

# **MEASURING DEPRIVATION IN SCOTLAND**

**MEASURING DEPRIVATION IN SCOTLAND:  
DEVELOPING A LONG-TERM STRATEGY**

**FINAL REPORT**

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## ABBREVIATIONS

FRS – Family Resources Survey.

PSE1999 – the Poverty and Social Exclusion Survey 1999, conducted by a team led by Bristol University.

SHS – the Scottish Household Survey, a continuous survey commissioned by the Scottish Executive.

SIMD2003 – the Scottish Index of Multiple Deprivation, compiled by a team at Oxford University (Noble et al, 2003).



## EXECUTIVE SUMMARY

### AIMS

This is the final report from a project to produce *a long-term strategy for measuring deprivation in Scotland*. The project was commissioned by the Central Statistics Unit of the Scottish Executive with three main objectives:

- To provide a clear *definition and conceptual basis* for measuring deprivation. It will also clarify how the term relates to others used to refer to social needs such as poverty, social exclusion or social injustice.
- To set out a long-term strategy for measuring *area deprivation* building on the recently published Scottish Index of Multiple Deprivation 2003.
- To explore approaches to measuring *deprivation for individuals*. In particular, it will recommend whether individual measures should be developed as replacements to area-based measures or as additional to them.

Most importantly, the work was not to be limited by considerations of what data is currently available but was to work from the definition and conceptual framework to determine whether additional data should be collected.

Measures were not being constructed for a single purpose or context. Rather, an important part of our remit was to provide measures of deprivation which were applicable across Scotland and suitable for a range of possible uses. At the same time, the work is intended to facilitate more specific, local analyses by ensuring that as wide a variety of information is made available in as flexible a way as possible.

### RESEARCH PROCESS

In addition to work reviewing existing research, consultations with a wide range of organisations and individuals have been central to the process of this research. An Interim Report was published setting out our initial thinking and this prompted a wide range of responses in writing and through attendance at public meetings. Responses were broadly positive but they have also led to some changes to our initial thinking.

As a result, this report highlights more clearly the extent to which existing individual and area-based measures capture rather different aspects of deprivation even though they share broadly the same definition of deprivation as a starting point. This reflects their different origins and uses. These differences are likely to continue and need to be borne in mind when comparisons are made between the two measures.

## **KEY RECOMMENDATIONS**

### **Defining deprivation**

We argue that the Executive should build on the work of Townsend and others in defining and measuring deprivation.

*“People are relatively deprived if they cannot obtain, at all or sufficiently, the conditions of life – that is, the diets, amenities, standards and services – which allow them to play the roles, participate in the relationships and follow the customary behaviour which is expected of them by virtue of their membership of society. If they lack or are denied resources to obtain access to these conditions of life and so fulfil membership of society, they may be said to be in poverty.”* (Townsend, 1993: p.36)

Deprivation is a multi-dimensional concept, concerned not merely with material goods but also with the ability to participate in social life. It is a relative concept where standards are defined in relation to social norms or expectations. Poverty and deprivation are seen as interlinked as cause and outcome. Both financial resources and outcomes should be captured in measures of multiple deprivation.

Deprivation overlaps with terms such as social exclusion or social justice to some extent, although it clearly has a narrower focus. Deprivation measures can provide direct measures of some forms of exclusion or injustice and indirect evidence of other forms.

We do not argue that deprivation is in some way a better concept of social need than others but we do believe that it is important for its focus on the poor material and social living standards which people face as a result of poverty. In discussing how to measure deprivation, we have tried to keep to these core issues.

### **Individual and area approaches**

The single most important recommendation emerging from this work is that the Executive should begin to develop a measure of deprivation at the individual level in addition to the existing area-based measures. These are complementary approaches, not alternatives. The current focus on area-based indices alone leaves a significant gap in our knowledge about absolute levels of deprivation, the distribution of deprivation between social groups or areas and trends over time. Furthermore, relating the two measures to each other may provide particularly useful insights into the nature and distribution of deprivation in Scotland so there are synergies to be gained from developing both. There was a very high degree of support for this development.

Practical constraints mean that different methods will be needed for each. Individual measures will be based on surveys. Area indices will continue to be based on indicators gathered from diverse sources as it would be prohibitively expensive to collect sufficient data through surveys.

The different methodologies and, importantly, the different origins and uses of the two types of measure mean that they have tended to be based on slightly different understandings of deprivation. The individual approach tends to retain a narrower focus on the “necessities of life” but many area-based deprivation indices have taken a broader approach, encompassing a wider range of problems associated with concentrations of deprivation or considered

important for their impacts on deprived individuals. They incorporate a range of measures which are not directly related to individual living standards (crime, physical environment or geographic access to services). From the consultation process, it was clear that many people expected area measures to have this wider conceptual base. We therefore recommend that this difference is maintained even though it means that direct comparisons between the two approaches need to be made with care.

## **Scottish context**

The report examines issues of Scottish distinctiveness and of variations within Scotland which might prevent a single measure having universal applicability. Differences between Scotland and the rest of the UK appear limited so approaches to the measurement of deprivation adopted elsewhere are likely to be useful in the Scottish context. Within Scotland, we recognise the diversity of situations in which people live, notably the differences across the urban-rural spectrum. At the same time, we argue that differences in the nature of deprivation across the country should not be exaggerated and that the application of a single measure to the whole country is therefore valid.

## **Area-based measures**

As noted above, many area-based deprivation indices have taken a broader approach to defining deprivation than individual measures. We recommend that this be retained although we also argue that the distinction between domains which attempt to capture individual living standards and those which relate to wider area problems should be clearer. The full list of domains recommended for inclusion in the area-deprivation index and the reasons for their inclusion can be summarised as follows:

- *current income; other financial resources* – indirect measures of deprivation as they measure the key cause;
- *housing* – direct measure of aspect of material living standards;
- *health; education* – indirect measures of deprivation (both are strongly related as causes and as consequences of deprivation);
- *crime and social disorder; physical environment; geographic access and telecommunications; and social relations and social capital* – direct measures of a range of area characteristics associated with concentrations of deprivation or important for their impacts on deprived individuals.

We do not recommend that the employment domain is retained but, if it is, we recommend that it is treated as a measure of the level of financial resources available.

The work also considered the most appropriate spatial unit for the index. While wards were seen as a better spatial unit than postcode sectors, there were concerns that they were still too large in many areas. With the possibility of local government moving to elections on the basis of proportional representation, the long-term future of wards is also in doubt. We therefore recommend that the Executive moves the deprivation index on to “small data units” developed for the Scottish Neighbourhood Statistics work.

In terms of presentation of the results, there was widespread support from the consultation process for summaries of the data by age or life-stage groups as well as by domains. This requires disaggregation of the indicators by broad age group where possible. We also make a strong recommendation that the Executive publishes as many of the individual indicators for the index as possible to facilitate local analyses and, where possible, disaggregates these by gender.

Although technical issues were not part of our remit, we make a recommendation that the Executive commissions further work on the shrinkage technique, particularly if there is to be a move to smaller units. We also recommend that the Executive reconsiders the use of factor analysis to produce domain scores.

### **Individual measures**

We recommend that individual measures follow the “consensual approach” developed for the Poverty and Social Exclusion 1999 survey. This would require original research in Scotland to establish the list of items regarded as “necessities of life” by the majority of the population, although this should build on existing work in the rest of Britain. Data on the number of people lacking these “necessities” could be collected through an existing large-scale survey. The Scottish Household Survey would be the most suitable option as this would enable a breakdown of the results at the level of local authorities to be provided.

We recommend that separate standards are used to measure adult and child deprivation. Research for the latter should build on the views and experiences of children. With the adult measure, it is important that the survey is able to disaggregate results for different social groups based on: age, gender, ethnicity, disability, sexual orientation, household type and other factors such as health or employment status.

The method is based on the development of a single deprivation standard against which all adult individuals are assessed. In the Interim Report, we discussed whether it would be necessary to develop specific standards to reflect the needs, lifestyles or circumstances of different groups. At this stage, we recommend that the Executive re-examines this question once details of the single common standard have been established.

### **Relationships with other measures**

At present, the Executive does not produce an individual measure of deprivation and has never done so, nor has the UK Government, so there are no direct overlaps with existing measures. In the case of the child deprivation measure, this might overlap with measures which the Department for Work and Pensions is developing as part of its work on measuring child poverty. We recommend that the Executive monitors that work closely.

There is also work on-going to develop deprivation indicators at European level. As that work is heavily constrained by the need to work across all 15 member states, there should be less emphasis on ensuring that any Scottish measure is congruent with measures it recommends.

## LIST OF SPECIFIC RECOMMENDATIONS

### 2. Definitions and conceptual framework

We recommend that the Executive:

- R2.1 - adopts the definition of deprivation set out by Townsend as the starting point for its work;
- R2.2 - recognises that poverty or lack of financial resources is the central cause of deprivation and that both should be captured in deprivation measures.

### 3. Individual and area approaches

We recommend that the Executive:

- R3.1 - develops both individual and area measures of deprivation as these are complementary rather than alternative approaches;
- R3.2 - recognises that the two measures need to be based on rather different conceptual bases and adopts the conceptual framework for individual and area measures set out;
- R3.3 - uses a household survey approach to measuring individual deprivation;
- R3.4 - continues to monitor developments in linking data from existing administrative sources as a possible means of measuring individual deprivation in future;
- R3.5 - takes the recommended steps to ensure that comparisons can be made between individual and area-based measures on a valid basis.

### 4. Scottish context

We recommend that the Executive:

- R4.1 - continues to draw on work on deprivation undertaken in the rest of Britain, given the fundamental similarities between Scotland and the rest of Britain in terms of the nature of deprivation, its underlying causes, social perceptions of minimum acceptable standards and the institutional context;
- R4.2 - continues in its approach of developing measures of deprivation which cover the whole of Scotland.

### 5. Developing area-based measures

We recommend that the Executive:

- R5.1 - develops a national area deprivation index based on domains for: current income, other financial resources, housing, health, education, crime and social disorder, physical environment, geographic access and telecommunications, and social relations and social capital;
- R5.2 - makes the detailed changes to the relevant indicators specified in Section 5.1 and follows-up on longer term actions;
- R5.3 - retains the use of wards for now but looks at moving to smaller “data zones” in future, possibly using a two-tier approach;
- R5.4 - summarises results using both domain and life-stage approaches and ensures that individual indicators can be disaggregated by life-stage groups and gender on a consistent basis;

- R5.5 - publishes as many of the individual indicator scores as possible in order than people can assess absolute changes over time as well as being able to explore the relationships between each indicator and the overall index;
- R5.6 - uses the same set of indicators from year to year but updates the set periodically and, in the change years, publishes results using both old and new sets of variables;
- R5.7 - uses the same set of weights from year to year when combining indicators to determine domain scores but updates the weights periodically (at the same time as new data is brought into the index) and, in the change years, publishes results using both old and new weights;
- R5.8 - commissions further work to consider improving the “shrinkage” technique applied to scores for small areas and re-considers the use of factor analysis for combining indicators into domain scores.

## 6. Developing individual measures

In implementing the individual measure of deprivation, we recommend that the Executive:

- R6.1 - determines the most appropriate standard to use to assess levels of deprivation (the list of “necessities”) following original qualitative and quantitative research in Scotland;
- R6.2 - recognises the high level of demand for data on individual deprivation down to the level of local authority areas and, consequently, collects data on deprivation through the Scottish Household Survey and publishes it annually;
- R6.3 - tracks change over time using a range of thresholds or cut-off points to determine levels of deprivation;
- R6.4 - uses a single standard to measure deprivation for all adults and a separate standard to measure deprivation for children;
- R6.5 - ensures that it is possible to disaggregate results (at national level) by age, gender, household type, ethnicity, and (if possible) disability and sexual orientation;
- R6.6 - carries out further research on the demand for separate standards for individual groups once the results of using a single standard have been published;
- R6.7 - maintains the same standard for consecutive years but reviews the standard periodically (at least every five years).

## 7. Relationships with other measures

We recommend that the Executive:

- R7.1 - liaises with the Department of Work and Pensions over the proposed inclusion of child deprivation indicators in the Family Resources Survey to ensure compatibility with any measure of child deprivation developed in Scotland, if appropriate;
- R7.2 - monitors development of the work on deprivation indicators by Eurostat.

# 1. INTRODUCTION

## 1.1 AIMS AND RESEARCH PROCESS

This is the final report from a project to produce *a long-term strategy for measuring deprivation in Scotland*. The project was commissioned by the Central Statistics Unit of the Scottish Executive with three main objectives:

1. The project will provide a clear *definition and conceptual basis* for measuring deprivation. It will also clarify how the term relates to others used to refer to social needs such as poverty, social exclusion or social injustice.
2. The project will set out a long-term strategy for measuring *area deprivation*. Building on the recently published Scottish Index of Multiple Deprivation 2003 or SIMD2003 (Noble et al, 2003), it will ensure that the measure gives full coverage to deprivation in the Scottish context, and to different contexts within Scotland, particularly rural and urban.
3. The project will explore approaches to measuring *deprivation for individuals*. In particular, it will recommend whether individual measures should be developed as replacements to area-based measures or as additional to them. It will also explore the desirability and feasibility of developing a range of measures related to the specific needs of different social groups.

The aim of the project is to work from the definition and conceptual framework to identify the indicators and data sources necessary to provide proper measures of deprivation across Scotland at area or individual level. In particular, we have been asked to make recommendations where additional data sources should be developed. The work is not limited by considerations of what data are currently available.

