty across time and countries, the arop60 indicator might be problematic for the purpose of assessing income adequacy. First, there is no evidence on the extent to which an income at the level of the arop60 enables to live a life in human dignity nor if it represents the same living standard across time and countries (Goedemé et al. 2019; Fahey 2007; Juhász 2006). A study of Goedemé et al. (2019) has shown that the arop60 approaches an adequate living standard in most richer member states, while the level is far from a decent income in poorer

member states. Second, the arop60 indicator is purely income-based, while the extent to which essential goods and services are accessible determines largely whether minimum incomes are sufficient to live a life in dignity. In particular, since publicly provided or subsidised goods and services account for about half of social expenditures in European welfare states with non-negligible distributive effects (e.g. Verbist and Matsaganis 2014; Aaberge et al. 2017). In order to indicate member states' efforts to ensure access to essential goods and services, the Scoreboard includes additional indicators such as the level of government spending on health and education. However, these macro indicators are largely determined by external factors such as demographic structure and fail to properly take into account families' needs with regard to their use of public services (Paulus et al. 2010; Aaberge et al. 2017). For example, when the proportion of elderly and families with children in the population increases, government spending on health care and education will be driven upward. Moreover, in various countries, minimum income support is complemented by cost reducing means-tested benefits -whether or not linked to the scheme- such as housing subsidies, social tariffs for heating and energy, reduced health care costs, free school meals and education-related allowances (Frazer and Marlier 2016; Immervoll 2012). However, little is known on the actual impact of these in-kind benefits on income adequacy and active inclusion.

This paper argues that current indicators to monitor the adequacy of minimum income lack a clear operationalization of what a life in human dignity entails, and, do not sufficiently correspond to the broad view on adequacy outlined in the EPSR. Cantillon et al. (2017) suggested an input indicator to asses adequacy of minimum income support in a broader sense, including protection for work-rich households and incentives to work, but without taking into account access to services. Some authors (e.g.Marchal and Van Mechelen 2017; Immervoll 2012) have partly included the latter by looking at access to active labour market support, health or childcare services, but these attempts generally lack an empirical and theoretical underpinning of all the expenses households need to make in order to live a life in dignity. The paper shows that Reference Budgets (RBs) offer such an operationalization of an acceptable living standard by defining what people need at the minimum in order to participate adequately in society, taking into account the institutional, cultural and social context (e.g. Goedemé et al. 2015b; Carrillo-Álvarez et al. 2019; Goedemé et al. 2015a). Doing this, RBs assess the out-of-pocket costs that specific household types face to access essential goods and services, taking into account the impact of public provisions or subsidies and cost-reducing measures (e.g. Penne et al. 2018). This makes them suitable to contextualise and construct EU policy indicators to monitor the adequacy of minimum income protection (See also Deeming 2017) for jobless households as well as for minimum wage workers, going beyond cash-income, while taking into account differences in social contexts. RBs are developed in nearly all EU Member States for a wide variety of purposes using different methodologies (for a review, see Storms et al. 2014). For the purpose of this paper, we use RBs for adequate social participation in Belgium. In Belgium, RBs have been developed since 2008 for a range of different household types (Storms 2012; Storms et al. 2015). Through a combination of hypothetical household simulations of essential out-of-pocket costs and designated tax-benefits for families living on different minimum income schemes, we are able to assess the adequacy of minimum incomes in Belgium over the period 2008-2017.

The paper is structured as follows: In the first paragraph, we give some theoretical background on the concept of income adequacy and the importance of taking into account the individual and societal context. Secondly, we describe the methods and data used to construct reference budgets and to simulate the net disposable minimum incomes for different household types using the microsimulation model Euromod. Subsequently, we use the case of Belgium to illustrate how RBs can be used to evaluate the adequacy of social protection touching upon the different dimensions of the Pillar's framework: cash benefits, access to affordable services and how the latter could affect financial work incentives. We end with a discussion of the strengths and weaknesses of our indicator and conclude.

WHEN IS A MINIMUM INCOME ADEQUATE?

With minimum income protection we refer to the minimum level of income guaranteed to all able-bodied people at active age (whether in or out of work). At the moment, all EU Member States provide some kind of minimum income protection for non-working people at active age. This is generally provided through social assistance schemes or unemployment benefits, topped up with other (means-tested) benefits (Immervoll 2012; Marchal 2017). When evaluating the adequacy of minimum incomes, it is useful to include also income protection for work-rich households, since many countries show increasing levels of in-work poverty (Gábos et al. 2019). Minimum wages¹, often supplemented with social-assistance top-ups and other in-work benefits, are an important tool for ensuring an adequate minimum income for those at work (Marchal et al. 2018a). Moreover, minimum wages can cause a tense relation with the social floor because of their impact on work incentives (Collado et al. 2019; Cantillon et al. 2017).

In the last decades, the adequacy of minimum income protection has gained growing attention of welfare state scholars (e.g. Nelson 2013; Van Mechelen and Marchal 2013; Cantillon et al. 2019), pointing at increasingly inadequate social benefits (and minimum wages) across European Member States. However, there is no consensus on what level of income corresponds to an acceptable living standard or to the frequently used concept of *human dignity* (e.g. see the European Council Recommendation (1992) and the ESPR (Commission, 2017)), and how this differs across households and countries. In absence of a clear conceptualization of what it means to live a life in human dignity, minimum income benchmarks are usually based on a fixed proportion of median income, often related to current measures of poverty (e.g. Immervoll 2012; Figari et al. 2013; Nelson 2013). The EU Parliament (2010) has defined an adequate income as an income at least reaching the level of the at-risk-of-poverty threshold in the Member State concerned. Doing this, policy makers and researchers generally take a rather arbitrary and purely income-based approach to an adequate minimum income.

Various attempts have been made (e.g. Doyal and Gough 1991; Nussbaum 2001) to define a normative framework of what is needed to *fully participate in society* or to *live a flourishing life*. By starting with a universal conception of the good, and by relying on both experiential and codified knowledge, these authors developed a non-exhaustive list of universal and intermediate needs (or basic and central capabilities) that can be translated to a specific cultural context (Gough 2014). Importantly, in order to fulfill these needs, certain individual and societal preconditions need to be realized (Doyal and Gough 1991; Storms 2012; Sen 1983). Due to differences in circumstances, people with similar financial resources are not necessarily able to attain the same living standard (Sen 1983). If a person is in a bad physical or mental health, is low-skilled, has limited competences or a lack of social capital, this person needs a higher level of income in order to be able to live a life in dignity (See e.g. Van Thielen et al. 2010; Hargittai 2010; Zaidi and Burchardt 2005).

