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A Proposed Multidimensional Framework for
Identifying Socio-Economic Disadvantage

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MELBOURNE INSTITUTE
of Applied Economic and Social Research

Measuring Poverty and Social Exclusion in Australia: A Proposed Multidimensional Framework for Identifying Socio-Economic Disadvantage*

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Abstract

We propose a framework for measuring social exclusion in Australia and discuss a number of issues that need to be resolved in order to arrive at valid and useful indicators or measures. To do this we first provide a general overview of international developments in the measurement of poverty and social disadvantage, examine the meaning of the concept of social exclusion and summarise the various approaches taken by international and Australian studies to measuring social exclusion and identifying the socially excluded. We then outline our proposed framework for the measurement of social exclusion in Australia, identifying and discussing some of the issues that arise in moving from this framework to actual measures, including discussing the limitations imposed by the data currently available in Australia.

1. Introduction

Although average living standards have improved considerably in recent years this does not mean that socio-economic disadvantage has been eliminated. Indeed, income inequality has remained largely unchanged since the mid-1990s (ABS, 2007). There is, however, much debate about the extent and nature of disadvantage in Australia, and how it has been changing in recent times. In particular, debates about what being ‘poor’ or ‘disadvantaged’ actually means persist, especially when it comes to assessing adequate levels of income and material wellbeing. The Henderson poverty line, developed in the 1960s and early 1970s, is no longer widely used, and other income-based approaches to poverty remain contentious. There correspondingly remains no official measure of poverty in Australia, and increased awareness of the conceptual limitations and measurement problems associated with a single income-based measure of poverty means none is likely in the near future.¹ Although value judgements will always be involved in assessments of who is disadvantaged there is clearly a need for better information on the experience of inadequate living standards in the Australian community.² Such information is key to monitoring wellbeing in Australia and is essential to the appropriate formulation and rigorous evaluation of government economic and social policies – be they specifically targeting disadvantage or not.

In recent times, broader concepts of disadvantage have taken over from the more traditional ways of thinking about poverty. One of these approaches is the social inclusion approach taken on by the European Union, and the UK government in particular. Most countries in the European Union (EU) now produce indicators of social exclusion to gauge the region’s progress in improving the circumstances of disadvantaged groups. Indicators typically used to measure the extent of social exclusion relate to health, education, incomes, attachment to the labour market and access to housing and other services. In the UK, the Labour Government

¹ The highly publicised debate in 2001, when the Centre for Independent Studies (Tsumori, Saunders and Hughes, 2002) attacked a report on poverty published by the National Centre for Social and Economic Modelling and The Smith Family (Harding, Lloyd and Greenwell, 2001) highlights how difficult, and contentious, it is to adopt a widely accepted income-based poverty line in Australia.

² Value judgements are required on aspects including determining: how disadvantage is identified and the relevant threshold to apply (i.e. the welfare metric), how to account for differences in needs (i.e. through equivalence scales), the time period of analysis and the unit of analysis.

under former Prime Minister Tony Blair has played a leading role in implementing a social inclusion agenda. Part of this agenda involved establishing a Social Exclusion Unit, which has since evolved into the current Social Exclusion Task Force (SETF) within the UK Cabinet Office, which has played a coordinating role in the government's drive against social exclusion. The new taskforce has been established to ensure that the cross-departmental approach delivers for those most in need.³

These developments have also been followed recently by the Australian federal government's development of a social inclusion agenda, which is to be driven by the new Social Inclusion Unit within the Department of Prime Minister and Cabinet. Although the development of the government's social inclusion agenda is in its initial stages, two guiding principles have been outlined: 'it must tackle the social exclusion of individuals and communities; and it must invest in the human capital of all our people, especially the most disadvantaged' (Gillard, 2007).

But what is the extent of social exclusion in Australia? And how do we know if the government's efforts have translated to real effects? This paper proposes a framework for measuring social exclusion in Australia and discusses a number of issues that need to be resolved in order to arrive at valid and useful indicators or measures. To do this we first provide a general overview of the developments in the measurement of poverty and of social disadvantage in the following section. The concept of social exclusion is then discussed in Section 3. A summary of the various approaches taken to measuring social exclusion and identifying the socially excluded is presented in Section 4. In Section 5, we outline our proposed framework for the measurement of social exclusion in Australia, and in Section 6 identify and discuss some of the issues in moving from this framework to actual measures. Data available is briefly reviewed in Section 7. Section 8 concludes.

³ More detail on the Social Exclusion Taskforce can be found at:
http://www.cabinetoffice.gov.uk/social_exclusion_task_force.aspx [viewed 29 August 2008]

2. Traditional approaches to measuring socio-economic disadvantage

The concept of poverty, or socio-economic disadvantage, has always been recognised as having multiple dimensions. However, traditionally, attempts to measure disadvantage have primarily focused on resource-based, and more particularly income-based, measures. The premise behind resource-based measures of disadvantage is that some minimum level of resources is required in order for people to attain an ‘acceptable’ standard of living. The focus on income reflects the view that this is the best indicator of the resources available to an individual, as well as the practical consideration that it is typically easier to obtain household income information than information on other types of resources, or indeed other (non-resource) dimensions of poverty. Household income is regularly measured for representative samples of households in all developed countries, whereas most other dimensions of poverty are measured infrequently or not at all.

In developing countries, the minimum benchmark tends to be an absolute measure capturing the very basic requirements for survival, generally based on meeting basic nutritional requirements and securing adequate shelter. In developed nations such as Australia, where absolute deprivation of basic necessities for survival is not a significant problem, it is generally accepted that some form of relative poverty measure is appropriate. That is, the poverty threshold, or ‘minimum acceptable standard of living’, is an increasing function of ‘average’ living standards in the community. As the general standard of living rises, so too does this minimum. For example, a common standard for income poverty is 60% of median income (e.g., OECD, 2007), whereby a person is classified as in income poverty if her household income is less than 60% of the median (with household income typically adjusted for household size to produce a ‘per adult equivalent’ household income). Relative income poverty measures are closely related to the social exclusion conception of poverty, because they are based on the notion of poverty as inability to participate in society at an acceptable level. Relative poverty measures are, however, somewhat contentious, and indeed the official US income poverty measure has remained at the same absolute standard for decades.

Income deprivation

The oldest and most widely used measure of poverty is one of income deprivation, but consumption-based measures are also sometimes used to avoid problems apparent with

transitory income fluctuations. The first widely accepted income poverty line in Australia was that set by Ronald Henderson in the 1960s and early 1970s. The poverty line was set at the disposable income required to support the basic needs of a family of two adults and two dependant children. Poverty lines for other types of family are derived from the benchmark using a set of equivalence scales. The poverty lines are updated to periods subsequent to the benchmark date using an index of per capita household disposable income.⁴

Alongside the Henderson poverty line, other income poverty lines have been commonly used in Australian poverty research. The poverty lines use some fraction of average (usually median) income, such as the 60% fraction mentioned above, as the benchmark.

There are a number of problems with income poverty measures and they have been extensively discussed in Australia. Perhaps in part reflecting these problems, there remains no formal measure of poverty in Australia. The recent debate between the Centre for Independent Studies and NATSEM, and later comments by the Social Policy Research Centre, provide a good example of how difficult and contentious it is to adopt a widely accepted income-based poverty line in the current economic and political climate.

Basic needs

The basic needs concept of poverty takes the income approach one step further. It defines poverty as the deprivation of requirements, mainly material, for meeting basic human needs. For an example of this approach taken in Australia see Saunders *et al.* (1998). The approach attempts to address some of the limitations of the income indicator family of measures by distinguishing between private income, publicly provided services and different forms of non-monetary 'income'. The basic needs approach to poverty measurement includes access to such necessities as food, shelter, schooling, health services, potable water and sanitation facilities, employment opportunities, and even touches on opportunities for community participation.

