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Geographical variation in quality of life: The role of public service organisations

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Introduction

The success of **public service organisations (PSOs)** is often judged in terms of the degree to which they are able to improve aspects of the quality of life of citizens in their jurisdiction. Little is known about the degree to which PSOs might be able to influence specific **quality of life** measures, especially those outside their main domain of influence. Also, less attention is paid to quality of life of citizens at the **local level** despite increasing policy focus on neighbourhoods and communities. The main objective of this study is to investigate geographical variation in aspects of quality of life (very broadly defined) starting from a local level.

In most **public sector service areas**, administrative organisations are arranged in a geographically **hierarchical** manner. Regional organisations such as Strategic Health Authorities (SHAs) are at the top, with lower level Primary Care Trusts (PCTs) nested within these boundaries and smaller geographical areas – 'lower super output areas' (LSOAs) – below these. Similarly, LSOAs are nested within Local Authorities (LAs) which are organised below Governmental Regions.

We examine the relationship between PSOs and quality of life indicators. We know that PSOs exist in correspondence with different geographical levels. We ask:

- Is there geographical variation in quality of life indicators within a specified hierarchical structure?
- If so, is this variation attributable to PSOs?
- To what degree do factors outside the control of PSOs (e.g. the 'needs' of the local population) influence quality of life outcomes?

The purpose of this briefing is to summarise the answers to these questions. In brief, **we find**:

- Where geographical variation in quality of life indicators is large, PSOs may have an important role to play in influencing them, even after accounting for the variation in 'needs' amongst their populations.
- PSOs may have a role to play in shaping aspects of quality of life that fall outside their traditional sector boundaries.
- There is substantial geographical variation in quality of life indicators at the lowest (small area) level. One implication of this is that the neighbourhood and community level matter and that the design of policies to address such variation should be a priority.

This document describes briefly how we obtained our results and sets out the policy implications.

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What is quality of life?

"Quality of life requires that people's basic and social needs are met and that they have the autonomy to choose to enjoy life, to flourish and to participate as citizens in a society with high levels of civic integration, social connectivity, trust and other integrative norms including at least fairness and equity, all within a physically and socially sustainable global environment" (Phillips, 2006, page 242).

Quality of life can be interpreted very broadly at both the individual and the community level and can be linked to concepts of **happiness and subjective well-being**. Many aspects of the broader social and environmental context in which people live are key factors in their well-being.

Social capital concerns *"networks together with shared norms, values and understandings that facilitate co-operation within or among groups"* (OECD, 2001). Social capital highlights the importance of many aspects of the social associations that people encounter in their everyday life that may contribute to their well-being and quality of life.

The policy agenda has placed a heavy emphasis on the responsibility of PSOs, often working together in partnerships across traditional sector boundaries, to improve the well-being of citizens, especially focusing on the **community and neighbourhood level** where social capital may have a major role to play. In particular, local authorities have been charged with developing sustainable community strategies that promote well-being, community cohesion and social capital of communities and neighbourhoods and address the full range of quality of life issues.

What data do we use?

We used 20 of the quality of life measures (Table 1) proposed by the Audit Commission to 'paint a picture' of the quality of life in a local area.

The 20 indicators cover broad areas of quality of life such as safety, housing, health, education, and transport and are available at 'small area' level. Small areas include electoral wards which are the units used to elect local government councillors. They constitute the lowest administrative units in the UK. There are 8,797 electoral wards in England. Small areas also include lower super output areas (LSOAs) which have an average population of 1,500. There are 32,482 LSOAs in England. We use data for the latest available year up to 2005.

Small areas (both LSOAs and wards) are nested within 150 Local Authorities, which are in turn nested within nine Governmental Regions, as shown in Figure 1. In the health sector, small areas are nested in 304 PCTs (our data covers the period before the large reduction in PCTs to 152), which in turn are nested in 28 SHAs.

Table 1: The 20 quality of life indicators at small area level

Indicator name	Indicator description
sleep rough	Percentage of people living rough
mortality	Standardised mortality ratio
life expectancy	Life expectancy at birth
longstanding illness	Percentage of households with one or more limiting longstanding illnesses
educational attainment	Average points score Key Stage 4
job seekers allowance	Percentage of working age people claiming job seekers allowance
crime	Deprivation score for crime
claiming benefit	Percentage of working age people claiming a key benefit
elderly deprived	Deprivation score for older people
school absence	Secondary school absence rate
no heating	Percentage of occupied households without central heating
kids deprived	Deprivation score for children
green area	Area of green space per head
travel foot bike	Percentage of population travelling to work by bike/foot
travel private	Percentage of population travelling to work by private vehicle
teenage conception	Teenage conceptions
election turnout	Election turnout
travel 20km work	Percentage of population travelling over 20km to work
air quality	Combined air quality indicator
travel public	Percentage of population travelling to work by public transport

We added data on indicators of deprivation (to measure 'needs' of the local population) because some aspects of quality of life may be only partially amenable to influence by PSOs in the presence of deprivation. We also added data on the performance of PSOs (as measured by government and regulators) to see if organisational performance can explain variations in quality of life.

