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Comparing Monetary and Non-monetary Indicators of Household Well-being in
Australia and Japan

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Introduction

Comparing the well-being of families across nations presents a set of formidable challenges. Some of them relate to the need for appropriate data that conform to a set of standard definitions that are nested within a common conceptual framework. The Luxembourg Income Study (LIS) has brought such an approach to fruition in what is now a rapidly expanding number of countries (Atkinson, 2004; Smeeding, 2006), while the Luxembourg Wealth Study (LWS) has recently embarked upon a similar path (Sierminska, Brandolini and Smeeding, 2006). Both studies focused initially on standardising microdata for a small number of high-income (OECD) countries, but LIS has since expanded to include several middle-income countries (including the Czech Republic, Mexico, Romania and Taiwan, PRC) and is currently negotiating further expansion in this direction.¹

One of the limitations of the existing LIS/LWS databases (impressive though they are) is that their focus is on producing comparative estimates of economic resources, specifically income and wealth. This implies that although they provide an invaluable benchmark for comparing patterns of inequality and redistribution in these two dimensions of well-being, their ability to examine other dimensions of well-being is limited.² There is also increasing recognition of the need to supplement economic measures with those that capture the non-monetary dimension of the standard of living more directly.

The national surveys that are included in LIS are all household surveys and the household is the unit around which the LIS database has been constructed. Implicit in much of this structure is the assumption that most households consist of nuclear families – individuals and couples, both with or without children – with multi-adult or even multi-generational households forming a minority that can be ignored in most analyses without imposing too much of a cost in terms of relevance or sample size.

¹ (South) Korea and Japan are also included in the list of country data sets on the LIS website at www.lisproject.org but neither currently have data actually included, although plans are underway to include data for both countries in wave VI (around 2004) of the data set.

² Studies have used LIS to examine the role and impact of noncash income provided by government social programs (e.g. Smeeding et al., 1993).

However, this assumption becomes far less applicable in countries (some of them members of the OECD) where multi-adult, multi-generation households are the norm. For example, Smeeding and Saunders (1998: Table 1) show that although less than one-quarter of people aged 65 and over were living with people other than their spouse in the early 1990s in most OECD countries, that proportion was close to two-thirds in Japan and almost three-quarters in Taiwan. In both cases, the ‘others’ were predominantly related members of the extended (multi-generational) family.³

These differences raise awkward questions about the relevance of comparisons based on the presumption that the single-generation living arrangement is the norm. They also suggest that some of the assumptions that underlie conventional well-being comparisons may not be appropriate. The equivalence adjustment, for example, assumes that resources are pooled within the household to the equal benefit of all individuals, yet this may not be appropriate when several generations live together.⁴ Shared accommodation is a way of pooling resources by spreading housing (and related facilities and service) costs across more individuals, but it is much more than that. In countries such as Japan, the multi-generation household represents a lineage, and the most basic unit of society on which many societal institutions (from public social security programs to even cemeteries) operate. Such forms of ‘generational solidarity’ draw the generations together, strengthening kinship ties and acting as a conduit for passing skills and wisdom on to younger cohorts. It is the preferred arrangement for many people, not a consequence of under-developed pension systems that, from a western perspective, prevent older people who would otherwise choose to live independently from doing so.

These differences raise important issues about the validity of comparing well-being across countries solely in terms of income (or wealth), adjusted for differences in need using an equivalence scale. They suggest that other approaches that examine living standards more directly should accompany (in some instances replace) comparisons that focus on economic resources, narrowly conceived. One such approach is the

³ In Japan, a little less than one quarter of all children (aged under 20) lived in three (or more) generation households in 2006, while nearly a half of elderly over 65 lived with their grown-up children (MHLW, 2007).

⁴ There is the other factor, identified in the sensitivity analysis conducted by Buhmann et al. (1988), that the sensitivity of results to variations in household size increases as the size of the household itself increases.

deprivation approach, developed initially by Townsend (1979) as a way of measuring poverty, but also capable of providing a more general basis for comparing living standards. Importantly, the deprivation approach utilises information about the reported living conditions of the household that does not rely on assumptions about the extent of resource sharing. Instead, it draws implications about living standards from evidence that indicates a divergence between what is actually achieved and what the community regards as acceptable.

This paper represents an initial attempt to apply the deprivation approach to compare the living standards of younger and older people in Australia and Japan. These two countries provide an interesting basis for comparison because although each belongs to the OECD, they both represent significant departures from the social security policy regimes that exist in North America and much of Europe. Australia is widely recognised as being a leading example of the targeted approach to social protection, relying heavily on means-tested programs that deliver modest benefits to those who satisfy strict eligibility criteria (Whiteford, 2006). Japan, in contrast, was the first Asian country to join the OECD and its social support system reflects a very different set of cultural values, expectations and practices (Gould 1993, Goodmand and Peng 1996) The approach adopted is relative in two dimensions: between countries; and between different groups within countries. The over-riding goal is to compare the relative living standards of children and older people in the two countries, relative to each other and relative to other groups in each country.

The remainder of the paper is organised as follows. Section 2 provides a brief overview of the main elements of the deprivation approach, drawing out those aspects that are relevant to its use in a comparative context. Section 3 describes the data sets on which the empirical results are based, and describes how the comparisons themselves have been structured. Section 4 presents and discusses the results, while the main conclusions are summarised in Section 5.

2 Comparing Living Standards Using a Deprivation Approach

The deprivation approach was initially designed to provide a more credible basis for identifying and measuring poverty. This involved defining poverty by identifying the *actual* experience of unacceptable hardship rather than on the basis of having an income that was *presumed* to be inadequate to support an acceptable standard of

living. This presumption was based on comparing income with a poverty line that represents the income required to meet needs to an adequate standard. However, having an income below the poverty line is not sufficient to establish that poverty exists because the ‘needs gap’ may be filled by drawing on other economic (e.g. accumulated wealth, or calling in outstanding debts) or social (e.g. local networks) resources. Because the deprivation approach focuses on achieved outcomes (at least as these are reported in surveys) as opposed to available income, it overcomes this limitation of the resources approach.

