

Economic Segregation in Britain's Cities

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Issues

- **A central feature of UK government policy is to encourage mixed income communities. But patterns of segregation have changed little over the last 20 years.**
- **Can we explain why this has been the case, using formal models?**
- **What policies are likely to be more successful (if any)?**



Features of Urban Britain

- **Highest % of children living in households with incomes below the US official poverty line**
- **Only Spain has worse performance in maths tests for 13 year olds**
- **Relatively low levels of adult literacy**



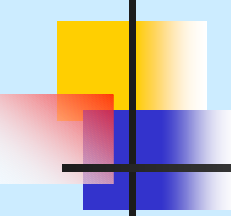
Features of Urban Britain

- **Low rates of participation in learning at age 18**
- **Highest % of households with children in which no adult is in employment**
- **Highest teenage birth rate**
- **Highest rate of teenage drug use**
- **High chance of being a crime victim**



Features of Urban Britain

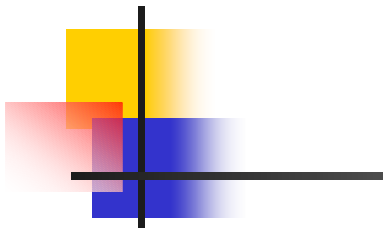
- These are primarily urban phenomena
- → The creation of vicious circles of decline



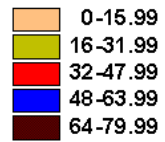
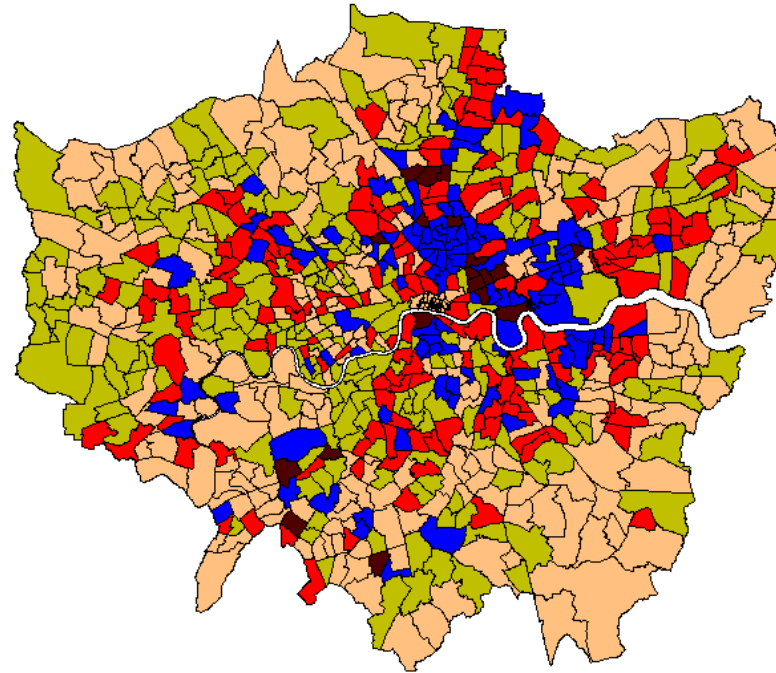
Regional Pattern of Most & Least Deprived Wards

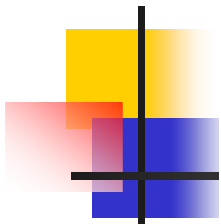
	Regional Breakdown of 10% most deprived wards	Regional breakdown of 10% least deprived wards
North East	19.0	0.8
Yorkshire & Humberside	9.4	2.7
East Midlands	9.0	9.5
Eastern	3.7	17.4
London	18.0	5.6
South East (excl. London)	3.4	47.1
South West	3.6	9.4
West Midlands	8.2	3.4
North West	25.7	4.0
Total	100.0	100.0

Source: Robson et al (2000)