What are our methods?

We used a range of **advanced statistical methods** to analyse the relationships between PSOs and quality of life measures at different **hierarchical levels**. The models varied according to the level considered, the

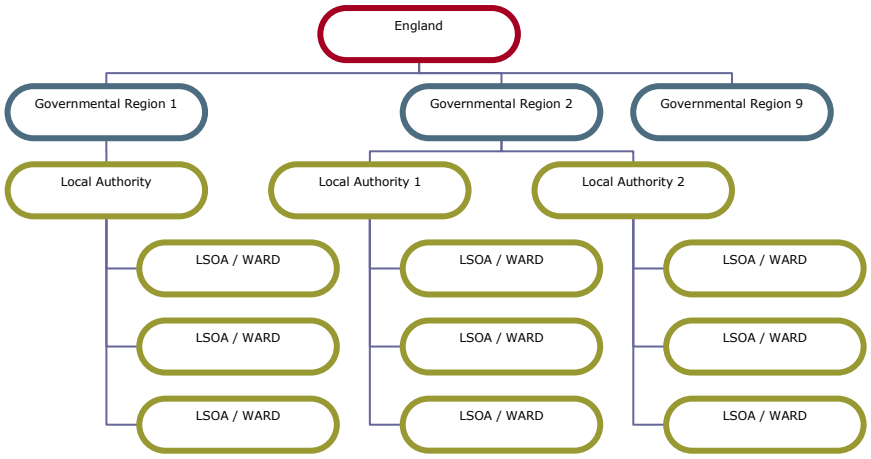

Figure 1: Example of hierarchy of public service organisation (PSOs)

way in which needs were taken into account, and whether or not the performance of organisations was considered. Our approach also allowed us to consider simultaneously the interactions that may exist between quality of life measures and levels.

The models sought to identify the proportion of variation in quality of life indicators attributable to each geographical level in the hierarchy. If variation for a quality of life indicator is high at a particular level, then it suggests that PSOs operating at that level might be able to influence it through the use of better targeted or more effective policy tools.

What are our findings?

We illustrate one set of findings in Figure 2. These show estimates of the proportion of variance found at each level and indicate the level in the hierarchy at which the most variation can be explained. This particular example explores the health context where small areas are nested within PCTs which in turn are nested within SHAs. However, other specifications show similar results.

We see that for most quality of life indicators the **majority of the variation** is at the **small area level** although a significant proportion of the variance is also attributable to the two higher levels at which PSOs operate. For the health variables – 'life expectancy', 'mortality', and 'long-standing illness' - 98%, 94%, and 84% of the variation (respectively) is at small area level, whereas for 'teenage conception' it is only 49%. This suggests that PCTs and SHAs may be able to exert more influence over the latter variable than the former.

Results for other variables such as 'sleep rough', suggest that much of the variation lies at the small area level and may be very localised and area specific; whereas for other variables such as 'air quality', 'election turnout' and the 3 measures of 'travel', the majority of the variation is attributable to the higher levels suggesting that at these levels PSOs may have a greater role to play in influencing outcomes on such variables. We illustrate another set of findings in Figure 3. This considers the local government context (with LSOAs or wards nested within LAs). The greatest variation in most quality of life measures is at the small area level, except for the variables 'air quality','election turnout' and the 3 measures of 'travel', where the greatest variation is at LA level.

In general, there is a set of indicators that tend to have a large variation at small area level, and another set for which the majority of variation appears at the higher levels (PCT, SHA or LA) as shown in Table 2.

What influence can PSOs have at small area level then? LSOAs have been constructed specifically to take into account not only mutual proximity and population size but also 'social homogeneity'. It can be argued