Relative deprivation

Rather than focusing solely on incomes, Townsend developed the idea of relative deprivation where people in poverty, 'Lack the resources to obtain the types of diet, participate in the

⁴ A detailed description of the calculation and use of poverty lines is published in Johnson 1987.

activities, and have the living conditions and amenities which are customary, or at least widely encouraged and approved, in the societies to which they belong.’ (Townsend, 1979: p.31) It is perhaps in Townsend’s notion of relative deprivation where the multi-dimensional nature of deprivation becomes more apparent in measurement studies, particularly in the UK and EU. It is from this base that the concept, and measurement, of social exclusion was developed.

3. The concept of ‘social exclusion’

3.1 Defining the concept: What does it mean to be ‘socially excluded’?

One of the main approaches to disadvantage followed in Europe, and now followed by the new Australian government, is to think of deprivation as social exclusion (Jones and Smyth, 1999; Gillard, 2007). Lack of resources and/or inadequate access to services makes it difficult for individuals or groups to participate in society. The formal concept of social exclusion originated in the 1970s in France referring to the population unprotected by the French social security system and was rooted in the tradition of social solidarity. The concept has since grown, being taken up by most of Europe, and is currently used to refer to the range of dimensions which marginalise people and reduce their opportunities to engage in social or political life.

In Europe social exclusion has become an important goal of social and economic policy. Organisations such as the Centre for Social Exclusion at the London School of Economics have made a significant contribution in advancing the conceptual basis of social exclusion and in its operationalisation. The UK government’s Social Exclusion Unit (SEU) has defined social exclusion as ‘a short-hand term for what can happen when people or areas suffer from a combination of linked problems such as unemployment, poor skills, high crime environment, bad health and family breakdown’ (SEU, 2001: p.10). The EU Task Force has similarly called for social exclusion to be analysed as ‘the problem field determined by the link between low income position, bad labour market position and disadvantages concerning non-monetary aspects of life’ (Eurostat, 2000: p.33). The Commission’s recent report on Income, Poverty and Social Exclusion consequently looks explicitly at the share of the poor who are deprived in other spheres (Eurostat, 2000).

As pointed out by Levitas (2000), the SEU's definition talks about what *can* happen when certain conditions arise, but does not actually state what *does* happen, and therefore sidesteps the issue of what actually constitutes social exclusion. Burchardt (2000) proposes a more precise, albeit more abstract, definition:

An individual is socially excluded if he or she does not participate to a reasonable degree over time in certain activities of his or her society, and (a) this is for reasons beyond his or her control, and (b) he or she would like to participate. (Burchardt, 2000)

Tsakloglou and Papadopoulos (2002), citing Room (1995), Atkinson (1998), Sen (2000) and Atkinson *et al.* (2002), suggest a consensus has formed around the following key elements of social exclusion:

1. Multidimensional: implies deprivation in a wide range of indicators of living standards. Usually, this deprivation has a neighbourhood dimension, since it can be caused not only by lack of personal resources but also by insufficient or unsatisfactory community resources.⁵
2. Dynamic: that people are excluded not just because of their current situation, but also because they have little prospect for the future.
3. Is purely relative: as it implies exclusion in a particular society at a particular point in time.
4. Recognises agency: in the sense that social exclusion lies beyond the narrow responsibility of the individual.
5. Is relational – in the sense that it implies a major discontinuity in the relationship of the individual with the rest of society, inadequate social participation, lack of social integration and lack of power.

Notions of exclusion suggest that the cumulative impact of individuals' lack of resources acts as a critical barrier to integration, often leading to intergenerational transfer of disadvantage.

⁵ Note, however, that there is some disagreement about whether individuals require multiple 'problems' to be regarded as socially excluded. For example, the SEU and EU approaches conceive of social exclusion as individuals facing a combination of problems, whereas Burchardt *et al.* (2002) argue that lack of participation in any one of the four 'key activities' they identify is sufficient for social exclusion (although they do also investigate the extent of exclusion on multiple dimensions).

The concept of social exclusion has increasingly been integrated with another popular multidimensional approach to conceptualising disadvantage, Nobel Prize winning economist Amartya Sen's notion of capability deprivation (Sen, 1999). Sen argues that what matter are individuals' *freedoms* – for example, freedom to live long and healthy lives, freedom to economically, politically and socially participate in society, and freedom from violence – and that therefore poverty should be viewed as not simply a situation of low income, but rather a situation of deprivation of freedoms, or *capabilities* to choose *functionings*. Sen identifies five types of freedoms: political freedoms, economic facilities, social opportunities, transparency guarantees and protective security. While resources such as income are important to achieving these freedoms, so are many other factors. The income required will depend on the circumstances of the individual, such as whether the individual has a disability or not, and can in fact be irrelevant to some freedoms, such as basic human rights. This notion of 'capability poverty' is entirely consistent with the concept of social exclusion. As Sen himself notes, '(s)ocial exclusion can ... be constitutively a part of capability deprivation as well as instrumentally a cause of diverse capability failures' (Sen, 2000).⁶

It is the integration of these two approaches, social exclusion and capability deprivation, that have been instrumental in directing the social exclusion agenda in Australia. Drawing from the international and Australian developments in the concept of social exclusion, the Brotherhood of St Laurence's Executive Director Tony Nicholson and a member of the government's Social Inclusion Board has proposed the following approach to social exclusion:

A social inclusion approach involves the building of personal capacities and material resources, in order to fulfil one's potential for economic and social participation, and thereby a life of common dignity. (Nicholson, 2008)

Nicholson stresses the notion of building *personal capacities* – health, education social networks, *material resources* – adequate housing, transport, income and access to services,

⁶ Sen (1999) notes that in practice capabilities are for the most part not observable, and '...the assessment of capabilities has to proceed primarily on the basis of observing a person's actual functionings.' Sen goes on to say that while "...there is a jump here (from functionings to capabilities)...it need not be a big jump, if only because the valuation of actual functionings is one way of assessing how a person values the options she has..." and '...even with the informational focus confined to functionings (longevity, health status, literacy, and so on), we get a more instructive measure of deprivation than we get from income statistics alone.'

and to fulfil *potential for economic – work- and social participation* – recreational, cultural, sporting and everyday living activities, and thereby a socially valued lifestyle.

Finally, the Australian Government's interpretation is perhaps summarised by the following statement by Deputy Prime Minister Julia Gillard:

From the Government's perspective, social inclusion means coordinating policies across national, state and local governments and with the community sector to ensure no Australian is excluded from meaningful participation in the mainstream economic and social life of the country. It won't be an easy task. Especially as many of the socially excluded suffer serious and multiple disadvantages that are difficult to address, and have specific problems which do not always command public sympathy. (ACOSS National Conference, 10 April 2008).

3.2 Why is measuring social exclusion important?

It is self-evident that it is important for governments to have a gauge of the wellbeing of their citizens. However, common aggregate measures of living standards, such as Gross Domestic Product per capita, provide only partial information and need to be supplemented with indicators of how these resources and the opportunities associated with these resources are being distributed. In any discussion about social disadvantage, or in this case social exclusion, it is therefore essential to know how many people are disadvantaged, or excluded, who these people are, and the nature of their disadvantage. Having a robust measure of social exclusion also provides a baseline from which to identify whether governments' social exclusion policies are working and enables stakeholders to benchmark and monitor performance. It also enables governments to monitor developments across countries.

A social exclusion approach provides a more satisfactory basis for identifying disadvantage than does traditional poverty measurement. Social exclusion measures more explicitly capture the multi-dimensional aspect of social disadvantage than do measures of income poverty. As Whiteford (2001) explains, "...European debates about social exclusion are more concerned with social relations and ruptures in the social contract. They are also implicitly focused on sub-sets of the low-income population who are distinguished within themselves and from the 'mainstream' by location, attitudes and behaviour. Not all low-income people are excluded from society, nor do all excluded people have low income."

In the next section we outline a range of studies that have attempted to measure social exclusion. As the take-up of the concept of social exclusion has been more recent in Australia,

we first outline some of the major international (and in fact European) studies of social exclusion, and then turn to the more limited Australian studies conducted to date.

