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## **Including services in multidimensional poverty measurement for SDGs: modifications to the consensual approach**

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*Poor households disproportionately lack access to services, yet these are rarely considered in poverty measures. Service provision varies between and within countries, thus similar levels of household resources may translate to different living standards. Where universal provision of basic services is lacking, current approaches to poverty measurement will result in underestimates, raising comparability and identification issues. We propose a conceptual framework to incorporate service provision into multidimensional poverty measures based on a modification of the Consensual Approach. The proposed modification, would create improved context specific poverty measures and a more nuanced understanding of effective access to services.*

The first Sustainable Development Goal (SDGs, the global development targets for 2030) is to eradicate poverty in all its forms everywhere. The multidimensional nature of poverty is acknowledged in Target 1.2 which requires countries to 'reduce at least by half the proportion of men, women and children living in poverty in all its dimensions according to national definitions'. Currently, however, there is no internationally-agreed measure of multidimensional poverty and countries are encouraged to use their own definitions to report on progress towards target 1.2.

Public services, including those for education, health, water, transport and electricity, are widely considered as essential, and the basic components of a minimum standard of living (Anand and Ravallion, 1993; UN, 1995; World Bank 2003; Eurostat, 2013; Lucci et al., 2018). Service provision (both qualitatively and quantitatively) varies substantially both between and within countries (UN, 2015). Where services are universally provided and free at the point of delivery, these constitute a key resource for households. Where services are provided but paid for by users, access depends on household income. Where such services are not provided, households can be deprived regardless of their income. Thus, similar levels of household resources may translate into different standards of living in different contexts. It follows then that not accounting for such provision can lead to mis-identification, through the over- or under-estimation of poverty in contexts with differing levels of access to/provision of services; this raises several issues for comparability. At the same time, poor households disproportionately lack access to quality publicly-provided services (World Bank, 2003). To properly account for the impact of services on living standards, unmet service needs due to lack of or inadequate provision, as well as affordability, must be considered when trying to measure multidimensional poverty for the SDGs. The CA assesses household and individual abilities to afford a set of 'socially perceived necessities' (SPNs), items and activities which the general population believes that no-one should have to go or be without due to a lack of resources; the approach identifies normative social standards and provides a simple mechanism to develop a *national* poverty

measure which is democratic, multi-dimensional and reflective of the impact of services on living standards.

This paper is structured as follows. Section two discusses how poverty has been defined and measured in recent decades. Section three expands the argument that not reflecting the impact of public services may result in measurement issues, and examines how services have been reflected in monetary and multidimensional poverty measures. Section four introduces the Consensual Approach and explains how it could be adapted to reflect access to services. The final section offers some conclusions and recommendations.

## **2. Poverty: definition and measurement**

The World Summit for Social Development (WSSD) in 1995 resulted in the Copenhagen Declaration (UN, 1995), which was adopted by 117 countries. It defined 'absolute poverty' as 'a condition characterised by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income *but also on access to services.*' (UN, 1995, *emphasis added*). Thus, any measures of absolute poverty should identify those who cannot afford to meet their basic needs. The Copenhagen Declaration also included a definition of 'overall poverty', relative to the standards of the society in which individuals live, as:

'lack of income and productive resources to ensure sustainable livelihoods; hunger and malnutrition; ill health; limited or lack of access to education and other basic services; increased morbidity and mortality from illness; homelessness and inadequate housing; unsafe environments and social discrimination and exclusion. It is also characterised by lack of participation in decision making and in civil, social and cultural life. It occurs in all countries'.

From these definitions it follows that poverty is a multidimensional phenomenon that reflects a lack of, or limited access to, resources including both income *and* services. Indeed, households may draw on a range of resources to cover their needs. In defining 'overall' poverty the WSSD was informed by Townsend's (1979) concept of 'relative deprivation' which covered not just basic needs but also an inability to effectively participate in society.

Townsend (1979, p. 31) saw relative deprivation as stemming from a low command over resources and argued that 'poverty can be defined objectively and applied consistently *only* in terms of the concept of relative deprivation' (*emphasis added*). Thus, a person, can be described as being in poverty when their 'resources are so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary living patterns, customs and activities' (1979, p. 31). Unlike income-based definitions of poverty, Townsend's approach looks directly at people's living standards. But, unlike wider concepts such as well-being, Townsend maintains the link between poverty and resources, identifying only the lack of items and activities that are dependent on access to resources as deprivation. Townsend's approach has been highly influential both on academic research and policy. It has informed, for example, the European Union's definition of poverty, which stated: "The poor" are those "persons, families and groups of persons whose resources (material, cultural and social) are so limited as to exclude them from the minimum acceptable way of life in the Member State in which they live" (EEC, 1984).