This Final Report has been produced following extensive consultations with a wide range of groups and individuals; full details are provided in Appendix 1. To inform these consultations, we published an Interim Report setting out our initial thinking and recommendations (Bailey et al, 2003). Feedback was generally very positive but we have also made some changes in response to comments received. In particular, this report highlights more clearly the extent to which existing individual and area-based measures capture rather different aspects of deprivation even though they share broadly the same conceptual base in theory. This reflects their different origins and uses. These differences are likely to continue and need to be borne in mind when comparisons are made between the two measures.

Discussion of every comment expressed during the consultation process would have made this document unduly long and difficult to read. We have tried to be clear, however, where we believe our recommendations received broad support and where there was opposition or disagreement. Copies of the written responses are available from the Central Statistics Unit of the Scottish Executive.

## **1.2 USES OF DEPRIVATION MEASURES**

Deprivation measures may be used in a wide range of situations or contexts and it is clear that no one measure will meet the needs of every potential user. An important part of our remit was to provide measures of deprivation which were applicable across Scotland. These might have a range of specific uses but, in general terms, these include assessing levels of need, guiding decisions over resource allocation or informing the evaluation of policies by tracking changes over time. The emphasis here is on developing a single common standard which can be applied across the whole country. There is therefore a need to be clear about the basis for such measures and to be open about their construction so that they can be seen to be fair.

At the same time, the work is intended to provide measures which will be of use to individuals working in a range of different contexts. There may well be a desire to construct different measures to capture the nature of problems in a particular context. This work is intended to facilitate that approach by ensuring that a wide variety of information is made available in as flexible a way as possible. This will also enable more detailed work to be carried out to explore the nature, causes and consequences of deprivation and how these vary between social groups or areas. The emphasis here might be on informing the design of policy as well as influencing local decisions about priorities, resource allocations or evaluations.

## **1.3 STRUCTURE OF THE REPORT**

The structure of the report is as follows:

- Section 2 covers the first element of our work – providing a definition and conceptual framework for deprivation, and setting out how deprivation relates to other terms used to refer to social needs such as poverty, social exclusion or social justice.
- Section 3 examines the need for individual and area measures and how they differ, both in terms of the methods used to construct them but also in terms of their conceptual bases.
- Section 4 looks at the Scottish context and this might need to be taken into account when designing deprivation measures.
- Section 5 turns to the second main element of this work – developing a long-term strategy for measuring area deprivation. It provides details for the construction of each domain, building on the conceptual framework developed in Section 3. This section also examines: the most appropriate spatial units; a domains versus life-stages approach; measuring absolute change; and updating the area-based measure in future.
- Section 6 covers the third main element – developing individual measures of deprivation. The first part looks at how multiply deprived individuals might be identified using a single standard. The second part discusses the case for developing additional standards to measure deprivation for different social groups. Finally, the section considers how the individual measures might be updated in future.
- Section 7 considers possible overlap between the proposed measures and existing or proposed data collection exercises.
- Section 8 provides a short conclusion.

In each section, we summarise the main recommendations at the start and follow this with the discussion or justifications for these. To limit duplication, reference is made to the Interim Report (Bailey et al, 2003) at times but it is intended that this report can be read as a self-contained document.

## 2. DEFINITIONS AND CONCEPTUAL FRAMEWORK

We recommend that the Executive:

- R2.1 - adopts the definition of deprivation set out by Townsend as the starting point for its work;
- R2.2 - recognises that poverty or lack of financial resources is the central cause of deprivation and that both should be captured in deprivation measures.

People may use the term deprivation in different ways. No one definition would be agreed on by everyone. Nevertheless, it is necessary for us to provide a single definition on which to base the rest of our work. We also need to provide definitions of terms such as poverty, exclusion and injustice in order to describe the relationships between deprivation and these terms. This enables us to see the extent to which a measure of deprivation may offer a measure of these other phenomena at the same time.

We are not arguing that deprivation is a “better” term than any other or that it should be used in preference to other terms. Rather our concern is to provide a clear definition of one term, deprivation, which we consider to be useful and relevant to the analysis of some social problems in contemporary Scotland. The particular strength of deprivation as a concept is that it draws attention to basic living standards and to the impact of low income on these.

### 2.1 DEFINING DEPRIVATION

In common with most research on deprivation, including the SIMD2003 (Noble et al, 2003), our starting point is the work of Peter Townsend:

*“Deprivation takes many different forms in every known society. People can be said to be deprived if they lack the types of diet, clothing, housing, household facilities and fuel and environmental, educational, working and social conditions, activities and facilities which are customary, or at least widely encouraged and approved, in the societies to which they belong.”* (1987: p.126)

There are four elements to this definition. First, it is *multi-dimensional*, as people can be deprived in different ways – by virtue of their lack of basic necessities of diet or clothing, or by virtue of the poor environment or social conditions in which they live. There is consequently a requirement to measure deprivations across these different dimensions. Each item that a person lacks may be seen as a separate deprivation and people lacking a given item may be termed “deprived” in that respect. It should be stressed, however, that the term is usually used to refer to people who have several deprivations and who are therefore suffering from “multiple deprivation”. At times, the term “deprivation” is used as shorthand for “multiple deprivation” but it is the latter which is our focus.

Second, Townsend’s definition is concerned with both *material* and *social or relational* dimensions. The latter refers to the ability of an individual to participate in the normal social life of their community – visiting family, having friends round, or attending social events such as birthdays, weddings or funerals, for example. Townsend and others have noted that most attempts at measurement have focused on material dimensions, as these are easiest to capture. However, he identifies social aspects as essential to our understanding of the nature

and impacts of deprivation. Many of the interviewees and focus group participants involved in our initial consultation process agreed with this perspective.

Third, Townsend's definition is a *relative* one. It is based on socially accepted norms or standards which will differ from one society to the next, and which will change over time. There is a need to check that any measure does indeed reflect widely held views about what are minimum acceptable standards of living and that it is updated in line with changing public perceptions.

Fourth, Townsend's definition focuses on *individuals* – it is people who are deprived, not areas. Individuals do not become multiply deprived simply by moving into an area with a high concentration of deprivation.

There is some debate over whether area characteristics should be seen as part of the problem of deprivation. All would agree that the characteristics of an area may impact on every individual living in that area – qualities of the physical or social environment, such as the degree of physical dereliction or levels of noise or disturbance, or locational characteristics such as access to services. The question is whether these problems are seen as “deprivations” in the sense that Townsend uses the term. As discussed in Section 3.3, some measures of deprivation (particularly those concerned with small areas) tend to include these aspects while others (particularly those concerned with individuals) see them as no less important but conceptually distinct from multiple deprivation.

Townsend's approach has been refined further, notably in the work on the Breadline Britain surveys and the Poverty and Social Exclusion 1999 survey (Mack and Lansley, 1985; Gordon and Pantazis, 1997; Gordon, Adelman et al, 2000). These have provided a more systematic method for defining which “necessities of life” people in a given society should expect to have. This is done by *consensus*; necessities are defined as those items which at least 50 per cent of the population believe an individual needs in order to participate in everyday life. Feedback from the consultation process supported this “consensual” approach over any attempt to be more “forward looking”. These surveys also attempt to distinguish between people who lack an item through choice or preference, and those who lack it due to inadequate income or resources, with only the latter being identified as deprived.

There is a sharp distinction between deprivation and social status which is defined by factors such as age, ethnicity or household type. Some status groups experience much higher levels of deprivation than others on average. In Scotland in recent years, deprivation levels have been higher among children, older people, some minority ethnic groups and lone parent households, for example. However, membership of one of these groups is not a cause of deprivation. “Even if many such people are deprived, it is their deprivation and not their status which has to be measured. And many people having that status are demonstrably not deprived” (Townsend, 1987, p. 135). This does not mean that status is irrelevant to discussions of deprivation. In this report, however, status is treated as a risk factor, not as a deprivation in itself.

## 2.2 DEPRIVATION AND POVERTY

For Townsend, the terms deprivation and poverty are two sides of the same coin. Deprivation (outcome) is the result of poverty (cause):

*“People are relatively deprived if they cannot obtain, at all or sufficiently, the conditions of life – that is, the diets, amenities, standards and services – which allow them to play the roles, participate in the relationships and follow the customary behaviour which is expected of them by virtue of their membership of society. If they lack or are denied resources to obtain access to these conditions of life and so fulfil membership of society, they may be said to be in poverty.”* (Townsend, 1993: p.36)

Townsend argues that there is a particular threshold in the income distribution where further decreases in income bring about sharp rises in levels of deprivation: “that ‘threshold’ properly marks the beginning of a state of objective poverty” (Townsend, 1987: p. 130). Others have argued that the relationship between income and deprivation is more gradual and continuous (Piachaud, 1987; Ringen, 1988).

Townsend (1979) also emphasised that “financial resources” extend well beyond current cash incomes from work, benefits or pensions. Resources reflect levels of savings or debts (Nolan and Whelan, 1996). Hence, the length of time that a person has spent on low income may be important in determining resources as savings will be depleted over time. There is also a link with past employment history, as frequent periods of unemployment limit the accumulation of savings and increase the likelihood of accruing debts. Poverty in retirement is strongly linked to previous work history. Resources are also determined by state expenditures on services, facilities or amenities. These include universal services or public goods such as the health service, schools, roads or public parks, and services targeted at particular groups (welfare benefits, social services or higher education).

Some perspectives see measures of poverty and deprivation as alternatives but others, such as Nolan and Whelan (1996), have argued that identifying individuals in deprivation requires measures of both resources *and* living standards to ensure that the measure captures individuals with low standards of living *resulting from* lack of resources. The SIMD2003, like previous area deprivation indices, includes measures of both resources (incomes) and living standards (outcomes) and so adopts this approach already. The PSE1999 also uses a combination of income and outcome indicators to identify those considered to be “multiply deprived”. We recommend that this approach is continued.

## 2.3 DEPRIVATION AND SOCIAL EXCLUSION

Social exclusion is a term which has become commonly used in Britain since 1997 when it was adopted by the new Labour government to define its approach to social problems although there is a rather longer history of use of the term in European, particularly French, policy discussions (Room, 1995). There is some debate about the extent to which the change in labels signifies a genuine shift in the focus of policy. Some commentators undoubtedly see important differences but these may also be exaggerated.

Two of the characteristics that most conceptualisations of exclusion have in common are an emphasis on the multi-dimensional and dynamic nature of exclusion (Room, 1995). In this respect, the differences between exclusion and deprivation are ones of emphasis. Both include material and social or relational dimensions, although exclusion studies have tended to give greater weight to the latter. The focus on the dynamics of exclusion draws attention to

the duration of situations experienced by individuals. Being on a low income only briefly can have quite different implications for individual living standards compared with a prolonged spell in poverty. While this has been under-emphasised in earlier work on deprivation, it is certainly present in some approaches (Nolan and Whelan, 1996). We would seek to develop this in our work.

Having emphasised the similarities, it is important to note that there are a number of divergences between social exclusion and deprivation literatures (Berghman, 1995; Levitas, 1998; Hills et al, 2002). We highlight just two here. First, some people use the term social exclusion in preference to deprivation because they see poverty or material living standards as just one dimension of a wider set of problems. They argue that social exclusion may arise where people are prevented from participating in economic, social, cultural or political aspects of society, regardless of whether they are in poverty or not. To be “included” requires not just adequate income (absence of poverty) but also access to work for those who want it, social and cultural integration, and political empowerment. From this perspective, the concept of deprivation appears more narrowly focussed than exclusion. Other writers on social exclusion argue that it is difficult, if not impossible, to separate social, cultural or political marginalisation from issues of poverty or deprivation; the most marginalised tend to be the poorest. From this point of view, the gap between deprivation and social exclusion concepts should not be overstated. In either case, deprivation measures may provide direct evidence on some aspects of social exclusion and indirect evidence of other aspects.

Second, some views of social exclusion see it as the process of becoming detached from a “moral order” that supposedly binds a society in a set of mutual rights and obligations (Room, 1995, p. 6; Etzioni, 1995). Within deprivation studies, the focus on social deprivation has been limited to the ability to maintain social relationships without concern for individual values. We would not intend changing this approach.

## **2.4 DEPRIVATION AND SOCIAL JUSTICE**

Social justice is the term which has been at the heart of the Scottish Executive’s approach to social problems since 1999 although it is not always clear how it differs from social exclusion in practice. Social justice is generally accepted as being concerned with “how the good and bad things in life should be distributed” (Miller, 1999, p. 1). A few accounts (Nozick, 1975, for example) restrict their concern to processes of distribution and to ensuring “procedural justice” or fair treatment in the different distributional systems within society, including both market and state systems. For the great majority, however, the concern is with achieving fair or just outcomes, and the fairness of different processes needs to be judged in relation to these outcomes.

In parallel with the debates on social exclusion, there is a divide within the social justice literature between conceptions which emphasise material distributions and those which emphasise social status or identity (Phillips, 2000). The first group has much in common with the deprivation literature and with material conceptions of exclusion. They are concerned with individual living standards although there are many differences within the group, in particular, between those views which emphasise equality of outcomes and those which emphasise equality of opportunity. For the former, measures which demonstrated unequal outcomes would tend to be seen as evidence of injustice. For the latter, there would need to be further evidence that individuals had made equal efforts to take advantage of opportunities available to them (to seek work, for example) before unequal outcomes would be seen as unjust. Deprivation measures may therefore provide good measures of injustice if justice is

seen in terms of equality of outcomes. If it is seen as equality of opportunity, then deprivation measures may provide good starting points for further investigation of the processes involved.

The second group within social justice has focussed on social groups and issues of status. For these conceptions, the key issue is equality of status, including recognition of identity, and equality of access and respect in political processes. There is an emphasis on the need for a just society to respect the different identities or cultures which groups have as well as ensuring material equality between them (Young, 1990). From this perspective, measures of material inequalities or deprivation might be seen as providing only limited measures of injustice. As we argued above in relation to social exclusion, however, there are likely to be important relationships between social or cultural marginalisation and material position. In this respect, differences in levels of deprivation between different social groups may provide important insights into the existence of social or cultural injustices. The ability to disaggregate deprivation measures by social group would therefore be highly valued from this perspective.