Not only individual characteristics, but also the societal context determines whether an income is adequate or not. Studies have shown that public provision or subsidization of essential goods or services (such as health care and education) positively affect living standards at the bottom of the income distribution (Aaberge et al. 2017; Paulus et al. 2010; Verbist and Matsaganis 2014). However, these studies do generally not take into account differences in the accessibility of these goods and services. In another set of literature, accessibility is defined as a multi-dimensional concept enfolding five commonly used criteria: availability, (spatial) accessibility, affordability, usefulness and comprehensibility (See e.g. Roose and De Bie 2003; De Corte et al. 2017; Vandenbroeck and Lazzari 2014). Availability concerns the supply of the service relative to people's needs (depending on e.g. waiting lists and eligibility conditions), the (spatial) accessibility is the extent to which a services can be physically reached, affordability refers to the costs people face -related to their ability to pay- to access the service, usefulness can be defined as the support and added value people experience when making use of the service and comprehensibility as the openness, transparent and informative character of the service. In

¹ In 5 of 28 EU Member States (Austria, Denmark, Finland, Italy and Sweden) there is no statutory minimum wage, but minimum wages are established in collective agreements (Eurofound 2018).

some studies, the two latter categories are excluded and partly covered by the criteria of *acceptability*, which is seen as the (miss)match between attitudes of the client and the provider (Fransen et al. 2015; Wallace and MacEntee 2012). Additionally, the dimension of *quality* is often included when assessing access to care services (See also the quality of life survey of Eurofound 2017) such as health care (Peters et al. 2008) and ECEC (Gambaro and Stewart 2014).

Importantly, people in poverty experience often more personal and societal barriers for being able to live a decent life (For a more in depth discussion see Penne et al. 2016). For instance, studies have found that living on a low income is significantly related to (self-reported) health problems (Hernández-Quevedo et al. 2006; Mackenbach et al. 2008; Eurofound 2017) and competences (Hargittai 2010; Mullainathan and Shafir 2013). At the same time, other research has revealed socioeconomic inequalities in the accessibility of essential goods and services (e.g. Van Doorslaer et al. 2006; Van Lancker 2013; Rybkowska and Schneider 2011). Common barriers for minimum income recipients to access services are financial obstacles, lack of availability, poor quality (e.g. capacity, resources), stigmatization, lack of information and digitalization (see Frazer and Marlier, 2016). Studies have shown that, despite the large variation across EU member states, there is a lot of room for improvement in the access to quality services for low income groups (Marchal and Van Mechelen 2017; Frazer and Marlier 2016; Eurofound 2017).

Hence, a measure that evaluates the adequacy of living standards should go beyond cash income, and should take into account the individual and societal circumstances. In the next section, we propose and describe a policy indicator based on hypothetical household simulations of both out-of-pocket costs (RBs) and net incomes (micro simulation), in order to get more insight into the adequacy of minimum income protection and its inherent and mutual relation with the accessibility of goods and services. We illustrate this with the case of Belgium.

A HYPOTHETICAL HOUSEHOLD METHOD TO SIMULATE OUT-OF-POCKET COSTS AND NET INCOMES

The reference budgets we use for the purpose of this paper, are based on a theoretical framework (Storms 2012) inspired by the theory of human need (Doyal and Gough 1991) which discusses a list of ten intermediate needs that should be fulfilled for adequate social participation²: adequate housing, food, clothing, health and personal care, maintaining social relations, safety in childhood, rest and leisure, mobility and security. These needs are translated into concrete baskets of essential goods and services (see Appendix Table 1 for a list of broad categories of included goods and services in the Belgium context) based on various information sources such as expert knowledge, (inter)national guidelines and recommendations, survey data and focus group discussions with citizens from various socioeconomic backgrounds (Cf. Goedemé et al. 2015b; Carrillo-Álvarez et al. 2019; Goedemé et al. 2015a). The latter are used to validate the theoretical framework and assumptions, to define essential goods and services and to assess the acceptability and feasibility of the budgets within the current societal and institutional context. The baskets are priced at minimum but acceptable prices in well spread retailers. Due to the variability in rental prices on the private housing market, housing costs of private tenants are defined by calculating the median price of dwellings corresponding to a list of quality criteria based on the Vlaamse woonsurvey 2013 (Winters et al. 2015). Since 2008, the RBs are yearly adjusted to price changes by means of a price survey and every five years an update takes place to evaluate if the content of the reference budgets still reflects what people minimally need in contemporary society (Storms et al. 2015).

As we have argued above, the resources that people minimally need, depend on the characteristics of households as well as on their living circumstances. Therefore, RBs are constructed for well-defined household types, living in a specific social and institutional context. In this paper, we make use of RBs for 12 different household types without or with 1 or 2 children, living in the Flemish region of Belgium. The adults are able-bodied and at active

_

² Adequate social participation is defined as the ability of people to adequately fulfil the various social roles one should be able to take as a member of a particular society. That is, to be able to take relevant social positions in line with the dominant social expectations associated with them.

age. The children are of 4, 8 or 15 years old, corresponding with pre-primary, primary and secondary school age in Belgium. Importantly, it is assumed that all family members are in a good health, self-reliant, are well-informed and have access to common publicly provided or subsidized goods and services (Cf. Storms et al. 2015; Goedemé et al. 2015b; Penne et al. 2016; Penne et al. 2018). In 2017, a single woman at active age who rents her dwelling at the private market needs 1,272 EUR/month in order to participate adequately in society. A couple in a similar situation would need 380 EUR/month extra to reach the same standard of living. If children are added to the household, the budget of a single person increases with 23% to 42% depending on the age of the children, up to 2,646 EUR/month for a jobless couple with two older children (8 and 15 years old). We also include the differential costs that families need to make if one adult is working³. The reference budgets for single earner couple families exceed the budgets of work poor households with about 2% to 4%. In order to illustrate the cost of child care, we only include child care costs for working single parent families. In that case, the RBs increase on average with 10%. However, there are many situations where child care would be desirable or necessary even if (one of) the parents are (is) unemployed. Taking this into account would increase the budgets for these families significantly.

To assess the adequacy of minimum incomes, reference budgets should be compared with the net disposable income of families. In order to simulate taxes and benefits, we make use of the Hypothetical Household Tool (HHoT) which is part of the European tax-benefit microsimulation model EUROMOD (cf. Sutherland and Figari 2013). The flexibility of the tool allows the user to specify a large variation of hypothetical households for which the net income, given a pre-specified gross income, can be simulated (Hufkens et al. 2016; Marchal et al. 2018b). In this paper we evaluate the adequacy of the following net minimum income schemes for the abovementioned hypothetical households living in Flanders: a social assistance income, a minimum income from unemployment insurance and a minimum income from employment. In couples, we assume that the partner is inactive. For the single earner families we assume that one adult (>20 years) works full time on a minimum wage with 12 months of work experience. Minimum unemployment benefits can only be simulated partly in Euromod, hence gross amounts are imputed⁴, assuming an unemployment duration of 12 months, and a previous full time work experience of 12 months. The simulation tool takes into account all compulsory taxes and social security contributions, and all child-specific benefits families are entitled to. Since study- and school allowances are traditionally not included in Euromod, they are added, based on own calculations⁵.