It has been argued that linking poverty to resources creates too narrow a definition of poverty. For example, Hick (2012) maintained that the emphasis on affordability when identifying deprivation may ignore sources of constraint other than resources such as disability or discrimination. Similarly, the WSSD's definition of 'overall poverty' covers 'social discrimination and exclusion' among the many aspects of disadvantage identified as poverty. Indeed, deprivation may result from a range of factors other than insufficient resources, such as disability, discrimination, or violent and unsafe environments. For example, the education needs of a child may be unmet for several reasons: they may live in an area where education facilities are limited, or where education requires the payment of fees they cannot afford. They may be prevented from accessing education due to a lack of transport

or be excluded from education because of discrimination, disability - and so forth. However, while the outcome may be the same, i.e. education deprivation, the different causes may require different solutions. Where the issue is affordability, increasing household incomes, or providing free (at the point of use) provision would be a solution; where the issue is accessibility (e.g. in remote rural areas and islands) the priority may be expanding local provision (e.g. government run boarding schools) or providing transport (e.g. school buses, boats). Where the issue is discrimination, then policies to change social perceptions and norms would be recommended.

Our argument is that it is important to conceptually distinguish poverty from other factors that negatively impact an individual's well-being and standard of living. Labelling all forms of disadvantage as poverty may obfuscate policy goals and obscure policy solutions (Levitas, 1999). Keeping low resources at the core of the definition of poverty is essential to distinguish it from wider concepts of well/ill-being and disadvantage, and to identify appropriate policy solutions. In this paper, within the wider concept of 'overall poverty' as defined by the WSSD (which includes non-resource factors of exclusion), we will use poverty to refer to the notion of deprivation poverty – that is relative deprivation as a result of low command over resources – and 'social exclusion' to refer to non-resource factors.

### **3. The importance of services as a non-household resource**

The WSSD definition of absolute poverty highlighted that poverty 'depends not only on income *but also on access to services*'. Services are acknowledged as being essential determinants of a decent standard of living, and a key factor for broader development. The 1948 Universal Declaration of Human Rights grants every individual the right to 'a standard of living adequate for the health and well-being of himself and of his family, including (...) medical care' (Art 25), and to education (Art 26). Nearly 70 years later, in 2016, the SDGs set out the importance of access to health care and education, and also access to basic household services such as water, electricity and sanitation (e.g. SDG 1.4.1 population living in households with basic access to services). Such services were key to the development of high-income countries and are similarly so for middle and low income countries (Anand and Ravallion, 1993; UNDP, 2010). Services such as improved water and sanitation, and access to healthcare result in benefits (positive externalities) across society e.g. by containing the spread of contagious diseases, reducing mortality rates, etc. Services aimed at particular groups, such as children, benefit not just the individual but wider communities e.g. a family benefits from their child's ability to read, society at large from an educated and healthy workforce - and so on.

Where services are widely available and provided for free (or subsidised), they are a key resource which households use to meet their needs; this in turn means they require fewer resources (in the form of income) to attain a decent standard of living (Paulus et al., 2010; UN, 2011). In the UK and Scandinavian countries, for example, universal services are central to welfare provision, meeting needs at different life stages (notably, for education or health) for all. While poorer households may still experience greater use constraints, the differences are relatively low. By strong contrast, in contexts with more marketised welfare provision (e.g. the USA), these universal public services provide high levels of protection for the poorest households (Bramley & Besemer, 2018).

Furthermore, services are often hard to replace with individual-level resources. This is particularly the case for education and health. For some services, such as public transport, alternatives may exist – owning a vehicle, taxis, etc – but this can create other problems (e.g. greater pollution), and often exclude those on low incomes. Water, sanitation, electricity and waste management can (to some degree) be replaced by household provision in some (rural) areas e.g. water tanks, septic toilets, generators, etc. However, these may come at additional costs for households, or result in lower standards, particularly when resources are shared (Lucci et al., 2018). Where such services are not provided (for example, in informal settlements or slums), households can be deprived regardless of their income.

Overall, poor households disproportionately lack access to publicly provided services. Public expenditure on services tends to benefit the non-poor relative to the poor, through subsidised provision (World Bank, 2003; UN, 2015). The expansion of services in developing countries may find difficulties in guaranteeing supplies and personnel particularly in rural areas, with monitoring

and maintaining services, as well as with physical access (OECD, 2008). In some cases, infrastructure may be in place but be unreliable; evidence from a review study using data from 34 African countries found that over half of respondents were not satisfied with the quality or reliability of government-provided water and sanitation services (Asunka, 2013).

Barriers to access may exist even when services are free at the point of use. A recent review of access to free healthcare services in sub-Saharan Africa by Robert et al. (2017) highlights that even when services are nominally free, access can be costly, for example, if transport is limited or work or caring obligations prevent service users from travelling long distances. Service use is also influenced by the perceived quality of services - e.g. whether qualified personnel deliver the service, whether care and drugs are included, or if there is a shortage of essential materials. Such factors may affect demand for services, i.e. people not making use of services perceived to be poor quality or unsafe (World Bank, 2003).

Excluding services from poverty measures may result in the mis-identification of the poor and lead to biased conclusions when comparing the extent and nature of poverty between countries or regions (Paulus et al. 2010). Let us consider two regions with similar distributions and levels of household income. Region A has accessible, free at the point of use healthcare, and region B only has private healthcare provision, and only in some areas. If we considered only household income, we might conclude that each region has the same rates of poverty. However, households in region A have access to health resources not available to households in region B, and households in region B are likely to have a lower standard of living if they can only purchase healthcare or have to go without. Excluding basic welfare service provision would over-state poverty in region A, if comparing it to region B, since an incomplete measure of poverty fails to capture, on a comparable basis, core determinants of household living standards.