## **2.5 DEPRIVATION AND SOCIAL COHESION**

Social cohesion is a rather different type of term. It is usually presented as a characteristic of a good society or community which may be absent, reduced or under threat amongst deprived or excluded groups. As such, its absence can be seen as a factor *causing* or at least *contributing to* social problems so that enhancing social cohesion is seen as a means to tackle other problems, rather than an end in itself (for example, Scottish Executive, 2002a). In our initial consultations, however, there was considerable encouragement to explore the lack of cohesion as a possible dimension of deprivation.

The concept of social cohesion is used to draw attention to different types of social relationship. Buck et al (2002) provide one useful typology, recognising three distinct sets of concerns: social connectedness or social capital; social equality or status; and social order. An individual's social connectedness or social capital refers to the set of personal relationships or networks which they have by virtue of their contacts with family, friends, neighbours, colleagues or other acquaintances. Different types of social capital may be said to perform different functions or bring different benefits. One of the best known distinctions is between "bonding" and "bridging" social capital, which builds on Granovetter's (1973) distinction between "weak" and "strong" ties. Strong ties tend to exist between family and close friends and these are seen as valuable in helping a person "get by" (bonding capital). Weak ties tend to exist between looser acquaintances such as work colleagues. While these do not tend to be a source of support, they may be more valuable as sources of information or further contacts to help a person "get on" (bridging capital). People living in areas with high concentrations of deprived households are sometimes said to suffer from "network poverty" as they have high levels of strong ties but relatively few weak ties.

There is some degree of overlap between the concepts of social capital and deprivation, as the latter is concerned with an individual's ability to maintain or develop social relationships as well as with material living standards. Deprivation studies have tended to emphasise closer personal relationships rather than the wider social networks which some conceptions of social capital see as important. While deprivation theories would suggest that the ability to maintain or develop social relationships is restricted by low income, however, some empirical studies of social capital suggest that certain social relationships (strong ties) are more likely to be present for people on lower incomes. This raises important questions about the types of social

connection which deprivation studies should focus on and the relationship between income and social connectedness.

The second focus of social cohesion studies, social equality, reflects a concern with status differences between individuals. One question for deprivation studies is the extent to which people on low incomes feel that have a low social status or feel marginalised or stigmatised because of their material position. Possible approaches to measuring the (lack of) social equality or status at the individual level might focus on factors such as the degree to which a sense of stigma or low status is felt, the degree to which people feel respected as equal to others and so on. The third focus within social cohesion is on problems of social order. These are strongly linked to problems of crime and social disorder often seen as characteristic of areas with high concentrations of deprivation (SEU, 1998).

## 2.6 CONCLUSIONS

The aim of this section was to set out our understanding of what deprivation is and how it overlaps with, or differs from, other terms used to refer to social needs. None of the terms has a single, uncontested meaning although deprivation emerges as one on which there is relatively close agreement.

- **Deprivation** is valuable for its focus on the lack of goods, services or social relations or inadequate physical or social environment which results from a lack of financial resources. It is a relative measure where standards are defined in relation to social norms or expectations.
- **Poverty** and deprivation are therefore interlinked as cause and outcome. Both financial resources and outcomes should be captured in measures of multiple deprivation.
- We see deprivation and **social exclusion** as closely related concepts while recognising a diversity of views within the exclusion literature in particular. Both are multi-dimensional concepts where issues of duration are relevant. Social or relational dimensions are important to both, although they have been given greater emphasis in the exclusion literature. While some commentators do not consider poverty to be an essential feature of social exclusion, deprivation measures can provide direct measures of some forms of exclusion and indirect evidence of other forms.
- There is a divide within the **social justice** literature between those who focus on individual material equalities and those who emphasise group identity and cultural equality. To some extent, this mirrors differences within the social exclusion literature. As with exclusion, deprivation measures may provide good measures of certain injustices and starting points for understanding others. Comparisons of levels of deprivation between different social groups may provide important evidence of the existence of cultural inequality or discriminatory processes. The ability to disaggregate deprivation measures for relevant social groups is therefore important.
- **Social cohesion** draws attention to a range of issues including social connectedness or social capital, social status and social order. The discussion of social capital issues raises questions about the types of social relationship which deprivation measures should focus on and about the relationship between income and social connectedness. The discussion of social status issues raises questions about the extent to which people on low incomes feel marginalised or stigmatised by others, and whether such issues should be captured in a deprivation measure. The discussion of social order draws attention to problems of crime and disorder.

### 3. INDIVIDUAL AND AREA APPROACHES

We recommend that the Executive:

- R3.1 - develops both individual and area measures of deprivation as these are complementary rather than alternative approaches;
- R3.2 - recognises that the two measures need to be based on rather different conceptual bases and adopts the conceptual framework for individual and area measures set out;
- R3.3 - uses a household survey approach to measuring individual deprivation;
- R3.4 - continues to monitor developments in linking data from existing administrative sources as a possible means of measuring individual deprivation in future;
- R3.5 - takes the recommended steps to ensure that comparisons can be made between individual and area-based measures on a valid basis.

One aim of this research was to explore whether individual measures should be developed in addition to, or in place of, area-based measures. From the consultation process, there was a strong consensus on the need for both as these measures serve different purposes. Indeed, feedback from the consultation process stressed the added value that lies in comparing and relating the two sets of measures. This section therefore starts by reviewing the development of the two approaches and their uses. In practical terms, different methodologies are needed to construct these measures because of constraints of data availability. The differences in purpose and methodologies have resulted in some divergence between them in terms of the aspects of deprivation which they measure. Although both approaches start from Townsend's definition, the resulting measures represent slightly different conceptions of deprivation. This must be borne in mind if the Executive intends producing both measures in parallel. Finally the section explores how comparisons between the two approaches might be facilitated.

#### 3.1 INDIVIDUAL MEASURES

There is a long history of measuring deprivation at the individual level which dates back at least to Townsend's work (Townsend, 1979, 1987). This has been further developed in the Breadline Britain and PSE1999 studies (Mack and Lansley, 1985; Gordon and Pantazis, 1997; Gordon, Adelman et al, 2000). All of this work has been conducted by independent researchers. To date, neither Scottish nor British Governments have sought to define and measure levels of deprivation although this may be about to change as Section 7 discusses. The individual approach provides a *direct* measure of the living standards enjoyed by each person and hence a direct estimate of the proportion of people in multiple deprivation in a given area. This enables comparisons to be made of the absolute levels of need between areas or of changes in levels of need over time. Through the collection of further information on individual characteristics, this approach allows research to explore the relationships between material or social deprivation and other dimensions of social exclusion such as social, cultural or political marginalisation.

The individual approach relies on the collection of a large amount of information about each individual's living standards, covering their material and social circumstances. The main method to date has been through the use of a household survey. These surveys are relatively lengthy and this tends to limit the number of interviews and hence geographic detail. The PSE1999 had a sample of 1530, enabling it to provide robust estimates of levels of deprivation for Britain and some information on the picture for regions such as Scotland. With sufficient resources, it would be possible to expand the survey approach to provide data

for sub-areas of Scotland but it would be very costly to provide data for areas smaller than local authorities in this way.

In theory, it may be possible to obtain direct measures of individual living standards by making greater use of the range of data held by different Government departments, as discussed in the Interim report. There are major technical and legal challenges before such an approach becomes a reality, not least due to data protection legislation and individual rights to confidentiality. This is an area the Executive might usefully monitor and review again in the medium term. For now, the survey approach is likely to remain the only feasible means of identifying individual deprivation and it is the one this report focuses on.

### 3.2 AREA-BASED MEASURES

In contrast to the individual measure, there is a long history of the Scottish Executive (and its predecessor, the Scottish Office) commissioning area-based deprivation indices for Scotland (Duguid and Grant, 1984; Duguid, 1986; Duguid, 1995; Gibb et al, 1998; Noble et al, 2003). These have their origins in urban policy initiatives. From the late 1960s, there was growing concern across Britain about the persistence of concentrations of deprivation in “inner city” areas and a recognition that the problems were multi-dimensional – declining employment opportunities and high unemployment, poor housing and physical environment, low educational attainment, poor health and failing public services, for example (Atkinson and Moon, 1994; Hill, 2000). This led to a series of initiatives targeted on areas with the greatest concentrations of deprivation (the Urban Programme being one of the first of these, the area-based Social Inclusion Partnerships one of the most recent). As a result, there has been a need to identify areas with the worst concentrations of deprivation in a consistent fashion.

There has been a long and vigorous debate both about the extent to which “deprived people” are concentrated into “deprived areas” and about the appropriateness of using area-based initiatives to tackle problems of deprivation (Holterman, 1975; Glennerster et al, 1999). Nevertheless, concentrations of deprivation persist, as does a concern about the impacts of living in “deprived areas” on individual life chances (Scottish Executive, 2002a). The aim of “narrowing the gap” between deprived areas and the average remains an important one for the Scottish Executive and, increasingly, for organisations involved in Community Planning Partnerships. In consequence, there is still strong demand for measures to identify the locations with the most severe concentrations of deprivation and track these over time. It should be stressed that *measuring* deprivation at the small area level does not imply that this is the most appropriate scale at which to *intervene* to try and tackle deprivation – a point also made by Noble et al (2003).

Recent indices in Scotland have been based on wards or postcode sectors (average population around 4000 to 5000) but earlier indices focussed on Census output areas (average population around 120 people). To achieve this level of spatial detail without the cost of *very* large surveys, some compromises are made. These indices are constructed from a series of indicators each measuring a single characteristic of the population (the proportion unemployed, lacking qualifications or on low income, for example). As a result, this approach cannot identify the number of individuals in *multiple deprivation* in each area. The combined index is a purely relative measure which ranks areas in relation to each other at a given point in time. It cannot be used to estimate absolute changes over time.

### **3.3 CONCEPTUAL BASES FOR INDIVIDUAL AND AREA APPROACHES**

The two approaches differ not only in terms of how they measure deprivation but also in terms of what they measure. This reflects both practical constraints on the types of data available but also differences in the conceptualisation of deprivation which underpin each measure. Table 3.1 illustrates this by showing the domains which two current measures cover – the individual approach of the PSE1999 and the area approach of the SIMD2003 (the latter including the three domains which would have been in the index had adequate data been available at the time). The SIMD2003 is already organised into domains. The indicators from the PSE1999 have been grouped under headings taken from Townsend’s definition. It is striking how little overlap there is between the two although both cover aspects of financial resources in addition to aspects of deprivation.

#### **3.3.1 Individual approach**

The domains in the PSE1999 focus directly on material goods or social relations – food, clothing, housing, household goods and participation in social activities. Access to these “necessities” is directly affected by individual income although, arguably, housing is slightly different as this is an area where, for many on low incomes, consumption is determined to a large extent by state provision (social renting) or subsidies which are separate from income (Housing Benefit). There is no attempt to include measures of area or locational characteristics within this approach. Within the PSE1999, area deprivation is seen as quite distinct, and is measured through a separate set of indicators. Deprivation in this sense is purely individual and determined by financial resources.

*Table 3.1: Domains for individual and area approaches*

Domains		Individual deprivation (PSE1999 “Necessities of life”)		Area deprivation (SIMD2003)	
Financial resources	Income	(✓)	(Not part of the “necessities” list but included in definition of “poor”)	✓	On low-income benefits, both out-of-work and in-work
	Other financial resources	✓	Insurance of contents of dwelling; Regular savings for rainy days; Money to spend on self weekly	✗	
Material goods and social relations	Diet	✓	Two meals a day; Fresh fruit and vegetables daily; Medicines prescribed by doctor; Meat, fish or vegetarian equivalent; Roast joint/vegetarian equivalent weekly	✗	
	Clothing	✓	Warm waterproof coat; Appropriate clothes for job interviews; Two pairs of all weather shoes; Outfit for social occasions	✗	
	Housing	✓	Beds and bedding for everyone; Heating to warm living areas; Damp free home; Money to keep home decorated	(✓)	(Proposed in SIMD2003 but not developed)
	Household facilities	✓	Refrigerator; Replace broken electrical goods; Deep freezer/fridge freezer; Carpets in living rooms and bedrooms; Telephone; Washing machine; Television; Replace worn out furniture; Dictionary	✗	
	Leisure	✓	Hobby or leisure activity; Holiday away from home	✗	
	Social relations	✓	Visit friends/family in hospital; Visit friends/family; Celebrations on special occasions; Visits to school; Attend weddings, funerals; Collect children from school; Friends/ family round for meal; Presents for friends/family yearly	✗	
Personal characteristics	Health	✗		✓	Comparative mortality factor; alcohol abuse; drug abuse; comparative illness factor; emergency admissions to hospital; depression, anxiety, psychosis; low birth weight
	Education	✗		✓	Secondary level absences; pupil performance at SQA Level 4; working age adults with no qualifications; proportion not staying in full-time education post-16.
	Employment	✗		✓	Unemployment claimant count; Incapacity Benefit; Severe Disablement Allowance; Compulsory New Deal
Area or locational characteristics	Crime & social disorder	✗	(Indicators on crime and social order problems collected separately)	(✓)	(Proposed in SIMD2003 but not developed)
	Physical environment	✗	(Indicators on physical environment collected separately)	(✓)	(Proposed in SIMD2003 but not developed)
	Geographic access to services	✗	(Indicators on use and rating of public services collected separately)	✓	Average distance to: GP/health centre; general store/supermarket; primary school; petrol stations; bank/building society; community internet facility

### 3.3.2 Area approach

In addition to income and housing, the area index is composed of measures of personal characteristics such as employment, health or education, and of area or locational characteristics (geographic access to services, physical environment and crime/social disorder). Other than housing, there are no measures of access to the material goods or social relations considered “necessities” as there is no data on these for small areas.

