

# The changing geography of deprivation in Britain: exploiting small area census data 1971 to 2011

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## Summary

This paper will describe the method used to devise a time-series of area deprivation 1971 to 2011 using census data for all years harmonised to contemporary definitions of LSOAs / Datazones in GB. Areas which are persistently deprived or advantaged over time will be highlighted and trajectories of change will be identified to reveal locations 'on the up' or 'on the slide'. Various facets will then be analysed in relation to changing deprivation such as: the aging population; health inequalities and educational achievement.

**KEYWORDS:** Deprivation; Area measures; Time-series; Census.

## 1. Introduction to guidelines

Many policy-related and academic studies use deprivation scores calculated cross-sectionally. It is useful to identify whether small areas have changed their level of deprivation over time and be able to assess the impact of area-based planning initiatives or determine whether a change in the level of deprivation leads to a change in health. However, the changing relationship with an outcome cannot be judged if the 'before' and 'after' situations are based on deprivation measures which use time-point specific variables, methods and geographies. Changing deprivation is both a cause and a consequence of demographic change.

UK deprivation indexes (e.g. Townsend 1987; Carstairs & Morris 1989) have traditionally been at ward scale and predominantly based on census variables as indicators of relative conditions between areas. In recent Indexes of Multiple Deprivation (IMD) alternative geographies and input variables have been used (Nobel et al. 2006). A drawback with the IMDs is they should only be used for individual countries in the UK. A drawback with ward schemes is the uneven population sizes compared with the Lower Super Output Areas (LSOAs) and equivalents used in the IMDs. Any cross-sectional scores are not comparable over time and geographical boundaries are liable to change.

This paper will describe the method (building on Norman 2010) and provide an analysis of a time-series of area deprivation 1971 to 2011 using census data for all years harmonised to contemporary definitions of LSOAs / Datazones in GB. Areas which are persistently deprived or advantaged over time will be highlighted and trajectories of change will be identified to reveal locations 'on the up' or 'on the slide'. Various facets will then be analysed in relation to changing deprivation such as: the aging population; health inequalities and educational achievement.

## **2. References and Citations**

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## **3. Biography**

Paul Norman is a population & health geographer interested in time-series analysis of area and individual data from census, survey and administrative records. Paul did an MA GIS and PhD at the School of Geography, University of Leeds, was research fellow at CCSR before returning to Leeds as a Lecturer.