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

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### **Abstract**

Poor households disproportionately lack access to basic public services, yet this rarely considered in poverty measures. Service provision can vary significantly between and within countries, and so similar levels of household resources may translate to very different living standards. Where universal provision of basic services is lacking, current approaches to poverty measurement may 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 to the Consensual Approach. The modification would create improved context specific poverty measures, enabling a more nuanced understanding about effective access to services.

Key Words: services, multidimensional poverty, SDGs, basic needs deprivation, measurement

Word count: 8839

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### Abstract

Poor households disproportionately lack access to services, yet this is rarely considered in poverty measures. Service provision can vary significantly between and within countries, and so similar levels of household resources may translate to very different living standards. Where universal provision of basic services is lacking, current approaches to poverty measurement may 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 to the Consensual Approach. The modification would create improved context specific poverty measures, enabling a more nuanced understanding about effective access to services.

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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'. There are currently, however, no internationally-agreed measures of multidimensional poverty which apply to both adults and children, and countries are being encouraged to use their own definitions to report on progress towards target 1.2.

Public services, including those for education, healthcare, water and sanitation, transport and electricity are widely considered to be essential, forming 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 however varies substantially both qualitatively and quantitatively between and within countries (UN 2015). Where services are universally provided and free at the point of delivery, they constitute an important resource for households. Where services are provided but paid for by users, access to some degree is dependent 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 misidentification, through the over- or under-estimation of poverty in contexts with differing levels of access to/provision of services; this raises several issues for poverty measurement, not least that of basic comparability. At the same time, poor households disproportionately lack access to good quality public services (World Bank 2003). To properly account for the impacts of service access on living standards, people's unmet service needs due to lack of or inadequate provision, as well as affordability, must be considered when trying to assess multidimensional poverty for the SDGs.

To achieve this, we propose an updated model of the Consensual Approach (CA). 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), which are items and activities that a majority of the population believe no-one should have

1 to go or be without - as opposed to those things which are nice to have but are not considered  
2 necessary. The second element is the generation of a deprivation index reflecting an *enforced lack* of  
3 socially perceived necessities – i.e. people lacking said SPNs because they cannot afford them. Thus,  
4 the CA assesses people’s abilities to afford a set of ‘socially perceived necessities’ (SPNs), items and  
5 activities which a majority of the population believes no-one should have to go without or be  
6 without due to a lack of resources; the approach effectively identifies normative social standards and  
7 provides a pragmatic mechanism to develop a *national* measure of poverty which is democratic,  
8 multi-dimensional and appropriate for different age groups (i.e. children and adults). Since its  
9 development in Britain over 35 years ago, the CA has been successfully implemented in high,  
10 middle, and low-income countries, in contexts as diverse as Japan, Sweden, Benin, Uganda and  
11 South Africa (e.g. Halleröd 1994, Noble et al. 2004, Abe and Pantazis 2013, Nandy and Pomati 2015,  
12 Depio et al. 2018, Pomati and Nandy 2019). In 2017 the EU adopted the approach to measure  
13 material deprivation among children (Guio et al. 2017) reflecting its international acceptance and  
14 validation.

15  
16 This paper expands the CA to better reflect the contribution of services to people’s living standards.  
17 In this updated model, we identify three factors which effectively prevent people from fulfilling their  
18 basic needs: insufficient household resources, limited access to services, and social exclusion as a  
19 result of prejudice and discrimination. Our aim is to enable the CA to better reflect the multiplicity  
20 of factors which may impact living standards by incorporating a wider view of resources to include  
21 services and distinguish between resource-based deprivation and deprivation due to other factors  
22 (e.g. discrimination). In doing so, it provides important information for governments and advocacy  
23 groups on determining priorities for action.  
24

25 The paper is structured as follows: section two briefly discusses how poverty has been defined and  
26 measured in recent decades and defends the value of grounding poverty definitions on access to  
27 resources. Section three expands the argument that not reflecting the impact of public services can  
28 result in measurement issues; it also examines how services have been reflected in monetary and  
29 multidimensional poverty measures. Section four outlines the Consensual Approach, and section five  
30 explains how it might be adapted to incorporate access (or lack of) to services. The final section  
31 offers some conclusions and recommendations. In the paper we use the wider term ‘services’ instead  
32 of the more specific ‘public services’ to acknowledge that some services, including basic services such  
33 as education and water, may be privately provided.  
34

## 35 36 **2. Poverty: definition and measurement**

37  
38 Internationally agreed definitions of poverty recognise poverty to be both multi-dimensional and  
39 relative. The World Summit for Social Development (WSSD) in 1995 resulted in the Copenhagen  
40 Declaration (UN 1995), which was adopted by 117 countries. It defined ‘absolute poverty’ as ‘a  
41 condition characterised by severe deprivation of basic human needs, including food, safe drinking  
42 water, sanitation facilities, health, shelter, education and information. It depends not only on income  
43 *but also on access to services.*’ (UN 1995, *emphasis added*). Thus, any measures of absolute poverty  
44 should identify those whose basic needs are not met through a lack of, or limited access to, resources  
45 including both income *and* services. However, avoiding poverty requires more than simply covering  
46 basic needs (Townsend 1979, Nussbaum 1999). The Copenhagen Declaration also included a  
47 definition of ‘overall poverty’, relative to the standards of the society in which individuals live, as:  
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51 ‘lack of income and productive resources to ensure sustainable livelihoods; hunger and  
52 malnutrition; ill health; limited or lack of access to education and other basic services; increased  
53 morbidity and mortality from illness; homelessness and inadequate housing; unsafe  
54 environments and social discrimination and exclusion. It is also characterised by lack of  
55 participation in decision making and in civil, social and cultural life. It occurs in all countries.’  
56

