

# Deprivation in the UK: Calculating Townsend Deprivation Scores

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The UK Data Service is the UK's largest source of social, economic and population data, including census data. Using the data available this research has calculated deprivation scores using the Townsend Index.

The scores have then been visualised in a map and compared to deprivation in the history of the UK, showing how the spread of deprivation has changed.

## Objectives

The aim of the research was to calculate deprivation in the UK using the Townsend Index and the 2011 census.

Scores were to be calculated at several geography levels and for earlier census' for comparison

Scores were compared from one year to the next as well as comparing across countries to determine the dynamics of the change in deprivation in the UK from 1971 to 2011.

Visualisations that compliment and showcase the results were also to be produced

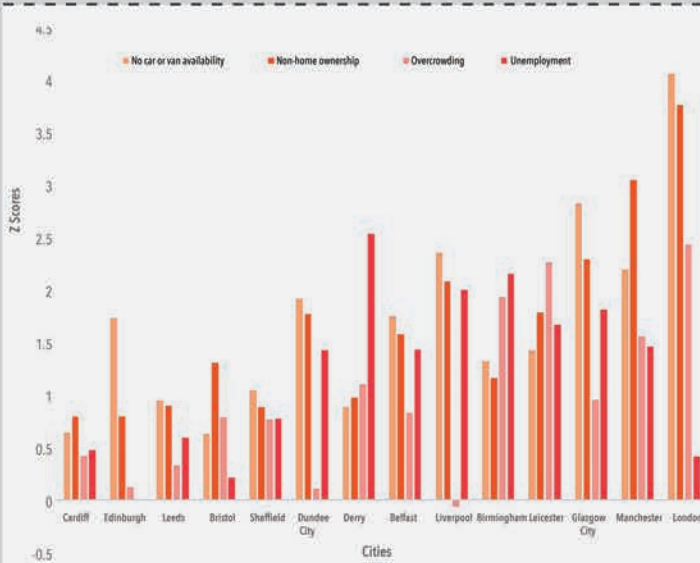
## Method

Census data was taken from the UK Data Service through InFuse and CasWeb. The data extracted were from 4 variables: Tenure, Car or van availability, Economic status and Persons per room of the household.

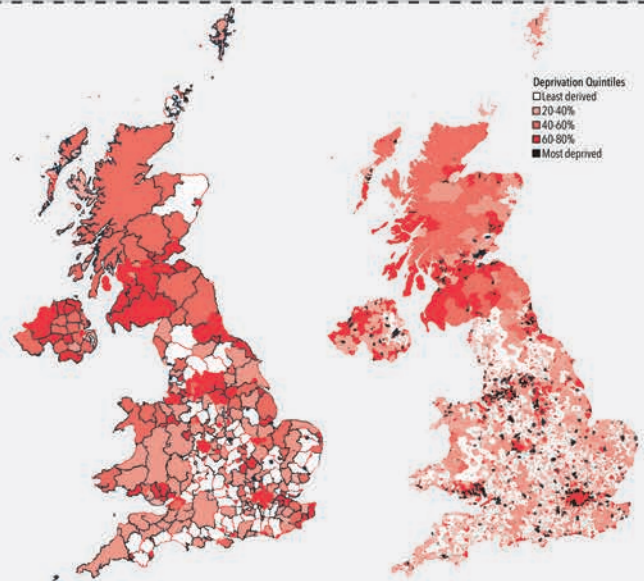
The formula needed to calculate the scores was then produced in an R Script.

The R script was used to calculate scores for all years from 1971-2011 at different areas including local authority, ward, lower super output area and output area.

Map visualisations were then created to illustrate the spread of deprivation across the UK and allowed for comparison across the years to see how this spread has changed.



The impact of each indicator in the Townsend Deprivation score in UK cities.



Maps showing the deprivation in UK Wards between 2001 and 2011

## Results and Conclusions

London consistently over the years was very deprived more so towards the centre and more affluent in areas on the outskirts. This can be said for other major cities like Birmingham and Manchester. From 1971 to 2011 it is clear to see that deprivation has decreased in Ireland and Scotland and has become more compact in the cities discussed, especially London. Out of the

four indicators of deprivation, the one that has made London appear the most deprived in comparison to the UK is car or van ownership. This indicator may be skewing the results as the figures may be indicating that it is not practice to drive a car in London rather than whether the occupants in the city can afford one.