In its original formulation by Townsend, the deprivation approach focused on identifying whether or not people were achieving levels of consumption in basic items or participating to a specific degree in customary activities. This approach was criticised because it was left to the ‘researcher as expert’ to identify which items to include in the lists of basic necessities and customary activities. It was also argued that differences in taste would make it difficult to distinguish between those who are going without because they are constrained by a lack of resources, from those who choose to forego particular items because they do not want them (Piachaud, 1980). Both criticisms were addressed in the study by Mack and Lansley (1985), which first asked a representative sample of the community whether or not a list of items was necessary, and then identified as poor in the sense of being deprived, those who did not have these items because they could not afford them. Although the distinction between ‘not being able to afford’ and ‘not wanting’ an item is somewhat problematic (Saunders and Adelman, 2006), it does attempt to identify a lack of economic resources as the cause of deprivation, making the approach consistent with the wider literature on poverty as lack of income.⁵

The feature of the deprivation approach that makes it a valuable framework for comparing countries as diverse as Australia and Japan is its reliance on the views of the community to identify which items are necessary and the identification of deprivation in relation to the absence of these items.⁶ In countries such as Japan,

⁵ Van den Bosch (2004) has examined what difference it makes if deprivation is defined solely on the basis of not having an essential item, as opposed to not having it *because* this lack reflects a lack of affordability.

⁶ The use of majority support to identify which items are necessary has led some to describe the approach as the ‘consensual approach’ to poverty measurement (Halleröd, Bradshaw and Holmes, 1997).

where poverty research has been relatively scant, the deprivation approach has gained much more support among the public than the income approach. The method also provides a way of taking account of the large differences that exist in community practices and expectations, and is thus suited to comparative studies.

The definition of deprivation as ‘an enforced lack of socially perceived necessities (Mack and Lansley, 1985: 39) has been used to identify who is poor in the sense of being deprived in many countries (Boarini and d’Ercole, 2006). The general approach – and even the specific items used to elicit responses regarding which are necessary – has been implemented in countries as diverse as Britain, Ireland, Denmark, Germany, Russia, Tanzania, Vietnam and Yemen (Gordon, 2006: 44-5). The fact that the same items are included in the list of potential necessities in each country (modified to suit local conditions and custom) implies that there is an incremental validation of the list as the scope of its application is extended. This is important, because the responses to which items are *actually* identified as being necessary or essential is obviously influenced by which items are included among those that might *potentially* be regarded as essential.⁷ However, there is still scope for the items in the list in different countries to vary considerably, reducing the ability to compare deprivation profiles, at least in some regards.⁸

One problem with the deprivation approach concerns the comparability of the items included as necessities when comparing countries with very different policies, institutions and cultures. In part, however, this depends upon the ‘space’ within which one is trying to establish comparability. If the aim is to examine the consequences of applying the same *methodology* in different countries, as opposed to the same list of possible (or actual) *necessities*, then the available studies provide a useful basis for

⁷ Maître, Nolan and Whelan (2006) have shown that if deprivation questions are asked more directly (e.g. using computer assisted personal interviewing (CATI), as opposed to in a self-complete questionnaire) they tend to produce higher levels of deprivation. Their analysis also suggests that it makes a difference whether respondents are interviewed for the first time or repeatedly (e.g. as members of a panel).

⁸ An alternative way of addressing this issue involves weighting the responses according to the degree of community support for each item being essential. Thus an item regarded as necessary by 90 per cent of those asked is weighted twice as highly as an item regarded as essential by only 45 per cent of those asked when estimating the degree of deprivation. Items included in the list that are not essential will, under this approach, receive little support and a low weight in the deprivation calculations. Although this approach has intuitive appeal in a cross-country comparative context (particularly where norms and custom differ), studies that have adopted a weighted approach have generally found that it makes very little difference to the resulting patterns of deprivation (Halleröd, Bradshaw and Holmes, 1997).

comparison. In practical terms, this is all that is currently available, because there is no East Asian (or Asia-Pacific) counterpart to the EU with the mandate or ability to drive comparable cross-national statistical collections in the way that has happened in Europe.⁹

As noted above, the focus of much work using the deprivation approach has been on identifying who is in poverty, or on doing so in a more robust and credible way. This can be achieved by setting a threshold of deprivation that separates those who are in poverty from those who are not. Alternatively, it is possible to adopt the approach developed by the Economic and Social Research Institute in Ireland (Nolan and Whelan, 1996; Combat Poverty Agency, 2006), which identifies consistent poverty as experiencing both low income and a minimum degree of deprivation. Both approaches require that deprivation is measured continuously (if bounded), for example using mean indicator scores or multiple deprivation incidence rates, which make it possible to compare living standards using a deprivation metric. We adopt this approach rather than the dichotomous approach focused on the poor/not poor distinction.¹⁰

3 Data and Methods

Data sources

The data examined in this study were derived from household surveys conducted in Japan (in 2003) and Australia (in 2006). Although the two surveys differ in many regards, a principle aim of both was to provide a better basis for estimating the nature and extent of deprivation (and social exclusion) in each country. They thus share a similar structure in terms of the kinds of questions asked of participants and can be used to derive estimates of the profiles of monetary (income) and non-monetary (deprivation) well-being indicators that are broadly comparable. However, the surveys also differ in ways that also constrain the ability to generate exact comparisons and, as is always the case with studies of this kind, a series of compromises have had to be

⁹ For a description of how the European Community Household Panel (ECHP) and its successor the European Union Community Statistics on Income and Living Conditions (EU-SILC) have expanded the scope and availability of living standard measures in the EU (which has itself expanded considerably) see Whelan and Maître (2007).