57 In defining ‘overall’ poverty the WSSD was informed by both Peter Townsend’s concept of ‘relative  
58 deprivation’ with its emphasis on an inability to participate in society (Townsend 1979) and by the  
59 Capabilities Approach developed over many years by Amartya Sen, with its broad view of the factors  
60 which can limit a person’s ability to flourish (Sen 1981, Sen 2009). The academic literature  
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acknowledges both the multi-dimensional and relative nature of poverty (Nussbaum 1999, Nolan and Whelan 2011, Hick 2012, Guio et al. 2017, Mack 2018a).

Townsend (1979, p. 31) saw relative deprivation as stemming from a low command over resources. He argued '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 maintained the link between poverty and resources, only identifying as deprivation a lack of items and activities which are dependent on access to resources. His approach has been highly influential both on academic research and policy, and has informed international definitions of poverty, including that used by the European Union.

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 factors other than insufficient resources, such as disability, discrimination, or violent and unsafe environments. For example, the education needs of a child may remain 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 require identification and thus different solutions. Where the issue is affordability, increasing household incomes, or free (at the point of use) provision would be a solution; where the issue is accessibility (e.g. living in remote underserved 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; Mack, 2018a). 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 therefore are acknowledged as being essential to a decent standard of living, and a key factor for broader development. The 1948 Universal Declaration of Human Rights grants everyone 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 education (Art 26). Nearly 70 years later, in 2016, the SDGs set out the importance of access to health care and education, and also 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

1 the individual but wider communities e.g. a family benefits from their child's ability to read, society  
2 at large from an educated and healthy workforce - and so on.

3 Where services are widely available and provided for free (or subsidised), they are a key resource  
4 which households use to meet their needs; this in turn means they require fewer resources (in the  
5 form of income) to attain a decent standard of living (Paulus et al., 2010; UN, 2011). In the UK and  
6 Scandinavian countries, for example, universal services are central to welfare provision, meeting  
7 needs at different life stages (notably, for education or health) for all – albeit with different models in  
8 terms of funding and balance of public and private responsibility for service provision. While poorer  
9 households may still experience greater use constraints, the differences are relatively low: universal  
10 public services provide high levels of protection for the poorest households (Bramley and Besemer  
11 2018) by strong contrast, to contexts with more marketised welfare provision (e.g. the USA). these

12  
13 Furthermore, services are often hard to replace with individual-level resources. This is particularly  
14 the case for education and health. For some services, such as public transport, alternatives may exist  
15 – owning a vehicle, taxis, etc. – but this can create other problems (e.g. greater pollution), and often  
16 exclude those on low incomes. Water, sanitation, electricity and waste management can (to some  
17 degree) be replaced by household provision in some (rural) areas e.g. water tanks, septic toilets,  
18 generators, etc. However, these may come at additional costs for households, or result in lower  
19 standards, particularly when resources are shared (Lucci et al. 2018). Where such services are not  
20 provided (for example, in informal settlements or slums), households can be deprived regardless of  
21 their income.  
22

23 Overall, poor households disproportionately lack access to publicly provided services. Public  
24 expenditure on services tends to benefit the non-poor relative to the poor, through subsidised  
25 provision, particularly in low-income countries (World Bank 2003). The expansion of services in  
26 these countries may find difficulties with monitoring as well as in guaranteeing physical access,  
27 supplies and personnel, particularly in rural areas (OECD 2008). In some cases, infrastructure may  
28 be in place but be unreliable or of poor quality; evidence from a review study using data from 34  
29 African countries found most respondents were unsatisfied with the quality or reliability of  
30 government-provided water and sanitation services (Asunka 2013).  
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33 Barriers to access may exist even when services are free at the point of use. A recent review of access  
34 to free healthcare services in sub-Saharan Africa by Robert et al. (2017) highlights that even when  
35 services are nominally free, access can be costly, for example, if transport is limited or work or  
36 caring obligations prevent service users from travelling long distances. Service use is also influenced  
37 by the perceived quality of services, such as whether users believe providers are qualified to deliver  
38 the service, whether care and drugs are included, or if there is a shortage of essential materials. Such  
39 factors may affect demand for services, i.e. people not making use of services perceived to be poor  
40 quality or unsafe (World Bank 2003), and these factors interact with individual characteristics such  
41 as age, ability, caste and gender (Nussbaum 1999).  
42

43 Excluding services from poverty measures may result in the misidentification of the poor and lead to  
44 biased conclusions when comparing the extent and nature of poverty between countries or regions  
45 (Paulus et al. 2010). Consider two regions with similar distributions and levels of household income.  
46 Region A has accessible, free at the point of use healthcare, and region B only has private healthcare  
47 provision, and only in some areas. If we considered only household income, we might conclude that  
48 each region has the same poverty rates. However, households in region A have access to health  
49 resources not available to households in region B, and households in region B are likely to have a  
50 lower standard of living if their choices are to either purchase healthcare or go without it. Excluding  
51 basic welfare service provision would over-state poverty in region A, if comparing it to region B,  
52 since an incomplete measure of poverty fails to capture, on a comparable basis, core determinants of  
53 household living standards.  
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### 3.1 Services in monetary poverty measures: measuring income

Following the Canberra Group's<sup>1</sup> recommendations (2001 and 2011), household surveys around the world have expanded the definition of income to include monetary estimates of employment in kind benefits (such as a company vehicle), and other transfers 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 challenges, not least in determining what should be included. Although progress is being made through tax benefit analysis in identifying the redistributive effects of welfare policy, it does not examine directly either access or adequacy of services at the household or individual level (e.g. Lustig 2016). Some welfare and public services have a direct impact on households, like meeting critical health needs, but in some 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, issues 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 (e.g. childcare) or when substitutes can be bought (e.g. home-grown produce). As these resources are distributed through different systems, households 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 household incomes; but recommends their exclusion from measures of income until further research is conducted and agreement reached.