### 3.1 Services in monetary poverty measures: measuring income

Following the Canberra Group<sup>1</sup> recommendations (2001 and 2011) surveys around the globe have since expanded the definition of income to include monetary estimates of employment in kind benefits (such as a company car), transfers, etc. alongside cash and earned income when calculating household income [see appendix 1 for a summary of income components]. Three sets of items are included in the definition of income but not in its operationalisation (UN, 2011): social transfers in kind, unpaid domestic services, and the value of services from household consumer durables<sup>2</sup>. Determining the value and impact of such resources presents practical difficulties, not least in determining what should be included. Some welfare and public services have a direct impact on households e.g. meeting critical health needs, in other cases the individual benefit of services on households is difficult to determine (e.g. roads, the justice system). Even when only direct benefits are considered, challenges remain in assessing the value of services provided outside the market, and allocating the benefits to households particularly where such benefits may extend beyond the present e.g. education (OECD, 2008). Similarly, unpaid household services are difficult to estimate and measure even when the services can be purchased in the market (e.g. child care) or when substitutes for goods could be bought (e.g. home-grown produce). Since these resources are distributed through different systems, households will have access to different levels of resources in different areas and at different times (e.g. harvest, winter). Thus, the Canberra Group (UN, 2011) acknowledges the contribution of these items to households incomes, but recommends their exclusion from income measures until further research is conducted and agreement reached.

Income-based measures rely on complete and accurate income information being collected. This is problematic in countries where income in kind constitutes a substantial part of the economy, not least when many imputations and assumptions required (Townsend, 1979; Nolan and Whelan, 2011;

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<sup>1</sup> An international Expert Group on Household Income Statistics established in 1996 'to address the common conceptual, definitional and practical problems that national statistical offices faced in the area of household income distribution statistics.' (UN, 2011, p. iii).

<sup>2</sup> Social transfers in kind include welfare services (education, health, social welfare), basic services (water, electricity, sanitation and transport) and collective services such as infrastructure, security and public administration (UN, 2011). Unpaid domestic services refer to care, cleaning, cooking and other services that are provided in the sphere of the households without an economic acknowledgement, while the value of consumer durables would include, for instance, the benefits of having a refrigerator.

Gordon and Nandy, 2012). The limitations of income-based measures, such as the 'dollar a day' or relative income thresholds to reflect poverty are widely recognised (Townsend, 1979; Nolan and Whelan, 2007; Reddy and Pogge, 2008; Alkire and Foster, 2011; Nolan and Whelan, 2011; Gordon and Nandy, 2012). The 'dollar a day' - arguably the most widely used income poverty measure - has been criticised as being arbitrary and inadequate in that it does not reflect what is actually needed to cover basic needs (Vandemoortele, 2002; Reddy and Pogge, 2008; Jerven, 2013; Deeming and Gubhaju, 2014), as well as for providing an inconsistent measure across countries where living standards can vary given similar levels of income (Gordon and Nandy, 2012). The exclusion of social transfers and unpaid household services from the measure is just one way it can misrepresent living standards.

While in no way underplaying the relevance, value and contribution of unpaid household services to household resources, the remainder of this paper focuses on non-household services which provide direct benefits to households, such as public education and health, and basic services, such as transport, sanitation, water and electricity. These services are acknowledged as having major impacts on human development (World Bank, 2003, p. 1), and their contribution (and people's lack of access to them) needs reflecting in any socially-realistic measure of poverty.

### 3.2 Services and direct multidimensional poverty measures

One proposed solution to the limitations of income measures has been the use of direct poverty measures (Ringen 1988). These focus on outcomes attained by individuals and households and can cover both purchases from household income (e.g. food) and services (e.g. access to water or education). Direct multidimensional poverty measures, such as deprivation indices, aim to overcome the limitations of income by directly reflecting the experiences of the poor as well as the multidimensional nature of poverty (Ringen, 1988; Nolan and Whelan, 2011; Mack, 2017). A vast methodological literature has assessed multidimensional poverty and deprivation measures (e.g. Halleröd, 1994; Gordon, 2006; Nolan and Whelan, 2007, 2011; Alkire and Foster, 2011; Guio et al., 2017; Pasha, 2017; Najera, 2018) and it is not the aim of this paper to delve into detailed methodological discussions. The discussion is ongoing, and at present there is no agreement as to the best way to measure multidimensional poverty (World Bank, 2017).