¹⁰ The dichotomous approach can only be applied if a threshold can be identified that distinguishes between those who are deprived and not deprived (or poor and not poor). This presents a set of formidable challenges that lie well beyond the scope of the current paper.

made about what to measure and how to measure it. The most significant of these are described below. The important point to note is that it has not been possible to benefit from the kind of developments in Europe that have culminated in the new EU-SILC survey: we have been forced to work with the data that we have, rather than working to generate the data that we need.

In Australia, the *Community Understanding of Poverty and Social Exclusion* (CUPSE) survey was conducted in 2006 by the Social Policy Research Centre (Saunders, Naidoo and Griffiths, 2007). The CUPSE questionnaire was mailed to a random sample of 6,000 members of the adult population drawn from the federal electoral roll.¹¹ Over 2,700 people responded to the survey, representing a response rate of approximately 47 per cent. The composition of respondents was broadly representative of key socio-economic demographics within the general population as revealed in official surveys conducted by the Australian Bureau of Statistics, particularly in relation to gender, country of birth, labour force status, principal source of income, housing tenure, educational attainment and disability status. There was a slight under-representation of those who have never been married; live alone; Indigenous Australians; and those with higher incomes. The main overall difference between the CUPSE sample and the general population was age-related; the CUPSE sample contains an over-representation of older people (over age 50) and an under-representation of younger people (under age 30).¹²

The Japanese Survey on Living Conditions (SLC) was undertaken by the National Institute of Population and Social Security Research as part of a broader program of research on the impact of public assistance programs (Abe, 2006). A random national sample of 2,000 individuals aged over 20 years was approached and 1,520 face-to-face interviews were conducted, representing a response rate of 76 per cent. Interviews were conducted with the head of the household or with the person most familiar with the household budget (usually the spouse of the household head). In terms of the characteristics of the SLC sample, there is a slight over representation of elderly men, and middle-age and elderly women compared to the national population.

¹¹ Voting is compulsory in Australia, so the electoral roll provides a good representation of the population over voting age (18 years).

¹² Adjusting the sample data for age differences by re-weighting has relatively little impact on the results presented later and does not alter the conclusions.

In terms of income class, there seems to be a bias toward low-to middle-income class, but this may be due to the fact that SLC survey uses self-reported income, rather than the one verified by tax authorities.

Selecting household types

Although both surveys were completed by individuals, much of the information collected relates to the circumstances of the household. The following comparisons of the relative well-being of children and older people in each country are thus based on information relating to households that contain these individuals. Because of differences in living arrangements in the two countries (which in turn reflect important differences in culture and custom) the household has been chosen as the basis for making the comparisons than the narrower nuclear family unit. Specifically, the analysis distinguishes between working-age and older households according to whether or not the respondent (usually the household head) is of working-age or an older person (aged 65 or over), between households containing a single person living alone or two or more adults (including spouse, grown-up children and parents), and between households with and without children according to whether or not there is at least one child (aged under 18 in Australia, or under 17 in Japan) present.¹³

Table 1 provides a breakdown of the two samples according to household structure defined in this way. It indicates that there are some marked differences in the household composition of the two samples. Thus, although around one-fifth (around 21 per cent) of both samples consist of older people living alone or with a spouse, older people are far more likely to be living alone in Australia than in Japan, where they are more likely to be living with relatives.¹⁴ Single person households, either working-age or older, are far less common in Japan (around 7 per cent) than in Australia (around 14 per cent). However, one of the most striking differences is the higher proportion of households consisting of at least two adults without children, which accounts for almost two-thirds (64.3 per cent) of the sample in Japan, but only

¹³ The modified OECD equivalence scale has been used to standardise for the income-based comparisons for differences in household size and composition. This scale assigns a score of 1.0 to the first adult in the household, 0.5 to each subsequent adult (including non-dependent children) and 0.3 to each dependent child.

¹⁴ Both samples contain an over-representation of older people, a trend that is common among surveys of the type being analysed here, so that the comparisons in Table 1 should not be taken as indicative of the overall household composition of the populations in each country.

just over half (52.4 per cent) of the sample in Australia. Another difference is that couple-only households are a much lower proportion of all multiple-adult households with an older head and no children in Japan (48.6 per cent) than in Australia (79.2 per cent), highlighting the fact that older people are more likely to live with their relatives in Japan than in Australia. Sole parent households are also far more common in Australia than in Japan, where the sample contains very few sole parent households (because many sole parents are living with their parents and thus fall into one of the two previous household types listed in Table 1).

Table 1: Household Types and Sample Composition

Household type	Australia		Japan	
	Sample size	%	Sample size	%
Single, working-age (WA; 20-64)	202	8.0	66	4.4
Single, older person (OP; 65+)	158	6.2	43	2.8
Couple and other adults, head is WA, no children ^(a)	942 (502)	37.1	692 (463)	45.7
Couple and other adults, head is OP, no children ^(a)	390 (309)	15.3	282 (137)	18.6
Couple and other adults, head is WA, with children ^{(a) (b)}	736 (576)	29.0	414 (331)	27.3
Sole parent, WA with children	113	4.4	17	1.1
Total	2,541	100.0	1,514	100.0

Notes: (a) Numbers in brackets refer to couples only (i.e. no other adults living in the household); (b) This group contains a small number of households (15 in Australia and 6 in Japan) where the head is an older person.

Measuring well-being using income

As noted earlier, income is the most common metric used to compare well-being and living standards within and between countries. This in part reflects the fact that income is relatively straightforward to measure and international standards have been developed to ensure a common (and thus comparable) definitional framework. Even so, problems exist in collecting accurate information on income, particularly at the extremes of the distribution, and these undermine the ability to capture the well-being of those who are most likely to face the risk of poverty.