THE ADEQUACY OF MINIMUM INCOME PROTECTION: THE CASE OF BELGIUM

In this section, we use the case of Belgium to show how RBs are an effective policy tool for assessing minimum income adequacy including the three dimensions of Principle 14 in the EPSR (Commission, 2017): 1) ensuring a life in dignity at all stages of life, (2) effective access to enabling goods and services, and, (3) financial incentives to (re)integrate into the labour market.

Ensuring a life in dignity at all stages of life

In Figure 1 we assess the adequacy of minimum income schemes for 12 hypothetical household types by comparing the level of their net income to the level of their reference budgets (illustrating the minimal out-of-pocket costs to fulfil their needs to live a life in dignity). The hypothetical families all live in the Flemish region of Belgium, rent a dwelling on the private market and have one income from either social assistance, minimum

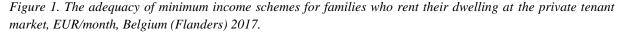
³ This includes some additional clothing, a budget to maintain relations with colleagues, less energy or water costs at home, in some cases a budget for child care, and an extra visit to the GP (to prove absence from work with a medical certificate) (see Storms et al. 2015).

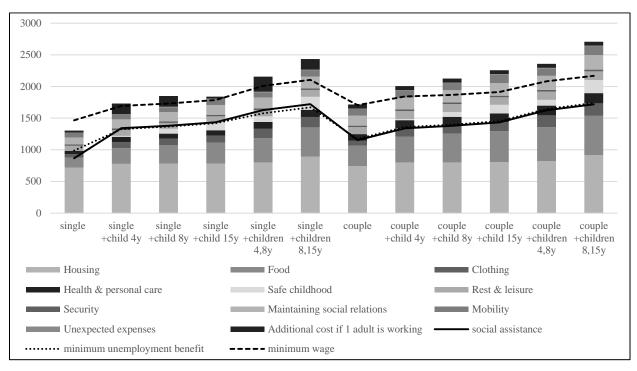
⁴ Gross minimum unemployment benefits are derived from the KOWESZ database.

⁵ The amounts and terms and conditions of school and study allowances in the Flemish region of Belgium are available online at https://www.studietoelagen.be/voorwaarden-en-bedragen

unemployment insurance, or from working full time on a minimum wage. The net income takes into account all taxes, social security contributions, and allocated benefits such as child allowances. The comparison with the reference budgets shows clearly that social assistance or unemployment incomes do not enable families to participate adequately in society and live a life in dignity. The deficit is the largest for couples with older children living on social assistance where the net income only reaches 65% of what they need at the minimum. This means that, after having paid their fixed costs, these families have barely enough left to buy food. With a social assistance income covering about 85% of the necessary costs, single parent families with small children are able to fulfil their physical needs, but there is nothing left to spend for recreational activities or social relations. Incomes from minimum unemployment benefits reach a similar level compared to social assistance incomes. Similar to various other EU countries where both systems operate (See Immervoll 2012), the long term unemployment insurance for people with previous low earnings is quite close to the level of social assistance.

Despite the fact that net incomes for single earner families with a full time minimum wage are higher compared to the social floor for jobless, the figure below reveals that incomes are generally still inadequate if these families rent a dwelling at the private market. This corresponds with other research (e.g. Marchal et al. 2018a), arguing that a single low wage is in many EU countries not sufficient to stay out of poverty. For a couple with two older children the minimum wage covers only 80% of their essential needs. Only for families without children, one minimum wage seems to be narrowly enough to participate adequately in society. However, when these families would need a car for traveling to work, the reference budgets would increase with about 265 EUR per month⁶, meaning that the minimum wage would be inadequate for all family types. Moreover, note that we did only include child care costs for single parent families at work. When other families need paid child care, the adequacy of their minimum income support will deteriorate significantly.





⁶ We have calculated the cost of a small second hand car (10 000 km/year).

In general, the indicator shows that minimum income support is more adequate for single parent families compared to couples with children. This can be explained by the fact that both single parent families are entitled to the same (or only slightly different) amounts of minimum income benefits, and to higher levels of child allowances (supplement for single parents) while couple families include an additional adult in the family. Because age-specific child allowances do not suffice to cover for the significant increasing needs and associated costs of older children, the adequacy of minimum income protection for families with children deteriorates as children grow older (See also Penne et al. 2018).

How did the adequacy of minimum income protection evolve in the last decade? If we look at the evolution of the reference budgets between 2008 and 2017, it is clear that the cost of accessing minimal priced goods and services has increased beyond the average consumer price changes captured in the Harmonized Consumer Price Index (22% on average for essential minimal priced goods and services versus 16% on average prices between 2008 and 2017)⁷. This can be largely explained by the sharp increase in rent prices of small dwellings between 2008 and 2013 (See Storms et al., 2015). Between 2013 and 2017 the reference budgets increased with another 5%, following average price evolutions⁸. Some costs have shown a larger increase such as energy, health care and public transport, while other costs, such as the cost of food, have slightly decreased or followed the average price index.

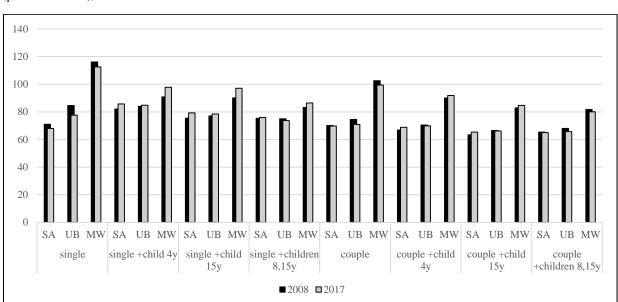


Figure 2 The evolution of the adequacy of minimum income protection expressed as % of the reference budgets (private tenants), 2008-2017

Legend: SA=social assistance, UB=minimum unemployment benefit, MW=minimum wage **Source**: Reference budgets 2008 and 2017 (CEBUD), minimum incomes for 2008 and 2017 are simulated using HHoT (Euromod H1.0+)

In Figure 2, we express the net income of families living with an income from social assistance, an unemployment benefit or a minimum wage as a percentage of their reference budget (for private tenants) in 2008

_

⁷ All items HICP (2015 = 100), annual average index, retrieved from Eurostat on September 4, 2018.

⁸ This can be partly explained because rent prices, which are an important part of the total budget, were adjusted following the Harmonised Consumer Price Index between 2013 and 2017. Future updates including the new results of the 'Vlaamse Woononderzoek 2019', might show significantly different results.

and 2017. The figure shows us that the evolution of adequacy varies across household types, with the largest improvements visible for single parents working on a minimum wage. Due to 'making work pay' measures, such as the decrease in taxes, the net income of single earners increased with 18 to 26%. The changes in the tax system (and in the child benefit system) had a stronger effect on singles and single parents (24 to 26%) than for couples without or with children (18 to 21%). We can see that adequacy remained unchanged or even deteriorated for families with a minimum income from unemployment (except for a single with one child), due to the limited increase of gross minimum unemployment benefits (19%). Furthermore, the cost of (older) children has increased more than the evolution of child benefits (13 to 15%), which have not been adjusted to the evolution in price index (See Decoster et al. 2019), and school- and study allowances (19%). As a result, for couples with two children the situation declined in all minimum income schemes. Also for families without children, the increase of net income was insufficient to cover the increase in necessary costs, in particular rent prices. We can conclude that, after 10 years of policy efforts (See also Decoster et al. 2019), minimum income protection is still inadequate for most families renting their dwelling at the private housing market.