The World Bank (2017) Commission on Global Poverty - an international group of poverty experts - agreed seven principles for the design of (multidimensional) poverty indicators to monitor progress towards SDG1. Principle 1 calls for measures to be truly global, suitable and applicable across low, middle and high-income countries (Nandy and Main, 2015), but also to allow for some degree of international comparison. Principle 2 calls for measures which identify the essence of the problem, be transparent and meaningful to users. To this end, measures should be based on an agreed definition of poverty, so that there is clarity in what is being measured, distinguishing poverty from related phenomena such as ill-being. Definitions should guide the selection of indicators (Ravallion, 2010). This leads to Principle 3, that there should be clear justification as to why components have been selected, including demonstrating their relevance to the contexts in which they are applied (Gordon et al., 2003); components should have statistical validity and have a clear normative interpretation. Indicators should also reflect the experiences of the poor in the societies in which they live (Nussbaum, 1999; Gordon et al., 2003; Mack, 2017), to 'give voice to the concerns of the world's citizens' (World Bank, 2017, p. 156). Principle 4 requires results be reliable, that is, consistent across samples, and be robust and statistically validated. An unreliable index will provide unstable estimates, and result in a misclassification of the poor (Najera, 2018). Principle 5 recommends results be cross-checked against existing country level information; Principle 6 suggests that where indicators are combined, that they be balanced across different dimensions; and Principle 7: where possible indicators should make use of existing information. With child poverty in mind - and in accordance to the reporting requirements for SDG Target 1.2.2 - we add Principle 8: reflect varying age-related standards (Delamonica, 2014). Principles 1 to 4 and 6 lay the foundations for a scientifically and socially valid index<sup>3</sup>.

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<sup>3</sup> Principles 5 and 7 address the practicalities of the creation of an index and are beyond the scope of this article.

Two of the most widely used methods for developing multidimensional poverty indices are the Multidimensional Poverty Index (MPI, Alkire and Foster, 2011) and the Bristol Approach (Gordon et al. 2003), both which include indicators which reflect household access to basic services. The MPI is a measure of acute poverty used by the UNDP to measure poverty in low and middle income states. It captures severe deprivation with regards education, health and living standards - including access to water, sanitation and electricity (Alkire and Foster, 2011). The health domain is reflected by children's nutritional status and mortality. The education domain is captured through information on educational attainment of household members and school attendance among children in the household. Thus, household access to basic services is measured at the time of the survey, while health and education variables reflect outcomes over time. For instance, the MPI educational attainment indicator reflects years of schooling of all household members (aged 10 or over). Given that most people complete their education during childhood, the indicator reflects a combination of the national education system and household conditions over different periods e.g. 10, 20 or 30 years ago for the oldest adults. In turn, the child mortality indicator refers to deaths of any children in the household in the past 5 years. When merging indicators which reflect household and national conditions at different points in time it becomes hard to identify the reference period for the poverty measure, and thus to identify what precisely is being captured, violating Principles 2 and 4. Overall, there are concerns about its reliability. For example, using Monte Carlo simulations with data from Latin America, Najera (2018) shows that the MPI (Alkire and Foster, 2011) misses at least 15% of the poor.

Furthermore, the MPI conflates indicators of poverty with its causes and consequences. There is a strong association between educational attainment and poverty, with children in poverty having lower educational outcomes and those with low educational outcomes being at greater risk of poverty as adults (OECD, 2008). While improvements in educational attainment may be positive for countries and households, it may not automatically translate in improved living conditions. Educational and health *outcomes* (as opposed to provision) remain useful indicators of development but there is value in distinguishing these from poverty per se. A key limitation of the MPI is thus, the lack of clarity as to what is being measured (Ravallion, 2010).

The Bristol Approach (Gordon et al., 2003), used by UNICEF to monitor the situation of children around the world, uses a human rights framework and the definition of absolute poverty agreed at the WSSD, to develop indicators of severe deprivation of basic human needs for shelter, sanitation, water, health, food, information and education. The indicators used reflect current outcomes, e.g. current water, sanitation facilities, living conditions in the household, untreated diseases and nutritional status. It shares some of the limitations of the MPI. First, both are geared towards the measurement of absolute poverty. For example, only school aged children who have never attended school are considered as being (severely) education deprived. As a result, neither the Bristol Approach nor the MPI are applicable to high income countries, where universal education was achieved decades ago, thus hampering the global comparability; it also implies that different standards are appropriate for low, middle and high-income countries, violating Principle 1. Second, the use of extreme thresholds -while useful to capture the most severe forms of deprivation- is at odds with Principle 3, that states that indicators should reflect social norms. While, say, educational exclusion is a useful indicator to capture the most severe forms of deprivation, children just above this threshold (say, who receive one or two years of schooling) may still be excluded from social norms and standards (e.g. five years of primary education, etc.). These limitations mean both measures are sub-optimal for monitoring progress towards the reduction of multidimensional poverty (SDG1.2).

The Consensual Approach has the potential to overcome all of these limitations. It allows for the identification of socially relevant thresholds, removing the need for arbitrary decisions. Furthermore, it can be adapted to tackle comparability issues by the inclusion of a service-related component. We propose an updated model of the CA which identifies three factors which prevent people from fulfilling their basic needs: insufficient household resources, limited access to services, and social exclusion due to forces like prejudice and discrimination. In doing so, it enables the method to reflect the multiplicity of factors which may impact living standards and provides important information for governments and advocacy groups on determining priorities for action.

#### **4. Extending the Consensual Approach to reflect services**

The Consensual Approach builds on Townsend's notion of relative deprivation (Mack and Lansley, 1985), in particular, by incorporating the views of the public in the definition and measurement of poverty. The approach has two key elements: first, the identification of "socially perceived necessities" (SPNs), items and activities which a majority of the population believes no-one should have to go or be without, as opposed to those things which are nice to have but are not considered necessary; and second, the generation of a deprivation index reflecting an enforced lack of socially perceived necessities. Since its development in Britain over 35 years ago, the approach has been successfully implemented in high, low and middle-income countries, in contexts as diverse as Japan, Sweden, Benin, Uganda and South Africa (e.g. Depio et al., 2018; Abe and Pantazis, 2013; Halleröd, 1994, Nandy and Pomati, 2015; Noble et al., 2004). In 2017 the EU adopted the approach to measure material deprivation among children (Guio et al., 2017), reflecting its international acceptance. This section provides an overview of the approach and explains how it might be adapted to reflect access to services.