The two surveys described above both collected information on income, although the degree of detail in both cases is rather limited. The income measure in both countries includes all components of income but information was only provided in ranges (14 in the case of Australia, 17 for Japan). The raw income data have been set at the mid-point of the relevant range for analytical purposes. In Australia, information on gross income was collected and tax liability was imputed from the tax scales in order to

derive an estimate of disposable income. In Japan, information was collected on disposable income directly. The two indicators examined are mean household (equivalised) incomes, and poverty rates derived using a poverty line set equal to one-half of median (equivalised) income.

Measuring Deprivation

Deprivation was identified on the basis of responses to a series of questions about a list of items identified as potential necessities (or essentials). The first question asked whether or not each item was necessary (or essential) *for people in general* in society. Responses to this question were used to identify those items regarded as essential by a majority (at least 50 per cent) of respondents. Those who do not have these items were then identified from responses to two further questions, which asked whether people had each item, and whether or not they wanted it.¹⁵ Only those who do not have and cannot afford the items identified as being essential by the majority are defined as deprived in relation to that item.

The specific items included in these questions differ in the two countries, and although there is similarity in the broad living standard domains covered, differences arise in the coverage of some items (e.g. there is less emphasis on issues relating to location and transportation in Japan than in Australia) and in the ways in which specific items are described. The list is also longer in Australia (61 items) than in Japan (42 items). More importantly, there is a difference in the response options provided to the key ‘Is it necessary?’ question that is used to identify necessities. In Australia, people were first asked whether each item was essential, then whether or not they had the item and, if they did not, whether or not this was because they could not afford it. In all three cases, two response categories were provided: Yes or No. In contrast, in Japan the approach used two distinct surveys. First, in the preliminary survey, participants were given four response options to the ‘Is it essential?’ question: ‘Definitely’; ‘Better to have, but can do without’; ‘Not necessary’; and ‘Don’t know’. Then, in a different survey where participants were selected separately from the preliminary survey, participants were asked to indicate

¹⁵ It should be noted that some of the items in the original list may refer to specific needs (e.g. of children) that are not relevant in some instances (e.g. where there are no children present in the household). In these instances, respondents will indicate that they do not have the item, but that this is not because they cannot afford it, and will thus not be identified as deprived in relation to that item.

which of the following applies to them with regard to each item: ‘Have the item’, ‘Do not want it’, ‘Cannot afford it’, or ‘Don’t know’.¹⁶

We first identify which items are essential on the basis of them attracting majority support (at least 50 per cent) for being necessary. However, the more graded range of responses provided to respondents in Japan is likely to affect how many say that the item is essential and the ‘Don’t know’ option is also likely to affect the pattern of responses. Once the list of necessities has been established, those who are deprived are identified as those who do not have *and* cannot afford each item (in Australia), or as those who say that they cannot afford the item (in Japan).¹⁷ Once those who are deprived of the items regarded as necessities by a majority of respondents have been identified, the level of deprivation was estimated by summing the number of items each individual is deprived of, and averaging the resulting scores across household types. A second set of indicators measures the severity of deprivation by comparing the proportion experiencing no deprivation, at least one indicator, and at least two indicators.¹⁸

4 Results

Monetary indicators: income comparisons

Table 2 shows the mean equivalised incomes for each of the household types shown in Table 1, in local currencies and expressed relative to the adjusted incomes of single working-age households. Also shown are the poverty rates in each country, estimated using a poverty line set at one-half of median OECD equivalised income. It is clear that there are some large differences between the income profiles of the two countries and in the poverty risks faced by different household types. In terms of poverty, although the overall rate is virtually the same in both countries (at around 14 per

¹⁶ It is possible that the difference in the two methods (a single survey as in Australia, or two separate surveys as in Japan) caused some bias in the comparison, even though it is not certain to what degree and to which direction.

¹⁷ Note that those who forego the item out of choice are identified explicitly in Japan (by the ‘I do not want it’ option), but are only identified implicitly in Australia (as those whose response implies that a lack of affordability is not the reason they lack the item). In both surveys, a lack of monetary resources is the implied cause of deprivation.

¹⁸ One problem with the mean deprivation score relates to its treatment of missing values, which are assigned a score of zero and thus implicitly treated as not deprived cases. This can distort the comparisons between groups (or countries) if the missing values are not randomly distributed across the sample. The incidence of a minimum level of deprivation (e.g. two or more items) overcomes this problem to a large extent.

cent), the disaggregated estimates indicate that the household-level differences between countries are greatest for single people (either working-age or older) and for sole parents. In all three cases, poverty rates are considerably lower in Australia than in Japan. However, these differences reflect the variations in living arrangements alluded to earlier, in particular the fact that these household types are far more likely to be living with other adults in Japan and thus benefiting from a broader sharing of resources. Put differently, single adults living alone (without children) face below-average poverty rates in Australia, but above-average poverty rates in Japan. Sole parents face high poverty rates in both countries but they are consistently higher in Japan than in Australia.

Table 2: Mean Incomes and Poverty Rates

Household type	Australia		Japan	
	Mean income (A\$/week)	Poverty rate	Mean income (‘0,000 Yen/annum)	Poverty rate
Single, working-age (WA; 20-64)	524.0 (1.00)	10.4	255.2 (1.00)	17.7
Single, older person (OP; 65+)	320.5 (0.61)	10.8 ^(a)	193.6 (0.76)	25.7
Couple and other adults, head is WA, no children	482.8 (0.92)	13.4	292.5 (1.15)	11.2
Couple and other adults, head is OP, no children	309.4 (0.59)	22.6	228.1 (0.89)	20.4
Couple and other adults, head is WA, with children	438.7 (0.84)	11.4	244.3 (0.96)	12.3
Sole parent, WA with children ^(b)	311.2 (0.59)	22.1	258.0 (1.01)	47.1
Total	430.5 (0.82)	14.8	262.5 (1.03)	14.3

Notes: (a) A large number of single older people in Australia are reliant on the means-tested age pension, and have incomes that are low, but slightly above the half-median poverty line. (b) The (small) sample of sole parent households in Japan contains two observations with high income. This increases the mean income of the group but the poverty rates remains high.