The justification for including income is obviously its role as the key cause of deprivation. Housing measures are included as this is the one aspect of living standards for which there are adequate measures at small area level. The justification for the other domains requires more explanation.

#### *Education, health and employment*

On the one hand, the education domain is seen as measuring “the key *educational* characteristics of the local area that might contribute to the overall level of deprivation and disadvantage” (Noble et al, 2003: p.20 – emphasis in original). In this perspective, the education indicators are indirect indicators of deprivation as they measure a major cause of low income. The argument might equally have been that educational characteristics are an indirect measure of deprivation as low educational attainment is associated with low household incomes or deprivation. On the other hand, the SIMD2003 also justifies measuring low educational achievement as a deprivation in its own right: “if - for whatever reason - one area has better educational results than another that may be less disadvantaged in other respects, then this area is less *educationally* deprived” (p.20 – emphasis in original). This sees education as an important in itself rather than as a measure of deprivation. With the health domain, the justification in the SIMD2003 report is again both in terms of its relationship with deprivation and in terms of health as important in its own right: “While ill health is closely intertwined with other aspects of deprivation, it is also an important aspect of deprivation in its own right” (p.16).

While low educational attainment or poor health may be problems in themselves, this does not imply that they should be seen as deprivations given Townsend’s definition. We argue therefore that the justification for both these domains should rest much more clearly on their role as indirect indicators of underlying problems of deprivation. In both cases, the domains can be justified as indirect indicators of outcomes and of causes (or contributory factors) which are strongly associated with deprivation.

With the employment domain, the justification in the SIMD2003 is placed solely on unemployment as a problem in itself. It “seeks to measure enforced exclusion from the world of work. The domain does not seek to capture income deprivation to which joblessness leads, since this is tackled in the Income Deprivation Domain” (p.14). This fits well with some conceptions of social exclusion but, as with education and health, it does not fit within our definition of deprivation. (If two people have the same income but one is unemployed, the unemployed person may be seen as more excluded but we would not see them as necessarily more deprived).

The alternative justification for including the employment domain (rejected by the SIMD2003 report) is that unemployment is a major cause of low income and hence deprivation. If there were no other measures of low income, this domain would be a useful

addition to the index. As it is, it appears to largely duplicate the function of the income domain but it does so less directly. There are also very significant problems with the definition of this domain as measuring those “who want to work but are unable to do so through unemployment, sickness or disability” (p.14), as discussed in the Interim Report. As a result, we recommend that the Executive considers dropping this domain from the index.

#### *Area or locational characteristics*

These domains were seen by many respondents during the consultation process as important components of an area deprivation index, although this does not mean there was unanimous support for every domain. The main justification for including them in the deprivation index is rather different than for the measures of individual characteristic.

It is possible to argue that these domains should be included in the index as indirect measures of individual deprivation. Measures of poor physical or social environment can be seen as indirect indicators of deprivation outcomes on the basis that people with low incomes are more likely to live in such areas than more affluent groups. Poor environment or poor geographic access to services may also be seen as indirect measures of causes of deprivation. Living in an area with a poor environment may contribute to problems such as poor health and hence deprivation (Noble et al, 2003: p.33). Poor geographic access can be seen as leading to higher costs in travelling to access services and hence in reduced disposable incomes and increased deprivation.

From the consultation process, however, it is clear that many people using area deprivation indices see area or locational characteristics as *direct measures of problems with the area as a whole*. These indicators are not seen as proxies for underlying problems of deprivation but, rather, as problems in their own right which should be the target of specific policies. As noted already, in the PSE1999, area characteristics are treated separately from measures of individual deprivation (the list of “necessities”). In the area indices, these are seen as part of the overall measure of deprivation which combines individual and area characteristics. We recommend that these domains should be included on this basis. They should not be seen as indicators of underlying problems of individual deprivation.

### **3.3.3 Final set of domains**

The domains discussed above reflect those included in the current measures developed for the PSE1999 and for the SIMD2003. The Interim Report set out further items which might be included in the area index either as new domains or as additions to existing domains.

There was support for:

- covering a broader range of factors which determine the levels of financial resources at the disposal of each household in addition to current income;
- extending the geographic access domain to include access to work as well as services, and availability of communications infrastructure; and
- developing a new domain on social relationships or social capital.

A summary of the final list of domains which we recommend the individual and area measures should cover is provided in Table 3.2 below. Although we have argued against the employment domain (as have others such as the Countryside Agency (2003)), there was strong support for retaining it. We have therefore retained it in the list for now.

**Table 3.2: Summary of proposed domains**

<b>Domain</b>	<b>Rationale</b>	<b>Comments</b>
<b><i>Financial resources</i></b>		
Current income	Indirect – measures a major part of the main cause of deprivation	Appears in both individual and area-based measures
Other financial resources	Indirect – measures other factors which determine level of financial resources including: past earnings history; savings/debts; and cost of living	Appears in both individual and area-based measures (area-based measure includes employment)
<b><i>Material goods and social relations</i></b>		
Diet Clothing Housing Household facilities Leisure Social relations	Direct - measure individual access to “necessities”	With the exception of housing, these appear only in the individual measure
<b><i>Personal characteristics</i></b>		
Health Education, skills and training	Indirect measures associated with deprivation as outcome and cause	Appear in the area-based measure
<b><i>Area or locational characteristics</i></b>		
Crime and social order Physical environment Geographic access and telecommunications Social relations and social capital	Direct measures of area problems (and, in some cases, arguably indirectly related to deprivation)	Appear in the area-based measure

### **3.4 COMPARING RESULTS FROM THE TWO MEASURES**

As noted above, there is a long-running debate over the extent to which deprived individuals are concentrated into the most deprived areas and over the suitability of area-based initiatives as responses to problems of concentrated deprivation. By devising individual and area-based measures, this work could provide very valuable insights into these relationships and inform the development of policy in future. As the discussion above illustrates, the measures start from rather different conceptual bases and, to some extent, measure different types of problem. Care needs to be taken when making comparisons between the two.

The process of comparison can be aided in at least three respects. First, the Executive should make available as many of the individual indicators underpinning the area-based index as possible, subject obviously to the need to preserve confidentiality. These would show the proportion of people deprived on a single dimension in each ward and, hence, the extent to which different groups were more or less concentrated into the most deprived areas. One

constraint on making available data from the SIMD2003 at ward level has been the fact that some of the data had previously been released for a different set of small areas (postcode sectors). Release of both sets of data might have breached confidentiality rules, due to the possibility of differencing. In future, this suggests a need to co-ordinate release of small area statistics better so that the full set of deprivation indicators can be released.

Second, the individual survey could be used to explore the distribution of deprived individuals between more or less deprived areas. Assuming the individual survey records the precise postcode of each person interviewed, it is possible to link each individual's data to the area in which they live and hence to an area deprivation score. There would not be sufficient data to provide a direct estimate of the number of deprived individuals in every small area but it would be possible to estimate the characteristics of each group of areas (the most deprived 10 per cent of areas, and so on). This could be used to estimate the proportion of deprived individuals living in the most deprived 10 or 20 per cent of areas. Similarly, it could also be used to estimate the proportion of people living in the most deprived 10 or 20 per cent of areas who were deprived on the individual measure.

Third, this approach could be taken a stage further by using modelling techniques to provide estimates of the numbers of people multiply deprived in each individual small area. Knowledge of the characteristics of deprived individuals from survey-based measures could be combined with data on small area characteristics from the Census and/or Scottish Neighbourhood Statistics. A similar approach has been used by Lee et al (1995) to estimate distributions of deprived individuals for small areas and by Bramley and Lancaster (1998) to estimate income distributions for small areas. There would of course be questions of validity with such measures; these might be at least partially addressed by a one-off survey of deprivation in a small number of small areas to cross-check the two methods. If the validity of this approach were to be widely accepted, it offers the possibility of being able to track levels of deprivation for small areas over time – potentially a powerful tool for policy evaluation.

### **3.5 CONCLUSIONS**

There is demand for both individual and area measures of deprivation as they are complementary rather than alternatives. Furthermore, relating the two measures to each other may provide particularly useful insights into the nature and distribution of deprivation in Scotland so there are synergies to be gained from developing both. Practical constraints mean that different methods will be needed for each. Individual measures will be based on surveys. Area-based indices will continue to be based on indicators from diverse sources as it would be prohibitively expensive to collect sufficient data through surveys. The practical steps outlined would help to ensure that the potential synergies from developing both measures are realised.

The different origins and uses of the two types of measure mean that they have tended to be based on slightly different understandings of deprivation. The individual approach tends to retain a narrower focus on the “necessities of life” but area measures include both individual and area characteristics. As users clearly expect area measures to have this wider conceptual base, we recommend that this difference is maintained even though it means that direct comparisons between the two approaches need to be made with care.

## 4. SCOTTISH CONTEXT

We recommend that the Executive:

- R4.1 - continues to draw on work on deprivation undertaken in the rest of Britain, given the fundamental similarities between Scotland and the rest of Britain in terms of the nature of deprivation, its underlying causes, social perceptions of minimum acceptable standards and the institutional context;
- R4.2 - continues in its approach of developing measures of deprivation which cover the whole of Scotland.

One requirement of this project was to explore whether there was evidence that the nature of deprivation was distinct in Scotland or whether there were differences within Scotland which would need to be taken into account in any measures. We examined the geographical, cultural and institutional context in some detail in the Interim Report (Bailey et al, 2003). Here we provide a shorter summary of that discussion and incorporate some feedback from the consultation process.

### 4.1 GEOGRAPHICAL CONTEXT

There are some differences of physical geography between Scotland and other parts of the UK which may have a bearing on needs. Scotland's colder, wetter and windier climate, particularly on the west coast, is likely to increase the deprivation problems associated with inadequate housing, notably fuel poverty arising from inadequate heating systems and insulation. Although not unique to Scotland, it becomes more important to ensure that these problems are adequately captured. The more important challenges relate to patterns of settlement and differences arising from histories of development. We summarise these as urban/rural and regional dimensions.

#### 4.1.1 Urban and rural dimensions

More than in England, measures of deprivation need to cope with the range of situations in which people live in Scotland – from dense neighbourhoods in large metropolitan areas to small settlements or isolated homes in remote and sparsely populated regions. There is great diversity between these extremes as well and the terms 'urban' and 'rural' do not reflect this adequately. While we continue to use these terms as a convenient shorthand, we need to bear this diversity in mind at all times. Recent evidence shows that, on a wide range of indicators, urban areas as a whole tend to have higher levels of deprivation than rural areas. These studies also show that there is a great deal of diversity within both urban and rural categories and deprivation is not confined to urban areas. In terms of the nature of the problems faced, we argue that the basic dimensions of deprivation are the same across Scotland (Rural Poverty and Inclusion Working Group, 2001). The importance of the urban-rural issue is increased because, in the past, many area-based deprivation indices were biased against rural areas due to the indicators used or due to the focus on area concentrations (Midwinter and Monaghan, 1991; Shucksmith, 1990; Shucksmith et al., 1994, 1996; Countryside Agency, 2003). As the Interim Report and others have argued, many of these criticisms became redundant with the latest indices as these are based on better data and different methodologies.

During the consultation process, it was clear that part of the concern from a rural perspective was that the focus on deprivation was seen as inappropriate. It was argued that many of the most remote or fragile rural areas were suffering problems of economic decline and out-migration. Some people who faced a future of poverty and deprivation if they stayed in these areas had migrated elsewhere in search of employment. The result was that levels of need were not adequately reflected by deprivation measures which focussed on current residents alone. There was a suggestion that deprivation measures should include indicators on out-migration to pick up these problems. While sympathetic to these problems, this change would be inappropriate. Deprivation measures cannot make assumptions about where people might prefer to live or about how their living circumstances might differ if they lived somewhere else.

#### **4.1.2 Regional dimensions**

There are important regional contrasts within Scotland which may both shape the nature of deprivation in different locations and have implications for how deprivation is measured. The most notable regional difference is the east-west contrast within the Central Belt which has grown so significantly over the last three decades (Bailey et al, 1999). As a result of the scale and nature of Glasgow's problems, it dominates the composition of national indices. While this gives a valid picture of deprivation nationally, it may reduce the value of national indices for guiding policy in some other parts of the country. Some areas have begun to develop their own indices of deprivation or of related concepts (Edinburgh and the Lothians, Fife, Aberdeen, Aberdeenshire and Highland areas, for example). This approach might become more widespread as individual Community Planning Partnerships take on greater responsibility within their areas for "narrowing the gap" between deprived and other areas (Scottish Executive, 2002a). Our main focus remains on the construction of national measures to provide comparability between areas. By making a much greater level of data on deprivation available at both small area and individual levels, however, we hope that the opportunity for different areas to undertake their own analyses will be increased.

### **4.2 CULTURAL CONTEXT**

Deprivation, like poverty, is a relative concept, defined and experienced in relation to social norms. These social norms may differ in the Scottish context in two ways. Firstly, perceptions of need and hence the definition of deprivation may be different to other parts of the UK and secondly, the experience of deprived individuals may be influenced by particularly Scottish cultural and social responses to poverty.

In relation to defining deprivation, there is reasonably firm evidence that there would be very few differences between Scotland and the rest of the UK. Work for the PSE1999 suggested that Scots would have a slightly less generous definition of "necessities of life" than the English (Pantazis et al., 2000). At the same time, Scots appear more concerned about the problems which arise from deprivation, and keener that action is taken to tackle these. Comparisons between the British and Scottish Social Attitudes surveys suggests that Scots were more likely to consider that benefit levels were too low and caused hardship, and less likely to believe that current benefit levels discouraged individuals from finding employment (Patterson, 2002a). A higher percentage of Scots than English also supported the redistribution of wealth (Patterson, 2002a).