Reliable monetary measures of poverty depend on complete and accurate income (or expenditure) data being collected. This is problematic in many countries, where income in kind constitutes a substantial part of the economy, not least when many imputations and assumptions are required (Townsend 1979, Nolan and Whelan 2011, 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 measure for global poverty - has been criticised as being arbitrary and inadequate in that it does not reflect what is actually needed to cover people's basic needs (Vandemoortele 2002, Reddy and Pogge 2008, Jerven 2013, Deeming and Gubhaju 2014), as also because it provides 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 misrepresents 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 to be reflected 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 using household income (e.g. food) and services (e.g. access to water or education). Direct measures of multidimensional poverty, like deprivation indices, aim to overcome

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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.

1 the limitations of poor/no income data by directly reflecting the experiences of the poor as well as  
2 the multidimensional nature of poverty (Ringen 1988, Nolan and Whelan 2011, Mack 2018a). An  
3 extensive methodological literature has comprehensively assessed the different measures of  
4 multidimensional poverty and deprivation (e.g. Halleröd 1994, Gordon 2006, Nolan and Whelan  
5 2007 2011, Alkire and Foster 2011, Guio et al. 2017, Pasha 2017, Najera 2018) and it is not the aim  
6 of this paper to revisit these discussions. We acknowledge the debate is ongoing, and that there is  
7 currently no agreement as to the best way to measure multidimensional poverty (World Bank 2017).

8 The World Bank (2017) Commission on Global Poverty - an international group of poverty experts  
9 –agreed seven principles for the design of (multidimensional) poverty indicators to monitor progress  
10 towards SDG1. Principle 1 calls for measures to be truly global, suitable and applicable across low,  
11 middle and high-income countries, but also to allow for some degree of international comparison.  
12 Principle 2 calls for measures which identify the essence of the problem, and that they be  
13 transparent and meaningful to users. To this end, measures should be based on an agreed definition  
14 of poverty, to ensure there is clarity about what is being measured, thus distinguishing poverty from  
15 related phenomena such as ill-being and discrimination. Definitions should guide the selection of  
16 indicators (Ravallion 2010). This leads to Principle 3, that there should be clear justification as to  
17 why components of a measure have been selected, including demonstrating their relevance to the  
18 contexts in which they are applied (Gordon et al. 2003); components should have statistical validity  
19 and a clear normative interpretation. Indicators should also reflect the experiences of the poor in the  
20 societies in which they live (Nussbaum 1999; Gordon et al. 2003; Mack 2018a), to ‘give voice to the  
21 concerns of the world’s citizens’ (World Bank 2017, p. 156). Principle 4 requires results be reliable,  
22 that is, be consistent across samples, and robustly and statistically validated. An unreliable index  
23 will provide unstable estimates, and result in a misclassification of the poor (Najera 2018). Principle  
24 5 recommends results be cross-checked against existing country level information. Principle 6  
25 suggests that where indicators are combined, that they be balanced across different dimensions; and  
26 Principle 7 that where possible indicators should make use of existing information. With child  
27 poverty in mind - and in accordance to the reporting requirements for SDG Target 1.2.2 - we add an  
28 eight principle: reflect the distinct needs of different age-groups (i.e. children compared to adults)  
29 (Delamonica 2014). Principles 1 to 4 and 6 lay the foundations for a scientifically and socially valid  
30 index<sup>3</sup>.

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33 Two of the most widely used methods for developing multidimensional poverty indices are the  
34 Multidimensional Poverty Index (MPI, Alkire and Foster 2011) and the Bristol Approach (Gordon  
35 et al. 2003), both of which include indicators reflecting household access to basic services (like water  
36 and sanitation). The MPI is a measure of acute poverty used extensively by the UNDP and other  
37 agencies to measure poverty in low- and middle-income states. It captures severe deprivation  
38 regarding education, health and living standards - including measures of access to water, sanitation  
39 and electricity (Alkire and Foster 2011). The health domain is reflected by children’s nutritional  
40 status and mortality. The education domain is captured through information on educational  
41 attainment of household members and school attendance among children in the household. Thus, a  
42 household’s access to basic services is measured at the time of the survey, while health and education  
43 variables reflect outcomes over time. For instance, the MPI educational attainment indicator reflects  
44 years of schooling of all household members (aged 10 or over). Given most people complete their  
45 education during childhood, this indicator reflects a combination of the national education system  
46 and household conditions over different periods e.g. 10, 20 or 30 years ago for the oldest adults. In  
47 turn, the child mortality indicator refers to deaths of any children in the household in the past 5  
48 years, irrespective of the cause. When merging indicators which reflect household and national  
49 conditions at different points in time it becomes hard to identify the reference period for the poverty  
50 measure, and thus to identify what precisely is being captured, violating Principles 2 and 4.  
51 Additionally, there are concerns about its reliability; Najera (2018) used Monte Carlo simulations  
52 with data from several Latin American countries, to show that the MPI failed to identify at least  
53 15% of the poor.  
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59 <sup>3</sup> Principles 5 and 7 address the practicalities of the creation of an index and are beyond the scope of this  
60 article.  
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1 Furthermore, the MPI conflates indicators of poverty with its causes and consequences. There is a  
2 strong association between educational attainment and poverty, with children in poverty having  
3 lower educational outcomes and those with low educational outcomes being at greater risk of  
4 poverty as adults (OECD 2008). While improvements in educational attainment may be positive for  
5 countries and households, it may not automatically translate in improved living conditions.  
6 Educational and health *outcomes* (as opposed to provision) remain useful indicators of development  
7 but there is value in distinguishing these from poverty per se. A key limitation of the MPI is thus,  
8 the lack of clarity as to what is being measured (Ravallion 2010).

