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Reference Budgets as an EU Policy Indicator to Assess the Adequacy of Minimum Income Protection

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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.

Keywords Minimum income · Adequacy · Social policy indicator · Reference budgets · Hypothetical household simulations · Affordability

1 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

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(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 Vlemingcx 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, enfolded 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.*” (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 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% 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; Babones et al. 2016). 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 (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 assess 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. Carrillo-Álvarez et al. 2019; Goedemé et al. 2015a, b). 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 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). In several local and national contexts, they have been used to assess the adequacy of minimum income protection (see e.g. Davis et al. 2018; Saunders and Bedford 2017). For the purpose of this paper, we use RBs for adequate social participation in Belgium for the year 2017. 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 in 2017 and assess changes over time by comparing with the year 2008.

The paper is structured as follows: In the first paragraph, we give some theoretical background on the meaning 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.

2 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 wages,¹ 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. 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; Davis et al. 2018), 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 adequate living standard and how this differs across households and countries. A frequently used key concept in the development of fundamental rights to guarantee a decent living standard at the (inter)national, regional and local level is the concept of *human dignity*. It is also the leading tenet behind Articles 14, 15 and 17 of the European Pillar of Social Rights (Commission 2017). However, despite its frequent use, scholars from various disciplines and traditions have been giving different meanings to the concept (McCrudden 2013; Rao 2007). As a result, human dignity remains an indeterminate, abstract and vague concept (Morales 2018; Düwell et al. 2014). Nevertheless, the concept of human dignity is about the realization of socio-economic rights (Eide 1989; Moons 2016) which not only refer to the protection of individual needs, but also to the promotion of social cohesion (Casas 2005). Moons (2016), who explores the concept of human dignity in his dissertation, introduces the term '*social dignity*', to emphasize our interconnected nature. In this sense, a life in dignity is about being able to

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).

develop and to participate as a full member of society. In quite some national and international efforts to assess the adequacy of income policies, and in particular reference budget research (See Storms et al. 2014), the concept of ‘adequate social participation’ is used as a benchmark for a decent living standard. Although social participation also remains elusive to some extent (See Levasseur et al. 2010), it is easier to translate into a concrete benchmark including individual needs as well as social cohesion.

Various attempts have been made (e.g. Doyal and Gough 1991; Nussbaum 2001) to define a normative framework of what is needed to *live a life in human dignity* or to *fully participate in society*. 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 (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; 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; 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 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 (e.g. 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; 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). 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. Nevertheless, 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. 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.

3 A Hypothetical Household Method to Simulate Out-of-Pocket Costs and Net Incomes

In this article, we use Belgian reference budgets for social participation to assess whether minimum incomes are sufficiently high to ensure people a life in dignity. Hence, we translate the rather vague concept of human dignity, to the concept of ‘adequate social participation’. We define ‘social participation’ as the ability of people to play the various social roles that one should be able to play as a member of a particular society (Storms 2012), whereby social roles should be interpreted as social expectations attached to positions (e.g. being a mother, being an employee, being a citizen,...) that people take in society (cf. Giddens 2001: 28–29; de Swaan 2007). These social positions should not be understood as a nearly fixed social status nor as a promotion of conformity with dominant patterns of behaviour. Rather, it stresses the importance of having the opportunity to comply with dominant social expectations, and having a choice to deviate from the norm if one wants to instead of due to a lack of resources (Goedemé et al. 2015a). Our definition of social participation is broader than many other definitions (See Levasseur et al. 2010) and combines, as we described above, personal development with social cohesion.

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 participation: 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 containing lists of essential goods and services (see “Appendix” Table 2 for a list of broad categories of included goods and services in the Belgium context) based on various information sources such as (inter)national guidelines, expert knowledge and focus group discussions with citizens from various socioeconomic backgrounds (Cf. Carrillo-Álvarez et al. 2019; Goedemé et al. 2015a, b). 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. In order to guarantee realistic prices, the pricing strategy, including

the choice of retailers, is checked in focus groups. Participants were asked to consider whether the stores are accessible and acceptable and whether it is possible to find similar items at the low prices we include. Everything was priced at the lowest prices, but allowing for some variation. For instance, food has been purchased at the lowest prices in the cheapest supermarket but the total budget has been multiplied by 10%, to ensure that people are able to buy their food in a supermarket within reach. 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).² 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). The last full update occurred in 2013.³

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 age (about 40 years old). 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, 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, 2018). In 2017, a single woman at active age who rents her dwelling at the private market needs 1272 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 23–42% depending on the age of the children, up to 2646 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 working.⁴ The reference budgets for single earner couple families exceed the budgets of work poor households with about 2–4%. 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.

² The following quality criteria have been used: (1) a good external (safe condition of walls, windows, electricity and roof) and internal (respecting safety and health, without chemical risks and moisture problems) physical condition of the building; (2) minimal comfort of the dwelling: presence of a toilet and bathroom, no leaks and no moisture; (3) occupancy of the dwelling: assessed by one bedroom for the adult(s) and 1 bedroom per 2 children (unless they are older than 12 years and of a different sex, in that case an extra bedroom is required). The median rent price is chosen to guarantee a certain freedom of choice taking into account the limitations of the private tenant market.