Cultural factors may be implicated in behaviour associated with the risk of deprivation and hence with the nature of deprivation. For example, levels of poverty and deprivation explain much of Scotland's strikingly poor health record but not all of it. Part of the explanation appears to lie in cultural differences and the impacts of these on health-related behaviours such as smoking, alcohol consumption and poor diet. The consultation process identified a number of other areas where, anecdotally, a particularly Scottish dimension may be present but again little hard evidence.

Importantly for the construction of national measures, there appear to be few differences in the social attitudes to deprivation between the Scottish regions. Perceptions of the degree of income inequality are uniform according to the Scottish Social Attitudes survey, with around 85 percent of respondents thinking the gap between those with high and low incomes is too large. Whilst there is some differences in attitudes towards unemployment benefits (those in West central Scotland more likely to support higher benefit levels), these apparent regional differences are largely explained by differences in average age rather than region per se (Bromley and McCrone, 2002). Looking at social capital, there appears to be no significant difference between the regions in levels of membership of community organisations although people in Highland region seem to exhibit slightly higher levels of trust in others and greater willingness to turn to others in times of need (Bromley and McCrone, 2002).

#### **4.3 CONCLUSIONS**

Overall this discussion suggests that, for the purposes of measuring deprivation, differences between Scotland and the rest of the UK are limited. Approaches to the measurement of deprivation adopted elsewhere are likely to be useful in the Scottish context. Differences within Scotland should also not be exaggerated. The application of a single measure to the whole country is valid.

## 5. DEVELOPING AREA-BASED MEASURES

We recommend that the Executive:

- R5.1 - develops a national area deprivation index based on domains for: current income, other financial resources, housing, health, education, crime and social disorder, physical environment, geographic access and telecommunications, and social relations and social capital;
- R5.2 - makes the detailed changes to the relevant indicators specified in Section 5.1 and follows-up on longer term actions;
- R5.3 - retains the use of wards for now but looks at moving to smaller “data zones” in future, possibly using a two-tier approach;
- R5.4 - summarises results using both domain and life-stage approaches and ensures that individual indicators can be disaggregated by life-stage groups and gender on a consistent basis;
- R5.5 - publishes as many of the individual indicator scores as possible in order that people can assess absolute changes over time as well as being able to explore the relationships between each indicator and the overall index;
- R5.6 - uses the same set of indicators from year to year but updates the set periodically and, in the change years, publishes results using both old and new sets of variables;
- R5.7 - uses the same set of weights from year to year when combining indicators to determine domain scores but updates the weights periodically (at the same time as new data is brought into the index) and, in the change years, publishes results using both old and new weights;
- R5.8 - commissions further work to consider improving the “shrinkage” technique applied to scores for small areas and re-considers the use of factor analysis for combining indicators into domain scores.

In recent years, there have been significant improvements in the availability of data for small areas and in the methodologies used to calculate area deprivation indices. The recently-published SIMD2003 takes advantage of both and represents a real advance. This section sets out a strategy for developing this index in the longer term. The Interim Report discussed at some length the set of indicators currently included in the SIMD2003 as well as possible additions, amendments and deletions. Here, we focus on presenting the conclusions we have come to. The justification for including each of the domains in the area index was discussed in Section 3.3 above. This section sets out in more detail the indicators on which we would base each of the domains. We distinguish between areas which can be implemented immediately or in the short term, and those where further development is required. We also set out our recommendations on a number of more specific issues.

## 5.1 DOMAINS AND INDICATORS

### 5.1.1 Current income

R5.1.1 We recommend that the Executive:

- retains benefits take-up rates as the means of identifying the population on low income in the short term, with the list of benefits updated to include Working Tax Credit and Pension Credit;
- commissions research to explore how benefit take-up rates vary between areas with the aim of producing correction factors so that take-up rates can be used to estimate eligibility rates in the medium term;
- monitors developments in estimating local income distributions as a potential replacement for benefits data as the basis for this element in the longer term;
- adds its voice to calls for the Inland Revenue to make data on incomes and wealth available for small areas.

There was some discussion during the consultation phase over whether there should be a single financial resources domain or whether current income should be kept separate. On balance, we favour keeping it separate as it is seen as such a key element in the overall index and it is based on comparatively robust data. This domain is concerned with measuring the proportion of people on low incomes as low income is the key cause of deprivation.

#### *Benefits take-up*

In the absence of reliable figures for local income distributions, the SIMD2003 used indicators based on the proportion of adults and children receiving “low income” benefits. We recommend retaining this approach. Some updating of the indicators will be necessary to reflect changes in the availability of benefits and tax credits but this will improve population coverage significantly. Specifically, Working Tax Credit (from April 2003) extends coverage of working age people without children who are in work but on low incomes, while the Pension Credit (from October 2003) will extend coverage of older people on low incomes but not in receipt of Income Support. In both cases, there will need to be an income cut-off to retain the focus on those on low incomes as is the case at present. Data would be obtained from DWP.

#### *Benefits eligibility*

There are concerns that take-up rates may vary across the country and that, as a result, they may provide a slightly biased picture of the distribution of low income households. We therefore recommend that further research be commissioned to examine spatial variations in take-up rates, building on earlier work by Bramley et al (2000). This work would be designed to produce correction factors to be applied to take-up rates so that the benefits data provides a more accurate picture of levels of eligibility and hence low income.

#### *Local income distributions*

In the longer term, there remains a concern that some low income groups may be missed by benefits data (many students, for example) and that this indicator is susceptible to changes in the benefits regime. Work is being carried out by ONS to model income distributions for

small areas. While this does not appear to be sufficiently robust at present, it may provide the basis for direct estimates of the numbers of people below certain income thresholds in future. As this would remove all problems of population coverage/eligibility and take-up arising from benefits data, it would be preferable. We recommend that the Executive monitor the development of this data source. We also recommend that the Executive adds its voice to calls for Inland Revenue to play a more active role in making data on local incomes more widely available.

### *Other*

There were mixed responses to the question of using Housing or Council Tax Benefit take-up. On the former, there was concern that this was available only to renters. For the latter, there was felt to be considerable overlap with other benefits, particularly now that the tax credit regime has increased coverage. While cross-checking of results might eliminate duplicate records, the added-value of such an exercise appears relatively small. We do not recommend incorporating either.

### **5.1.2 Other financial resources**

R5.1.2 We recommend that the Executive

- discusses with DWP the possibility of providing estimates of numbers who have been on low income benefits for more than one year;
- explores acquisition of commercial data on debt and savings levels;
- considers modelling incidence of financial stress and savings from household surveys;
- considers development of local cost of living measures in the longer term;
- monitors the development of standardised money advice systems as a potential source of data on debt problems in future.

The aim of this domain is to pick up additional factors which determine the level of financial resources available to an individual, beyond current income. There are three elements to this domain: persistent low income; savings and debts; and cost of living adjustment.

#### *Persistent low income*

There was strong support from consultees for devising measures of persistent low income. The most direct approach would be to use the low income benefits data and to seek to identify individuals who had been on one or other of these benefits for, say, a period of one year. As with low income, this could be expressed as a simple proportion of the population. There may be some difficulties where individuals have moved between benefits. We recommend that the Executive discusses the feasibility of obtaining such data with the DWP.

#### *Savings and debts*

The suggestion that measures of financial resources should include measures of savings/debts had widespread support. One additional argument in favour of this approach is that this would provide a better picture of the relative financial position of households over the life-cycle. Older people may have lower incomes but tend to have more savings to draw on. Significant challenges remain in terms of defining savings/debts and in terms of measuring these. On debt, a working group on over-indebtedness led by the Department of Trade and

Industry (DTI) has drawn a distinction between secured debt (principally mortgage debt on housing) and unsecured or consumer debt (credit cards, bank overdrafts, consumer credit agreements, etc.). The latter seems the most appropriate area to focus on as it applies to the whole population although, for homeowners able to borrow by re-mortgaging, the line between the two may be very unclear. On savings, a similar distinction might be drawn between relatively inaccessible savings tied up in housing equity or pension funds and those more readily accessible in savings accounts or short to medium terms investments.

For debts, one approach is to measure levels of debts directly. These should be related to income levels as it is not debt itself but the cost of repaying debt in relation to income which matters. There are no public sources of data at present. Some commercial data on credit-worthiness exists and this could provide indicators immediately and on an on-going basis. Questions about the validity of the data would need to be addressed. The alternative approach is to look at experiences of financial stress (problems paying bills, arrears of mortgages or rent, reduced consumption of necessities for financial reasons, etc.). Data on these issues could be gathered through household surveys and modelled to small area level. In the short term, we recommend that the Executive explores both the purchase of data from a private supplier and the possibility of modelling data.

In the longer term, alternative sources of administrative data may become available. There are moves to develop a common system for money advice or debt counselling to be used across public and voluntary sector agencies. While this would only provide data on those who approached such agencies for help, the information would be available on a consistent basis. We recommend that the Executive monitors these developments.

On savings, some very basic data is collected in the Scottish Household Survey which could be modelled to small area level although the accuracy of this would need to be checked. There may also be commercial data. Again both options could be explored further.

### *Cost of living adjustment*

There was strong support, particularly from rural areas, for the inclusion of some form of measure of relative cost of living. We are aware that it might prove very expensive to collect the necessary data if a standalone exercise were required. Some data is collected from different locations for the existing Retail Prices Index. We recommend that the Executive examines whether this might be used to provide estimates of local cost of living for the whole country.

### 5.1.3 Housing

R5.1.3 We recommend that the Executive:

- focuses the housing domain on direct measures of inadequacy of housing, covering physical conditions, suitability and security of tenure;
- uses the Census in the short term to provide indicators of physical conditions and overcrowding;
- examines data on origins of homeless people applying to local authorities once it becomes available;
- gives the Housing Working Group within the Neighbourhood Statistics project the responsibility to develop appropriate measures of housing deprivation in the longer term.

The argument for including a housing domain is that this is one area on which direct measures of living standards are available for small areas although, as noted above, the relationship between housing conditions and deprivation is less direct due to direct state provision (social housing) and additional financial support (Housing Benefits). We recommend that the domain should focus on direct measures of inadequacy of housing covering physical conditions, suitability and security of tenure.

In the short term, the Census can provide valuable if limited indicators on the physical conditions and suitability. We recommend the following indicators:

- the proportion of people living in housing lacking amenities and/or lacking central heating;
- the proportion of people overcrowded, defined as those living at levels above the occupancy norm.

This data cannot be updated directly but better measures of physical conditions and suitability should soon be available from the Scottish Neighbourhood Statistics work on housing. Assuming this links to the work to develop an updated minimum standard of housing (HITF, 2003), this would provide a much more satisfactory basis on which to measure poor physical conditions. We also recommend that the data on origins of homeless people seeking accommodation from local authorities be examined when it becomes available.

Some respondents to the consultation process favoured the development of measures such as housing costs or affordability (cost/income). Others argued that, if there are significant affordability problems, they would be expected to lead to more direct outcomes such as overcrowding or homelessness and that it should be these impacts which should be measured. We favour this approach.

## 5.1.4 Health

R5.1.4 We recommend that the Executive:

- specifies the aim of the domain as identifying areas with health problems attributable to deprivation;
- commissions further work to explore whether it is necessary to adjust all the health indicators to control for population structure;
- extends the Comparative Mortality Factor to cover the population over 75;
- adopts Census data on limiting long-term illness and general health as the basis of the Comparative Illness Factor in the short term, and uses the SHS to update this in future years;
- monitors the development of small area data on life expectancy and healthy life expectancy as alternatives to existing mortality and morbidity indicators;
- seeks to include an additional indicator on smoking rates.

This domain is well developed in the current index and we would retain it with minor changes. We would, however, suggest that it is re-named “health” to reflect the focus on mortality and morbidity, rather than disability. In Section 3.3, we argue strongly that the justification for this domain is that it measures health inequalities associated with low income and deprivation. As such, the aim should be to identify areas with *higher than expected* levels of ill health or mortality given the age/sex profile of the population.

### *Standardising indicators*

To this end, it is necessary to ensure that the indicators focus on this excess by controlling for age/sex differences as appropriate. Two indicators (Comparative Mortality Factor (CMF) and Comparative Illness Factor (CIF)) would be adopted unchanged as these have adjusted raw mortality or sickness rates to take account of population age/sex structures. Further work should be carried out on the other five indicators to explore whether population structure has a significant effect on these and to consider controlling for this if necessary.

### *Comparative Mortality Factor*

We would extend the measurement of mortality, CMF, to those over 75 to provide better population coverage. The relationship between deprivation and health is not as strong with older age groups but it is still significant and this would provide better coverage of the whole population. Given comments below about disaggregating indicators to distinguish between different age groups, this might be done by constructing separate indicators for working age and older people in the first place.

### *Comparative Illness Factor*

The Comparative Illness Factor (CIF) is currently based on data from DWP on uptake of certain benefits because data on self-assessed health from the 1991 Census was considered too out-of-date. The limitation of this data is that it provides a rather uneven measure of ill health. People of working age are recorded as “ill” if they require help with personal care or mobility (Disabled Living Allowance) or are unable to work due to ill health (Incapacity Benefit or Severe Disablement Allowance). People over working age are recorded as suffering ill health if they require help with personal care (Attendance Allowance). Benefits

measures have the attraction that they provide comparability between areas but they are not a useful guide to the absolute scale of problems or to the relative differences between age groups.

With publication of the 2001 Census, data is available for small areas on the number of people who see themselves suffering from a limiting long term illnesses (LLTI) and the number who rate their general health as poor in the past year. Some different views were expressed about whether self-reported health is a good guide to actual morbidity but it is clearly preferable to benefits-based measures on the basis of its coverage. We recommend that the Executive adopts both Census measures in the short term in place of the current benefit measures. Given that age has a strong impact on self-reported health, it is important that the Census measures are standardised in the same way as at present.