Access to enabling goods and services

The adequacy of minimum income support is not only determined by the level of net income, but also by the accessibility of essential goods and services. Policy makers can influence this in two main ways: (1) by providing or subsidizing goods and services and improve overall access regardless of households' financial situations or, (2) by introducing means-tested cost reductions and improve accessibility specifically for vulnerable groups. The first set of policies is partly reflected in the level of the reference budgets, since it includes the minimum out-of-pocket costs for education, public transport and health care services, among others. Importantly, by calculating costs at the level of different household types while keeping household characteristics constant (see above), we circumvent the issue of variation of needs across households, which is inevitably related to the affordability of goods and services (e.g. Aaberge et al. 2017). Of course, as indicated above, besides affordability, there are several aspects determining whether a good or service is accessible such as the availability, spatial accessibility and quality (e.g. Roose and De Bie 2003; Vandenbroeck and Lazzari 2014; Peters et al. 2008). However, these other dimensions of accessibility are beyond the scope of this paper. In this section, we focus on the second set of policy measures and assess the impact of targeted in-kind benefits on the adequacy of minimum income protection.

In the past few years, the Federal, Flemish and local governments as well as different profit and non-profit civil society organisations have introduced a range of cost-reducing benefits for low-income families. However, this landscape of means-tested social tariffs and allowances has become rather complex, with a wide variation of providers. Moreover, many of these cost-reductions are not allocated automatically, and are subject to different kinds of (income) eligibility criteria. In what follows, we calculate the impact of these in-kind benefits on the level of resources families need at the minimum to participate in society, by assuming full take up. The table below shows an overview of the benefits we have taken into account. Inevitably this exercise requires some important assumptions: (1) the families are well informed about the subsidies to which they are entitled, (2) the family members can invest the necessary time and energy to address different providers to apply for their social rights in the required form, and, (3) the providers of these benefits are accessible for all. It is important to note that in many cases these assumptions are not realistic and that non-take up of means-tested social benefits frequently occurs, due to a variety of factors such as administrative barriers, perceived complexity, lack of information and related stigma (e.g. Van Mechelen and Janssens 2017).

Table 1 Overview of means-tested cost-reducing benefits included in the study

Cost-reducing benefit	Provider	Main conditions
Social rent	Social housing company	Income threshold
Rent allowance	Flemish government	4 years waiting list social housing, below certain rent limit and income threshold
Fuel allowance	Non-profit organisation	Income threshold
Social correction Flemish energy taks	Flemish government	Specific social security categories, below certain energy limit (*)
Social tariff electricity & gas	Energy distributors	Specific social security categories (*)
Discount economical devices	Network operator	Specific social security categories (*)
Reduction water bill	Drinking water distributors	Specific social security categories (*)
Increased Reimbursement Health care	Health insurance service	Income threshold or specific social security categories
Reduction public transport	Public transport company	Increased reimbursement or specific social security categories
Social tariff internet & phone	Telecommunication provider	Specific social security categories (*)
Exemption/reduction Province tax	Province	Social assistance/ increased reimbursement

^(*) Minimum wage workers are not eligible to these benefits since these are only assigned to certain categories of social security (e.g. social assistance)

Note: The table with cost-reducing benefits is non-exhaustive. In reality, families in Flanders can have access to additional (rather small) cost reductions from local governments or organisations. Due to the limited coverage and the large regional variation they are not included in this exercise.

Figure 3 below shows how the adequacy of minimum income protection increases if families take-up all their monthly social rights. If families with an income from social assistance make use of all the cost-reducing benefits (except the rent subsidies), and you add this in cash to their monthly social assistance net income, it increases with 103 euro (12%) for a single person to 177 euro (10%) for a couple with two older children. But it is especially the effect of social housing that makes a substantial difference: depending on household income and family size, social rent⁹ increases the monthly budgetary space with 381 euro (44%) to 462 euro (27%) compared to families renting on the private market. If we assume that families take up all their social rights (adding up cost-reducing benefits + social rent), the net income of single social assistance recipients without or with children (the dotted black line in Figure 3), is just enough to allow for adequate social participation. Nevertheless, social assistance levels (and minimum unemployment benefits) remain largely inadequate for couples with children. Importantly, access to social housing is limited in Flanders, covering only 6.7 % of the housing market compared to 20.4% private tenants and 70.5 % owners (Winters et al. 2015). After four years on the waiting list for social housing, low-income families renting a modest dwelling on the private market are entitled to a rent allowance. For social assistance recipients who receive the rent allowance, their budget increases with 138 euro for a single to 184 euro for a couple with two older children (not included in the figure below).

-

⁹ The price of social rent is calculated based on administrative data applying the legal framework of the Flemish government, taking into account net taxable income, family size and patrimony value.

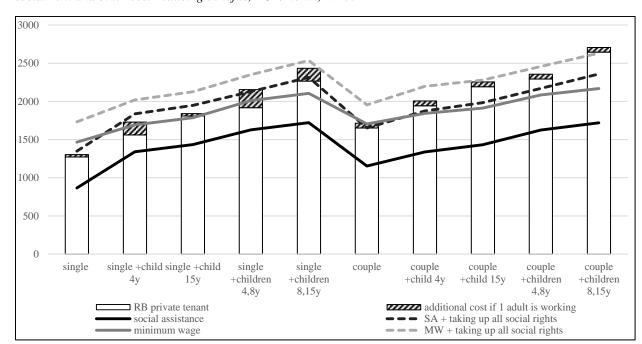


Figure 3. The adequacy of minimum income schemes assessed by the reference budgets, including the impact of social rent and other cost-reducing benefits, EUR/month, 2017.

Note: 'SA/MW + taking up all social rights' illustrates the level of net income for households living on social assistance or one minimum wage, adding as a cash benefit the cost-reduction of renting a dwelling at the social housing market, and taking up all cost-reducing benefits they are entitled to.

Source: Own calculations based on reference budgets 2017 (CEBUD), net minimum incomes are simulated using HHoT 2017 (Euromod H1.0+).

Financial incentives to (re)integrate into the labour market

The third dimension of the right to an adequate minimum income in the Pillar states that "for those who can work, minimum income benefits should be combined with incentives to (re)integrate into the labour market". Above, Figure 3 shows that in the case of Belgium, there is a significant gap between net incomes from minimum wages and net incomes from social assistance, ensuring financial incentives to work (cf. Cantillon et al. 2017). If we express these net minimum incomes as a percentage of the reference budgets, a net minimum wage is about 43 to 65 percent points more adequate compared to a net income from social assistance. However, when children are added to the working household, a minimum wage becomes insufficient for adequate social participation. For a family with children, relative to their reference budget, a minimum income from work is about 20 to 30 percent points higher than an income from social assistance. This wedge decreases to only 10 percent points if we take into account the cost of child care for single parent families at work.