³ Recently a new full update has taken place for the year 2018. For the purpose of this study, we could not include data for the year 2018 yet, due to unfinished validation and missing data on income components.

⁴ 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).

To assess the adequacy of minimum incomes, reference budgets should be compared with the net disposable income of families. In Belgium, for those at work, minimum income protection consists of minimum wages supplemented with in-work benefits. For the jobless, minimum income schemes are part of a complex social security system.⁵ First, the classic social insurance system provides a substitution income for the unemployed depending on previous labour market situation, family situation and duration in unemployment (degressive in time). Secondly, for those without professional income, there is social assistance support as a ‘last resort’. Finally, there are supplementary benefits to bear social charges such as family allowances and sickness benefits.

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 EURO-MOD (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. 2018). In this paper we evaluate the adequacy of the following net minimum income schemes for the above-mentioned 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 imputed,⁶ 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 calculations.⁷

4 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.

4.1 Ensuring a Life in Dignity at all Stages of Life

In Fig. 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 needs to participate adequately in society). The hypothetical families all live in the Flemish region of Belgium, rent a dwelling on

⁵ For more information on the social security system in Belgium, see Federal Public Service Social Security (2017). “Social Security. Everything you always wanted to know (in Belgium)”, available at socialsecurity.belgium.be/en/publications/everything-you-have-always-wanted-know-about-social-security.

⁶ Gross minimum unemployment benefits are derived from the KOWESZ database.

⁷ 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>.

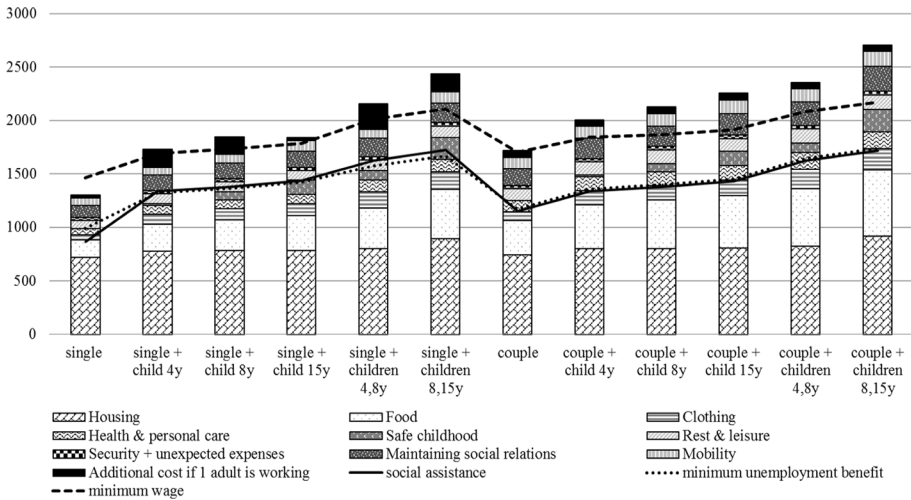


Fig. 1 The adequacy of minimum income schemes for families who rent their dwelling at the private tenant market, EUR/month, Belgium (Flanders), 2017. *Source:* Reference budgets 2017 (CEBUD), net minimum incomes are simulated using HHoT 2017 (Euromod H1.0+)

the private market and have one income from either social assistance, minimum 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. 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. Cantillon et al. 2017), arguing that a single minimum 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 month,⁸ meaning that the minimum wage would be inadequate for all family types. Moreover, note that we did only

⁸ We have calculated the cost of a small second hand car (10,000 km/year).

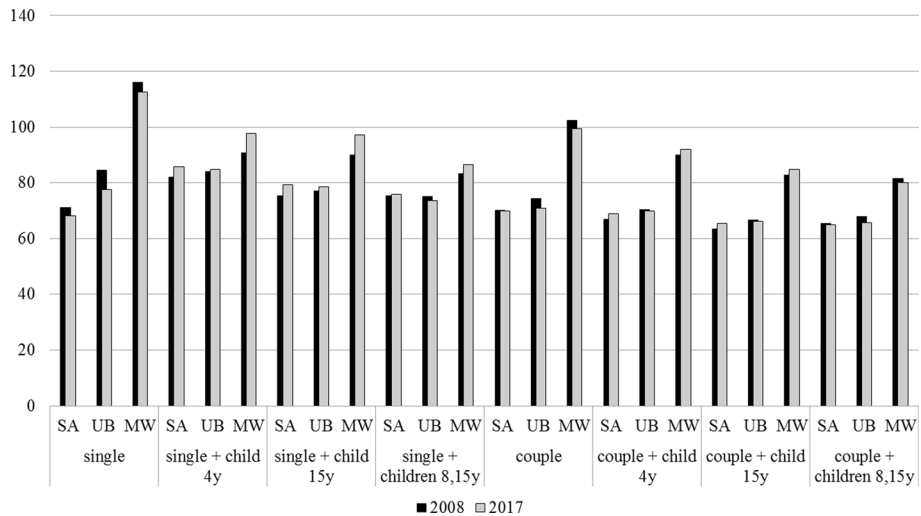


Fig. 2 The evolution of the adequacy of minimum income protection expressed as % of the reference budgets (private tenants), 2008–2017. *SA* social assistance, *UB* minimum unemployment benefit, *MW* minimum wage. *Source:* Reference budgets 2008 and 2017 (CEBUD), minimum incomes for 2008 and 2017 are simulated using HHoT (Euromod H1.0+)

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.