##### **4.1 The Consensual Approach**

Mack and Lansley (1985) argued that a deprivation index should reflect the public's view on contemporary needs and not rely solely on expert opinion. A cornerstone of the approach is the democratic identification of socially perceived necessities. These can include (separate) items/activities for adults and children, reflecting things like adequate food and clothing, social participation and social obligations (e.g. giving gifts on important occasions). The identification of SPNs takes place in two stages. In the first stage focus groups are conducted with a range of population groups to identify a list of items reflecting possible social norms. The focus groups allow for a nuanced discussion of not only necessities but also appropriate thresholds for covering these necessities. For example, in the UK the groups identified as necessary 'two pairs of all-weather shoes', agreeing on a threshold (two pairs) as well as a necessity (shoes) (PSE, 2012) Furthermore, it is also possible to reflect 'normative satisficers', that is, socially appropriate ways to cover the identified needs, given the frequent rain in the UK respondents thought that everyone should be able to have 'all-weather shoes'. The first stage allows for the identification of items that are relevant and appropriate, with relevant thresholds and satisficers for each item. While there is a core of items included in these questionnaires which are common to all countries (e.g. three meals a day for children), others are country specific (e.g. in Japan, the index includes 'attending wedding and funerals'). Thresholds and satisficers may vary from country to country and be adapted to reflect local contexts. The second stage involves a nationally representative survey, which asks respondents to identify those items/activities they consider to be necessities; that is for each item to distinguish those which are 'essential' from those which may be 'desirable' but are not 'necessary'. Items/activities seen as a necessity by a majority of the population are classed as socially perceived necessities (SPN).

From data collected in countries where the approach has been used, we can identify key commonalities and differences in items identified as SPNs. Table 1 shows the percentage of respondents who identify a series of children's items as necessities across four countries - UK, Japan, Tonga and Uganda. For some items -e.g. three meals a day- there is strong agreement across all countries that sufficient food for children is a necessity. For other item there are wider variations e.g. items such as some new not second-hand clothes, or a suitable space to do homework. In addition, some of the items seen as necessities by a majority are specific to that country (e.g. in Uganda 'a blanket' is classed as essential by 85%). The SPNs identified for each country are, therefore, relevant to that country, while having points of commonality between countries to enable international comparison.

The survey also asks which items/activities respondents have and, for those they lack, whether it is because they do not want them or because they cannot afford them. Those lacking SPNs because they cannot afford them are said to have an 'enforced lack' and can thus be considered deprived of an SPN - something society has agreed no-one should lack. The SPNs of which a person is deprived are tested for validity and additivity against known measures of resources - such as household income, asset-based wealth index or a measure of financial strain - as well as for inter-item reliability (Guio et al., 2017). Items shown to be reliable, valid and additive are then used to create a final deprivation index. Finally, the poverty threshold is identified by calculating the point in the income (or asset



score distribution) distribution where deprivation increases sharply, echoing Townsend (1979) (for further details see Gordon, 2006, 2017). Hence, the approach enables the development of a *nationally-defined* measure of poverty, reflecting the distinct needs of children and adults.

Table 1. Percentage thinking child items necessary/essential

		UK	Tonga	Japan	Uganda
Food	Three meals a day	93	98	89	96
	Meat, fish or vegetarian equivalent daily	90	98		
	Fresh fruit and vegetables daily	96	96	79	
Clothes and shoes	Some new (not second-hand clothes)	65	97	23	69
	Two sets of clothing				94
	Properly fitting shoes <sup>(1)</sup>	93	98	42	78
Furniture	Beds and bedding <sup>(2)</sup>	67	97		81
	Suitable space to do homework <sup>(3)</sup>	89	97		55
Education	School Uniform and equipment		98		88
	Books suitable for their age	91	94	61	63

Notes: (1) Shoes: UK, Japan, new properly fitting shoes. UG Two pairs of properly fitting shoes including all weather shoes. (2) Beds UK Beds and bedding for everyone, Eurobarometer, 2007; Tonga, for all children aged 10 or older; Uganda own blanket; (3) Homework UG Desk and chair for homework.