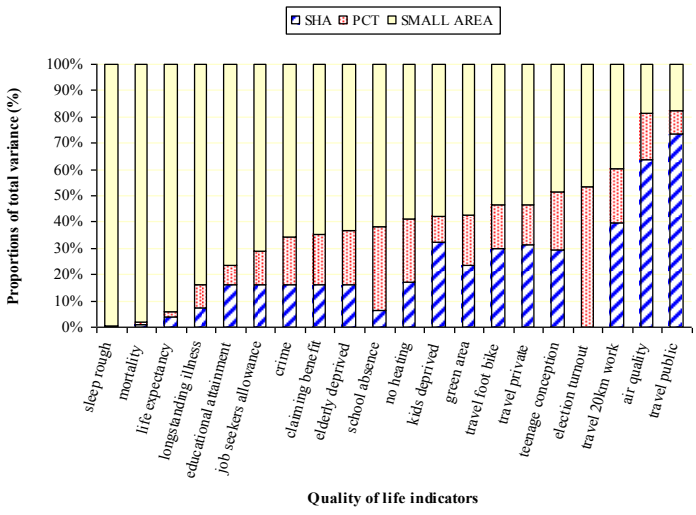

Figure 2: Proportion of variance in QOL indicators attributable to higher level SHAs, PCTs and small areas (controlling for need variables and PCT performance indicators)

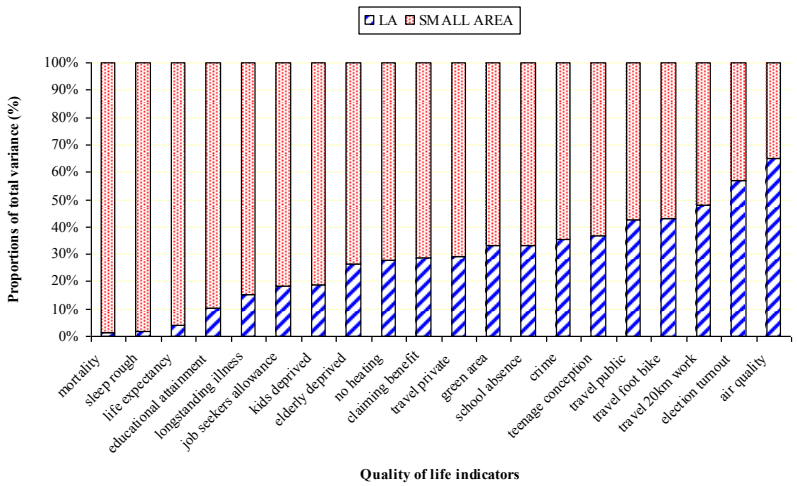

Figure 3: Proportion of variation in quality of life indicators attributable to higher level LAs and small areas (controlling for need variables and LA performance indicators)

Table 2: Summary of 6 QOL indicators which have the most variation explained at each level

Most variation at small area level
Standardised mortality ratio
Average points score Key Stage 4 (educational attainment)
Percentage of people living rough
Deprivation score for children
Life expectancy at birth (all people)
Area of green space per head
Most variation at PSO level
Percentage of population travelling to work by public transport
Percentage of population travelling over 20km to work
Election turnout
Combined air quality indicator
Teenage conceptions
Deprivation score for crime

therefore that the variation at small area level may be amenable to influence by policy actions at a small area level (such as communities or neighbourhoods). However, the relative size of the variation on a measure such as 'life expectancy' was consistently very small compared to 'sleep rough' and 'green area' which have high levels of total variance. This suggests that performance on the latter indicators might be more sensitive to intervention.

Implications for policy and practice

The identification of the degree of geographical variation in quality of life indicators apparent at each level is important. It suggests that where those **variations are large**, there may be **scope to influence outcomes** at that level to a greater extent than where the variations are small. So where we find large variation in indicators such as the number of teenage conceptions at the higher level where healthcare organisations such as SHAs and PCTs exist, we suggest that these organisations should be able to influence that outcome.

Conversely, because we find small variations at this level in indicators such as life expectancy, we suggest that these are less amenable to influence by higher level organisations.

From a policy perspective, it is important to consider the **influence of PSOs** on quality of life in **areas that fall outside their traditional domains**. Our results suggest that geographical variation exists in this respect and give a flavour of the potential influence that health care and local government organisations could have on measures that span different domains, providing support for partnership working across sector boundaries.

We illustrate the potential significance of considering the **small area level** in public policy making. The large degree of variation found in many quality of life indicators at this level is **important**. Whilst there are no obvious PSOs with responsibility for quality of life at this level, it suggests that organisations need to be aware of the potential impact of their policies at this level. Moreover, recent policy highlights the importance of local communities and neighbourhoods. PSOs have been encouraged to become more responsive to local needs and to devolve to communities a greater role in decision-making, including the handling of resources at neighbourhood, group and community level. Neighbourhood and community networks and relationships appear to play an important role in the creation and maintenance of social capital. Our results therefore suggest that policy attention to the local level may well be a fruitful approach if the aim is to enhance the overall quality of life of citizens.

References

Phillips D. (2006) Quality of Life: Concept, Policy and Practice, Routledge: London and New York.