The other notable feature of Table 2 concerns the relative income positions and poverty rates of older people in the two countries. On average, households containing older people have relatively low mean incomes and high poverty rates in both countries. However, even though the mean incomes of older people (relative to that of single WA households) in single households as well as in multiple-adult households, are higher in Japan, poverty rates are also considerably higher in Japan. This is probably due to the differences in the public pension systems in the two countries. The Australian pension system with its means-test and benefit level above the poverty line is more effective in reducing the poverty of older people, while the Japanese pension system, which is related to pre-retirement income and has no minimum guarantee, is much less effective.

Non-monetary indicators I: comparing overall deprivation

Reference has already been made to the problems associated with comparing deprivation rates in the two countries as a consequence of differences in the purpose and content of the two surveys from which the estimates have been derived. These should be borne in mind when reviewing the following results.

Table 3 shows the list of items included in the two surveys and the percentage support in each country for each item being necessary.¹⁹ Despite the differences in nature and number of many of the items, several broad similarities are apparent in the two sets of rankings. In both countries, access to various forms of medical care appears at the top of the ranking of necessities, as do items that reflect the availability and quality of accommodation. Another common theme is the importance of items that either represent different forms of social engagement with others, including attending important social occasions (identified as customary in each society), or access to those items that make such participation feasible (appropriate clothing and access to transportation). The greater emphasis given to educational success in Japan is evident in the high level of support for high school education being essential (71.7 per cent) compared to 63.4 per cent support for this item (and a far lower ranking) in Australia. Another notable difference is the apparently lower acceptance of consumerism in Australia, where electronic items receive lower levels of support for being necessary than is the case in Japan (where far more people are dependent on the jobs generated in high-technology manufacturing industries). It is also interesting to note that the support for items does not necessarily reflect state policies. Thus, high school education receives high support in Japan where the high school education is not compulsory, and lower support in Australia where it is compulsory. Dental treatment receives higher support in Australia where it is not covered by public health insurance, than in Japan where it is.

Despite these ranking similarities, the overall level of support for items being necessary is lower in Japan. Thus, whereas in Australia almost half (29 out of 61) of the items are regarded as necessary by more than 90 per cent of the population, not one item attracts this degree of support for being necessary in Japan. This difference

¹⁹ Both sets of estimates shown in Table 3 have been weighted using population weights in order to obtain a better estimate of what 'the community' (as opposed to sample participants) regard as essential in each country.

in the apparent strength of community agreement about which items are essential may reflect the differences in the wording of the question described earlier and, in particular, the larger number of response options provided in the SLC in Japan.²⁰ In total, 15 of the 61 items in Australia and 22 out of 42 items in Japan fail to receive majority support for being essential, and these items are thus dropped from the analysis. In addition, a number of the items that exceed the majority support threshold in Australia either apply to only specific groups in the community (e.g. mental health services if needed) or cannot be purchased by individuals (e.g. supportive family relationships, or a public telephone). These items have also been removed from the analysis in order to maintain a focus on general needs, and so that the ‘can you afford it?’ filter used to identify deprivation can be applied.^{21 22} When these items are removed, the number of necessities falls from 46 to 26 in Australia and from 20 to 19 in Japan. For ease of comparisons, the final list of deprivation items are shown in italics in Table 3.

²⁰ If the ‘Definitely’ and ‘Better to have but can do without’ options are combined, the percentage support for items being necessary in Japan approaches that in Australia

²¹ For Japan, the item ‘Transportation costs to see friends, family, relatives’ was removed because it overlaps with ‘Attending relative’s weddings, funerals, etc. (including giving gifts)’, both of which received very similar levels of support. Many people in Japan travel once a year to their, or their parents’ or grandparents’ place of birth, mostly on New Year’s Eve or around mid-Summer, when the spirits are said to come home’. This accounts for most family trips.

²² It should be noted that the item ‘Education up to High School level’ was kept in the list of necessities for Japan even though a very similar item was removed from the Australian list because education is free, and thus the ‘can you afford it’ question is not relevant. In contrast, in Japan parents are required to pay for their children to attend high school and even though the percentage of pupils entering high school is very high (around 97 per cent) some poorer families have difficulty paying the tuition fees.

Table 3: Support for Items Being Necessary in Australia and Japan (percentages)