4. Studies and Currently-Used Measures of Social Exclusion

4.1 International studies

The Centre for Analysis of Social Exclusion

The Centre for the Analysis of Social Exclusion (CASE), based at the London School of Economics, has in recent years been instrumental in defining the concept of social exclusion and its measurement. Burchardt, Le Grand and Piachaud (1999) began work with CASE adopting an ‘outcome based’ definition of social exclusion. The outcomes considered were participation in five types of activity - consumption, savings, production, political engagement and social. Indicators used by the authors for each of these domains are summarised in Table 1.⁷ In this study, poor health and education were seen as factors which might contribute to exclusion in one of the five areas, but were not seen as outcome measures in themselves. In this early work of Burchardt *et al.* (1999), the British Household Panel Survey (BHPS), a population based longitudinal survey of British households, was used to measure the extent of social exclusion in the UK from 1991- 1995 across the five dimensions proposed. These five dimensions have remained the focus of the work of CASE, with more recent research by Burchardt, Le Grand and Piachaud (2002) narrowing the focus to the following four dimensions:

1. Consumption: Capacity to buy goods and services.
2. Production: Participation in economically or socially valued activities, including not just work but also socially useful roles that are performed outside the labour market, such as caring (for children or others), education, and retirement in old age.

⁷ Note that in the table we have adapted the domains to be relevant across the range of studies examined.

3. Political engagement: Involvement in local or national decision making, including not only voting, but also membership of campaigning organisations, such as tenants associations or trade unions.
4. Social: Relationships.

In further research examining regional variations in wellbeing and exclusion across the EU, Stewart (2002) builds on the measures developed by her colleagues at CASE, examining the following five dimensions of wellbeing and exclusion: material wellbeing; health; education and literacy; and participation in two spheres – productive and social.

The indicators used by Stewart include those used (or some variant of the indicators used) by Burchardt, Le Grand and Piachaud (1999), adding indicators of housing quality, the share of the adult population with low educational attainment, the share of 17 year olds in full-time education, the infant mortality rate, the standardised mortality rate, and a self assessed health measure.

Researchers at CASE are currently developing the link between social exclusion and capability deprivation with a focus on operationalising Sen's capability approach through the measurement of capability deprivation in the UK.

Table 1 Selected studies of social exclusion: Domains/themes and corresponding indicators

	CASE: Burchardt, Le Grand and Piachaud (1999)	European Union: Laeken indicators	UK government: Opportunities for all	New Policy Institute: Monitoring poverty and social exclusion	Millennium survey of PSE: Gordon (2000) and Pantazis (2006)	Community Understanding of PSE: Saunders <i>et al.</i> (2007)
Domain/theme	Indicators of social exclusion	Indicators of poverty and social exclusion	Indicators of poverty and social exclusion	Indicators of poverty and social exclusion	Indicators of poverty and social exclusion	Indicators of social exclusion
Material/ economic resources	Income under half mean equivalised household income (relative poverty rate) Not an owner-occupier, not contributing to or receiving an occupational or personal pension, and no savings over £2,000	Income under 60% median equivalised household income (relative poverty rate) Persistent poverty Depth of poverty Dispersion around poverty line* Poverty rate anchored at point in time* At risk of poverty rate before transfers* Persistent poverty rate based on 50% median income* 80/20 percentile ratio Gini coefficient*	Income under 60% median equivalised household income (relative poverty rate) Persistent poverty Absolute poverty Long term benefit recipients	Income under 60% median equivalised household income (relative poverty rate) Poverty rate after housing costs Persistent poverty Income inequality using a range of percentile ratios Cannot afford a range of essential items or activities (eg.s include household contents insurance, friends/family round for drink or a meal at least once a month) Lacking consumer durables Level of out-of-work benefits relative to earnings	Income under 60% median equivalised household income (relative poverty rate) Subjective poverty Lack of socially perceived necessities (using consensual poverty method)	Couldn't keep up with payments for water, electricity, gas or telephone in the last 12 months Does not have \$500 in savings for use in an emergency Had to pawn or sell something, or borrow money in the last 12 months Could not raise \$2000 in a week Does not have more than \$50,000 worth of assets Has not spent \$100 on a special treat for a special treat for myself in the last 12 months Does not have enough to get by on
Economic participation	Not in employment or self-employment, fulltime education or training, looking after children, or retired over pensionable age	Long term unemployment rate Percentage of people living in jobless households Coefficient of variation of regional employment rates Long term unemployment share* Very long term unemployment rate (> 24 mths)*	Employment rate Workless household rate	Out of work benefit recipients Long term recipients of benefits In receipt of tax credits Percentage of people living in jobless households Unemployment rate Population wanting paid work Low pay Pay inequalities Job insecurity Access to training	Non-participation Jobless households	Unemployed or looking for work Lives in a jobless household
Education/ knowledge	—	Early school leavers not in further education/training Persons with low educational attainment*	Persons with low educational attainment Attainment at a range of ages Truancies School exclusions	Early school leavers not in further education/training Persons with low educational attainment Permanent school exclusions	—	Children do not participate in school activities or outings
Health and wellbeing	—	Life expectancy at birth Self perceived health status by income level	Infant mortality Life expectancy Child protection re-notifications Teen pregnancy Use of illicit drugs Smoking rates	Low birth weight Infant deaths Dental health Accidents Youth suicide Youth drug use	—	—

			Death rates from suicide and undetermined injury	Premature deaths Longstanding illness/disability At risk of mental illness Obesity Dental health among children		
Social relations/ participation	If lacks someone who will offer support in one of 5 respects (listen, help in crisis, can relax with, really appreciates you, can count on to comfort)	—	—		Non-participation in common social activities The extent of people's social networks and the extent to which they are socially isolated The support available to individuals on a routine basis and in times of crisis Confinement, resulting from fear of crime, disability or other factors	No regular social contact with anyone Does not have a social life No annual week's holiday away from home No hobby or leisure activity for children Could not go out with friends and pay my way in the last 12 months Unable to attend wedding or funeral in the last 12 months
Political or community participation	Did not vote in the 1992 general election or not member of political or campaigning organisation	—	—	Non participation in any social, political, cultural or community organisations#	Disengagement from political and civic activity	Did not participate in any community activities in last 12 months
Living environment		—	Rough sleepers Non decent homes	Without central heating Non decent homes Energy inefficient homes Fuel poverty Homelessness Overcrowding Unmet housing need Mortgage arrears Housing benefit Polarisation of housing tenure# Dissatisfaction with local area#		—
Access to services		—	Older people receiving intensive home care and receiving any community-based service	Without bank account Without home contents insurance Without a car	Exclusion from an extensive range of public and private services due to inadequacy, unavailability or unaffordability	Couldn't get to an important event because of lack of transport in last 12 months Lack of access to: medical treatment if needed, a local doctor or hospital, dental treatment if needed, a bulk-billing doctor, mental health services, child care for working parents, aged care for frail older people, disability support services, bank or building society
Personal safety		—	Older people with fear of crime Rate of domestic burglary	Victims of crime#		

Notes: * Secondary indicators. # These indicators have been categorised as measures of 'social cohesion' in the study. Other indicators of social cohesion included teenage pregnancies, young people with a criminal record, and children in care.

European Union – Laeken

A decision to focus on the eradication of poverty led to the European Union’s development of the European Social Inclusion Strategy as part of the Lisbon Agenda in 2000. As part of this strategy a set of economic and social indicators were endorsed by Heads of State and Government of countries in the European Union (EU), referred to as the ‘Laeken indicators’, were developed to be used as measuring tools in the fight against poverty and social exclusion at the EU level.

The list of Laeken indicators, outlined in Table 1, include ten ‘primary’ indicators based around the four domains of material/economic resources, economic participation, education/knowledge and health. A range of ‘secondary’ indicators are also provided covering the same areas as the primary indicators but providing additional depth, detail and robustness checks. Indicators are included for the distribution of income, poverty incidence and persistence, the poverty gap, long term unemployment, jobless households, early school leavers, life expectancy and self-assessed health. It was decided that appropriate ‘tertiary’ indicators be developed at national level.

Housing quality and social participation were two major areas highlighted to be developed to generate accurate cross-country comparative measures (Social Protection Committee 2001 and Atkinson *et al.* 2002).