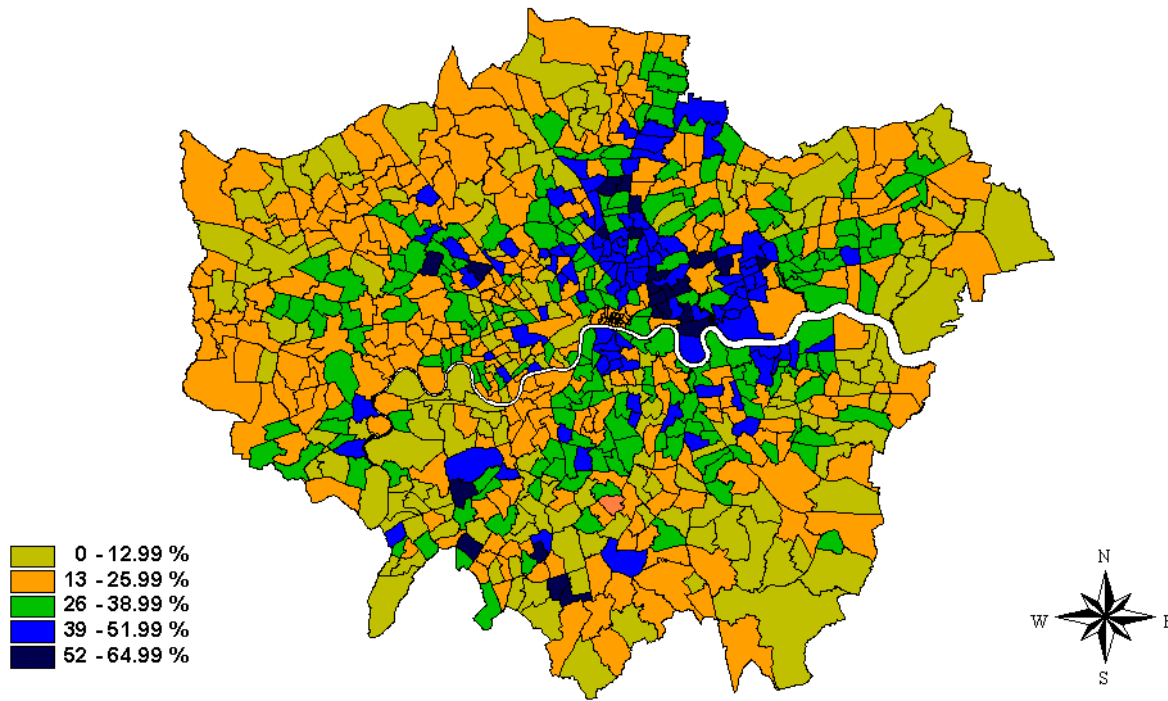


Deprivation in London





Income Deprivation in London





Segregation in Britain

LAD (unemployment based)	Index of Dissimilarity (Unemployment based)	LAD (skills based)	Index of Dissimilarity (skills based)
Cannock Chase	0.304	Sheffield	0.411
Stockton-on-Tees	0.284	Leeds	0.345
Middlesbrough	0.270	Solihull	0.340
Preston	0.267	Stockton-on- Tees	0.332
Odham	0.253	Ellesmere Port	0.323
WLans	0.253	Kingston-upon- Hill	0.316

Source: calculated from the 2001 Census.



Explaining (and Modelling) Vicious Circles and Segregation

Need to Model (at local level):

- (i) Household moving & location choices**
- (ii) Determinants of deprivation**
- (iii) Determinants of unemployment & incomes**
- (iv) Housing demand/supply → prices**



Moving Probabilities

- **The central point is that low income households have lower moving probabilities**



Moving Probabilities

Household Type	Probabilities
Income quartile 1; private renting; 0 children; <40	0.362
Income quartile 4; private renting; 0 children; <40	0.403
Income quartile 1; owner occupn.; 0 children; <40	0.097
Income quartile 4; owner occupn; 0 children; <40	0.114
Income quartile 1; public renting; 0 children; <40	0.164
Income quartile 1; owner occupn.; 1 child;=45	0.037
Income quartile 2; owner occupn; 0 children; retired	0.097



Location Probabilities

- **Households will prefer to move to areas of high amenities, low deprivation, low unemployment.**
- **Most moves are short distance**



Location Probabilities

	Inner London	Outer London	Rest of South East	Rest of England
Previously IL	0.395	0.184	0.228	0.193
Previously OL	0.041	0.769	0.103	0.087
Previously SE	0.028	0.057	0.856	0.059



Labour Market Status (unemployment)

- On both micro & macro data the key determinant of labour market status, and hence income, is qualifications.
- Location, by itself, is not the key determinant
- Concentrations of unemployed are an outcome, not the cause.



Determinants of Deprivation

$$IMD = 1.71 + 4.19(UR) - 0.61(AGE) + 0.15(NQUAL) + 2.03(ILL) + 0.13(NW)$$

11.3) (14.7) (7.9) (2.7) (16.2) (4.4)

$$R^2 = 0.92$$

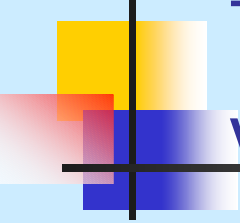
where:

- IMD*** = deprivation index
- UR*** = % of economically active population who are unemployed
- AGE*** = % of economically inactive population who are retired
- NQUAL*** = % of people who have no qualifications
- ILL*** = % of working population with long-term illness
- NW*** = % of Black or Asian individuals in the local authority district



Determinants of Deprivation

- In other words, deprivation can be explained by unemployment, lack of qualifications, age, illness and ethnic composition
- The key point for later is that a 1% point rise in the unemployment rate raises the deprivation index by 4.2 points.