Item (N = 61)	AUSTRALIA	Is it necessary? (%)	Item (N = 42)	JAPAN	Is it necessary? (%)
<i>Medical treatment if needed</i>		99.9	<i>To be able to see a doctor</i>		88.6
<i>Warm clothes and bedding, if it's cold</i>		99.8	<i>To be able to see a dentist</i>		86.8
<i>A substantial meal at least once a day</i>		99.6	<i>Telephone</i>		86.6
<i>Able to buy medicines prescribed by a doctor</i>		99.3	<i>Pension premiums to prepare for retirement</i>		74.0
Access to a local doctor or hospital		99.3	<i>Insurance for death, accidents, illness, etc.</i>		71.9
Disability support services, when needed		99.0	<i>Education up to High School level (*)</i>		71.7
<i>Dental treatment if needed</i>		98.5	<i>Family's own bath (inc. shower)</i>		67.1
To be treated with respect by other people		98.5	<i>Heaters/Coolers (air conditioner etc.)</i>		66.9
Aged care for frail older people		98.0	<i>Books, magazines for children (*)</i>		66.8
To be accepted by others for who you are		97.9	<i>Family's own toilet</i>		65.8
Ability to speak and read English		97.8	<i>Family's own kitchen</i>		64.9
Streets that are safe to walk in at night		97.7	<i>Hot water heater (for kitchen and wash basin)</i>		64.5
Access to mental health services, if needed		97.2	<i>Attending relative's weddings, funerals, etc. (including giving gifts)</i>		58.5
<i>A decent and secure home</i>		97.3	<i>Micro-wave oven</i>		57.9
Safe outdoor space for children to play at or near home		96.1	<i>Transportation cost to see friends, family, relatives</i>		57.8
Supportive family relationships		95.0	<i>New underwear at least once a year</i>		57.5
<i>Children can participate in school activities and outings</i>		94.7	<i>Separate bedroom from the living space</i>		56.9
<i>A yearly dental check-up for children</i>		94.3	<i>Parents participating in school event (*)</i>		55.8
Someone to look after you if you are sick and need help		93.2	<i>To be able to save every months even a little</i>		54.4
Good budgeting skills		92.4	<i>Special suits for occasions (funerals, weddings, etc.)</i>		50.3
A local park or play area for children		92.1	<i>Suits for work and interviews</i>		49.5
<i>A hobby or leisure activity for children</i>		92.5	<i>Multiple bedrooms (for families larger than a couple)</i>		48.1
<i>Regular social contact with other people</i>		92.5	<i>Celebrating a birthday (*)</i>		47.2
<i>A roof and gutters that do not leak</i>		91.5	<i>Pocket money (*)</i>		45.8
Good public transport in the area		92.1	<i>Bicycle (or tricycle) (*)</i>		44.7
Access to a bulk-billing doctor (Medicare)		91.7	<i>Mobile phone (incl. PHS)</i>		40.7
<i>Secure locks on doors and windows</i>		91.6	<i>New Year's celebration (such as Osechi - a special meal for the new year's day)</i>		35.7
<i>Furniture in reasonable condition</i>		89.3	<i>Xmas present (*)</i>		33.9
Access to a bank or building society		90.2	<i>Child's own room (*)</i>		33.7
<i>Damp and mould free walls and floors</i>		90.7	<i>Education up to University or Junior university (*)</i>		33.7
<i>Heating in at least one room of the house</i>		87.4	<i>Fruits at least once a day</i>		33.6
<i>Up to date schoolbooks and new school clothes</i>		88.5	<i>Socializing with others through sports, hobbies</i>		33.4
A public telephone		88.5	<i>Video player</i>		31.5

Table 3 (Continued):

Child care for working parents	86.5	New clothes and shoes every year (not a second-hand) (*)	28.4
Someone to give advice about an important decision	85.4	Toys such as sports equipment and games (*)	26.1
<i>A separate bed for each child</i>	84.0	Participating neighbourhood clubs, women's & child clubs (*)	23.5
<i>A telephone</i>	81.1	Eating out 2,3 times a month	22.6
<i>Up to \$500 in savings for an emergency</i>	81.1	Lessons (hobby, sports, etc.)	21.9
<i>A washing machine</i>	79.4	Family trip of more than 1 night at least once a year	20.8
<i>Home contents insurance</i>	75.1	Access to the internet	18.9
<i>Presents for family or friends at least once a year</i>	71.6	Juku (private tutoring classes)(*)	16.2
<i>Computer skills</i>	68.7	Walkman, CD/MD Player, etc.(*)	14.7
Attended school unit at least year 12 or equivalent	63.4		
<i>Comprehensive motor vehicle insurance</i>	60.2		
<i>A week's holiday away from home each year</i>	52.9		
<i>A television</i>	50.9		
<i>A car</i>	47.8		
<i>A separate bedroom for each child aged over 10</i>	49.1		
<i>Up to \$2000 in savings for an emergency</i>	44.4		
<i>A special meal once a week</i>	35.9		
<i>A spare room for guests to stay over</i>	31.5		
<i>A night out once a fortnight</i>	35.6		
<i>A home computer</i>	25.9		
<i>A mobile phone</i>	23.0		
<i>A clothes dryer</i>	18.9		
<i>Access to the internet at home</i>	19.7		
<i>A printer</i>	18.6		
<i>A DVD</i>	17.2		
<i>An answering machine</i>	12.3		
<i>A dishwasher</i>	7.6		
<i>A fax machine</i>	5.3		

(*) For Japan, items marked with asterisk are selected as "items being Necessary for children in particular"

There are some striking similarities between the two sets of items regarded as necessary by a majority in the two countries. In both countries, access to basic medical (and dental) services when needed appear at the top of the necessities ranking. The largest single grouping of necessities relates to accommodation needs, as captured in the quality and features of the dwelling itself, the facilities it provides and the consumable durables within it. This domain accounts for 9 of the 26 necessities in Australia and 7 of the 19 in Japan. Each list includes similar numbers of items that provide protection against unforeseen or longer-term risks, relate specifically to the needs of children, and facilitate participation in special occasions such as weddings or

annual holidays. Overall, these similarities more than outweigh the differences in the items included in the original two lists (which in part reflect the differing research priorities of two independent studies) and in the detailed necessity rankings themselves.

Table 4 compares the aggregate deprivation incidence rates for those items that satisfy the necessities threshold in each country when applied as described above. These rates express the numbers who indicate that they do not have each item because they cannot afford it as a percentage of those who responded to the relevant questions in each sample. Where the items refer to the needs of a specific sub-group (e.g. children) we assume that those respondents for whom these items are not relevant (e.g. households that do not contain any children) will indicate that while they do not have these items, this is not because they cannot afford them and they will not therefore be identified as deprived given the logic of the deprivation approach.^{23 24} This highlights the important role that the ‘can you afford it?’ question plays, not only in focusing on a lack of resources as the key determinant of deprivation, but also in acting as a filter for items that are irrelevant given the structure of the household.