UK government

Since 1999, the UK government has conducted an annual overview of a range of indicators of poverty and social exclusion in its ‘Opportunity for All’ series. The indicators are organised according to stages of the life-cycle with sets of indicators for children and young people, working-age people and older people. There are also a set of communities indicators.

There are currently 198 indicators available via the Department for Work and Pensions website (<http://www.dwp.gov.uk/ofa>) with a report outlining major trends published annually. The major sets of current indicators are summarised in Table 1. The indicators are based on those agreed to by the EU, with significant efforts made to include an extensive range of tertiary indicators. The information relies on a range of government and non-government data sources.

More recently, the UK government has established a Social Exclusion Task Force (SETF) within the UK Cabinet Office ‘...to coordinate the Government's drive against social exclusion, ensuring that the cross-departmental approach delivers for those most in need.’ (http://www.cabinetoffice.gov.uk/social_exclusion.aspx) The SETF has commissioned further research developing the definition and measurement of social exclusion across the UK. The latest offering from this work is a comprehensive overview of developments in the measurement of social exclusion by Levitas *et al.* (2007). This recent work of Levitas and her colleagues proposes a considered and refined list of dimensions of social exclusion, termed the Bristol Social Exclusion Matrix (B-SEM). The proposed B-SEM measures are presented in Table 2.

The B-SEM measures are arranged around three broad areas: resources (including measures of material and economic resources; access to public and private services; and social resources); participation (including measures of economic participation; social participation; culture, education and skills, and political and civic participation; and quality of life (including measures of health and well-being; the living environment and crime, harm and criminalisation). Levitas *et al.* propose a range of themes relating to one of five life cycle stages: children, young people aged 16-24 years, working age adults, older people 50 to 65 years and older people 65 years plus.

As of writing, there has been no published application of B-SEM to measure social exclusion in the UK. However, the authors did conduct a comprehensive analysis of existing datasets to which the B-SEM framework could be applied in order to examine the availability of measures within existing data sources. A number of limitations and gaps were identified.

Table 2 B-SEM measures of social exclusion

	Themes	Sub-Theme
RESOURCES	Material or economic resources	Estimated total household income Components of household income Possession of necessities Home ownership Other assets and savings Debt Subjective Poverty
	Access to public and private services	Public services Utilities Transport Private services Access to financial services (includes access to a bank account)
	Social resources	Institutionalisation/ separation from family Social support (affective and instrumental) Frequency and quality of contact with family members/friends/co-workers
PARTICIPATION	Economic participation	Paid work - employed, self-employed, unemployed, non-employed Providing unpaid care Undertaking unpaid work Nature of working life (includes type of work undertaken, full-time/part-time status) Quality of working life (anti-social hours, nature of contract, leave entitlement, flexible working arrangements, workplace injuries)
	Social participation	Participation in common social activities including performing social roles
	Culture, education, skills	Basic skills (literacy, numeracy, English language competency) Educational attainment Access to education (includes school exclusion and access to lifelong learning) Cultural leisure activities Internet access
	Political and civic participation	Citizenship status Enfranchisement (includes voter registration, entitlement and turnout) Political participation Civic efficacy (e.g. feeling able to affect decisions) Civic participation and voluntary activity/membership (including m/ship of faith groups)
QUALITY OF LIFE	Health and wellbeing	Physical health and exercise Mental health Disability Life satisfaction Personal development (including for children, but not only for them) Self-esteem/personal efficacy Vulnerability to stigma (incl. long-term receipt of means tested benefits) Self-harm and substance misuse (includes alcohol)
	Living environment	Housing Quality Homelessness Neighbourhood safety (includes traffic, atmospheric pollution, noise pollution) Neighbourhood satisfaction Access to open space
	Crime, harm and criminalisation	Objective safety/victimisation (includes actual and risk of abuse within the home) Subjective safety (includes perceptions of safety within home and outside) Exposure to bullying and harassment Discrimination Criminal record Anti-social behaviour Imprisonment

Source: Levitas *et al.* (2007), Appendix 7.

New Policy Institute

The New Policy Institute, with the sponsorship of the Joseph Rowntree Foundation, has been publishing its Monitoring poverty and social exclusion series since 1998, with publication of an annual report and a wider range of indicators of poverty and social exclusion across the UK on 'The Poverty Site' at www.poverty.org.uk.

The indicators presented are similar to those outlined in the UK government's 'Opportunity for All' reports, with a list of the major indicators presented summarised in Table 1. Indicators cover the following major domains: income, work, low pay, education, health, housing, services and social cohesion.

Some indicators are population based; others are presented for the key life cycle stage that they are most relevant for, with indicators for children, young adults, working age and older people presented. Indicators are also available at the regional level, with individual reports available for Scotland, Wales and Northern Ireland, and they are also produced broken down by ethnicity and disability status.

Millennium Survey of Poverty and Social Exclusion

The international attempts to measure social exclusion discussed to this point have used existing data sources to formulate their measures. These data were collected with no explicit focus on measuring social exclusion. The Millennium Survey of Poverty and Social Exclusion (PSE) has the distinction of being the first attempt to conduct a nationally representative survey with the specific aim of measuring poverty and social exclusion. The survey was conducted in 1999 as a one off cross-section. A population-wide sample was surveyed about the necessities of life. A sub-sample of this group, over-sampling low-income persons, was then selected for a follow-up survey that asked respondents whether they (and their children) went without items and social activities through choice or lack of money. An extensive range of other aspects of social exclusion were also covered in the survey.

Explained in more detail in Gordon *et al.* (2000) and Pantazis, Gordon & Levitas (2006) and summarised in Table 1, the PSE approach distinguished four dimensions of social exclusion:

1. Impoverishment (exclusion from adequate income or resources):
 - Income poverty
 - Subjective poverty

- Lack of socially perceived necessities – consensual poverty method which establishes items and activities perceived by the public as necessities of life, identifies those who lacked these necessities because of affordability, and determines the levels of household income at which people run a greater risk of not being able to afford the socially perceived necessities.
2. Labour market exclusion (exclusion from paid work):
- Non-participation
 - Jobless households
3. Service exclusion (exclusion from public and private services):
- Respondents were asked how essential they considered a wide range of services including: libraries; public sports facilities, museums and galleries; evening classes; public/community/village hall, hospital with an Accident & Emergency (A&E) department; doctor; dentist; optician; post office; places of worship; bus services; train/tube station; petrol stations; chemists; corner shop; access to medium to large supermarkets; access to banks and building societies; pub; cinema or theatre; facilities for children to play safely nearby; school meals; youth clubs; after-school clubs; public transport to school; nurseries, playgroups, mother and toddler groups; availability of home help; availability of Meals on Wheels; and special transport for those with mobility problems.
 - Respondents were then asked whether they used these services and, if not, whether this was due to inadequacy, unavailability or unaffordability.
4. Exclusion from social relations:
- Non-participation in common social activities.
 - The extent of people’s social networks and the extent to which they are socially isolated.
 - The support available to individuals on a routine basis and in times of crisis.
 - Disengagement from political and civic activity.
 - Confinement, resulting from fear of crime, disability or other factors.

The analyses of the PSE did not result in any overall estimate of the numbers of socially excluded people in the UK, and attempts were not made to weight the indicators in any way. The degree of exclusion was however considered by examining exclusion across eight dimensions: poverty, lack of paid work, living in a jobless household, service exclusion, non-participation in social activities, social isolation, poor social support, and civil and political

disengagement. The majority of the population was found to be socially excluded on at least one indicator and just under one-quarter of the population (22%) were excluded on four or more dimensions.

Other unique features of PSE are that it included direct measures of children's social and material deprivation and it examined how resources are shared within households. Further analyses were also conducted on poverty and social exclusion among young people (Fahmy, 2006) and among older people (Patsios *et al.*, 2006).

While the survey did provide for extensive measurement of social exclusion, limitations of the survey identified by Levitas *et al.* (2007) included a small sample size relative to the other population-based data sources, a low response rate, and no longitudinal component to the survey, with the 1999 survey a single cross-sectional survey that has not been repeated.