Sources: Japan (Abe and Pantazis, 2014); Uganda (Depio et al., 2018, UNHS 2016/17; books EPRC Survey 2017); UK PSE UK 2012 (Main and Bradshaw 2014), Tonga Household Income and Expenditure Survey 2015/16

One concern that critics of studies which use subjective assessments of need raise is with the issue of Adaptive Preferences. Adaptive preferences theory suggests that people adjust their preferences about what is an acceptable standard of living based on their understanding of available possibilities (Nussbaum, 1999). Thus, people in poverty may be less likely to identify as necessary those items which they cannot afford; if true, this has the potential of introducing a downwards bias, in that the poor will consider different sets of items to be necessities to the non-poor. In developing countries, with high rates of poverty, this could limit (and lower) what the general public define to be an acceptable standard of living. However, studies which have used the Consensual Approach in poor countries find no evidence that the poor are less likely to identify items as necessary than the non-poor (Mack, 2017). For instance, Nandy and Pomati (2015), using data from Benin, found that the poor “were marginally *more* likely than those not experiencing any deprivations (i.e. not poor) to consider all items on the deprivation index essential” (p. 710). They concluded that overall the poor have very similar views as to what should constitute a minimally acceptable standard of living to the rest of society. Their findings suggest that widespread deprivation of an item or activity is not a precondition for it being considered necessary. Similarly, a recent report published by UNICEF Uganda (2018) shows that items were identified as necessities despite only being accessible to a minority. For instance, nine in ten Ugandans considered a blanket as necessity for children, but six in ten children could not afford one. Similarly, six in ten respondents viewed a desk and chair for homework as a necessity, despite seven in ten children being deprived. This is important to address, as otherwise, the CA method could be seen as mechanism for locking in or justifying lower minimum standards for the poorest countries.

The CA therefore enables countries to develop a poverty measure which reflects the principles set out by the World Bank expert group (WB, 2017): the indicators and measures can be statistically validated across a range of countries (Principle 4), the approach can be applied across low, middle and high income countries (Principle 1), and can create both adult and child specific measures of deprivation (Principle 8). The consensual component addresses the normative acceptability of the measures (Principle 3). In keeping resource constraints at the centre of definitions and measures of poverty it is possible to distinguish ‘poverty’ from wider concepts of ill-being, exclusion and disadvantage (Principle 2).

#### 4.2 Adapting the CA to account for non- or inadequate provision of services

Linking poverty to a lack of resources, in line with Townsend's definitions, is central to the Consensual Approach, both for identifying SPNs and to the concept of *enforced* lack. However, this still leaves the question of how resources are defined and how this might influence which items are included in a minimum standard. Townsend had a broad concept of resources which included services as well as household resources.<sup>4</sup> However, in practice, the deprivation indices Townsend used to measure poverty – as well as surveys following Townsend's tradition – focused exclusively on items dependent on access to household resources, primarily household income. We now show how the Consensual Approach might be used to reflect the contribution of services to household resources and standard of living.

The CA was originally developed in the UK<sup>5</sup>, where education and healthcare, as well as other basic services like electricity, water and sanitation were (almost) universally provided<sup>6</sup>. Questions about access to, and the adequacy of, such services were therefore not originally included in the identification of SPNs, though such services are clearly a core part of any minimum standard.<sup>7</sup> In addition, in implementing the concept of an 'enforced lack', the question aimed at the identification of necessities was phrased in terms of items that all adults should not only 'not have to go without' but also 'should be able to afford'. This limited and linked the concept of necessities to items/ activities dependent on household resources.

As use of the Consensual Approach has expanded to countries where universal service provision may not be the norm, the core questions about what a necessity is have expanded, to include questions about access to services as well as affordability. The inclusion of services – depending on public and private (non-household) resources – has resulted in a wider understanding of necessities in terms of items that are essential. For example, in South Africa respondents were asked about whether 'mains electricity in the house' was essential (Wright, 2012). Similar questions have been introduced in other countries (e.g. Noble et al., 2004, Nandy and Pomati, 2015). In this way the concept of necessities has expanded to include those stemming from a broader understanding of resources, to include state/communal/local resources, as well as household resources. At the same time, where essential services have to be paid for, these too are included; in Uganda respondents are asked about items such as being able to afford 'a visit to a health facility when ill, and all the medication prescribed to treat the illness' (Depio et al., 2018).

In addition, the CA approach by allowing for different thresholds and satisficers for each item (see section 4.1), allows for a more nuance of levels of provision. For instance, Lucci et al., (2018) building on evidence collected in slums in India convincingly argue for the need to alter poverty thresholds to reflect access to water and sanitation in urban areas, where facilities are typically shared by many families. Measures which only capture whether households have access to a service like a sanitation, do not reflect to what extent those facilities are usable or reliable (e.g. interrupted and intermittent supplies of water or electricity). Factors related to accessibility may impair household's use of services, which may not be apparent to survey enumerators and researchers. To truly reflect the experiences of the poor it is necessary to reflect their own perceptions of accessibility and sufficiency. The Consensual Approach, by asking respondents about access to and/or standards of services, both captures the experiences of the poor and introduces a democratic element into the definition as to what constitutes a minimally-acceptable standard of living.

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<sup>4</sup> In his seminal work *Poverty in the United Kingdom* Townsend (1979) identifies the following categories of resources: (a) cash income, (b) capital assets, (c) employment benefits in kind; (d) public services in kind and subsidies, and (e) private income in kind.

<sup>5</sup> Breadline Britain, 1983, was the first survey followed by Breadline Britain, 1990; PSE Britain, 1999; PSE NI, 2002/3; PSE UK, 2012. Details available at: [www.poverty.ac.uk/pse-research/questionnaires](http://www.poverty.ac.uk/pse-research/questionnaires).