The Vicious Circle (a simplified version)

- High income households have higher moving propensities & prefer areas of low deprivation/high amenities.
- But deprivation is related to unemployment/low qualifications
- As “rich” move out, conditions for those left behind worsen (as unemployment rises)
- The spiral continues

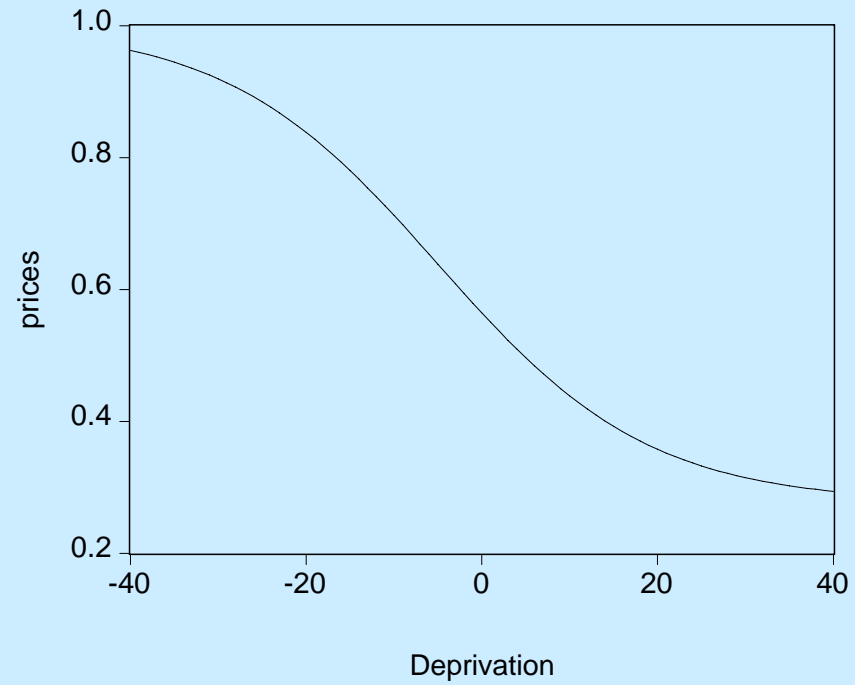


House Prices & Deprivation

- **The key point is that house prices (demand) in local areas are non-linearly related to the level of deprivation**
- **There is a threshold at a certain level of deprivation**
- **If deprivation rises well above the threshold regeneration policy becomes ineffective and segregation becomes more likely.**



House Prices & Deprivation





House Prices & Deprivation

In practice the threshold level of deprivation is around 40-50.

**The units don't matter for our purposes
– they are expressed as deviations
from the regional means**



Some Results from Simulating a 4- Equation Model

**The variables are: house prices,
deprivation, unemployment, & income**

- **To begin with, this is on LA data (353)**
- **We look, first, at the responsiveness of house prices to increases in the level of deprivation**
- **This demonstrates that the threshold “bites” around 40-50.**

Effects of Changing the Level of Deprivation

% change in house prices (In Knowsley – the most deprived local authority outside London)

Deprivation Index (difference from base value)	-10	0	+10	+20	+30	+40	+50	+60	+70	+80
% change in house prices (difference from base value)	+25.4	0	-19.6	-28.5	-32.7	-34.6	-35.5	-35.9	-36.1	-36.1
Effect on prices of 10 point rise in the index	-	-25.4	-19.6	-8.9	-4.2	-1.9	-0.9	-0.4	-0.2	0

In the simulation the base value of the deprivation index is approximately 20. Therefore, when deprivation reaches 40-50, the non-linearity has a strong effect. When the index is around 80, there is almost no effect.



Conclusions from the Simulation

- **Since none of the LAs, have deprivation levels much above 30 (as deviations from the mean) and certainly not 80 , we cannot “write off” LAs as a whole.**
- **We need to look at lower spatial levels – the wards.**



The Most Deprived Wards - the North

Local Authority	Ward	Deprivation Index (deviation from regional mean)	Unemployment rate (2000, %)	Required unemployment change to reduce deprivation to 40 (% points)	Required % change in unemployment relative to current levels
Hartlepool	St Hilda's	46.62	7.0	1.6	22.9
Middlesbrough	Thorntree	47.82	9.4	1.9	20.2
Redcar	Grangetown	45.75	11.1	1.4	12.6
Manchester	Benchill	53.6	6.6	3.2	48.5
Knowsley	Princess	50.6	10.3	2.5	24.3
	Longview	49.5	10.2	2.3	22.5
Liverpool	Breckfield	49.5	8.8	2.3	26.1
	Everton	51.9	6.0	2.8	46.6
	Granby	49.6	10.4	2.3	22.1
	Speke	52.9	8.2	3.1	37.8
	Vauxhall	51.3	9.0	2.7	30.0



Conclusions for the Wards

- Even at the ward level, the worst areas are only on the borderline
- But reducing the deprivation index by 10 points is very tough – see the required unemployment changes
- The above gives a guide to where to look, but probably still need to look at lower spatial levels within these wards
- But there is potentially a big pay-off to regeneration where deprivation is at moderate levels.



Final Overall Conclusions

- Typically, one policy does not fit all.
- Different policies are required for areas at different levels of deprivation
- But this requires the difficult job of identifying the areas at different stages of development and the thresholds.
- Segregation arises from cumulative processes & the fact that areas cannot extract themselves from decline once the threshold is passed.