4.2 Australian studies

Australian interest in social exclusion and its measurement has accelerated considerably following the creation of a Social Inclusion Unit with the Department of Prime Minister and Cabinet.⁸ This is, however, a very recent innovation, and conceptual and empirical work on social exclusion in Australia very much lags behind that undertaken in Europe. Indeed, possibly the first significant work on measuring social exclusion was The Community Understanding of Poverty and Social Exclusion Survey (CUPSE). The survey was conducted by researchers from the Social Policy Research Centre at the University of NSW in 2006, with support from a range of community sector organisations and the Australian Council of Social Services (see Saunders *et al.*, 2007). CUPSE followed the UK PSE in that its specific purpose was to collect information on poverty, deprivation and social exclusion in Australia. As with PSE, CUPSE was a single cross-sectional survey of the general population, followed by a further survey of a sub-sample that over-sampled clients using community sector welfare services.

CUPSE identified social exclusion in three forms:

- Disengagement: Lack of participation in social and community activities.

⁸ We do note, however, that the South Australian government established a Social Inclusion Unit within the Department of Premier and Cabinet in 2002.

- Service exclusion: Lack of adequate access to key services when needed.
- Economic exclusion: Restricted access to economic resources and low economic capacity.

The 27 indicators formed around these notions of exclusion are summarised in Table 1.

CUPSE shares both its strengths and limitations with the UK PSE. It provides for extensive measurement of poverty, deprivation and social exclusion and analysis of the relationship between each measure of disadvantage. A small sample size relative to other population-based data sources and a low response rate are the major limitations of the survey. The one-off cross-sectional nature of the survey is also a limitation. However, there are indications that there are plans to conduct follow-up surveys with the original sample, which would provide a longitudinal component to the survey.

Others who have measured social exclusion in Australia include Headey (2006) and NATSEM. In proposing a new multidimensional framework for the measurement of poverty in Australia, Headey (2006) noted that although the concepts of capability deprivation, material deprivation and social exclusion differ, ‘when it comes to measurement, they overlap to a large degree’. It is on this basis that the resulting indicators of ‘poverty’ or ‘low capabilities’ are considered to be indicators of social exclusion. There were, however, no attempts made by Headey to address the implications of the different conceptual bases of the approaches for their operationalisation. Likewise, the NATSEM child social exclusion index, developed in Tanton *et al.* (2006), is limited in its ability to fully operationalise social exclusion across a range of dimensions because of the limited information available in the data source used, the Census. However, a major strength of the NATSEM research is that measures are available across local areas, thus providing a spatial picture of exclusion across Australia.

5. A framework for measuring poverty and social exclusion in Australia

In part stimulated by the new Australian Government’s social inclusion agenda, the Brotherhood of St Laurence and the Melbourne Institute of Applied Economic and Social Research are working in partnership to establish a new measure of socio-economic disadvantage to determine the extent of social exclusion that is occurring in Australian society. Both organisations have a long history of involvement with the measurement and

alleviation of poverty. The Brotherhood of St Laurence is a Melbourne-based community organisation that has been working to reduce poverty in Australia since the 1930s. Its work includes direct service provision to people in need, research to better understand the causes and effects of poverty in Australia, and the development of policy solutions at both national and local levels. The Melbourne Institute was established in 1966 under the leadership of Professor Ronald Henderson, the pioneer of poverty research Australia, and has produced *Poverty Lines: Australia* since 1973. The proposed measure of social exclusion will continue this tradition, and more particularly, will build on the Brotherhood of St Laurence's Social barometer series and recent research conducted at the Melbourne Institute on poverty and socio-economic disadvantage (e.g., Headey, 2006)

In a recent speech reflecting on the current state of disadvantage in Australia, Ken Henry, the Secretary to the Treasury, stated:

...the distributional goals of government must relate to a much broader concept of prosperity or wellbeing; one that goes well beyond standard inequality measures, or poverty lines constructs, based on crude statistical measures of dispersion around mean or median income. These traditional income based measures of poverty and disadvantage are just too simplistic for the task. The dispersion of money income is of consequence, to be sure, but it is not enough. (Henry 2007)

The Brotherhood and the Melbourne Institute are keen to develop an aggregate indicator of social exclusion that captures the degree to which Australians have the essential capabilities to fully participate in the social and economic life of the country. We wish to be able to regularly report on the nation's progress in strengthening these core capabilities and hence in reducing disadvantage and social exclusion over time.

In this way, such a measure will supplement what Henry has rightly described as the 'simplistic' current indicators of poverty and inequality. We believe that the proposed Indicator could make an important contribution to community understanding and policy debate in the future.

5.1 A proposed framework for Australia

Our approach builds on work for Australia by Headey (2006) and is strongly influenced by recent international work on social exclusion, and in particular the B-SEM framework outlined in Section 4, which contains the most comprehensive suite of indicators of social

exclusion. Fundamentally motivating our approach is the goal of a better measure of the *extent* of socio-economic deprivation in Australia. Thus, the focus is on measures that capture participation in society, or the ability to participate. We emphasise that we are not aiming to understand causal relationships in this analysis, although we hope that the framework helps facilitate further analyses of these causal relationships in the future.

Our proposed framework, described in Table 3, distinguishes seven ‘life domains’ for the measurement of social exclusion: (1) material resources; (2) employment; (3) education and skills; (4) health and disability; (5) social; (6) community; and (7) personal safety. In contrast to B-SEM, we do not make distinctions between ‘resources’, ‘participation’ and ‘quality of life’, since in our view most indicators in B-SEM can be classified into at least two of these three areas. The B-SEM classification system also has the potential to be misleading. Indicators in the ‘resources’ area might be construed as measuring *sources* of exclusion, and indicators in the ‘quality of life’ area might be interpreted as measuring *consequences* of exclusion, leaving only the ‘participation’ area as providing measures of the experience of exclusion. In fact, all indicators in our (and B-SEM’s) framework are intended to be measures of the fact of exclusion, or (involuntary) non-participation in society. That is, while an indicator may provide information on the causes or subsequent consequences of social exclusion, it belongs in the framework only if it improves information on whether a person is socially excluded.

Table 3 lists the proposed specific components of each domain for which indicators or measures of social exclusion would be produced. Considerations in choosing these components include measurability, objectivity and parsimony, as well as the less scientific consideration of correspondence to community notions of social exclusion (as assessed by the authors). These considerations, and in particular the desire for parsimony, have resulted in a reduced total number of proposed components compared with B-SEM. However, this has been achieved while still preserving the multidimensional essence of social exclusion that the B-SEM framework and other studies of social exclusion are trying to capture. For instance, as detailed below, we have replaced B-SEM’s three measures of asset or wealth exclusion – home ownership, other assets and savings, and debt – with a measure of total household net worth. Following a similar logic, other components were omitted if it was felt that the dimension was already captured by another proposed component. For instance, self-harm and substance misuse should be reflected in measures of physical and mental health.

The first domain, material resources, is perhaps the most obvious one, a lack of such resources having considerable overlap with the income poverty conception of disadvantage. Specific components in the material resources domain that are proposed be examined comprise household income, household net worth, household consumption expenditure, long-term receipt of government income support and experience of homelessness, financial hardship and subjective poverty.⁹ The employment domain could potentially be included as part of material resources, but is treated as a separate category because it has importance to social inclusion independent of the financial benefits. Most notably, unemployment is associated with adverse effects that extend beyond lack of income. For this domain, measures of participation in paid work, unpaid work and care of others are to be produced.

Education and skills (the third domain) provide information on an individual's human capital. We propose that indicators for level of education attainment and for basic skills, such as literacy and numeracy, be constructed to capture this dimension of exclusion. Health and disability can also be conceived as representing a form of human capital, but they can contribute to social exclusion in other ways. For example, in addition to adversely impacting on productivity, disability can raise the costs of achieving a given level of inclusion because of the need for aids, equipment, medical services and so on. Health and disability can also be products of social exclusion. The specific components for which indicators are to be produced comprise measures of physical health, mental health and disability.