The average deprivation rate across all items is higher in Australia than in Japan, although the difference is not pronounced. In both countries, deprivation is highest in relation to an inability to afford to save – for emergencies in Australia and on a regular (if modest) basis in Japan – and in the domain of security provision and risk protection more generally. Few people are deprived of medical treatment in either country, although the cost of dental treatment prevents people from accessing this service when needed in Australia. Overall, accommodation deprivation is higher in Australia, particularly in relation to the quality of the dwelling itself. The child-focused items also suggest that deprivation among children is higher in Australia than in Japan, even allowing for the larger number of items appearing in the Australian list of necessities. The highest single rate of deprivation occurs in relation to the lack of

²³ This may not always be the case. Some respondents may have non-dependent (older) children living with them and may indicate that they cannot afford the child-related items. Others may indicate that they cannot afford the items even though, strictly speaking, they do not need them. There are some respondents in these situations in Australia, particularly the former.

²⁴ In Japan, the three questions on children’s needs were asked only to households which contained a child aged less than 12 years old

an annual holiday away in Australia (22.4 per cent), although unfortunately there is no comparable item in Japan.

Table 4: The Overall Incidence of Deprivation (unweighted percentages)

AUSTRALIA		JAPAN	
Domain/Item	Incidence (%)	Domain/Item	Incidence (%)
Health/Basic Needs		Health/Basic Needs	
Medical treatment if needed	2.0	To be able to see a doctor	1.8
Dental treatment if needed	13.9	To be able to see a dentist	2.7
Able to buy prescribed medicines	3.9	New underwear at least once a year	7.4
Warm clothes and bedding	0.2		
A substantial daily meal	1.1		
Accommodation/Facilities		Accommodation/Facilities	
A decent and secure home	6.6	Family's own toilet	1.2
Secure locks on doors & windows	5.1	Family's own kitchen	1.1
Roof and gutters that do not leak	4.6	Hot water heater (for kitchen)	3.4
Furniture in reasonable condition	2.6	Family's own bath (inc. shower)	2.2
Heating in at least one room	1.8	Heaters/coolers	0.9
A washing machine	0.8	Micro-wave oven	1.5
Home contents insurance	9.5	Separate bedroom from living space	4.9
Security/Risk Protection		Security/Risk Protection	
Up to \$500 in emergency savings	17.6	Pension premiums for retirement	4.1
Full motor vehicle insurance	8.6	Insurance for death, illness, etc.	7.8
		To be able to save every month	25.0
Children's Needs		Children's Needs (a)	
Up to date school books & clothes	3.8	Education to High School level	0.6
Children participate in school activities and outings	3.5	Books, magazines for children	0.3
Annual dental check for children	9.1	Parents participate in school events	0.6
A hobby/leisure activity for children	5.7		
A separate bed for each child	1.6		
A separate bedroom for older children	6.1		
Social Functioning		Social Functioning	
Telephone	1.5	Telephone	2.0
Regular social contact with others	4.7	Attending relative's weddings, funerals, etc. (including giving gifts)	2.8
A television	0.2	Special suits for funerals, weddings, etc.	2.4
Presents for family or friends	6.6		
Computer skills	5.2		
Week's holiday away from home	22.4		
Mean Incidence rate (unweighted)	5.8		4.1

(a) For Japan, the children's needs were asked only to households with children aged 12 and less.

Non-monetary indicators II: household deprivation patterns

Having briefly examined the overall patterns of deprivation, we now compare the extent and severity of deprivation across household types. To make this part of the analysis manageable, we focus on four aggregate indicators, the mean deprivation

score (MDS, derived by summing the number of separate deprivation items and then averaging across household types), and the percentages within each group that experience none, at least one and at least two forms of deprivation. The results are shown in Table 5.

Table 5: Deprivation Indicators by Household Type

Household type	Mean score (MDS)	AUSTRALIA			Mean score (MDS)	JAPAN		
		D = 0	D ≥ 1	D ≥ 2		D = 0	D ≥ 1	D ≥ 2
Single, working-age (WA)	2.12	0.48	0.52	0.39	1.80	0.38	0.62	0.33
Single, older person (OP)	1.33	0.62	0.38	0.27	1.35	0.44	0.56	0.26
Couple and other adults, head is WA, no children	1.12	0.66	0.34	0.23	0.59	0.71	0.29	0.11
Couple and other adults, head is OP, no children	0.65	0.75	0.25	0.14	0.58	0.64	0.36	0.11
Couple and other adults, head is WA, with children	1.42	0.60	0.40	0.27	1.41	0.65	0.35	0.16
Sole parent, WA with children	3.86	0.26	0.74	0.59	2.65	0.18	0.82	0.65
Total	1.35	0.62	0.39	0.27	0.73	0.65	0.35	0.15

Notes: See Notes to earlier Tables.

Since the number of deprivation items are different between the two surveys, the comparison of the mean score and the proportion of no or only-one deprivation between Australia and Japan is not very revealing. Instead, it is more interesting to note the similarities and differences in the patterns of deprivation across different households within a country. Despite the differences in the patterns of relative poverty between Australia and Japan, the results reveal a similar pattern of deprivation in terms of who is most affected by it. In both countries, sole parents are the most deprived, followed by working-age single people and working-age households with children. Least deprived are older couples, working-age couples without children, and older single people, in that order. These patterns are similar if either the mean score or the percentage experiencing two or more forms of deprivation is used as the basis of the comparisons, indicating that the results are robust.

Finally, we compare the deprivation patterns shown in Table 5 with the income and poverty comparisons shown in Table 2. There are some marked changes in the rankings, particularly for single working-age people (who show up as far worse on a deprivation basis) and older couple households (who show up far better). In both countries, households with an older head seem to be consistently less deprived than households with similar family composition, even though the poverty rates suggest otherwise. Further, in both countries, households with children show higher rate of deprivation than households without children. These differences may indicate that the living standards of younger people are lower than their poverty rate suggests, while those of older people are higher, but they may also reflect systematic differences in the relevance and applicability of the deprivation items, and in the willingness of people at different stages of the life cycle to reveal that they do not want or cannot afford specific items. Other studies have observed similar patterns in cross-sectional data (e.g. Van den Bosch, 2001; Berthoud, Bryan and Bardarsi, 2004) and this is an issue that warrants further examination.