9 The Bristol Approach (Gordon et al. 2003), used by UNICEF to monitor the situation of children  
10 around the world, uses a human rights framework and the definition of absolute poverty agreed at  
11 the WSSD, to develop indicators of severe deprivation of basic human needs for shelter, sanitation,  
12 water, health, food, information and education. The indicators used reflect current outcomes, e.g.  
13 current water, sanitation facilities, living conditions in the household, untreated diseases and  
14 nutritional status. It shares some of the limitations of the MPI. First, both are geared towards the  
15 measurement of absolute poverty. For example, only school aged children who have never attended  
16 school are considered as being (severely) education deprived. As a result, neither the Bristol  
17 Approach nor the MPI are applicable to high income countries, where universal education was  
18 achieved decades ago, thus hampering the global comparability; it also implies that different  
19 standards are appropriate for low, middle and high-income countries, violating Principle 1. Second,  
20 the use of extreme thresholds -while useful to capture the most severe forms of deprivation- is at  
21 odds with Principle 3, that states that indicators should reflect social norms. While, say, educational  
22 exclusion is a useful indicator to capture the most severe forms of deprivation, children just above  
23 this threshold (say, who only receive one or two years of schooling) may still be excluded from social  
24 norms and standards (e.g. five years of primary education, etc.). These limitations mean both  
25 measures are sub-optimal for monitoring progress towards the reduction of multidimensional  
26 poverty (SDG1.2).  
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29 The Consensual Approach is one method which has the potential to overcome all these limitations.  
30 It allows for the identification of socially relevant thresholds, removing the need for arbitrary  
31 decisions. Furthermore, it can be adapted to tackle comparability issues by the inclusion of a service-  
32 related component. The next section provides an overview of the approach and section 5 explains  
33 how it might be adapted to reflect access to services.  
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#### 36 **4. The Consensual Approach**

37 Mack and Lansley (1985) argued that a deprivation index should reflect the public's view on  
38 contemporary needs and not rely solely on expert opinion. A cornerstone of the approach is the  
39 democratic identification of socially perceived necessities (SPNs). These can include (separate)  
40 items/activities for adults and children, reflecting things like adequate food and clothing, social  
41 participation and customary social obligations (e.g. giving gifts on important occasions).  
42 Identification of SPNs takes place in two stages; in the first stage, focus groups are conducted with a  
43 range of population groups to identify and agree a list of items reflecting possible social norms. The  
44 focus groups allow for a nuanced discussion of not only necessities but also appropriate thresholds  
45 for covering these necessities. For example, in the UK the groups identified as necessary for adults  
46 'two pairs of all-weather shoes', agreeing on a threshold (two pairs) as well as a necessity (shoes)  
47 (Poverty and Social Exclusion in the UK Survey (PSE UK) 2012). Furthermore, it is also possible to  
48 reflect 'normative satisficers', that is, socially appropriate ways to cover the identified needs; given  
49 the frequent rain in the UK, respondents thought that everyone in the country should be able to  
50 have 'all-weather shoes'. The first stage therefore allows for the identification of items/activities  
51 which are relevant and appropriate to the national context, along with relevant thresholds and  
52 satisficers for each item. While there is a core of items included in these questionnaires which are  
53 common to all countries (e.g. three meals a day for children), others are country specific (e.g. in  
54 Benin, the index includes 'cereals or food made from roots or tubers every day'). Thresholds and  
55 satisficers may vary from country to country and be adapted to reflect local contexts. The second  
56 stage involves a nationally representative survey, which asks respondents to identify those  
57 items/activities (from the list agreed during the first stage) they consider to be necessities; that is  
58 for each item to distinguish those which are 'essential' from those which may be 'desirable' but are  
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1 not 'necessary'. Items/activities seen as a necessity by a majority of the population are classed as  
2 socially perceived necessities (SPNs).