The social domain refers to interaction with and support from family, friends and society more generally. While it is clearly an important dimension of social inclusion – indeed, it could be viewed as the *defining* dimension – it is somewhat more difficult to objectively measure than the first four domains. With this significant constraint in mind, we propose a limited number of indicators based on separation from family and access to social support be developed. Specifically, individuals institutionalised or, in the case of children, separated from their families, are interpreted as having reduced social resources and thus being at greater risk of exclusion, and indicators based on access to social support are also proposed in order to identify the individual's social resources more generally.

The sixth domain, community, has been defined broadly to encompass access to community services, institutional resources, neighbourhood quality, and political and civic participation.

⁹ Note that household expenditure is an innovation that does not appear in B-SEM.

In principle, this includes, among many other things, public infrastructure, legal rights and protections, the existence and exercise of voting rights, law enforcement, and public recreational facilities. In common with the social domain, many aspects of the community domain are not amenable to objective measurement. Indeed, it is our view that many elements of this domain, particularly in relation to institutional resources, should not be measured as part of an Australian social exclusion index. In modern-day Australia, meaningful, objective and/or time-varying measures are unlikely for many of the elements that make up institutional resources, such as legal rights, which are better addressed in other ways. With regard to political and civic participation the existence of compulsory voting means that commonly-used measures of voter turnout are not directly applicable to Australia. More relevant in the Australian context is voter enrolment. Significant efforts have been made over the years to increase enrolment of young adults, with groups such as the homeless, particular targets. On the other hand, a recent bill passed through parliament to remove the prison population from the electoral roll has also been the subject of considerable controversy. In light of these considerations, the proposed components comprise measures of access to transport, access to health, utilities and financial services, neighbourhood quality, voter enrolment, civic participation and voluntary activity/membership.

The last domain is labelled ‘personal safety’. Here we have in mind the actual experience of breaches of personal safety, or perceptions of lack of safety, which are likely to provide very important information on the extent of participation. Being exposed to crime or discrimination can impact on a person’s participation in a range of economic, social, civic or political activities and thus has been identified as a distinct life domain relevant to social inclusion.

Although all components itemised in the third column of Table 3 primarily provide measures of the domain to which they are assigned, it should be noted that many of them communicate information on other domains of social exclusion. For example, participation in paid work is relevant to material resources, education and skills, social and even community domains. Note also that the importance of the various domains of exclusion identified may differ across individuals or subgroups of the population – or to put it another way, there are important interactions between the domains. For example, a given income may deliver social inclusion for a young healthy person but not for an older unhealthy person. The multidimensional nature of social exclusion also means that it is possible for a person to be excluded even if some resources are ‘high’. Again highlighting the parallels of the social exclusion approach

with Sen (1999), these are points he emphasises with respect to identifying capability deprivation.

Table 3 Proposed framework for measuring poverty and social exclusion in Australia

Domains	Components
Material resources	Household income Household net worth Household consumption expenditure Homelessness Financial hardship
Employment	Paid work: employed, self-employed, unemployed, non-employed, underemployed Undertaking unpaid work
Education and skills	Basic skills (literacy and numeracy) Educational attainment Lifelong learning
Health and disability	Physical health Mental health Disability or long-term health condition
Social	Institutionalisation/separation from family Social support Participation in common social activities Internet access
Community	Access to transport Access to health, utilities and financial services Neighbourhood quality Voter enrolment Civic participation and voluntary activity/membership
Personal safety	Victim of crime Subjective safety Victim of discrimination

6. From a conceptual framework to measures of social exclusion

A range of issues arise in moving from our conceptual framework to a measure or measures of social exclusion. In the section, we raise some of these issues. We then list some specific potential indicators for each of the outcome domains listed in Table 3 to help fix ideas about the issues confronted in constructing overall measures or indices of social exclusion.

6.1 Considerations in implementing the framework

Societal-level and individual-level measures

A key distinction is between ‘societal level’ measures of social exclusion and ‘individual level’ measures. There is considerable overlap between the two, but they are different. Individual-level measures are those that can be meaningfully applied to an individual to determine whether that individual is social excluded. These measures are appropriate when interest is in the identities of the excluded, the causal factors for social exclusion, the consequences of exclusion for the excluded, and so on. Societal-level measures provide overall assessments of how society is performing. They might include measures such as the percentage of the population with a particular adverse outcome.

Experience of multiple dimensions of disadvantage and persistence in exclusion are more readily examined at the individual level, but in principle, anything that can be measured at the individual-level can be translated to the societal level. That is, it is conceptually possible to produce aggregate measures of the incidence of multiple dimensions and the persistence of exclusion. The reverse is, however, not true: indicators or measures available and/or appropriate at the societal level may not be directly applicable to the individual level. For example, the proportion of 15 year-olds still at school may be a valid societal-level measure, but it does not directly translate to an individual-level measure for someone who is not 15 years of age (and especially those who are not yet 15).

As a practical matter, individual-level measures require all relevant data on the one individual, whereas societal-level measures can draw on multiple data sources. For example, unit record data, such as is available for the Household, Income and Labour Dynamics in Australia (HILDA) Survey, the Australian Bureau of Statistics (ABS) General Social Survey (GSS), the Census and the ABS Survey of Income and Housing (SIH), can be used to construct both individual-level and society-level measures. By contrast, aggregate administrative data, such as on high school completion rates and on Supported Accommodation Assistance Program (SAAP) (emergency accommodation) usage, can only be used to produce society-level

measures.¹⁰ Thus, an advantage of the aggregate-level approach is that a broader range of indicators can be drawn upon.

In our opinion however, it is critical in any analysis of social disadvantage/exclusion to determine the extent of disadvantage/exclusion at the individual level. We thus make this a priority for further research. Subsequently this will then enable us to investigate not only the nature of disadvantage/exclusion but also its causes, correlates and consequences.

Depth of exclusion

The extent of poverty and social exclusion will differ across individuals and families. Some people will exhibit exclusion in only one dimension and are therefore perhaps less vulnerable than others who may experience multiple forms of exclusion. For instance a healthy 45 year old who left school at 15 years of age and who is working full-time would not be considered as disadvantaged as a young person with depression who completed school at 15 years of age and is unemployed. While it is important to identify those with only one or a few dimensions of exclusion – the aforementioned 45 year old is still relatively vulnerable if retrenched from their job – it is somewhat more important to identify those experiencing multiple forms of exclusion.

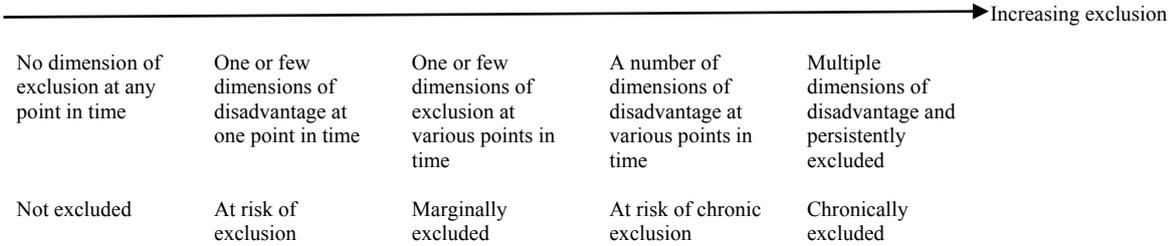
Similarly, more important than social exclusion at a point in time is persistent social exclusion. Identifying persistence generally requires longitudinal data on individuals, as individuals' recollections of detailed life histories are generally regarded as unreliable for economic and social analysis. Longitudinal data also enables researchers to examine various dynamic features of poverty and social exclusion. Data limitations are, of course, a key influence on the longitudinal content of social exclusion measures.