Overlap analysis

Having shown that the monetary (poverty) and non-monetary (deprivation) indicators produce differences in the rankings of households differentiated on the basis of their age (in broad categories), the overlap between the two indicators. This issue has attracted considerable attention in the poverty literature, where it has been used to identify whether those with low-income are actually experiencing deprivation (Bradshaw and Finch, 2003; Perry, 2002) and to identify ‘consistent poverty’ on the basis of having both an income below the poverty line and experiencing a minimum degree of deprivation (Nolan and Callan, 1989; Nolan and Whelan, 1996). In exploring this issue here, deprivation is defined as experiencing at least two forms of deprivation.²⁵ This produces a deprivation rate in Australia that is close to twice as high as the poverty rate (27 per cent compared to 14.8 per cent), whereas the two rates are much closer in Japan (15 per cent for deprivation and 14.3 per cent for poverty). Although it would have been preferable to select the indicators so that they produce

²⁵ It should also be noted that the samples now differ slightly from those used to derive the earlier results.

similar overall rates, this is not possible when comparing two countries unless it happens by coincidence.

The overlap results in Table 6 show that, in both countries, the overlap between poverty and deprivation implies that ‘consistent poverty’ – the combination of low-income and at least two forms of deprivation – is well below the income poverty rate; 7.7 per cent in Australia and 5.9 per cent in Japan. Without further investigation, it is not possible to be definitive about the factors that explain why both countries start off with very similar poverty rates, yet consistent poverty ends up almost two percentage points lower in Japan than in Australia. One possible explanation is that the greater tendency for people to live in multi-adult, multi-generation households in Japan provides the capacity basis for greater sharing of resources that protects those with poverty-level incomes from being deprived.

Table 6: Overlap Analysis and Consistent Poverty

Household type	AUSTRALIA				JAPAN			
	Poverty rate (P)	Deprivation rate (D) (D ≥ 2)	P and D	Neither P nor D	Poverty rate (P)	Deprivation rate (D) (D ≥ 2)	P and D	Neither P nor D
Single, working-age (WA)	0.108	0.397	0.082	0.577	0.177	0.323	0.139	0.629
Single, older person (OP)	0.116	0.295	0.078	0.667	0.257	0.200	0.114	0.657
Couple and other adults, head is WA, no children	0.138	0.238	0.077	0.702	0.112	0.112	0.043	0.819
Couple and other adults, head is OP, no children	0.231	0.149	0.070	0.690	0.204	0.110	0.045	0.731
Couple and other adults, head is WA, with children	0.115	0.26	0.070	0.690	0.123	0.166	0.061	0.773
Sole parent, WA with children	0.224	0.579	0.140	0.336	0.471	0.647	0.412	0.294
Total	0.145	0.264	0.077	0.668	0.143	0.146	0.059	0.770

Notes: See Notes to earlier Tables.

In Australia, consistent poverty is spread evenly at around 8 per cent across all households, with the exception of sole parents, who face a consistent poverty rate that is approaching twice that of other groups. In contrast, there is greater variability in consistent poverty rates across households in Japan, with sole parents experiencing almost seven times the overall rate, and single people living alone (in both age

groups) facing more than twice the average rate. Japanese households with more than one adult, with or without children, face consistent poverty rates of 6 per cent or less, lower than any group in Australia.

It is to be expected that when this stricter definition of poverty is applied, it results in fewer people being identified as poor. In aggregate, two-thirds of Australian households and over three-quarters of Japanese households are shown to experience neither poverty nor deprivation. There are, however, still marked differences within and between the two countries in the incidence of consistent poverty across the different household types. Sole parent households again show up as facing the highest poverty risks, as do single people living alone in Japan. We also see surprisingly similar results when we examine the percentage of those who are income poor and also deprived. Poor single working-age households are very likely to also be deprived (73 per cent in Australia and 79 per cent in Japan), whereas multiple-adult households where the head is old, are much less likely to be in this situation (30 per cent in Australia and 22 per cent in Japan).

5 Conclusions

This paper has applied a standardised approach to identify necessities and estimate deprivation in two very different countries. The results differ markedly from those based on monetary (income) estimates of well-being, and provide the basis for a more informed understanding of differences in living standards, both within and between countries. Above all, they demonstrate that the deprivation approach can be applied comparatively, and is capable of producing new and illuminating results. Specifically, the paper makes use of two surveys in respective countries which are designed separately but are very similar in nature. The most notable difference between this paper and previous comparative studies of deprivation is that it makes use of two distinct sets of item lists to measure deprivation, each selected using the same 'consensual approach'. Even though the lists of items selected as 'necessities' in the two countries differ in many respects, the paper has shown that many of the findings derived from the comparative analysis using the same list are robust. This is evidence that the deprivation approach can be applied to study variations in living standards in countries with vast cultural differences.

The comparative analysis of deprivation between Australia and Japan confirms some of the findings which have been discovered in previous comparative work, but has also revealed some new findings. First of all, deprivation ranking of household types is strikingly similar between the two countries. In both Australia and Japan, sole parents show up as most deprived, followed by working-age single people and working-age households with children. Least deprived are older couples, working-age couples without children, and older single people, in that order. This is so despite the fact the cohabitation decisions with parents and children are very different between the two countries. Secondly, the deprivation ranking is very different from the poverty ranking. In both countries, working-age households are more deprived than the retired households, and households with children are more deprived than the households without children, even though the poverty ranking is very different between the two countries. These results suggest that using the deprivation approach may be revealing a glimpse into a fundamental and universal nature of poverty, which cannot be seen from just looking at the income-based poverty measures.

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