3 From data collected in countries where the approach has been used, we can identify key  
4 commonalities and differences in items identified as SPNs. Table 1 shows the percentage of  
5 respondents who identify a series of children's items as necessities across four very disparate  
6 countries - UK, Japan, Tonga and Uganda. For some items - e.g. three meals a day- there is strong  
7 agreement across all countries that sufficient food for children is a necessity. For other items, such  
8 as 'some new not second-hand clothes', or 'a suitable space to do homework' there is greater  
9 variation . In addition, some of the items seen as necessities by a majority are specific to that country  
10 (e.g. in Uganda 'a blanket' is classed as essential by 85%). The list of SPNs therefore allows for items  
11 which are relevant to the context of a particular country to be identified, while also enabling  
12 identification of what is common across countries, enabling international comparison.  
13

14 [TABLE 1 HERE]  
15

16 These surveys have also found a high degree of consensus on which items are seen as necessities and  
17 their relative importance across gender, occupation, income level, age, ethnicity, religion and  
18 political preference (Wright 2012, Mack and Lansley 2015, Nandy and Pomati 2015, Pomati and  
19 Nandy 2019). This consensus is important, otherwise the views of minorities could be overlooked.  
20

21 The next step in the Consensual Approach is to ascertain which items/activities respondents have  
22 and, for those they lack, whether it is because they do not want them or because they cannot afford  
23 them. Respondents lacking SPNs because they cannot afford them are identified as having an  
24 'enforced lack' and thus can be considered deprived of an SPN – i.e. missing out on something  
25 society has agreed no-one should lack. The Consensual Approach can be expanded to investigate  
26 constraints other than affordability - such as discrimination – which may explain why people lack an  
27 item (Mack 2018a). For instance, in the 2012 PSE UK survey, an additional response option was  
28 introduced relating to activities - 'don't do for any other reason' . Only respondents who reported  
29 lacking an item/activity due to affordability were classed as being deprived of that item.  
30

31 Each SPN is tested for validity, additivity and inter-item reliability against known measures of  
32 resources - such as household income, asset-based wealth index or a measure of financial strain  
33 (Guio et al. 2017). Items shown to be reliable, valid and additive are then used to create an index of  
34 deprivation. Finally, a poverty threshold is identified by calculating the point in the income (or asset  
35 score) distribution where deprivation increases sharply, echoing Townsend (1979) (for further  
36 details see Gordon 2006 2017). Thus, the approach enables the development of a *nationally defined*  
37 measure of multidimensional poverty, reflecting the distinct needs of children and adults.  
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40 One concern raised by critics of studies which use subjective assessments of need is the issue of  
41 adaptive preferences. Adaptive preferences theory suggests that people adjust their  
42 preferences/expectations of what they consider to be an acceptable standard of living based on their  
43 understanding of available possibilities (Nussbaum 1999). Thus, it is assumed, people in poverty may  
44 be less likely to identify as necessary those items which they cannot afford; if true, then these  
45 bounded horizons have the potential of introducing a downwards bias in normative standards, in  
46 that the poor may consider different sets of items to be necessities compared to the non-poor.  
47

48 In low- and middle-income countries, with high rates of poverty, this issue could limit (and lower)  
49 what the general public define to be an acceptable standard of living. However, studies using the  
50 Consensual Approach in high, middle and low-income countries find no evidence that the poor are  
51 less likely to identify items as necessary than the non-poor (Mack 2018a). For instance, Nandy and  
52 Pomati (2015), using data from Benin, found that the poor 'were marginally *more* likely than those  
53 not experiencing any deprivations (i.e. not poor) to consider all items on the deprivation index  
54 essential' (p. 710). They concluded that overall the poor have very similar views as to what should  
55 constitute a minimally acceptable standard of living to the rest of society. Such findings suggest that  
56 widespread deprivation of an item or activity is not a pre-condition for it being considered necessary.  
57 Similarly, a recent report from Uganda (Depio et al. 2018) showed that items were identified as  
58 being necessities despite only being accessible to a minority of respondents. For instance, nine in ten  
59 Ugandans considered a blanket as necessity for children, but six in ten children lacked one because  
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1 their households could not afford one. Similarly, six in ten respondents viewed a desk and chair for  
2 homework as a necessity, despite 70% of children being deprived of this item. This is important to  
3 address, as otherwise, the Consensual Approach could be seen as means for locking in or justifying  
4 lower minimum standards for the poorest countries. Ample evidence demonstrates that inclusion of  
5 the poor in the definition of national standards is appropriate and valid.

6 Additionally, adaptive preferences may apply to responses on lacking an item; some of those who  
7 cannot afford an item may declare not wanting it. This is particularly relevant when the subject and  
8 respondent are not the same person, e.g. when parents answer questions about their children<sup>4</sup> and  
9 some approaches consider children as deprived if they lack an item for any reason (e.g. Chzhen et al.  
10 2016 work with MODA). Using data from Sweden Halleröd (2006) found some evidence that long  
11 term economic constraints do affect preferences, with people on low incomes appearing to be  
12 satisfied with less. More recently, Crettaz and Suter (2013) also found evidence of downward  
13 adaptation among individuals living on low incomes in Switzerland. However, they conclude that  
14 overall deprivation indexes such as those developed by Townsend to be only weakly affected by  
15 adaptive preferences (Crettaz and Suter 2013,149).

16  
17 In addition, the Consensual Approach by allowing for different thresholds and satisficers for each  
18 item (see section 4.1), allows for a more nuanced understanding of levels of provision. For instance,  
19 Lucci et al., (2018) building on evidence collected in slums in India argue convincingly for the need  
20 to alter poverty thresholds to reflect access to water and sanitation in urban areas, where facilities  
21 are typically shared by many families. Measures which only capture whether or not households have  
22 access to a service like sanitation, do not reflect the extent to which those facilities are usable or  
23 reliable (e.g. interrupted and intermittent supplies of water or electricity). Factors related to  
24 accessibility may impair household's use of services, which might not be apparent to enumerators  
25 and researchers. To accurately reflect the experiences of the poor it is important they be able to  
26 express their perceptions of accessibility and sufficiency. The Consensual Approach, in asking  
27 respondents about access to and/or standards of services, both captures the experiences of the poor  
28 and introduces a democratic element into the definition as to what constitutes a minimally-  
29 acceptable standard of living. The Consensual Approach enables the development of national  
30 poverty measures which reflect the principles set out by the World Bank expert group (WB 2017) –  
31 i.e. that indicators and measures be statistically validated across a range of countries (Principle 4),  
32 that approaches be applicable across low, middle and high-income countries (Principle 1), and can  
33 create adult and child specific measures of deprivation (Principle 8). The consensual component  
34 addresses the normative acceptability of the measures (Principle 3). In keeping resource constraints  
35 at the centre of definitions and measures of poverty it is possible to distinguish 'poverty' from wider  
36 concepts of ill-being, exclusion and disadvantage (Principle 2).  
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## 40 **5. Adapting the Consensual Approach to account for non- or inadequate provision of services**