If we now assume that single earners with a minimum wage take up all social rights (cost-reducing benefits + social rent) to which they are entitled (the grey dotted line in Figure 3), the adequacy of a minimum income from work would increase with 249 euro (15%) to 464 euro (21%) per month. This is mainly due to the impact of social housing which does not exclude employed families, although social rent prices are slightly higher since they are calculated based on taxable income. Figure 3 illustrates the effect of means-tested benefits in kind on financial work incentives by showing how the two dotted lines (the net incomes including all social rights) came closer to each other compared to the solid lines (the net incomes without cost-reducing benefits and private rent). If we would express the net incomes including all social rights as a percentage of the RBs, the gap between minimum wage and social assistance reduces to 25 percent points for a single without children to no gap at all

for single parents with small children (taking into account the cost of childcare). If a social assistance recipient without children, who pays social rent and takes-up all social rights, starts working full-time on a minimum wage, costs can increase up to 219 euro per month. This is due to the fact that work-rich households are not eligible to the cost-reducing benefits attached to social security categories and, for the other benefits, the net income of a single minimum wage earner is above income thresholds. If they have children, minimum wage workers fall below most of (equivalized) income thresholds, which make them still entitled to the fuel allowance and the Increased Reimbursement for health care. However, take-up of these social rights is likely to be lower for people in employment, since assignment is not automatic and often goes through public welfare offices. Importantly, this is not only a matter of work incentives, since social assistance recipients are also entitled to more cost-reducing benefits compared to persons in unemployment or other insurance categories.

DISCUSSION

In this paper we propose reference budgets combined with hypothetical household simulations of net incomes, as an indicator to support implementation of the right to an adequate minimum income protection included in the EPSR. The Indicators Sub-Group (ISG), has agreed on a common set of methodological criteria for the development of EU social indicators of good quality (Commission 2015). Social indicators should be (1) valid and have a clear and accepted normative interpretation, (2) robust and statistically validated, (3) sufficiently cross-nationally comparable, (4) building on available data, timely and susceptible to revision, and, (5) responsive to policy interventions but not subject to manipulation. (Atkinson et al. 2002; Commission 2015) Before we head to the conclusions, this section discusses some strengths and weaknesses of our proposed indicator in the light of these quality criteria.

We start with the drawbacks. First, with respect to the validity of the indicator, reference budgets never represent an exact income threshold. The priced baskets of goods and services that people need at the minimum for adequate social participation are always illustrative. Sometimes, other choices could be possible which might result in slight changes in the total cost. Therefore, maximum transparency must be pursued when developing RBs, which allows them to be integrated in a country's social debate of what is minimally needed to live a life in dignity. Secondly, the indicator faces problems of robustness, since there is a lack of quality (comparable) data on social expectations, accessibility of goods and services, purchasing patterns, prices and life spans. Focus group discussions including people with different socio economic backgrounds can help to reveal important insights but should be used carefully since they do not provide representative information. To improve robustness, reference budgets are developed for a limited number of household types with specific assumptions. However, this means that they cannot be generalised to a benchmark for the population as such (see Penne et al. 2016). As we have argued above, especially people living on low incomes encounter more health problems and barriers to access quality services (e.g. Hernández-Ouevedo et al. 2006; Mullainathan and Shafir 2013; Van Lancker 2013). Hence, if the RB-indicator is used as a tool for policy makers or field workers to test income adequacy, a first crucial step should be to check if the individual competences and societal conditions are applicable. Informed by data on the institutional context, actual consumption patterns and real-life population characteristics, an appropriate equivalence scale could be developed to extrapolate the indicator to the wider public (see Goedemé et al 2019, Penne et al. 2016).

However, outlining the common quality criteria shows also the clear advantage of RBs in contrast to existing social indicators, notably the at-risk-of-poverty indicator. Firstly, an important strength is the *internal validity* of the indicator, since RBs provide an empirically based, transparent, concrete and acceptable benchmark that represents an adequate minimum income level. They have a clear normative interpretation of what is needed to live a life in human dignity in the different EU Member States, corresponding to the Pillars' specific objective of fulfilling people's essential needs. This is done by building on a sound theoretical framework of human needs and social participation, embedded in the institutional and social context by making use of governmental guidelines, conventions and scientific knowledge combined with the opinions of random citizens in focus groups. By transparently documenting all methodological choices, regularly updating them to changes in society

and involving various stakeholders, RBs have the potential of becoming a widely accepted instrument of consensus-building.

Secondly, our indicator has a clear advantage for policy makers in assessing both ex ante the social impact of specific measures, as well as in monitoring ex post changes in social policy. By taking a hypothetical household approach to policy evaluations we are able to capture 'pure policy intentions'. In contrast to indicators of government spending, the results are not blurred by demographic changes, or differences in rates of take-up and compliance. Moreover, the indicator allows to estimate the combination of a whole set of -interacting- policy measures, including all relevant taxes and cash benefits, as well as in-kind benefits. Importantly, compared to other research (e.g. Nelson 2013; Cantillon et al. 2017; Van Mechelen and Marchal 2013) and to other indicators of the Social Scoreboard assessing the adequacy of minimum income protection, reference budgets have the advantage of revealing the essential out-of-pocket costs families face, taking into account both publicly provided or subsidized goods and services as well as cost-reducing benefits. Hence, our indicator is not only responsive to changes in the level and design of the benefits, but also to changes in the affordability of essential goods and services such as reducing health care or housing costs. Moreover, by comparing various household types, it is possible to identify unmet household needs and groups that could be targeted. For instance, in Belgium minimum income protection is generally less adequate for couples and for families with older children, since it does not take proper account of the needs of an additional adult or growing child in the household. As in most European welfare states, the 'tax and transfer implicit equivalence scale' reflects rather the result of a policy compromise interacting with the prevailing socio-economic context than differences in household needs (e.g. Van de Ven et al. 2017; Penne et al. 2018).

Finally, the RB indicator provides opportunities for developing a *substantive comparable* minimum income benchmark at EU level. Recently, two related EU funded projects (Goedemé et al. 2015a; Goedemé et al. 2015b) made some considerable progress in the construction of cross-national comparable reference budgets in Europe. This paves the way for EU policy makers to extend the use of RBs as policy indicators to monitor implementation of the Pillar in a cross-nationally comparable way. These EU projects have tried to meet the abovementioned challenges of robustness and comparability by developing a common theoretical and methodological framework, starting as much as possible from existing public guidelines, applying a step-wise well-coordinated and harmonised procedure, making use of well-defined household types and relying on a wide range of information sources and a strong network of national researchers, experts and stakeholders. Elsewhere we have shown that the at-risk-of-poverty indicator is comparable in a procedural way, but does not reflect the same level of living standard across countries (See Goedemé et al., 2019). Hence, reference budgets could be a tool to enhance substantive comparability by representing a context-specific benchmark that illustrates what an adequate minimum income means in the different Member States.