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).⁹ 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 evolutions.¹⁰ Some costs have shown a larger increase such as energy, health care and public transport, while

⁹ All items HICP (2015 = 100), annual average index, retrieved from Eurostat on September 4, 2018.

¹⁰ 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.

other costs, such as the cost of food, have slightly decreased or followed the average price index.

In Fig. 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 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 18–26%. The changes in the tax system (and in the child benefit system) had a stronger effect on singles and single parents (24–26%) than for couples without or with children (18–21%). 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 (13–15%), 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.

4.2 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

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 ^a
Social tariff electricity and gas	Energy distributors	Specific social security categories ^a
Discount economical devices	Network operator	Specific social security categories ^a
Reduction water bill	Drinking water distributors	Specific social security categories ^a
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 and phone	Telecommunication provider	Specific social security categories ^a
Exemption/reduction Province tax	Province	Social assistance/increased reimbursement

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

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

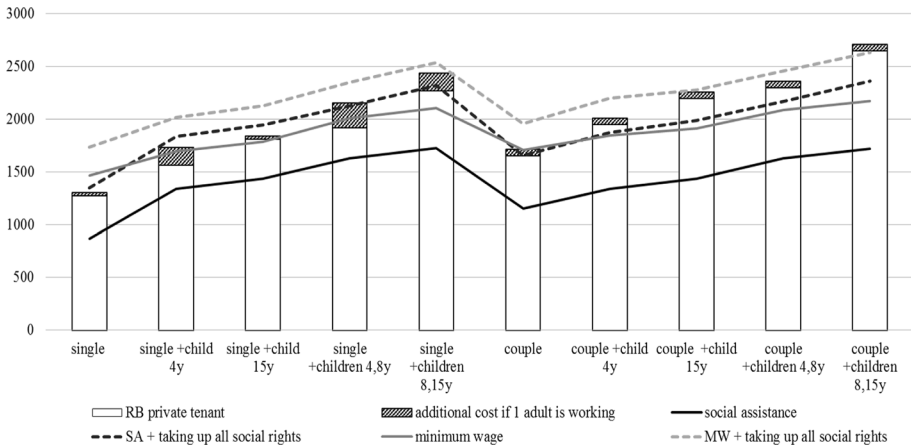


Fig. 3 The adequacy of minimum income schemes assessed by the reference budgets, including the impact of social rent and other cost-reducing benefits, EUR/month, 2017. ‘SA/MW + taking up all social rights’ illustrates the level of net income for households living on social assistance or one minimum wage, 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+)

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).

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 rent¹¹ 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 Fig. 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

¹¹ 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.

4 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).

4.3 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, Fig. 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 43–65% 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 20–30% points higher than an income from social assistance. This wedge decreases to only 10% 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 Fig. 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% 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.

5 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. 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 participate adequately in society. 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 socioeconomic 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-Quevedo 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 adequately participate in society 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-benefit system reflects rather the result of a policy compromise interacting with the prevailing socio-economic context than differences in household needs (Penne et al. 2018).

Finally, the RB indicator provides opportunities for maximising *substantive comparability* (capturing the same level of living standard in different social contexts), of a minimum income benchmark at EU level. Recently, two related EU funded projects (Goedemé et al. 2015a, b) 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. Due to a lack of data and the to some extent elusiveness of the concept of social participation, complete substantive comparability remains a distant objective. Nevertheless, both 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 it is 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.

6 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 adequate minimum incomes, 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, 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.

In this paper, 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 (compared to 2008) 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 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 it is shown 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 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 adequate social participation. In our case study, especially a reduction of the housing costs through social rent, has a positive effect on the adequacy of minimum incomes. On the other hand, cost-reducing benefits are often fragmented, insufficient to compensate for low cash benefit and subject to strict (income) conditions or 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 and the quality of the good or service (e.g. 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). 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.

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Appendix

See Table 2.

Table 2 Categories of essential goods and services included in the Belgian reference budgets

Housing	Rent, utility costs, taxes Median rent for quality dwelling (<i>Vlaamse woonsurvey</i>) Repair and maintenance
Food	Liquids Bread, grains, potatoes Fruit and vegetables Dairy Meat, fish, eggs Fats and residual Kitchen equipment Physical activity
Clothing	Coats Sweaters Shirts and tops Pants/dresses Sport clothes Underwear and socks Accessories Shoes Maintenance, repair and storage
Health care	Consult GP (every day diseases, minor traumata) Consult dentist Sun glasses and -lotion Family medicine chest (common medicines, plasters and 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 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)
Maintaining social relations	Visits of family and friends (+ extra dinnerware and chairs) 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

Table 2 (continued)

Safe childhood (only if there are children in the household)	Day trip Mobile phone (teenagers) 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)
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

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