41 Linking poverty to a lack of resources, in line with Townsend's definitions, is central to the  
42 Consensual Approach, both for identifying SPNs and to the concept of *enforced* lack. However, this  
43 still leaves the question of how resources are defined and how this might influence what items are  
44 included in a minimum standard. Townsend had a broad concept of resources which included  
45 services as well as household resources.<sup>5</sup> However, in practice, the deprivation indices Townsend  
46 used to measure poverty –as well as surveys following Townsend's approach - focused exclusively  
47 on items dependent on access to household resources, primarily household income. We now show  
48 how the Consensual Approach might be used to include the contribution of services to household  
49 resources and standard of living.  
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55 <sup>4</sup> It is also likely that such responses will be affected by social norms around gender, disability, age, etc. The  
56 use of individual questionnaires can help reduce the issue.

57 <sup>5</sup> In his seminal work *Poverty in the United Kingdom* Townsend (1979) identifies the following categories of  
58 resources: (a) cash income, (b) capital assets, (c) employment benefits in kind; (d) public services in kind and  
59 subsidies, and (e) private income in kind.  
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1 The Consensual Approach was originally developed and applied in the UK<sup>6</sup>, where education and  
2 healthcare, as well as other basic services like electricity, water and sanitation were (almost)  
3 universally provided<sup>7</sup>. Questions about access to, and the adequacy of, such services were therefore  
4 not originally included in the identification of SPNs, though such services are clearly a core part of  
5 any minimum standard. While later surveys included questions about services, these were not  
6 designed to be integrated in a poverty measure, and have been analysed separately from the SPNs<sup>8</sup>.  
7 In addition, in implementing the concept of an enforced lack, the question aimed at the identification  
8 of necessities was phrased in terms of items that all adults should not only 'not have to go without'  
9 but also 'should be able to afford'. This limited and linked the concept of necessities to  
10 items/activities dependent on household resources.

11 As use of the Consensual Approach has expanded, to countries where universal service provision  
12 may not be the norm, the core questionnaire about what items are considered a necessity have  
13 expanded, to include questions about access to services as well as their affordability and quality. The  
14 inclusion of services – depending on public and private (non-household) resources– has resulted in a  
15 wider understanding of necessities in terms of items that are essential. For example, in South Africa  
16 respondents were asked whether 'mains electricity in the house' was essential (Wright, 2012).  
17 Similar questions have been introduced in other countries (e.g. Noble et al. 2004, Nandy and Pomati  
18 2015). In this way the concept of necessities has expanded to include those stemming from a broader  
19 understanding of resources, to include state/communal/local resources, as well as household  
20 resources. At the same time, where essential services have to be paid for, these too are included; in  
21 Uganda respondents are asked about items such as being able to afford 'a visit to a health facility  
22 when ill, and all the medication prescribed to treat the illness' (Depio et al. 2018). However, to date,  
23 no survey has included a comprehensive assessment of effective access to services, that is also  
24 grounded on SPNs.  
25

26  
27 Despite this expansion, the concept of enforced lack remains tied to affordability. Individuals and  
28 households are considered deprived if they cannot *afford* an item – that is they lack command over  
29 sufficient household resources. However, in the case of services, barriers other than cost can prevent  
30 households from access, while public services free (or subsidised) at the point of delivery are in effect  
31 a subsidy in kind. Households which cannot access services due to limited or inadequate provision,  
32 as well as cost, effectively have fewer 'resources' than those who do have access. By excluding  
33 services, the original method does not capture this difference, thus affecting comparability.  
34

35 We believe that with some slight modifications, the Consensual Approach can be used to show that  
36 when a household reports an 'enforced lack', that this also reflects deprivation stemming from a lack  
37 of publicly-provided resources (as well as from insufficient household resources). That is, material  
38 and social deprivations stemming from insufficient or inadequate service provision would be  
39 included as well as those resulting from inadequate household income. The process is illustrated in  
40 Figure 1. In what we will call the traditional Consensual Approach method, respondents are asked of  
41 each item/activity: *Is this item/activity a necessity? Do you have it? If not, why not?* Respondents lacking  
42 an item are then asked if they lack an item is due to two reasons: because they '*cannot afford it*' or '*do*  
43 *not want it*'. Recent adaptations to the method have included the introduction of an option for  
44 relevant items (e.g. activities) of '*don't have/do for any other reason*'. The modification to the approach  
45 proposed in this paper would retain the same initial questions but would add, for items relating to  
46 services, a further response category to when it is lacked. This would be: '*it is not provided or*  
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51 <sup>6</sup> Breadline Britain, 1983, was the first survey followed by Breadline Britain 1990; PSE Britain 1999; PSE NI  
52 2002/3; PSE UK 2012. Details available at: [www.poverty.ac.uk/pse-research/questionnaires](http://www.poverty.ac.uk/pse-research/questionnaires).