CONCLUSIONS

In order to rebalance economic rights and social rights in the EU, there is an increasingly urgent call for an EU binding framework on minimum income protection, while at the same time taking into account the large heterogeneity across Member States (Vandenbroucke et al. 2013). The launch of the European Pillar of Social rights (Commission, 2017) is a step towards a more right-based social Europe, aimed at fulfilling people's essential needs through an adequate minimum income protection, labour market inclusion and access to affordable goods and services of good quality. Although the Commission assigns a very ambitious role to the EPSR, as a non-binding soft law instrument the content remains vague (e.g. what does a life in dignity mean?), leaving the responsibility for its implementation to policy-makers at the national and local level (Rasnača 2017). Hence, without a translation of the Pillar's rights into a set of good quality indicators and support of all key stakeholders, promises might not be fulfilled. Although the Social Scoreboard is an important tool, we argue that the existing indicators lack a clear normative interpretation of what an adequate income means in the different Member States. At the same time, the indicators are not sufficiently responsive to policy interventions that affect income adequacy indirectly such as the accessibility of essential goods and services.

Following the framework of the Pillar, we have proposed a needs-based indicator that combines hypothetical household simulations of essential out-of-pocket costs through reference budget research and of tax-benefits through the micro-simulation tool HHoT (Euromod). The added value of the indicator is illustrated empirically by applying it to the case of Belgium, for a range of household types, living in the Flemish region. Adequacy is assessed for the year 2017 and evaluated over the last decade (2008-2017) for three different minimum income schemes: a social assistance income, a minimum income from unemployment insurance and a minimum income from employment. The paper shows how the indicator is a useful policy tool that allows for a broad view on minimum income protection (see also Cantillon et al., 2017) including work incentives and access to affordable goods and services. For the case of Belgium, we found that minimum income schemes are generally insufficient to participate adequately in society. In other studies we show that this is the case for most EU Member States (e.g. Goedemé et al. 2019; Penne et al. 2018). Although net minimum wages are in most cases inadequate as well, financial work incentives are maintained through a clear wedge with net social assistance levels. Furthermore, the indicator shows that reducing out-of-pocket costs to access essential goods and services can support cash benefits to ensure a life in human dignity. In our case study of Belgium, especially a reduction of the housing costs through social rent or -to a lesser extent- the rent allowance, has a positive effect on the adequacy of minimum income schemes.

On the other hand, means tested cost-reducing benefits are often fragmented, subject to strict (income) conditions and insufficient to compensate for low cash benefits. In the case of Belgium, cost-reductions are often attached to social assistance excluding working- or other insurance categories. Hence, out-of-pocket costs can increase significantly if social assistance beneficiaries are integrated into the labour market, which might have a negative impact on work incentives. However, this effect is probably overestimated if we take account of the levels of non-take-up of means-tested and not automatically assigned benefits (Van Mechelen and Janssens 2017). Moreover, this study focuses on the affordability of goods and services while largely ignoring other aspects that determine access such as the availability, acceptability and the quality of the good or service (Vandenbroeck and Lazzari 2014; Peters et al. 2008). For instance, in Flanders there is a limited supply of social housing with long waiting lists for families in need (Winters et al. 2015). Hence, similar to the conclusion of Vandenbroucke and Vleminckx (2011), we argue that investment in accessible goods and services could be a successful complementary strategy in the fight against poverty, but only if benefits are equally distributed and balanced with adequate social protection levels, while at the same time taking into account labour market activation of the low-skilled.

Social policy researchers have emphasize the need for EU policy *input indicators* that evaluate policy packages, without compromising subsidiarity (Cantillon et al. 2017; Vandenbroucke et al. 2013). In this paper, we show how reference budgets, and even more if they would be developed in a cross-nationally comparable way, are an opportunity to develop a more binding and comprehensive EU policy framework on adequate minimum income protection (see also Deeming, 2017). They are a useful tool to build a common understanding of what an adequate minimum income means, while at the same time being sensitive to the Member States' context. Furthermore, their detailed construction allows for cross-national learning with regards to the accessibility of essential (publicly subsidised) goods and services such as healthy food, housing, health care and education, as being emphasized by various rights in the EPSR. In sum, despite its limitations, we are convinced that the indicator proposed in this paper can contribute significantly to the monitoring and implementation of the right to an adequate minimum income protection expressed in the EPSR, aiming at a life in human dignity for all.

REFERENCES

Aaberge, R., Langørgen, A., & Lindgren, P. (2017). The distributional impact of public services in European countries. In A. A.B., G. A.-C., & M. E. (Eds.), *Monitoring Social Europe* (pp. 159-174). Luxembourg: Publications Office of the European Union.

Atkinson, T., Cantillon, B., Marlier, E., & Nolan, B. (2002). *Social indicators: The EU and social inclusion*. Oxford: Oxford University Press.