In the longer term, the SHS collects some data on self-reported health problems and this should be used to update Census figures in a process similar to that already used to estimate the proportion of working age adults lacking qualifications.

#### *Life expectancy and healthy life expectancy*

Work is underway within the Information Services Directorate of NHS Scotland to develop small area estimates of life expectancy and healthy life expectancy. These might provide a useful alternative to mortality and morbidity indicators, not least because they could be expressed as a proportion of the population (e.g. proportion with below average life expectancy or healthy life expectancy). We recommend that the Executive monitors developments with this data.

#### *Smoking rates*

There was strong support for adding in measures of smoking rates, given that these are seen as the major preventable cause of premature death and that there is a strong social class gradient. Some work to model small area smoking rates has been commissioned for Scotland by NHS Health Scotland (formerly the Public Health Institute of Scotland). This is using data from the Scottish Health Survey combined with Census population figures. We recommend that the Executive await the results of that work and considers including the indicator developed.

### 5.1.5 Education, skills and training

R5.1.5 We recommend that the Executive:

- specifies that the focus of this domain should be on low educational achievement or low skills as both an outcome and a cause of poverty and deprivation;
- bases the pupil exam performance indicator on an average for three years;
- improves the indicator on absence rates by taking advantage of new pupil-level data on this area;
- replaces the indicator on qualifications for working age adults by direct figures from the Census and, in future, updates these figures using a revised method;
- improves coverage of the working age and older population by estimating the proportion of adults with poor literacy or numeracy.

As discussed in Section 3.3, we recommend that the focus of this domain should be on educational attainment as an indirect measure of deprivation, both as an outcome but also as a cause.

#### *Children and young people*

For the school exam performance data, we recommend one minor change: using an average figure for three consecutive years to reduce the impact of fluctuations from one year to the next. We recommend retaining the indicator on the proportion not staying on in full-time education (either at school and or in higher or further education). Following feedback from the consultation process, we recommend that the indicator on absence rates be retained. The construction of the indicator can be significantly improved as pupil-level data on absence rates becomes available from the development of educational statistics.

#### *Working age lacking qualifications*

We would retain the indicator on working-age adults with no qualifications although, in the short term, we would replace the current measure with one based directly on the 2001 Census question on this issue. In the longer term, we recommend that the Executive should re-examine the method for updating small area estimates using LFS data. The current method relies on a model derived from data on the 32 local authorities and appears rather crude. A better alternative would be to develop the model on the basis of individual data from the SHS. (A separate note is being submitted to the Executive on this point.)

#### *Poor literacy or numeracy*

To strengthen coverage of education for the adult population, we recommend that a further indicator be developed to measure problems of poor literacy or numeracy. In line with the aim of this domain, this is intended to act as an indicator of underlying problems of deprivation although we expect that there will also be interest in the data for their own sake. The indicator will need to be based on individual data and modelled to small area level. At present there is no suitable data collected on an on-going basis other than as part of the International Adult Literacy Survey and the definitions used in that survey have been questioned (Scottish Executive, 2001). There is a strategy to tackle problems of poor literacy and numeracy being developed within the Executive and it is recommended that development of suitable indicators be conducted in conjunction with that work.

## 5.1.6 Employment

R5.1.6 If the employment domain is retained, we recommend that the Executive:

- considers whether the domain is intended as a measure of “exclusion from the world of work” (as at present) or as an indirect measure of deprivation;
- (if the latter) measures the opposite of the (full-time equivalent) employment rate;
- (if the former) retains the existing benefits-based measure;
- in any case, uses benefits data averaged over four successive quarters to remove problems of seasonal fluctuations in unemployment;

In our view, the employment domain does not fit within the conceptualisation of deprivation we have outlined and should therefore be dropped from the index. We recognise, however, that there was strong demand from many people consulted to retain this domain as unemployment is seen as a key issue in its own right. We therefore provide a brief discussion of how the indicators in the current index might be updated.

One issue which needs to be resolved is whether the domain attempts to follow the current justification, measuring “enforced exclusion from the world of work” (Noble et al, 2003: p.14) or whether its function is to act as a proxy for low income and hence an indirect measure of deprivation.

The latter approach is consistent with the conceptual framework set out above and would be our preference. If this approach were adopted, the measure would simply need to capture all those of working age who were not in (full-time) employment as a proportion of all of working age. Reasons for not working (full-time) would be irrelevant. Data on employment status is available from the Census and the measure could be constructed as the opposite of the (full-time equivalent) employment rate. This could be updated using data from the Labour Force Survey and/or benefits data or (if available) estimates of the employment rate taken from SNS. There would be substantial overlap with those recorded as claiming out-of-work benefits in the current income domain but this measure would also include those not eligible or not claiming benefits.

If the existing approach is retained, it is necessary to measure who is not working at present but would be working if: there were more demand for labour in the area; or they did not have health problems or disabilities which prevented them working. The current measure includes those in receipt of Job Seekers Allowance or on compulsory New Deal programmes, and those in receipt of benefits related to incapacity to work on grounds of health or disability (Severe Disablement Allowance or Incapacity Benefit). This should be retained. One problem with this measure, however, is the undercounting of who is “unemployed”, particularly women. With unemployment benefits, there is no requirement for (usually female) partners of JSA claimants to sign-on themselves. Some of these partners may make a positive choice not to seek work, perhaps because they take on the unpaid work of caring for children or others. For other partners, the choice is at least partly determined by judgements about conditions in the local labour market and the type of work they might hope to obtain. While this bias is unlikely to affect the relative position of different areas, it does lead to an undercount of the absolute scale of the problem and to a bias against women in the index. Another problem with the concentration on unemployment is that the measure does not pick up those working part-time who might wish to work longer hours. Women are far more likely to work part-time than men.

Whichever approach is adopted, we recommend that any measure based on benefits data use figures for four successive quarters in order to remove problems of seasonal fluctuations or bias.

### 5.1.7 Crime and social order

R5.1.7 We recommend that the Executive:

- bases the domain on a combination of crime incidence data, fear of crime measures, incidence of social disorder or incivilities, and fire service data on malicious fires and false call-outs;
- estimates crime incidence from police recorded crime statistics and crime survey data;
- works with police forces to make recorded crime statistics available for small areas on a consistent basis in the longer term;
- estimates fear of crime and incidence of social disorder or incivilities using survey data modelled to small area level;
- works with the fire service to secure data on malicious fires and false call-outs.

The basis for this domain is that it identifies a range of matters which are seen as important problems or area deprivations in their own right. This domain may also be seen by some as an indirect measure of individual deprivation as well although that is not its role here. The argument for this is that, at an area level, there is good evidence of an association between some types of crime such as burglary and other aspects deprivation (Johnson et al, 1997; Smith et al, 2001). It should be noted that this does not mean that the poorest necessarily suffer much higher victimisation rates. Pantazis and Gordon (1998) provide evidence that it is “better off” households in poorer areas who are most likely to be victims of crime but it is the poorest who have much greater fear of crime. The domain therefore includes crime incidence and fear of crime, as well as a wider range of low-level problems associated with social disorder or “incivilities” such as vandalism, graffiti and noise.

There was strong support for including this domain from the consultation process, particularly from those concerned with urban areas. Some respondents from rural locations felt that problems of crime were not strongly associated with problems of deprivation in their areas. If this is the case, this makes crime measures a biased indicator of levels of individual deprivation but does not mean that they should not be used as indicators of problems in their own right.

#### *Crime incidence*

Several problems exist with using police recorded crime statistics to measure crime incidence, including variable reporting rates by the public, variable recording practices by the police and their unwillingness to make data available for small areas. In the short term, we recommend that the Executive adopts the approach to estimating small area crime rates which has been proposed for inclusion in the English deprivation index by Robson et al (2002). This apportions police recorded crime figures to ward level using a combination of victimisation rates from crime survey data and Census data on ward characteristics. The method was tested in a number of case study areas in England where local surveys provided direct estimates of crime incidence and it appeared robust. Further testing might be carried out in Scotland.

For the longer term, we recommend that the Executive supports efforts to introduce more standardised recording practices and explores further with police forces the possibility of making existing data available for small areas directly. Correction factors would need to be

developed to allow for differences in recording levels between areas. These could be derived from an analysis of crime survey data in a process similar to that used to adjust benefits take-up rates to estimate eligibility (see Section 5.1.1 above).

### *Fear of crime*

Using data from the Breadline Britain survey, Pantazis and Gordon (1997) argued that fear of crime is more strongly related to poverty than incidence of crime itself at an individual level. One important factor explaining this link is that many people living in poverty cannot afford household insurance so the consequences of burglary for them may be particularly severe. Data on fear of crime is available from the Scottish Crime Survey and would need to be modelled to small area level.

### *Social disorder and “incivilities”*

Data on perceptions of problems of social disorder would capture some of the low-level crimes which are not recorded in crime statistics such as vandalism or graffiti, as well as nuisances or incivilities such as noise from neighbours, disturbance from passers-by and so on. Data is available from the Scottish Crime Survey and the Scottish Household Survey and this would need to be modelled to small area level.

### *Fire service data*

The SIMD2003 report suggested that fire service data on malicious fires or false call outs might provide one indicator for levels of social disorder and this had some support in consultations. It is not clear whether it would be subject to the same problems of differential recording practices that apply to police recorded crime data. In the consultation process, it was suggested that this data would provide information on only a very small proportion of the types of crime impacting upon local areas. Nevertheless, we recommend that this data should be requested from Fire Services and examined to see how robust it is.

## **5.1.8 Physical environment**

R5.1.8 We recommend that the Executive:

- bases the domain on measures of air, water or noise quality, as well as proximity to positive or negative features;
- looks to develop a measure of access to open space or play areas for children.

There was strong support for the inclusion of a domain capturing quality of the physical environment as this is seen as being important in itself. It may also be seen as important where the quality of the physical environment has an impact on health or well-being and hence, indirectly, on deprivation. In the Interim Report, we suggested that this domain should focus on negative features such as graffiti, litter or vandalism but we now include these within the crime and social order domain. We now argue that the focus should be on aspects such as air, water or noise quality, as well as proximity to positive or negative features (such as green space, mobile phone masts or noxious industries).

The Scottish Centre for Infection and Environmental Health (SCIEH) is carrying out work for the SNS project to develop a range of indicators of environmental quality. These cover: air

and water quality; radiation levels; location of mobile phone masts, cooling towers and certain industrial processes; and complaints about noise. These should provide a useful source from which to develop a range of indicators and the Executive should look to build on this work when the indicators become available. The reliance on *complaints* about noise may be problematic. As different groups may have different propensities to complain, it may be a poor guide to levels of noise in an area. The relationship between this and other indicators of deprivation should be checked before it is included in the index.

There were a number of suggestions that this domain should capture proximity to open space or green space *which could be used for recreational purposes*. Much land around small settlements in rural areas may look attractive but could not be used for leisure or recreation. Different types of area would be needed for very young children, older children or adults. It would be relatively easy to collect data on the location of public parks or play areas for children and to calculate proximity to this using a simplified form of access measure (ideally based on walking distance). We recommend that the Executive explores the possibility of local authorities providing data on the location of such facilities. It is rather more difficult to define and measure access to other forms of open or green space which are much more variable in nature. We make no recommendations in that regard.

### 5.1.9 Geographic access and telecommunications

R5.1.9 We recommend that the Executive:

- changes the name of the domain to “geographic access and telecommunications”, reflecting the broader focus;
- changes the list of services to which distance is calculated as discussed;
- moves to measuring distance in terms of drive or travel times rather than road/ferry distance in the short term, and consider the use of generalised travel costs in the longer term;
- includes a measure of geographic access to employment and measures of the availability of telecommunications infrastructure;
- continues to explore how wider issues of access to services, service quality and service availability might be captured.

The justification for this domain is that it captures a set of problems which operate at area level and which are seen by many as important problems in their own right. These are the problems (financial cost, time and inconvenience) of having to travel a relatively long distance to access basic services. From this perspective, the fact that the domain has a negative correlation with indicators of individual deprivation in the current index is not relevant.

The domain is not intended as an indirect measure of poor access as a cause of deprivation due to its impacts on increased costs of travel and hence cost of living. First, higher costs in accessing services might be offset partially or wholly by lower housing costs. Second, if there is a more general cost of living problem, this should be captured directly in the cost of living measure proposed in Section 5.1.2.

#### *Geographic access to services*

The current domain focuses on geographic access to a number of key services. We recommend some changes to the list of services and the method for calculating distance, and the inclusion of access to employment.

We recommend that the focus should be on services which are visited regularly and are widely used, particularly by those on low incomes. We recommend retaining access to doctors, supermarkets, petrol stations and primary schools but dropping access to a bank/building society in favour of access to a post office. According to Bramley and Ford (2001), post offices are used by the vast majority of people and are seen as an essential local service. It is also likely to be a service of particular importance to many on low incomes. Data on location of post offices should be readily available. Access to a community internet facility should also be dropped as these are used by such a small proportion of the population and many alternative sources of access to the internet exist (home, work or commercial facilities). There were various suggestions of services which might be added, including some support for including access to secondary schools.