53 <sup>7</sup> There are some limitations. Some collectives are prevented from accessing those services for free e.g. those  
54 without a fixed address, homeless people, Travellers, and non-EU migrants and difficulties in accessing  
55 services for some of those living in remote areas.

56 <sup>8</sup> Breadline Britain 1990, PSE Britain 1999 and PSE UK 2012 surveys included sections on services. However,  
57 services were not conceptualised as resources; neither were these intended to be included in the deprivation  
58 index. Questions about use and adequacy were asked at household (not individual) level and not all services  
59 where covered e.g. respondents were assumed to be able to access for example healthcare or electricity.  
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1 *inadequate*<sup>9</sup>. What constitutes ‘adequate provision’ of services is arguably broad, but it could cover  
2 elements such as frequency, reliability, capacity, accessibility and safety. Questions would reflect  
3 local understandings of suitability/sufficiency (as is currently the case for material deprivation  
4 items). This challenge, in our view, is secondary to the benefit of reduced comparability issues and  
5 enhanced understanding of poverty through the identification of unmet service needs.

6 [FIGURE 1 HERE]

7 Including options that distinguish between affordability and insufficient or inadequate provision  
8 would generate an indicator of service deprivation, which could be part of a measure of deprivation  
9 poverty. Respondents reporting lacking a service SPN because it is either not provided or is  
10 inadequate would be seen as having an ‘enforced lack’, in addition to those who reported not being  
11 able to afford it. These service-based SPNs would be tested against measures of resources for  
12 validity, reliability and additivity before inclusion in a deprivation index, alongside material and  
13 social SPNs, and this broader deprivation index could be used to assess multidimensional poverty, in  
14 combination with information on assets/monetary poverty. This therefore incorporates public as  
15 well as household resources into the concept of deprivation poverty. Application of this approach  
16 would require adding service-related questions to existing deprivation modules, reflecting  
17 consensually identified SPNs.

18 The model could explore other (non-resource based) reasons why households lack an  
19 item/activity/service by including the additional response category: ‘*lack for other reasons*’ along  
20 follow up questions as to the reason. This could cover factors like discrimination and disability (Hick  
21 2012). These non-resource related constraints need not be included directly in a poverty count, but  
22 could be reported separately, for example, as part of a measure of wider social exclusion.

23 Cultural perceptions of acceptability - e.g. with regards to gender and disability- can play a role in  
24 access to healthcare, and similar barriers have been identified with regards to access to education  
25 (World Bank 2003). The UNGEI (2015) report on access to education for girls highlights the  
26 impact of structural barriers and discriminatory social norms, including early marriage and  
27 motherhood, gender violence, traditional seclusion practices, sanitation in schools and male  
28 preference. Only considering affordability in poverty measures would miss such key factors which  
29 prevent people from accessing services and thus being socially excluded. The inclusion of an ‘other  
30 reason’ category would be particularly useful when examining outcomes for men, women and  
31 children separately (as required by SDG 1.2), enabling gender and age-related discriminations to be  
32 explored.

## 33 6. Conclusion

34 We have argued here for the importance of considering the role of public services in measures of  
35 multidimensional poverty. Ignoring the contribution of such services misrepresents the resources  
36 available to households, and can lead to a misidentification of the poor; this in turn may affect  
37 comparisons between societies where services may or may not be provided/available. Slight  
38 modifications to the Consensual Approach, which enable it to reflect the contribution of services, can  
39 provide a means to developing reliable indicators for assessing progress towards the first SDG.

40 Measures of poverty generated by the Consensual Approach result from a consensual, democratic  
41 and dynamic process. The approach provides a solution to key challenges in the definition of  
42 multidimensional poverty: the identification of necessities, the setting of thresholds for normative  
43 variables, as well as context appropriate means to attain those thresholds. Some items are  
44 consistently identified as necessities, reflecting both basic needs, such as food and clothing, but also  
45 items relating to social participation. Thus, it is possible to test comparable measures over time and  
46 across countries. It could also enable comparisons of overall poverty levels between countries of  
47 differing income levels by using items common across countries as anchoring points (see Guio et al.  
48 2017), and to make comparisons over time.

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49 <sup>9</sup> While here we focus on services where provision is central, we acknowledge that the market may not provide  
50 appropriate items (e.g. appropriate shoes or children’s books) that are perceived as necessities, and thus access  
51 may also in some circumstances be an issue for goods.

1 Our contribution is both theoretical and methodological. Empirical research, e.g. through the  
2 inclusion of a services module in existing or new surveys, will be necessary to fully assess the  
3 implications of the proposed model. Poor people have less access to and tend to access lower quality  
4 services (World Bank 2003) with some indications that austerity measures in Europe are  
5 entrenching this trend (Bramley and Bessemer 2018). However effective access to services also  
6 depends on factors other than poverty, that is, it is not possible to use household resources alone to  
7 accurately predict access to services. While different approaches to poverty measurement  
8 consistently identify the same groups as poor (Nolan and Whelan 2011), poverty rates are likely to  
9 vary when considering access to services, as new forms of deprivation will be identified. Equally,  
10 given that access to services partially follows geographical patterns, considering services in poverty  
11 measurement is likely to alter the geographies of poverty. Coupled with appropriate techniques such  
12 as small area estimation or regression models, an extended Consensual Approach module would  
13 allow the identification of areas and or groups lacking access to essential services alongside an  
14 understanding of the barriers they experience, allowing for improved targeting of interventions.