- Cantillon, B., Goedemé, T., & Hills, J. (2019). *Decent incomes for all: improving policies in Europe*. New York (USA): Oxford University Press.
- Cantillon, B., Marchal, S., & Luigjes, C. (2017). Decent incomes for the poor: which role for Europe? *JCMS: Journal of Common Market Studies*, 55(2), 240-256.
- Carrillo-Álvarez, E., Penne, T., Boeckx, H., Storms, B., & Goedemé, T. (2019). Food reference budgets as a potential policy tool to address food insecurity: lessons learned from a pilot study in 26 European countries. *International journal of environmental research and public health*, 16(1), 32.
- Collado, D., Cantillon, B., Van den Bosch, K., Goedemé, T., & Vandelannoote, D. (2019). The end of cheap talk about poverty reduction: the cost of closing the poverty gap while maintaining work incentives. In B. Cantillon, T. Goedemé, & J. Hills (Eds.), *Decent incomes for all: improving policies in Europe*. New York (USA): Oxford University Press.
- Commission, E. (2008). Commission Recommendation on the Active Inclusion of People Excluded from the Labour Market. COM (2008) 639 Final. Brussels: European Commission.
- Commission, E. (2015). Social protection committee indicators sub-group: Portfolio of EU social indicators for the monitoring of progress towards the EU objectives for social protection and social inclusion. 2015 update. Luxembourg: Publications Office of the European Union.
- Commission, E. (2017). European Pillar of Social Rights. *Proclaimed by the European Parliament, the Council and the Commission on 16 November 2017*. Brussels: European Commission.
- Council, E. (1992). Council recommendation on common criteria concerning sufficient resources and social assistance in social protection systems (92/441/CEE). (pp. 246–248).
- De Corte, J., Verschuere, B., & De Bie, M. (2017). Networks for welfare provision: getting a grip on processes of social exclusion by evaluating network effectiveness. *Social Policy & Administration*, 51(7), 1174-1190.
- Decoster, A., Perelman, S., Vandelannoote, D., Vanheukelhom, T., & Verbist, G. (2019). Which Way the Pendulum Swings? Equity and Efficiency of 26 Years of Tax-Benefit Reforms in Belgium. *CSB Working Paper Series*. Antwerp: Herman Deleeck Centre for Social Policy, University of Antwerp.
- Deeming, C. (2017). Defining minimum income (and living) standards in Europe: Methodological issues and policy debates. *Social Policy and Society*, *16*(1), 33-48.
- Doyal, L., & Gough, I. (1991). A theory of human need. Houndmills: Palgrave Macmillan.
- Eurofound (2017). European Quality of Life Survey 2016: Quality of life, quality of public services, and quality of society. Luxembourg: Publications Office of the European Union.
- Eurofound (2018). Statutory minimum wages in the EU 2018: First findings. Dublin: Eurofound.
- Fahey, T. (2007). The case for an EU-wide measure of poverty. European Sociological Review, 23(1), 35-47.
- Figari, F., Matsaganis, M., & Sutherland, H. (2013). Are European social safety nets tight enough? Coverage and adequacy of minimum income schemes in 14 EU countries. *International Journal of Social Welfare*, 22(1), 3-14.
- Fransen, K., Deruyter, G., & De Maeyer, P. (2015). Concepts, reflections and applications of social equity: approaches to accessibility to primary goods and services in the region of Flanders, Belgium. In L. Boelens, D. Lauwers, & F. Witlox (Eds.), *Adaptive mobility: a new policy and research agenda on mobility in horizontal metropolises* (pp. 17-44). Groningen, Nederland: InPlanning.
- Frazer, H., & Marlier, E. (2016). Minimum Income Schemes in Europe. A study of national policies, European Social Policy Network (ESPN). Brussels: European Commission.
- Gábos, A., Branyiczki, R., Lange, B., & Tóth, I. G. (2019). Employment and poverty dynamics in the EU countries before, during and after the crisis. In B. Cantillon, T. Goedemé, & J. Hills (Eds.), *Decent incomes for all: improving policies in Europe*. New York (USA): Oxford University Press.
- Gambaro, L., & Stewart, K. (2014). An equal start? Providing quality early education and care for disadvantaged children. Bristol: Policy Press.
- Goedemé, T., Penne, T., Hufkens, T., Karakitsios, A., Simonovits, B., Carillo Alvarez, E., et al. (2019). What Does It Mean To Live on the Poverty Threshold? Lessons From Reference Budgets. In B. Cantillon, T. Goedemé, & J. Hills (Eds.), *Decent incomes for all: improving policies in Europe*. New York (USA): Oxford University Press.
- Goedemé, T., Storms, B., Penne, T., & Van den Bosch, K. (Eds.). (2015a). Pilot project for the development of a common methodology on reference budgets in Europe. The development of a methodology for comparable reference budgets in Europe Final report of the pilot project. Brussels: European Commission.

- Goedemé, T., Storms, B., Stockman, S., Penne, T., & Van den Bosch, K. (2015b). Towards cross-country comparable reference budgets in Europe: First results of a concerted effort. *European Journal of Social Security*, 17(1), 3-30.
- Gough, I. (2014). Lists and thresholds: comparing the Doyal-Gough theory of human need with Nussbaum's capabilities approach. *Capabilities, Gender, Equality*, 357-382.
- Hargittai, E. (2010). Digital na(t)ives? Variation in internet skills and uses among members of the "net generation". *Sociological inquiry*, 80(1), 92-113.
- Hernández-Quevedo, C., Jones, A. M., López-Nicolás, A., & Rice, N. (2006). Socioeconomic inequalities in health: a comparative longitudinal analysis using the European Community Household Panel. *Social Science & Medicine*, 63(5), 1246-1261.
- Hufkens, T., Leventi, C., Rastrigina, O., Manios, K., Van Mechelen, N., Verbist, G., et al. (2016). HHoT: a new flexible Hypothetical Household Tool for tax-benefit simulations in EUROMOD (Deliverable 22.2). Leuven: HIVA, FP7 InGRID project.
- Immervoll, H. (2012). Minimum-income benefits in OECD countries. In D. Besharov, & K. Couch (Eds.), *Counting the poor: new thinking about European poverty measures and lessons for the United States*. Oxford: Oxford University Press.
- Juhász, G. (2006). Exporting or pulling down? The European social model and Eastern enlargement in the EU. *European Journal of Social Quality*, 6(1), 82-108.
- Mackenbach, J. P., Stirbu, I., Roskam, A. J. R., Schaap, M. M., Menvielle, G., Leinsalu, M., et al. (2008). Socioeconomic inequalities in health in 22 European countries. *New England Journal of Medicine* 358(23), 2468-2481.
- Marchal, S. (2017). *The social floor: essays on minimum income protection. Doctoral dissertation*. University of Antwerp, Antwerp.
- Marchal, S., Marx, I., & Verbist, G. (2018a). Income support policies for the working poor. In H. Lohmann, & I. Marx (Eds.), *Handbook on In-Work Poverty* (pp. 213-227). Cheltenham, UK: Edward Elgar Publishing.
- Marchal, S., Siöland, L., & Goedemé, T. (2018b). Methodological working paper: Using HHoT to generate institutional minimum income protection indicators. *CSB Working Paper Series, No. 18.20*. Antwerp: Herman Deleeck Centre for Social Policy, University of Antwerp.
- Marchal, S., & Van Mechelen, N. (2017). A new kid in town? Active inclusion elements in European minimum income schemes. *Social Policy & Administration*, 51(1), 171-194.
- Marx, I., & Nelson, K. (2013). Minimum income protection in flux. UK: Palgrave Macmillan.
- Mullainathan, S., & Shafir, E. (2013). Scarcity: Why having too little means so much: Macmillan.
- Nelson, K. (2013). Social assistance and EU poverty thresholds 1990–2008. Are European welfare systems providing just and fair protection against low income? *European Sociological Review*, 29(2), 386-401.
- Nussbaum, M. C. (2001). Women and human development: The capabilities approach (Vol. 3): Cambridge University Press.
- Parliament, E. (2010). Role of minimum income in combating poverty and promoting an inclusive society in Europe. European Parliament resolution 2010/2039 (INI).
- Paulus, A., Sutherland, H., & Tsakloglou, P. (2010). The distributional impact of in-kind public benefits in European countries. *Journal of Policy Analysis and Management*, 29(2), 243-266.
- Penne, T., Cussó Parcerisas, I., Mäkinen, L., Storms, B., & Goedemé, T. (2016). Can reference budgets be used as a poverty line? *ImPRovE Working Paper No. 16/05* (pp. 36). Antwerp: Herman Deleeck Centre for Social Policy, University of Antwerp.
- Penne, T., Hufkens, T., Goedemé, T., & Storms, B. (2018). To what extent do welfare states compensate for the cost of children? A hypothetical household approach to policy evaluations. *CSB Working Paper Series, No.* 18.11. Antwerp: Herman Deleeck Centre for Social Policy, University of Antwerp.
- Peters, D. H., Garg, A., Bloom, G., Walker, D. G., Brieger, W. R., & Rahman, M. H. (2008). Poverty and access to health care in developing countries. *Annals of the New York Academy of Sciences*, 1136(1), 161-171.
- Rasnača, Z. (2017). Bridging the gaps or falling short? The European Pillar of Social Rights and what it can bring to EU-level policymaking. Working Paper 2017.05, ETUI, Brussels.
- Roose, R., & De Bie, M. (2003). From participative research to participative practice—a study in youth care. *Journal of Community & applied social psychology, 13*(6), 475-485.
- Rybkowska, A., & Schneider, M. (2011). Housing conditions in Europe in 2009. *Eurostat Statistics in focus*, 4, 1-12.
- Sen, A. (1983). Poor, relatively speaking. Oxford Economic Papers, 35(2), 153-169.