In terms of measuring distance, feedback from the consultation process was clearly of the view that drive or travel times rather than road distance would be preferable. This would also provide a better reflection of the difficulty of accessing services where ferry journeys were involved. From a policy perspective, the indicator would also show improvements both where new services were located closer to residents and where improvements in roads or transport services reduced travel times. This change should be made relatively quickly

Two further issues raised during consultation were the possibility of reflecting the availability of public transport services and the financial as well as time costs involved in making a journey. One means of tackling both issues would be to use “generalised travel costs”. These reflect physical distance but also: type of transport available to an individual; time taken (including time waiting for connections); and convenience or quality of transport. Hence, two neighbours might have different generalised travel costs to reach the same destination if one has a car available to make the journey and the other has to travel by public transport. For the area as a whole, the cost of reaching a given destination (GP, shop, etc.) would be the average of the cost of getting there by car and the cost of using public transport, weighted by the proportion of the population relying on each mode.

### *Geographic access to work*

There was wide support for including a measure of access to employment in the index. There was some debate about whether this was best included in the employment domain or the access domain. On balance, we feel that the issues involved (of transport, travel cost, location) mean that this is best included in the access domain.

In measuring access to employment, there is the additional complication that jobs are “rival goods” in the sense that only one person can occupy each post at any one time, as noted in the Interim Report. There is therefore a need to include distance of rivals (other potential job seekers) to the relevant jobs as well as distance of the individual to the workplace in question. The measure also needs to reflect the fact that access to a job depends on other factors such as level of skill.

A range of methods for calculating geographical access to employment have been developed, although the most sophisticated are those of Shen (1998). These allow for the incorporation of residential location, employment location, competing workforce, occupational differences and differences in mobility. They are quite demanding in terms of data requirements but could be operationalised at small area level using the Census. Some of the data could be updated between Censuses. Workplace employment data is available for small areas from the Annual Business Enquiry and local authority-level data from the Labour Force Survey could

be combined with small-area population figures to provide some updating of workforce characteristics.

### *Telecommunications infrastructure*

This had been proposed in the Interim Report as a possible additional domain but feedback suggested it might be included within the access domain as it captures a very similar set of problems. Rather than focus on individual ownership of particular items, it was felt that the indicators should measure the extent to which it was possible to gain connection to digital means of communication at reasonable cost. This could be achieved by measuring coverage of telecommunications infrastructure: mobile phone networks, broadband access, cable television or digital radio transmissions, for example. The indicators would be the proportion of the population able to gain access to each. Data would be obtained from service providers as there are no issues of confidentiality involved or from industry regulators.

### *Other issues in access to services*

The Interim Report raised a number of additional issues which might have been considered in an expanded domain on access to services more generally. This would have covered issues such as:

- the quality and quantity of services being accessed (quality of school, waiting time to visit GP, for example); and
- the extent to which costs (charges as well as travel costs/time), quality or location of services acted as barriers to use.

There was some support for developing these areas but no further suggestions on how these might be measured. There are very significant challenges in measuring service quality or in assessing quantity of service provide in relation to levels of need. Data on barriers to service usage might be gathered through household surveys. The PSE1999 employed questions on the extent to which people were: using a service despite perceiving it as inadequate; not using a service because it was unavailable or inadequate; and not using a service because they could not afford to (Bramley and Ford, 2001). Modeling results to small area level might be regarded as relatively unsatisfactory in this case as a key determinant is expected to be variations in local provision. As a result, we recommend that the Executive keeps this area under review.

### 5.1.10 Social relations and social capital

R5.1.10 We recommend that the Executive monitors the work led by ONS to develop measures of social capital for small areas and considers including all or some of those measures within the index.

The Interim Report considered how a domain might be constructed to capture social dimensions of individual deprivation on the basis that this would provide a direct measure of an aspect of deprivation not well developed in previous area indices. There was some discussion on which aspects of social relations should be captured and a contrast was drawn between social relationships as a source of personal support (“getting by”) and as a source of contacts, connections or information (“getting on”). We also discussed the broader concepts of social capital, social equality or stigma and social order although the relationship between these and individual deprivation was less clear.

In this report, however, we have drawn a distinction between those domains which attempt to measure deprivation directly (e.g. income, housing, health and education) and those which are intended to capture area-wide problems of deprivation (e.g. crime and social order, physical environment or geographic access). The former are intended to provide coverage of all aspects of personal deprivation, both material and social. The latter are measures of area characteristics which are seen as related to or affecting problems of deprivation. It is difficult to justify the inclusion of a domain on social relationships as a direct measure of deprivation, not least it is difficult to envisage what sources could be developed to provide this information directly. This domain is therefore included on the basis that it picks up a number of the social dimensions of an area relevant to the understanding of deprivation. These are certainly seen as important issues in their own right, as current policy statements make clear (Scottish Executive, 2002a) and there was widespread support for including them from the consultation process.

The Office for National Statistics (ONS) has been leading on a project to develop small area data on social capital since 2001 and this is nearing completion. The SNS is already linked in to this work. According to the ONS website, social capital is being defined using an OECD definition as "networks together with shared norms, values and understandings that facilitate cooperation within or among groups" (Cote and Healy, 2001: p.41). There are seen as being five dimensions which the measure should capture:

- participation, social engagement, commitment;
- control, self-efficacy;
- perception of community level structures or characteristics;
- social interaction, social networks, social support; and
- trust, reciprocity, social cohesion (National Statistics, 2002).

We recommend that the Executive continues to monitor the development of this data and considers including the measures within the area index.

## **5.2 UNITS FOR ANALYSIS**

The move from postcode sectors to wards in the SIMD2003 has been widely welcomed but there are problems with these units in the longer term. First, for some people, particularly but not only those in rural areas, wards are still too large and therefore miss important “pockets” of deprivation. Second, the possibility of proportional representation leading to major changes in wards, even an end to wards, needs to be taken into account. It was also pointed out that the two tier approach we had suggested in the Interim Report (a full set of indicators at ward level, a sub-set for the smaller data zones) would not be feasible as data zones do not nest within wards and problems of “differencing” would therefore arise.

We recommend that wards be retained for the immediate future but that the Executive looks at using the small data zones in the longer term. If there are problems with quality of data for the small data zones, then a two-tier approach might be considered where the upper tier is made up of aggregations of small data units.

## **5.3 DOMAINS VERSUS SOCIAL GROUPS**

In the Interim Report, we set out a very different way of combining any given set of indicators to construct an overall index. Rather than grouping these into domains based on functional distinctions (income, employment, education and so on), it was proposed that indicators should be grouped according to age or “life-stage” (children, young people, working age and so on). The arguments for doing so were partly based on a criticism of the domain approach (notably that it was wrong to think of the education domain as highlighting educational problems, and so on). But it was partly based on a positive argument that the life-stages approach would provide information which might prompt more joined up thinking. A table was included in the Interim Report which showed how the current set of indicators could be re-cast in this way, with little or no change to the information collected.

There was significant support for both approaches to be used in future. There are only minimal implications for data collection, most notably the need to ensure that indicators can be disaggregated by age group. For the current set of indicators, for example, this would apply to data on low incomes derived from benefits and to data on adult health problems, derived primarily from NHS data sources. We recommend this approach be adopted.

In addition, there was also demand for the indicators to be disaggregated on the basis of other factors, notably gender. We recommend that the Executive seeks to provide gender breakdowns for all indicators.

## **5.4 CHANGE OVER TIME**

One specific issue on which we were asked to comment was the possibility of using area deprivation indices to measure absolute changes over time. As already noted, one of the limitations of the area based approach is that it is a relative measure. The scores which each area achieves do not reflect the absolute number of people who are multiply deprived. An area may see a reduction in absolute levels of deprivation but no change in its relative ranking and vice versa. There was strong support from consultees for absolute measures of change.

In practice, the best that could be achieved would be to summarise change over time in terms of a “basket of indicators”. In other words, absolute change on each underlying indicator could be published alongside the change in the relative ranking. For example, an improvement of ten places in overall ranking might be accompanied by a fall of 10 per cent in the number of low income households, a fall of 5 per cent in absence rates, a rise of 7 per cent in emergency admissions, and so on. In general, there was strong support from consultees for the Executive publishing more detail for individual indicators, rather than relying on the five domain scores as at present.

## **5.5 UPDATING THE AREA-BASED MEASURE**

Our task is to set out a long-term strategy for developing measures of deprivation in Scotland. No matter how far-sighted this work tries to be, there will always be the need to review the measures. There may be opportunities to include new indicators, including those arising from the development of additional data sources recommended as part of this work. There may be methodological advances. There will be changes in standards of living and in social judgements as to what constitute “necessities of life”. This section briefly considers some of the issues which arise for updating the area-based measures.

There is a trade-off between retaining a consistent measure to enable analyses to be made of change over time and updating a measure to take account of new data sources, methodological advances or changes in social perceptions or practices. Area-deprivation indices have rarely retained the same method for successive measures, being updated as new data sources and methods have become available. Up to now, however, these measures have only been produced on an occasional basis (following the decennial Census, until recently) so consistency seemed less important. With the move to producing deprivation indices on a more regular basis, possibly annually, a compromise position might be useful. This would entail retaining the same measure for a period of several years. Several revisions could then be made at one time rather than minor changes made each year. By publishing both old and new indices in the change years, it would be possible to distinguish changes in ranking due to change over time from those due to the change in indicators. A more continuous picture of the changing pattern of deprivation could then be developed.

One specific issue relates to the way in which individual indicators are combined to produce an overall domain score. For three of the current domains, the SIMD2003 uses factor analysis to derive weights. This has been criticised both for producing results which lean heavily on one or two indicators in some cases (such as the Education, Skills and Training domain) and, more importantly, for producing results which are unstable (Raab, 2003). This last issue is particularly problematic when it comes to updating the index. If factor analysis is repeated each year and this produces quite different weights, movements in the ranking of areas may owe more to changes in weights than to changes in local conditions. On the other hand, if weights from the first year are used regardless of subsequent changes in the relationships

between variables, this might also be seen as unfair. We recommend using a consistent set of weights from year to year, revising these periodically at the same time as new data sources are included. We also recommend that the Executive reconsiders whether factor analysis is the most appropriate means of arriving at these weights.

## **5.6 OTHER ISSUES**

Our remit in conducting this review of the area-based measure specifically excluded consideration of technical issues. Several respondents argued that it was difficult to make a hard distinction between these and we have already commented on the use of factor analysis to weight indicators within each domain. One further issue relates to the impacts of shrinkage techniques on the picture of deprivation in rural areas where ward sizes were particularly small. There was concern that this added to the problems of identifying areas of deprivation in rural contexts, as potentially deprived areas had their scores “shrunk” towards the average for their authority. These problems would presumably become even greater if there were a move to use smaller data units in future. We have not examined the scale of these problems in practice but would note that it ought to be possible to construct more sophisticated shrinkage techniques. At present, scores for small areas on one variable are shrunk towards the local authority average for that variable. A more sophisticated approach would take account of the scores achieved by other small areas which were similar on the basis of other characteristics.

## 6. DEVELOPING INDIVIDUAL MEASURES

- In implementing the individual measure of deprivation, we recommend that the Executive:
- R6.1 - determines the most appropriate standard to use to assess levels of deprivation (the list of “necessities”) following original qualitative and quantitative research in Scotland;
  - R6.2 - recognises the high level of demand for data on individual deprivation down to the level of local authority areas and, consequently, collects data on deprivation through the Scottish Household Survey and publishes it annually;
  - R6.3 - tracks change over time using a range of thresholds or cut-off points to determine levels of deprivation;
  - R6.4 - uses a single standard to measure deprivation for all adults and a separate standard to measure deprivation for children;
  - R6.5 - ensures that it is possible to disaggregate results (at national level) by age, gender, household type, ethnicity, and (if possible) disability and sexual orientation;
  - R6.6 - carries out further research on the demand for separate standards for individual groups once the results of using a single standard have been published;
  - R6.7 - maintains the same standard for consecutive years but reviews the standard periodically (at least every five years).

This section considers the third element of our work – measuring deprivation at an individual rather than area level. The first part sets out the basic approach using a single standard measured through a household survey. The second part turns to the question of whether different standards might be developed to reflect the needs of different social groups in more detail. Finally, the Section examines the question of updating the measure.

### 6.1 MEASURING INDIVIDUAL DEPRIVATION

At present, the only feasible option for measuring deprivation at an individual level is through a household survey, as discussed in Section 3.1 above. Following the model of the PSE1999 study and its predecessors, this involves a three-stage process as the Interim Report made clear.

The first stage is concerned with determining the minimum standard used to measure deprivation - the material goods, services or social activities which everybody should be able to enjoy. It is not for this research to say what this standard should be. Rather, as Pantazis et al (2000) explain, the process of arriving at the standard involves both qualitative work to determine a “short list” of possible items and quantitative research to identify the final list of items which the majority see as “necessities”. Both elements should be carried out for this exercise, although the work at the British level would provide a significant base to start from. For the quantitative element, sufficient data is needed to provide reasonable confidence levels at national level only. This might be collected through an existing survey such as the Scottish Social Attitudes Survey (with a sample of 1600 from across Scotland). Checks should be carried out to ensure that the judgements of different groups (by age, gender, class, and so on) as to what constitute “necessities” are essentially similar.

The second stage gathers data on individual living standards using a household survey. One issue is the extent to which the survey can provide detail on levels of deprivation for different parts of Scotland. In the consultations for this work, there was strong interest in being able to get estimates of deprivation down to the level of local authorities. A dedicated survey to

achieve this would be extremely expensive. The more cost-effective alternative would be build relevant questions into an existing survey. The SHS seems to offer the best opportunity at present as it is designed to deliver robust estimates of population characteristics at local authority level over a two-year period by interviewing over 30,000 people in that time. Results could of course be produced annually using rolling two-year periods; annual figures were what most consultees tended to prefer. Alternatively, data could be aggregated for a larger number of years to provide more stability; the problem with this approach is that the measure is less responsive to change.

Some of the content of the SHS is already highly relevant to the study of deprivation and it would therefore be a matter of expanding on or amending those questions, not adding entirely new topics. There are existing questions on whether the household has certain material items (freezer, washing machine, telephone, or computer), on housing conditions and on social relations (frequency of contact with family and friends), for example.