15 Keeping resource constraint at the centre of poverty measures is essential if we are to distinguish  
16 poverty from wider and related concepts, like ill-being, exclusion and disadvantage. However,  
17 basing deprivation indices solely on items and activities accessible through household resources  
18 however, is limiting. Including a service component recognises that meeting people's needs for  
19 water, healthcare and education rely as much on local provision as on household resources. It also  
20 improves comparability between countries where public services are provided, and those where they  
21 are not. This is important in low and middle-income countries, but also increasingly so in high-  
22 income countries, where once well-funded public services are being withdrawn, retrenched or  
23 replaced by private providers. The inclusion of a service element would enable the impact of such  
24 changes to be tracked. It is in reflecting these situations, of how lives are actually lived, that socially  
25 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 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 Property income</b>	
a Income from financial assets, net of expenses	✓
b Income from non-financial assets, net of expenses	✓
c Royalties	✓
<b>3 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 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 Income from production (sum of 1 and 3)</b>	
<b>6 Primary income (sum of 2 and 5)</b>	
<b>7 Total income (sum of 4 and 6)</b>	
<b>8 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 Disposable income (7 less 8)</b>	
<b>10 Social transfers in kind (STIK) received</b>	—
<b>11 Adjusted disposable income (9 plus 10)</b>	

Figure

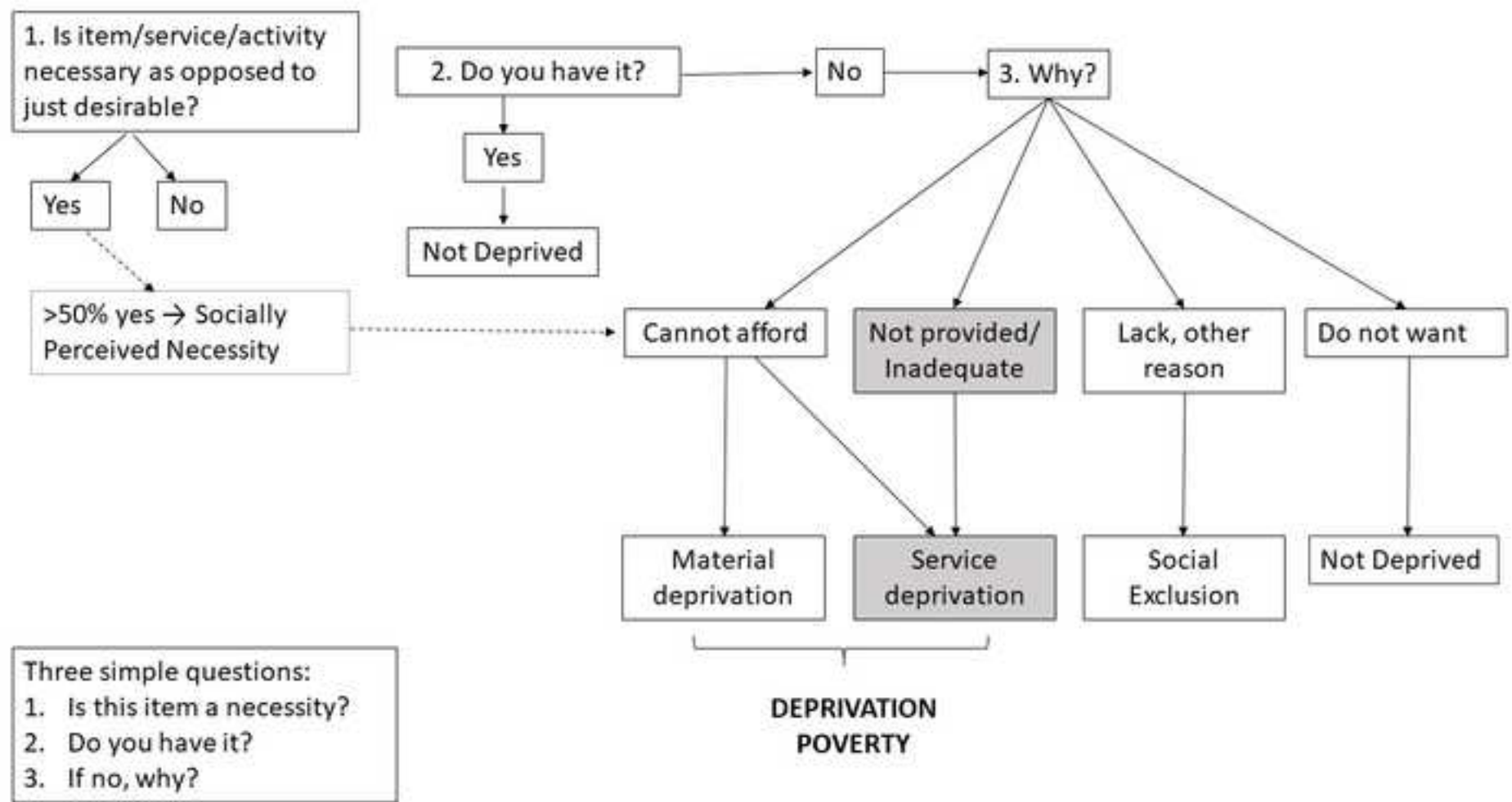


Table 1

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 Bed; (3) Homework Uganda 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 own analysis Household Income and Expenditure Survey 2015/16