

Chapter 1: Measuring Multiple Deprivation at the small area level: The conceptual framework

The Index of Multiple Deprivation 2007 (IMD 2007) is a measure of multiple deprivation at the small area level. The model of multiple deprivation which underpins the IMD 2007 is the same as that which underpinned its predecessor – the IMD 2004 (Noble et al., 2004) and is based on the idea of distinct dimensions of deprivation which can be recognised and measured separately. These are experienced by individuals living in an area. People may be counted as deprived in one or more of the domains, depending on the number of types of deprivation that they experience. The overall IMD is conceptualised as a weighted area level aggregation of these specific dimensions of deprivation. This chapter, which draws from the ID 2004 Report, elaborates on the model of multiple deprivation that has been used and addresses issues relating to it.

Background

We must first know what poverty is before we can identify where and when it is occurring or attempt to measure it; and before we can begin to do anything to alleviate it' (Alcock, 1997, p.57)

In his 1979 account of *Poverty in the United Kingdom* Townsend sets out the case for defining poverty in terms of relative deprivation. Thus his definition of poverty is: *'Individuals, families and groups can be said to be in poverty if they lack the resources to obtain the types of diet, participate in the activities and have the living conditions and amenities which are customary, or at least widely encouraged or approved in the societies to which they belong'* (Townsend, 1979, p.31). Though 'poverty' and 'deprivation' have often been used interchangeably, many have argued that a clear distinction should be made between them (see for example the discussion in Nolan and Whelan, 1996). It could be argued that the condition of poverty means not having enough financial resources to meet needs. Deprivation on the other hand refers to unmet need, which is caused by a lack of resources of all kinds, not just financial. In a similar vein, Atkinson (1998) notes that in recent debates on 'Social Europe', the terms 'poverty' and 'social exclusion' have been used on occasions interchangeably, but he defines poverty as a 'lack of money or material possessions'. Townsend himself concurs. In his article 'Deprivation' Townsend argues that '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 ...' [our italics]. People are in poverty if they lack the resources to escape deprivation (Townsend, 1987, p131 and 140).

In his 1987 article Townsend elaborates on the distinctions between social and material deprivation. The former – which he acknowledges is more difficult to measure – he describes as ‘providing a useful means of generalising the condition of those who do not or cannot enter into ordinary forms of family or other relationships’. The more easily measured material deprivation relates to diet, health, clothing, housing, household facilities, environment and work (Townsend, 1987, p136). By identifying both social and material deprivation, he is anticipating some aspects of what one might now call ‘social exclusion’. In this study Townsend also lays down the foundation for articulating multiple deprivation as an accumulation of several types of deprivation.

Townsend’s formulation of multiple deprivation is the starting point for the model of small area deprivation which is presented here in respect of the design of new measures of deprivation for England.

Area based measures

Though Townsend’s work mainly (though not entirely) referred to individuals experiencing deprivation – single or multiple – the arguments can, in modified form, extend to area based measures. However, limitations of data availability inevitably cause some of the sophistication of his original concept to be lost in practice. At an area level it is very difficult to measure the percentage of the population experiencing deprivation on one, two or more dimensions. It is possible to look at single forms of deprivation at an area level and state that a certain proportion of the population experiences that deprivation or a proportion experiences some other forms of deprivation etc. and describe at an area level the combination of single deprivations as area level multiple deprivation. The approach used here conceptualises multiple deprivation as a composite of different dimensions or domains of deprivation. It, however, says little about the *individual* experience of *multiple* deprivation.

The area itself can be characterised as deprived *relative to other areas*, in a particular dimension of deprivation, on the basis of the proportion of people in the area experiencing the type of deprivation in question. In other words, the experience of the people in an area give the area its deprivation characteristics. The area itself is *not* deprived, but the presence of a concentration of people experiencing deprivation in an area may give rise to a compounding deprivation effect – this is still *measured* by reference to those individuals. Having attributed the aggregate of individual experience of deprivation to the area, it is possible to say that an area is deprived in that particular dimension. Once the specific dimensions of deprivation have been measured, these can be understood as elements of multiple deprivation.

Dimensions of deprivation

The approach allows the separate measurement of different dimensions of deprivation, such as education deprivation and health deprivation. There is a question as to whether there should be an additional domain for low income or one that measures the lack of socially perceived necessities (Gordon *et al.*, 2000) (e.g.

adequate diet, consumer durables, ability to afford social activities etc.). To follow Townsend, within a multiple deprivation measure only the deprivations resulting from a low income would be included so low income itself would not be a component, but lack of socially perceived necessities would. However, there are no readily available small area data on the lack of socially perceived necessities and therefore low income is an important indicator for these aspects of material deprivation. Moreover, it could be argued that measures of consumption are themselves problematic as lack of certain items may be by choice rather than inability to pay for them. Therefore, it is appropriate to measure low income itself rather than the possession of certain items.

Despite recognising income deprivation in its own right, it should not be the only measure of area deprivation. Other dimensions of deprivation contribute crucial further information about an area. However, low income remains a central component of the definition of multiple deprivation for the ID 2007. As Townsend writes 'while people experiencing some forms of deprivation may not all have low income, people experiencing multiple or single but very severe forms of deprivation are in almost every instance likely to have very little income and little or no other resources' (Townsend, 1987, p131).

'Multiple deprivation' is thus not some separate form of deprivation. It is simply a combination of more specific forms of deprivation, which themselves can be more or less directly measurable. It is an empirical question whether combinations of these different forms of deprivation are more than the sum of their parts, that is, whether they are not simply additive but interact and may have *greater* impact, if found in certain combinations.

Measuring different aspects of deprivation and combining these into an overall multiple deprivation measure raises a number of questions. Perhaps the most important one is the extent to which area deprivation in one dimension can be cancelled out by lack of deprivation in another dimension. Thus if an area is found to have high levels of income deprivation but relatively low levels of education deprivation, should the latter cancel out the former and if so to what extent? The IMD 2007 is essentially based on a weighted cumulative model and the argument for limited cancellation effects is presented.

Another question concerns the extent to which the same people or households are represented in more than one of the dimensions of deprivation. In previous Indices based on Census data no explicit information is available on this aspect of the conceptual framework. The 'households with no access to a car' may well have been the same households who 'live in overcrowded accommodation'. The combination in earlier Indices takes no account of possible double counting nor do the published accounts address the potential problem. The position taken in the IMD 2007 is that if a family or area experiences more than one form of deprivation this is 'worse' than experiencing only one form of deprivation. The aim is not to eliminate double counting *between* domains – indeed it is desirable and appropriate to measure situations where deprivation occurs on more than one dimension.

To summarise, the model which emerges from this theoretical framework is of a series of uni-dimensional domains of deprivation which may be combined, with appropriate weighting, into a single measure of multiple deprivation.

The Concept of Multiple Deprivation

The IMD 2007 is therefore underpinned by a coherent conceptual model of multiple deprivation at the small area level. To reiterate, the model of multiple deprivation is underpinned by the idea of separate dimensions of deprivation which can be recognised and measured. These are experienced by individuals living in an area. The area itself can be characterised as deprived, relative to other areas, in a particular dimension of deprivation on the basis of the proportion of people in the area experiencing the type of deprivation in question. In other words, the experience of the people in an area give the area its deprivation characteristics. The area itself is not deprived, though the presence of a concentration of people experiencing deprivation in an area may give rise to a compounding deprivation effect, but this is still measured by reference to those individuals. Having attributed the aggregate of individual experience of deprivation to the area, it is possible to say that an area is deprived in that particular dimension. Having measured specific dimensions of deprivation, these can be understood as elements of multiple deprivation.