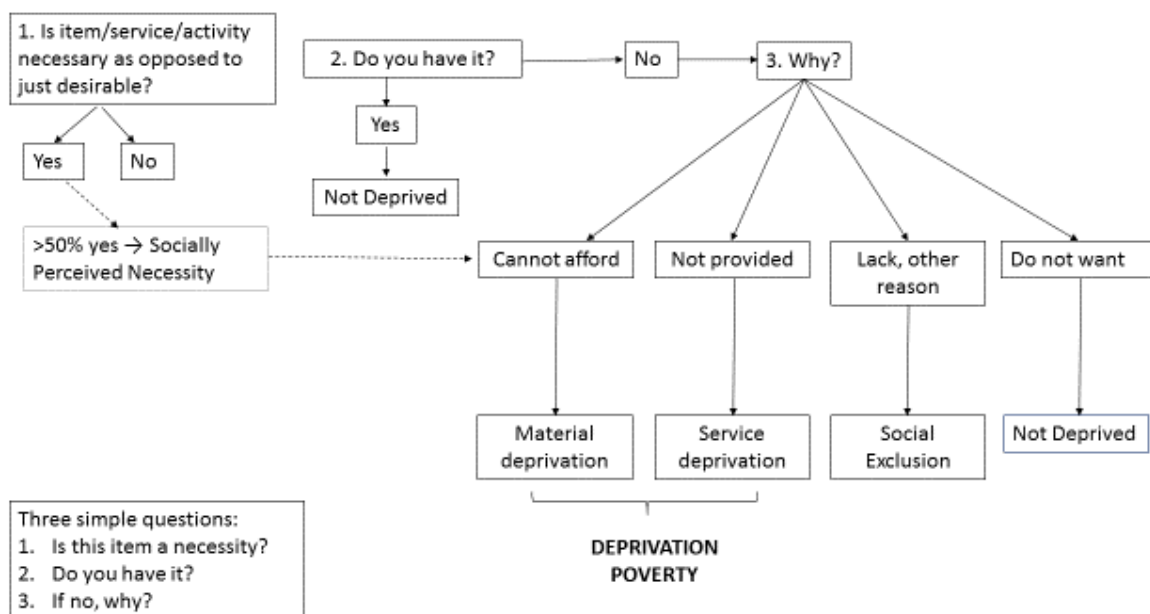
<sup>6</sup> There are some limitations. Some collectives are prevented from accessing those services for free e.g. those without a fixed address, homeless people, Travellers, and non-EU migrants and difficulties in accessing services for some of those living in remote areas.

<sup>7</sup> Breadline Britain 1990, PSE Britain 1999 and PSE UK 2012 surveys have included separate sections on services (outside the necessities module).

Despite this expansion, the concept of ‘enforced lack’ remains tied to affordability. Individuals and households were considered as deprived if they could not *afford* an item – that is they had a lack of command over household resources. However, in the case of services, barriers other than cost can prevent households from access, while public services free (or subsidised) at the point of delivery are in effect a subsidy in kind. Households who cannot access services due to limited or inadequate provision, as well as cost, have effectively lower resources than those who do have access to such services. By excluding services, the original method does not capture this difference, weakening comparability.

We believe that, with some slight modifications, the CA can be used to show when a reported ‘enforced lack’ reflects deprivations stemming from a lack of publicly-provided resources as well as from insufficient household resources. That is, material and social deprivations stemming from insufficient or inadequate service provision would be included as well as those resulting from inadequate household income. The process is illustrated in Figure 1. In what we will call the traditional CA method, respondents are asked of each item/activity: Is this item/activity a necessity? Do you have it? If not, why not? Respondents are then given two options: ‘cannot afford it’ or ‘do not want it’. The modified CA would retain the same initial questions as to whether the item is necessary and whether the respondents have it but, for relevant items (i.e. those relating to services), add an additional answer category: ‘it is not provided or inadequate’. What constitutes ‘adequate provision’ of services is arguably broad, but it could cover elements such as frequency, reliability, capacity, accessibility and safety. Question wordings would need to reflect local understanding of appropriateness/sufficiency for each service (as is the case for material deprivation items). This challenge, however, is, in our view, secondary to the benefit of reduced comparability issues and enhanced understanding of poverty through the identification of unmet service needs.

Figure 1 Conceptual framework for the modified Consensual Approach



Source: Authors’ elaboration building on Mack (2017). Note: For economy of language in the figure, the category “Not Provided” is used to reflect no or inadequate provision.

Including options which distinguish between affordability and insufficient or inadequate provision would generate an indicator of service deprivation, which could be part of a measure of deprivation poverty. Those reporting they lack a service SPN because of a lack of provision or inadequacy would be seen as having an ‘enforced lack’, as well as those who reported not being able to afford it. These service-based SPNs would be tested against measures of resources for validity, reliability and additivity before inclusion in a deprivation index, alongside material and social SPNs and this

broader deprivation index would be used to assess multidimensional poverty, along with information on monetary poverty. This thereby incorporates public as well as household resources into the concept of deprivation poverty.

The model could be expanded further, to explore other (non-resource based) reasons why households lack an item/activity/service by including an additional answer category: 'lack for other reason'. Those lacking an activity/services for 'other reasons' could be asked follow up questions as to the reason. This could cover factors such as discrimination and disability. These non-resource related constraints need not be included directly in a poverty count, but could be reported separately, for example, as part of a measure of wider social exclusion.