To address these differences in the extent, or depth, of social exclusion we propose to locate individuals on a scale or continuum of extent of exclusion, as shown in Figure 1. Thresholds on this continuum will then be used to determine between discrete categories of exclusion. Individuals experiencing multiple dimensions of exclusion that persist over time will be identified as chronically excluded, while those experiencing multiple dimensions of exclusion at various points of time will be identified as 'at risk of chronic exclusion'. Individuals with

¹⁰ Of course, societal measures of multiple dimensions or persistence will require the relevant information at the individual level.

only one or a few dimensions are to be classified as ‘marginally excluded’ if the dimensions are persistent, and ‘at risk of exclusion’ if exclusion is only experienced at one point in time. The remaining group include individuals exhibiting no dimension of exclusion at any observed point in time.

Figure 1: The continuum of exclusion¹¹



Capturing exclusion across the life cycle

The relative importance of the different dimensions of social exclusion, and the criteria that are appropriate to apply to a dimension, can vary considerably depending on a person’s life cycle stage. Indeed, some components in Table 3 will not be relevant at all to people at particular lifecycle stages. For example, while employment is clearly important to working-age people, non-employment is not an appropriate indicator of social exclusion for children or the elderly. It follows that the measures used to determine social exclusion should differ by lifecycle stage.

In B-SEM, Levitas *et al.* (2007) propose that various social exclusion themes, or dimensions, be measured for each of five key life cycle stages: children, young people aged 16-24 years, working age adults, older people 50 to 65 years and older people 65 years plus. Headey (2006) similarly emphasises the importance of a lifecycle approach to the identification of not only deprivation itself, but also the appropriate remedial policy responses. He suggests distinguishing five lifecycle stages that very closely match those distinguished by Levitas *et al.* (2007): childhood, late teenage and early adult years, prime-age working and family formation years, the later working and pre-retirement period, and retirement. He suggests that, for younger people, human capital investment and social development are relatively more important. As people move through the working-age years, employment and welfare reliance take on relatively more importance, while as they approach retirement age, health and wealth

¹¹ We would like to thank Christine Williams for providing us with this idea.

accumulation take on more importance. In the post-retirement years, health and wealth further increase in importance, and social capital additionally becomes relatively important.

The lifecycle approach has great potential, not only to more accurately determine the extent of exclusion for particular population age groups, but also to predict particular population groups that are at risk of longer term poverty and social exclusion. This is a potential priority area for development.

The spatial dimension

Locational disadvantage is an important dimension of social exclusion. The framework proposed does include some outcomes to be examined that capture locational characteristics, such as neighbourhood quality. However, a more basic issue is understanding the geographic composition of social exclusion. This argues for indicators of exclusion by region, potentially resulting in the generation of many estimates, depending on the size of the regional unit. The data demands of such information are very high, and currently-available data does not support comprehensive measures of social exclusion at the region-specific level. Indeed, even at the aggregate national level, existing data sources may not support adequate statistical reliability for some potential measures. Nevertheless, we consider the generation of region-specific analysis of social exclusion an important aspiration for future work.

6.2 Potential indicators

Atkinson *et al.* (2002), in a European Union report, argue that each indicator of social exclusion should possess six key properties, and that a further three properties should hold for the portfolio of indicators collectively. Their desired properties of each indicator are that it be:

1. Clear and unambiguous
2. Robust and statistically validated
3. Responsive to effective policy, but not subject to manipulation
4. Comparable across countries and consistent with international standards
5. Timely
6. Not burdensome on states, enterprises and citizens.

Desired properties for the portfolio of indicators are that they are:

7. Balanced across the different dimensions
8. Mutually consistent and each indicator is given 'proportionate' weight
9. Transparent and accessible to citizens (easy to understand)

These properties appear to be good criteria to apply in choosing indicators, with of course the additional criterion that indicators provide measures of the dimensions of social exclusion that we seek to measure. Following are some examples of potential indicators for each domain presented in Table 3. They are restricted to society-level measures and should be regarded only as examples to assist interpretation of the proposed framework and approach, and to provide a more concrete indication of data requirements. Development of the full suite of indicators – including construction of individual-level measures, allowing for indicators based on multiple components, providing distinct indicators by lifecycle stage and considering depth and persistence – and translating this into measures of social exclusion that allow, for example, producing aggregate estimates of social exclusion rates, are substantial tasks beyond the scope of the current paper.

Material resources

- Proportion of persons in relative income poverty, defined as household annual disposable income adjusted for household composition using the OECD equivalence scale (equivalent income) is below 60% of median equivalent income.
- Analogous to income, an 'inadequate wealth' standard could be adopted as wealth less than 60% of median wealth. Thus, the proportion of persons with low wealth could be produced. An alternative might be to impute an income to the wealth and create a wealth-adjusted poverty measure.

Employment

- Proportion of persons in employment.
- Long-term unemployment rate.
- Proportion of employees with leave entitlements.
- Proportion of the population continuously in receipt of income support for 12 months or more.

Education and skills

- Proportion of Year 9 students reaching reading, language and maths national benchmarks.
- Proportion of the population with Year 10 or below as highest educational attainment.

Health and disability

- Proportion of the population for whom self-assessed health status is poor or very poor.
- Proportion of the population with a mental illness or experiencing psychological distress.
- Proportion of the population with a disability.

Social

- Proportion of the population in prison or youth detention centres.
- Proportion who report that they do not have anyone to help out or talk to when in difficulty.
- Proportion of the population that regularly participates in a social activity.
- Proportion of households with Internet access at home.

Community

- Proportion of the adult population who own a car or have access to regular public transport within walking distance of home.
- Proportion of the adult population who have difficulty accessing service providers.
- Proportion of the population who rate their neighbourhood services as poor.
- Proportion of eligible persons enrolled to vote.
- Proportion of persons who regularly participate in organised voluntary work.

Personal safety

- The proportion of persons who feel unsafe walking alone in their area after dark.
- Proportion of persons who were victim of a violent crime in the last 12 months.
- Proportion of persons who reported that they were a victim of discrimination.

7. Data available in Australia

In Table 4, we briefly review the data currently available that could be used to provide indicators on the outcomes listed in Table 3. We begin with the principle that it is preferable to be able to determine exclusion at the individual level. The first four data sets (columns) in the table therefore consider the availability of data for each dimension of exclusion in the four main nationally representative household surveys in Australia that are likely to contain relevant data. These comprise the HILDA survey, the ABS General Social Survey (GSS), the 1% sample Census file, and the ABS Survey of Income and Housing, which is (now) conducted in conjunction with the Household Expenditure Survey every six years. A ‘×’ indicates that the data source contains no information on the dimension, ‘✓’ indicates that the data source contains limited information on the dimension, and ‘✓✓’ indicates it contains reasonably good information on the dimension.

It may not be possible to capture individual-level exclusion in a single survey and, as we have discussed, our initial focus is on societal-level indicators of exclusion. In the final column in Table 4 we therefore outline additional potential sources of societal-level indicators, also noting the regularity of the data series. Note that the sources identified here are not comprehensive. We have discussed the desirability of being able to identify individuals/households at risk of longer term social exclusion. We therefore also consider in the table whether the available unit record data sets are longitudinal.

From Table 4 it is clear that no one data source is able to comprehensively measure social exclusion across the range of dimensions proposed. The closest to doing so is the HILDA Survey, which is also the only available data source that is longitudinal. The HILDA Survey is therefore likely to be the best source for individual-level measures, facilitating multidimensional measures as well as consideration of the persistence of poverty and exclusion. However, there are limitations to using the HILDA data. As is almost always the case for household surveys, those at greatest risk of social exclusion – most notably the homeless and many of those living in institutions – are omitted entirely from the survey sample. Other groups who might be expected to have higher rates of exclusion, including Indigenous Australians and recent immigrants are also under-represented in the HILDA Survey sample. These problems also afflict the other household surveys and even the Census, but the under-representation of recent immigrants is particularly acute in the HILDA Survey,

which by design has a very low probability of including immigrants who arrived after the initial sample was selected in 2001.¹²

A further problem with the available data, that applies to all of the representative population based surveys, and even to the 1% Census sample, is that the sample sizes of those groups at risk of exclusion can be quite small, making it difficult to determine patterns in exclusion with any degree of accuracy. In addition, as noted earlier, no publicly-available unit record data in Australia is capable of providing region-specific information on poverty and social exclusion. In sum, there are many limitations of the currently-available data for the identification of disadvantage in Australia. Substantial new data collection initiatives are perhaps unlikely in the near future, but it is clear that there is tremendous scope for improving the quality of empirical assessments of poverty and social exclusion through collection of more data.