- Storms, B. (2012). Referentiebudgetten voor maatschappelijke participatie. Doctoraal proefschrift. PhD, UA, Antwerpen.
- Storms, B., Goedemé, T., Van den Bosch, K., Penne, T., Schuerman, N., & Stockman, S. (2014). Pilot project for the development of a common methodology on reference budgets in Europe: Review of current state of play on reference budget practices at national, regional, and local level. (pp. 150). Brussels: European Commision.
- Storms, B., Penne, T., Vandelannoote, D., & Van Thielen, L. (2015). Referentiebudgetten als benchmark voor het beoordelen van de doeltreffendheid van de minimuminkomensbescherming. Hoe evolueerden inkomens en noodzakelijke uitgaven in de periode 2008-2013? *Belgisch Tijdschrift voor Sociale Zekerheid*(3), 497-516.
- Sutherland, H., & Figari, F. (2013). EUROMOD: the European Union tax-benefit microsimulation model. *International Journal of Microsimulation*, 6(1), 4-26.
- Van de Ven, J., Hérault, N., & Azpitarte, F. (2017). Identifying tax implicit equivalence scales. *The Journal of Economic Inequality*, 1-19.
- Van Doorslaer, E., Masseria, C., & Koolman, X. (2006). Inequalities in access to medical care by income in developed countries. *Canadian medical association journal*, 174(2), 177-183.
- Van Lancker, W. (2013). Putting the child-centred investment strategy to the test: Evidence for EU27. *European Journal of Social Security*, 15(1), 4-27.
- Van Mechelen, N., & Janssens, J. (2017). Who is to blame? An overview of the factors contributing to the non-take-up of social rights. *CSB Working Paper Series No. 17.08*. Antwerp: Herman Deleeck Centre for Social Policy, University of Antwerp.
- Van Mechelen, N., & Marchal, S. (2013). Struggle for life: social assistance benefits, 1992–2009. In *Minimum income protection in flux* (pp. 28-53). UK: Palgrave Macmillan.
- Van Thielen, L., Deflandre, D., Baldewijns, K., Boeckx, H., Leysens, G., Casman, M., et al. (2010). Minibudget: Wat hebben gezinnen nodig om menswaardig te leven in België. Onderzoek gefinancierd door Federaal Wetenschapsbeleid in opdracht van de POD MI.
- Vandenbroeck, M., & Lazzari, A. (2014). Accessibility of early childhood education and care: A state of affairs. *European Early Childhood Education Research Journal*, 22(3), 327-335.
- Vandenbroucke, F., Cantillon, B., Van Mechelen, N., Goedemé, T., & Van Lancker, A. (2013). The EU and minimum income protection: clarifying the policy conundrum. In I. Marx, & K. Nelson (Eds.), *Minimum income protection in flux* (pp. 271-317). UK: Palgrave Macmillan.
- Verbist, G., & Matsaganis, M. (2014). The redistributive capacity of services in the European Union. In B. Cantillon, & F. Vandenbroucke (Eds.), *Reconciling work and poverty reduction: How successful are European welfare states?* (pp. 185-211). New York: Oford University Press.
- Wallace, B. B., & MacEntee, M. I. (2012). Access to dental care for low-income adults: perceptions of affordability, availability and acceptability. *Journal of community health*, 37(1), 32-39.
- Winters, S., Ceulemans, W., Heylen, K., Pannecoucke, I., Vanderstraeten, L., Van den Broeck, K., et al. (2015). Wonen in Vlaanderen anno 2013. De bevindingen uit het Grote Woononderzoek 2013 gebundeld. Antwerpen-Apeldoorn: Garant.
- Zaidi, A., & Burchardt, T. (2005). Comparing incomes when needs differ: equivalization for the extra costs of disability in the UK. *Review of income and wealth*, 51(1), 89-114.
- Zeitlin, J., & Vanhercke, B. (2018). Socializing the European Semester: EU social and economic policy coordination in crisis and beyond. *Journal of European Public Policy*, 25(2), 149-174.

APPENDIX

Appendix 1. Categories of essential goods and services included in the Belgian reference budgets

Housing	rent, utility costs, taxes
	median rent for quality dwelling (Vlaamse woonsurvey)
	repair and maintenance
Food	liquids
	bread, grains, potatoes
	fruit & vegetables
	dairy
	meat, fish, eggs
	fats & residual
	kitchen equipment
	physical activity
Clothing	coats
	sweaters
	shirts & tops
	pants/dresses
	sport clothes
	underwear & socks
	accessories
	shoes
	maintenance, repair & storage
Health care	consult GP (every day diseases, minor traumata)
	consult dentist
	sun glasses and -lotion
	family medicine chest (common medicines, plasters & bandages)
	medical prevention (vaccines)
	contraception
	health insurances
Personal care	hand hygiene
	mouth hygiene
	body hygiene
	hair care
	cosmetics and perfume
	intimate hygiene women/girls

	shaving	
	toiletry bag	
	basic bathroom equipment (e.g. towels, toilet paper)	
Rest and leisure	bed with necessities	
rest and leisure	fold-out sofa	
	accessories (bedside table, lamp)	
	domestic leisure (e.g. TV, radio)	
	access to library	
	non-organised leisure (pub, cultural activities)	
	organised leisure (membership association)	
	babysit	
	yearly domestic holiday	
	small free-to-spend budget on non-necessity (to enable self-control)	
	sman free-to-spend budget on non-necessity (to enable sen-control)	
Maintaining social	visits of family and friends (+ extra dinnerware & chairs)	
relations	take away food/ eating out	
	computer with internet	
	printer and camera	
	mobile phone (for adults)	
	celebrations, cards and presents	
	obligations as a citizen (e.g. ID, province tax)	
	some accessories for cheerfulness at home	
Safe childhood	day trip	
(only if there are children	mobile phone (teenagers)	
in the household)	birthday party (< 12 years)	
	youth association	
	toys	
	cultural activities	
	pocket money	
	direct education costs (general discipline in public school)	
	child care (only included for working single parents)	
	and the control of th	
Mobility	bicycle (+ equipment and repair)	
	public transport inside city (annual bus pass)	
	public transport outside city on occasions (Train pass for 10 rides)	
	budget to use a shared car once a month (Cambio)	
Security	financial security (banking)	
	insurances and basic prevention	
Unexpected expenses	small monthly budget to save in order to replace durables	
Onexpected expenses	sman monuny budget to save in order to reprace durables	