Cultural perceptions of acceptability - e.g. with regards to gender and disability- can play a role in access to healthcare and similar barriers have been identified with regards to access to education (World Bank, 2003). The UNGEI (2015) report on access to education for girls highlights the impact of structural barriers and discriminatory social norms including early marriage and motherhood, gender violence, traditional seclusion practices, sanitation in schools and male preference. Considering affordability alone would not reflect key factors that can prevent people from accessing services and thus being socially excluded. The inclusion of an 'other reason' category would be particularly useful when examining men and women and children separately (as required by SDG 1.2) enabling gender and age-related discriminations to be explored.

## **5 Discussion**

We have argued here for the importance of considering the role of public services in measures of multidimensional poverty. Ignoring the contribution of services misrepresents the resources available to households and can lead to a misidentification of the poor; this in turn may cause comparability issues when comparing societies where services are or are not available. Slight modifications of the Consensual Approach, to reflect the contribution of services, can provide a means to develop indicators to assess progress towards the international SDGs.

Measures of poverty generated by the CA result from a consensual, democratic and dynamic process. The approach provides a solution to key challenges in the definition of multidimensional poverty: the identification of necessities, the setting thresholds for normative variables, as well as context appropriate means to attain those thresholds. Some items are consistently identified as necessities. These include both basic needs, such as food and clothing, but also items relating to social participation. Thus, it is possible to test like for like measures over time and across countries. It could also enable comparisons of overall poverty levels between countries of differing income levels by using items common between countries as anchoring points (see Guio et al., 2017), and to make similar comparisons over time.

Keeping resource constraint at the centre of poverty measures is essential if we are to distinguish 'poverty' from wider and related concepts, like ill-being, exclusion and disadvantage. Basing deprivation indices solely on items and activities accessible through household resources however, is limiting. Including a service component recognises that meeting needs for water, healthcare and schooling rely as much on local provision as on a household's available resources. It also improves comparability between countries, where public services are provided, and those where they are not. This is of particular importance to developing countries, but is also of increasing importance in developed countries, where once well-funded and freely-provided public services are systematically being withdrawn or replaced by private providers. The inclusion of a service element in the CA would enable such changes to be tracked. It is in reflecting these situations, of how lives are actually lived, that socially-realistic and valid measures of poverty provide value.

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## Appendix 1 Income components in the conceptual and operational definitions

The Canberra Group defined income as “all receipts whether monetary or in kind (goods and services) that are received by the household or by individual members” (...) that “are available for current consumption and do not reduce the net worth of the household” (...) “Household income may be defined to cover: (i) income from employment (both paid and self-employment); (ii) property income; (iii) income from the production of household services for own consumption; (iv) current transfers received and (v) social transfers in kind.” (UN, 2011, p. 9). Three of these components - unpaid domestic services, services from household consumer durables and social transfers in kind - were excluded from the operational definition of income as can be seen in the table below.

Table A1. Income components in the conceptual and operational definitions (Canberra Group, 2011)

	Conceptual definition	Operational definition
<b>1</b>	<b>Income from employment</b>	
a	Employee income	✓
	Wages and salaries	✓
	Cash bonuses and gratuities	✓
	Commissions and tips	✓
	Directors' fees	✓
	Profit-sharing bonuses and other forms of profit-related pay	✓
	Shares offered as part of employee remuneration	✓
	Free or subsidised goods and services from an employer	✓
	Severance and termination pay	✓
	Employers' social insurance contributions	✓
b	Income from self-employment	✓
	Profit/loss from unincorporated enterprise	✓
	Goods and services produced for barter, less cost of inputs	✓
	Goods produced for own consumption, less cost of inputs	✓
<b>2</b>	<b>Property income</b>	
a	Income from financial assets, net of expenses	✓
b	Income from non-financial assets, net of expenses	✓
c	Royalties	✓
<b>3</b>	<b>Income from household production of services for own consumption</b>	
a	Net value of owner-occupied housing services	✓
b	Value of unpaid domestic services	—
c	Value of services from household consumer durables	—
<b>4</b>	<b>Current transfers received</b>	
a	Social security pensions / schemes	✓
b	Pensions and other insurance benefits	✓
c	Social assistance benefits (excluding social transfers in kind; see 10)	✓
d	Current transfers from non-profit institutions	✓
e	Current transfers from other households	✓
<b>5</b>	<b>Income from production (sum of 1 and 3)</b>	
<b>6</b>	<b>Primary income (sum of 2 and 5)</b>	
<b>7</b>	<b>Total income (sum of 4 and 6)</b>	
<b>8</b>	<b>Current transfers paid</b>	
a	Direct taxes (net of refunds)	✓
b	Compulsory fees and fines	✓
c	Current inter-household transfers paid	✓
d	Employee and employers' social insurance contributions	✓
e	Current transfers to non-profit institutions	✓
<b>9</b>	<b>Disposable income (7 less 8)</b>	
<b>10</b>	<b>Social transfers in kind (STIK) received</b>	—
<b>11</b>	<b>Adjusted disposable income (9 plus 10)</b>	