¹² A sample top-up is planned for 2011 which would attempt to address this under-representation of immigrants.

Table 4 Data available for Australian measures of social exclusion

Domain	Component	Main unit record data sets				Other potential sources
		HILDA	GSS	Census	SIHC/HES	
Material resources	Household income	✓✓	✓	✓	✓✓	ABS National Accounts (quarterly)
	Household net worth	✓✓*	✓	×	✓✓	ABS National Accounts (quarterly)
	Household consumption expenditure	✓	×	×	✓✓	ABS National Accounts (quarterly)
	Homelessness	×	×	×	×	Supplement to Census (5 yearly) SAAP demand (continuous)
Employment	Financial hardship	✓✓	✓✓	×	✓✓	
	Paid work	✓✓	✓	✓	✓✓	ABS LFS (monthly/quarterly) ABS EEBTUM Survey (annual)
	Undertaking unpaid work	✓	✓✓	✓	×	ABS SDAC (5 yearly) ABS Time Use Survey (irregular)
Education and skills	Basic skills (literacy, numeracy, English)	✓*	×	×	×	MCEETYA NAPLAN (annual), PISA ABS Functional Literacy Survey (irregular)
	Educational attainment	✓✓	✓✓	✓✓	✓	ABS Education and Work (2 yearly) ABS Education and Training (4 yearly)
	Lifelong learning	✓✓	✓	✓	✓	ABS Education and Work (2 yearly) ABS Education and Training (4 yearly)
Health and disability	Physical health	✓✓	✓✓	✓	✓	ABS NHS (annual)
	Mental health	✓✓	✓	×	×	ABS NHS (annual)
	Disability	✓✓	✓	×	✓	ABS SDAC (5 yearly)
Social	Institutionalisation/separation from family	×	×	✓	×	
	Social support	✓	✓✓	×	×	
	Participation in common social activities	✓	✓✓	×	×	ABS Time Use Survey (irregular)
	Internet access	×	✓✓	✓✓	×	ABS Time Use Survey (irregular)/MPHS (annual)
Community	Access to transport	✓	✓	✓	×	
	Access to services	✓	✓	×	×	
	Neighbourhood quality	✓	✓	✓✓	✓	
	Voter enrolment	×	×	×	×	Australian Electoral Commission (continuous)
	Civic participation and voluntary activity	✓	✓✓	×	×	ABS Time Use Survey (irregular)
Personal safety	Victim of crime	✓	✓	×	×	ABS Victims of Crime Survey (annual)
	Subjective safety	✓	✓	×	×	ABS Personal Safety Survey (irregular) PC Review of Government Services (annual)
	Victim of discrimination	✓*	×	×	×	
LONGITUDINAL DATA		✓✓	×	×	×	FaHCSIA/DEEWR administrative records SAAP demand

Notes: HILDA is an annually recurring panel, but some components (indicated by *) are measured at four-yearly intervals. The GSS is four-yearly, the Census is five-yearly and the SIHC is likely to be two-yearly, although its periodicity has in the past varied somewhat. The HES is conducted every six years in conjunction with the SIHC. For all four data sources, the indicated data available relate to the public-release versions of the data. In the case of the Census, this is a 1% sample. GSS – General Social Survey; HILDA – Household, Income and Labour Dynamics in Australia; SIHC – Survey of Income and Housing Costs; HES – Household Expenditure Survey; SAAP – Supported Accommodation Assistance Programme; NHS – National Health Survey; SDAC – Survey of Disability, Ageing and Carers; EEBTUM – Employee Earnings, Benefits and Trade Union Membership; LFS – Labour Force Survey; FaHCSIA – Families, Housing, Community Services and Indigenous Affairs; DEEWR – Department of Employment, Education and Workplace Relations; MCEETYA – Ministerial Council on Employment, Education, Training and Youth Affairs; NAPLAN - National Assessment Program in Literacy and Numeracy ; PC – Productivity Commission; MPHS – Multi Purpose Household Survey.

8. Concluding comments

Social exclusion is a contested term and operationalising the concept is correspondingly difficult. Key recognised elements of the concept of social exclusion are that it: is relational; includes the range of resources available to people; is dynamic; and recognises agency. A range of studies have focused on operationalising the concept of social exclusion, with many of the developments coming out of the UK Cabinet Office's Social Exclusion Taskforce.

In this paper we have provided an overview of the various studies attempting to operationalise the concept of social exclusion and measure the level of exclusion occurring within and, to some extent, across countries. We have also outlined a proposed framework for Australia, arranged around the broad areas of resources and participation. We identified that it is critical to examine social exclusion at the individual level, allowing an examination of the nature of exclusion at a point in time and longitudinally. Existing data sources were examined to determine their abilities to capture the various proposed dimensions of exclusion at the individual level. No one data source meets all of the needs to comprehensively measure social exclusion.

Interestingly, due to data limitations using existing sources, Levitas *et al.* recommend the generation of a 'social exclusion module' based on the B-SEM for inclusion in the future UK Longitudinal Household Survey (UKLHS), which builds on the BHPS. Following these developments in the UK, Australia could follow suit by adding a similar 'social exclusion module' in future waves of surveys such as the GSS and HILDA. This would better enable a suite of indicators reflecting requirements of a social exclusion measure, rather than a compilation of proxies.

Other limitations of using household based survey data set also need to be accounted for. Following the UK government's lead, there could be an effort to boost the sample in the GSS and/or HILDA (the sample for the UKLHS is approximately 40,000 households) as subsamples of particular vulnerable groups in surveys such as the BHPS and HILDA are too small for extensive statistically reliable analysis. This is particularly evident when examining Indigenous Australians. Data on the homeless and other key groups falling outside of the scope of the existing survey based data are also necessary. However, rather than broadening the scope of HILDA to include these groups, it is perhaps more efficient to supplement the data source with the various ABS data for these groups.

Of course, new developments on the data front such as social exclusion modules, expanded samples and new surveys need to overcome funding constraints. Furthermore, such new data would not be available for some time. In the short- to medium-term, to develop a measure/s of social exclusion, it will be necessary to use existing data sources. This is the next stage of our research.

Appendix

Participants in workshop held by Brotherhood of St Laurence and Melbourne Institute of Applied Economic and Social Research on 4 December 2008:

Name	Organisation
Peta Furnell	The Treasury, Australian Government
Matthew Gray	Australian Institute of Family Studies
Joanne Helleman	Social Inclusion Unit, Department of Prime Minister and Cabinet, Australian Government
Michael Horn	Brotherhood of St Laurence
John Landt	Social Inclusion Unit, Department of Prime Minister and Cabinet, Australian Government,
Patrick Laplagne	Productivity Commission Department of Employment, Education and Workplace Relations, Australian Government
Bob McColl	Australian Bureau of Statistics
Alison Moorehead	Department of Employment, Education and Workplace Relations, Australian Government
Jeannette Pope	Department of Planning and Community Development, Victorian Government
Linda Richardson	Department of Family, Housing, Community Services and Indigenous Affairs, Australian Government
Rosanna Scutella	Brotherhood of St Laurence and Melbourne Institute of Applied Economic and Social Research
Stephen Sedgwick	Melbourne Institute of Applied Economic and Social Research
Iain Sutherland	Department of Planning and Community Development, Victorian Government
Roger Wilkins	Melbourne Institute of Applied Economic and Social Research
Christine Williams	Department of Family, Housing, Community Services and Indigenous Affairs, Australian Government
Mark Wooden	Melbourne Institute of Applied Economic and Social Research

Invitees providing feedback but unable to attend:

Name	Organisation
Peter Davidson	Australian Council of Social Services
Bruce Headey	Melbourne Institute of Applied Economic and Social Research
Peter Saunders	Social Policy Research Centre, University of New South Wales
Tony Vinson	Australian Social Inclusion Board

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