In the third stage, a cut-off point is applied to determine the number of people considered to be multiply deprived. These thresholds can be seen as being somewhat arbitrary – there is not necessarily any objective reason for determining that lacking three “necessities” determines deprivation rather than two or four. The key point is that, by tracking changes over time, evidence is provided as to whether the number of people deprived on a given threshold is increasing, decreasing or remaining the same. As with statistics on low incomes, it would make sense to use a number of different thresholds rather than relying on one single threshold.

The PSE1999 argued that children have significantly different needs from adults and that these should be reflected through the use of a separate standard to measure child deprivation. There was strong support for this approach to be adopted in Scotland. Separate research would need to be conducted to identify the list of “child necessities”. There were strong representations that any such research should be child-centred, i.e. based on the views and experiences of children. Data would also need to be collected through the SHS on living standards of children. At present, data on one child in each household is collected from the highest-income householder or their partner rather than from the child themselves. While it might be preferable to have the child’s opinion of whether they lack certain “necessities” or not, there are ethical and practical barriers to interviewing children directly, particularly younger children. These include problems of getting open answers from children in the presence of their parent or guardian. One way round this problem might be to obtain parental or guardian consent to older children completing a written questionnaire.

The use of a single standard for measuring deprivation for all adults is particularly valuable because it enables comparisons to be made between social groups in terms of levels of deprivation. Indeed, there was strong support from the consultation process for disaggregating national statistics to make comparisons between different social groups. This is not to deny that there may be variations in needs or life styles between groups to some extent but the argument is that there is sufficient commonality to make a single standard broadly applicable.

Information already collected in the SHS would make it possible to disaggregate results by:

- age;
- gender;
- ethnicity;
- household types;
- other factors such as health, employment status and so on.

There is some information on disability available from the survey although this could be further developed. Ideally, it would also be possible to disaggregate results by sexual orientation but there are problems in collecting this information in large scale surveys due to fears of persecution and discrimination. Work is on-going within the Scottish Executive and elsewhere to try to find a suitable form of question which could be adopted in surveys such as the SHS.

One issue with using a household survey to collect data on individual deprivation is that incomes and standards of living are assumed to equal within the household. In practice, there is significant evidence that resources may be unequally distributed, with women most likely to lose out. In particular, women in low income households often forego their own necessities in order to ensure that their children have a better standard of living. It would be important that care is taken to identify each individual's living standards, and not rely on household averages.

Finally, it worth noting that, while this study has focussed on measuring deprivation, additional questions could be built into the SHS to give a more rounded picture of other forms of need such as social exclusion or social injustice or other problems such as views on the area in which they live. It would also be possible to "attach" data on area characteristics (crime incidence rates, access to services, for example) to individual records to explore relationships between individual and area-level factors.

## **6.2 MEASURES FOR DIFFERENT SOCIAL GROUPS**

A further aim of this work is to explore whether it might be useful and feasible to develop a range of measures to assess the levels of deprivation for different social groups. In losing the ability to make comparisons between groups, the main gain would be a better assessment of absolute levels of need for each group and of how the deprived members of each group were distributed across Scotland.

In general, there was limited response to this question in the consultation process, perhaps because it was difficult for people to comment without having seen the details of the single standard. There was support for developing measures specific to the needs of some groups but, with the exception of children, little clear evidence was presented to argue that the needs of one particular group would not be captured by the single standard.

As a result, our recommendation is to proceed more slowly in this regard. The first priority is to put in place a single standard for adults and a separate standard for children, and to ensure that the adult measure can be disaggregated to show differences between groups. Once these measures are in place, there should be further consultations on the desirability of separate measures.

### **6.3 UPDATING THE INDIVIDUAL MEASURE**

For the individual measure, the key issue is how to cope with changes in social perceptions of what constitute “necessities”. Gordon, Pantazis and Townsend (2000) show that, in general, standards defined by consensus have risen over time, reflecting rising levels of affluence and expectations. They use current judgements of “necessities” in their work, giving a truly relative approach to measuring deprivation.

With a move to produce data on possibly an annual cycle, however, it would be unhelpful to update the standard every year as this would make comparisons of changes over time less transparent. It would also add to costs for relatively little return as standards are unlikely to change rapidly. As a compromise, we recommend that the same standard should be used for a number of years and then revised to reflect changes in social perceptions. If possible, both old and new standards should be used in the changeover year. As there is likely to be very substantial overlap between old and new standards, this should be straightforward to achieve. Maintaining a standard for several years gives a less truly relative approach to measuring deprivation. It would be similar in effect to a measure of poverty which used the same (absolute) level of income to track changes over time. We would recommend that the standard be updated at least every five years, however, so that it is not allowed to drift too far from current perceptions.

## 7. RELATIONSHIPS WITH OTHER MEASURES

We recommend that the Executive:

- R7.1 - liaises with the Department of Work and Pensions over the proposed inclusion of child deprivation indicators in the Family Resources Survey to ensure compatibility with any measure of child deprivation developed in Scotland, if appropriate;
- R7.2 - monitors development of the work on deprivation indicators by Eurostat.

In proposing new or amended measures of deprivation at either individual or area level, this work needs to be aware of the many existing initiatives to provide social indicators for monitoring or evaluation purposes. This section summarises possible areas of overlap or duplication and suggests how these might be resolved.

### 7.1 INDIVIDUAL MEASURES

Area deprivation indices have been calculated by Government for at least twenty years but there has been no similar attempt to measure deprivation at an individual level. There are established measures of the number of individuals in income poverty, showing the proportion of people below various thresholds (Scottish Executive, 2003). In recent years, the Government has begun to publish a wide range of different indicators on social exclusion or social injustice, at both UK and Scottish levels (DWP, 2002a; Scottish Executive, 2002b). These provide information on separate aspects of these problem but do not attempt to measure the number of people excluded or suffering injustice. Few of the Social Justice Milestones relate directly to living standards as they concentrate on matters over which the Executive feels it has most direct control. The problems of overlap are therefore limited.

In Section 6, we argue that there should be separate standards developed to measure adult and child deprivation. In the latter case, there is a risk of overlapping with the work the DWP is currently undertaking to determine how to measure child poverty (DWP, 2002b and 2003). The DWP has taken a very broad approach to defining “poverty” which is likely to go beyond a simple income measure and may include a measure of material deprivation as well. Work is underway to explore the possibility of some indicators of material deprivation being included in the Family Resources Survey (FRS) and a report on this is expected by the end of 2003. The FRS has a national sample of around 25,000 households so that this exercise would provide a robust estimate for levels of child deprivation for Scotland as a whole particularly since the Executive has provided funding to increase the sample and improve coverage in Scotland. Unless there is clear evidence that people in Scotland would define a different set of necessities of life for children, it would make sense to ensure that there is close co-ordination with the DWP’s measure if this goes ahead.

There is also work on-going within the European Commission to develop indicators of deprivation to make comparisons across the EU. This work is being undertaken by Eurostat as part of its programme of work on statistics on living conditions (Eurostat, 2003). While it would be useful to have co-ordination between the measures, the Eurostat work is heavily constrained by the difficulties of devising pan-European social indicators. We recommend that the Executive continues to monitor that work but that it should not be overly concerned to ensure any Scottish measure fits within this European framework.

## 7.2 AREA-BASED MEASURES

With the area-based measure, the main issue is the extent to which individual indicators in the index overlap with small area indicators developed for other purposes. In its statement on implementing the Community Regeneration Statement, the Scottish Executive produced a set of indicators that it will use to measure its contribution to “closing the opportunity gap between deprived communities and the rest of Scotland” (Table 7.1). These indicators were chosen because they were seen as relevant for monitoring one aspect of “deprivation” but also because they reflected existing targets that individual Executive departments are responsible for delivering. As with the Social Justice Milestones, these focus on matters which the Executive is able to influence directly. Some key indicators of deprivation, such as low income, were excluded because they do not reflect areas for which Scottish Executive departments have direct responsibility (Scottish Executive, 2002c).

As a result, it should not be seen as problematic if there are significant differences between these indicators and the set used to construct the area deprivation index. In this work, it was never the intention to devise a measure which would be used as a performance indicator or as the basis of a target against which the “success” of Government policy would be judged in some direct fashion. Furthermore, it is not clear what the Community Regeneration Statement means by the term “deprivation” in this context.

**Table 7.1: Community Regeneration Statement monitoring indicators**

Education	Children achieving at least basic educational qualifications
Health	Death from coronary heart disease in people under 75 Mothers who smoke during pregnancy
Justice	Levels of house-breaking
Transport	Serious and fatal road accidents involving children Access to a local bus service
Housing	Homes with poor energy efficiency
Jobs	Unemployment rates 16-19 year olds who are not in education, training or employment Children in workless households.

Source: Scottish Executive (2002c)

## 8. CONCLUSIONS

An increasing number of terms are used to refer to social needs – poverty, deprivation, social exclusion or inclusion, or social justice, for example. To some extent these terms may be used interchangeably but they can also be used to signal important differences in focus. We do not argue that deprivation is in some way a better concept of social need than others but we do believe that it is important for its focus on the poor material and social living standards which people face as a result of poverty. In discussing how to measure deprivation, we have tried to keep to these core issues. We also believe that measures of deprivation can provide important insights into a broader range of problems of exclusion or injustice and that they will be valuable in that respect as well.

The key recommendation emerging from this work is that the Executive should begin to develop a measure of deprivation at the individual level in addition to the area-based measures. There was a very high degree of support for this development. The individual approach would provide an absolute measure of levels of deprivation and would enable comparisons to be made between different groups. The real added value from developing both measures, however, lies in analyses which make comparisons between individual, group and area deprivation, exploring the extent to which different deprived groups are more or less concentrated into particular locations.

While most measures of deprivation claim some basis in the work of Townsend, some follow his framework more closely than others. Many area-based deprivation indices have moved away from a narrow focus on living standards to encompass a wider range of problems associated with concentrations of deprivation or seen as related problems which policy should address. Insisting that the area based measure had a narrower focus on living standards would have brought it into line with the proposed individual measure and this would have improved comparability between the two. It would have made it less useful for policy makers and practitioners in many areas and so we have recommended retaining this broader focus in the area index. Comparisons between individual and area measures should therefore be made with some caution.

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## **APPENDIX 1: RECORD OF CONSULTATIONS**

Throughout the study, the work has benefited from the input of the members of the Steering Group (listed below).

The first phase of the work included:

- a review of relevant literature on the definition, conceptualisation and measurement of deprivation and related terms;
- interviews with around 20 representatives of central government, local government, other public agencies, voluntary and community groups and academics;
- two focus groups conducted with representatives of community organisations from a variety of rural and urban locations; and
- a number of written submissions from representatives of public and voluntary sector groups.

This led to the publication of an Interim Report (Bailey et al, 2003), setting out our initial conclusions and requesting feedback on a wide range of questions. This report provided the basis for a formal consultation process. Three public meetings were held in Edinburgh, Glasgow and Inverness, attended by around 60 people in total (listed below). Further written comments were received from around 30 individuals from a wide range of organisations (listed below).

### **LIST OF STEERING GROUP MEMBERS**

Michelle Dowling, South Lanarkshire Council  
Bianca Heggie, SE Central Statistics Unit  
Gillian Lancaster, SE Social Research Local Government  
Catriona McKay, SE Central Statistics Unit  
Gordon McLaren, Fife NHS Board  
Richard Rollinson, SE Housing & Area Regeneration  
Stephen Sinclair, SE Social Research Environmental & Rural Affairs  
Patricia Scotland, SE Housing & Area Regeneration  
Gillian Young, Communities Scotland

## **LIST OF ORGANISATIONS REPRESENTED AT THE PUBLIC MEETINGS**

### **Edinburgh**

CAHRU, University of Edinburgh  
City of Edinburgh Council  
Communities Scotland  
East Lothian Council  
Falkirk Council  
Fife Council  
Fife NHS Board  
Heriot Watt University  
ISD, NHS Scotland  
LAPA  
Lothian NHS Board  
Midlothian Council  
Save the Children  
Scottish Borders Council  
Scottish Executive, Rural Policy Team  
SCC  
SECSU  
South Lanarkshire Council

### **Glasgow**

Barnardos  
Communities Scotland  
East Ayrshire Council  
East Renfrewshire Council  
Glasgow City Council  
MVA  
New Opportunities Fund  
NHS Health Scotland  
North Ayrshire Council  
North Lanarkshire Council  
North Lanarkshire Partnership  
Renfrewshire Council  
Scottish Churches Policy Office  
Scottish Executive  
Shelter  
South Lanarkshire Council  
University of Strathclyde  
West Dunbartonshire Council

### **Inverness**

Aberdeen City Council  
Aberdeenshire Council  
Great Northern Partnership  
Highland Council  
Highland & Island Health Research Institute  
Highland NHS Board  
Highlands & Islands Enterprise  
Voluntary Action Highland

## **LIST OF ORGANISATIONS MAKING WRITTEN RESPONSES TO INTERIM REPORT**

Aberdeen City Council  
Aberdeenshire Council  
City of Edinburgh Council  
Coalfield Communities Campaign  
Communities Scotland  
East Ayrshire Council  
East Renfrewshire Council  
Edinburgh Youth Social Inclusion Partnership  
Falkirk Council  
Fife Council  
Fife NHS Board  
Highland Council  
Lothian NHS Board  
Midlothian Council  
NHS Health Scotland (formerly PHiS)  
NHS Scotland  
North Lanarkshire Council  
One Plus  
Poverty Alliance  
Scottish Environment Protection Agency  
Scottish Executive Education Department  
Scottish Low Pay Unit  
South Bank University  
South Lanarkshire Council Central Policy Unit  
University of Bath