Using census microdata to explore the inter-relationships between ethnicity, health, socioeconomic factors and internal migration

Census Applications: Using the UK's population census data
University of Manchester, July 2015

Fran Darlington
@F_Darlington | gyfd@leeds.ac.uk

Paul Norman (University of Leeds)
Dimitris Ballas (University of Sheffield)

White Rose Social Science DTC
Universities of Leeds, Sheffield & York

www.popgeog.org

UNIVERSITY OF LEEDS

Context and Research Intent

- Increasing **ethnic diversity** and **persisting ethnic inequalities in health:** widely observed, not fully understood
- Ethnic inequalities in health represent a 'significant gap in current evidence and policy' (Nazroo, 2014)
- Selective sorting between area-types and social classes may explain changing overall and *ethnic* health gradients
- Opportunities for and propensity to migrate or for social mobility vary by **health status**, **socioeconomic status**, **area** and **ethnicity**

Aims: explore *nature* of ethnic inequalities in health, and possible explanations for changing ethnic health gradients

Cross-sectional SARs

- Explore ethnic patterns of internal migration by health status and socioeconomic attribute and extent of social and spatial inequality between ethnic groups in England (not shown)
- Explore influence of migrant status and socioeconomic attributes on health inequalities between ethnic groups (logistic regression)

Longitudinal ONS LS

- Analyse health status by transition category (between social classes and deprivation quintiles) for **movers** and s**tayers** by ethnic group

Selective sorting and health gradients: why does it matter?

Area A

- Lower social classes
- Overcrowding
- Less green space
- High unemployment
- Poorer health

- Health differences between movers and stayers?
- Health differences between mobile groups?
- Size of the migratory flows?
- Health of those 'left behind'?
- Demographic and socioeconomic attributes

Area B

- Higher social classes
- More sparsely populated
- More green space
- Low unemployment
- Better health

- Social mobility?
- **<u>Variations by ethnicity?</u>**

White Rose Social Science DTC
Universities of Leeds, Sheffield & York

UNIVERSITY OF LEEDS

Probability of LLTI: adjusting for demographic and socioeconomic attributes, migrant status and an interaction between migrant status and housing tenure

Probability of LLTI (1991 2001)	White	Black Caribbean	Black African	Indian	Pakistani & Bangladeshi
Non-migrant SC I&II	2.5% 3.2%	2.8% 3.4%	1.6% 1.9%	3.2% 4.1%	3.2% 3.7%
Migrant SC I&II	2.3% 3.0%	2.6% 3.2%	1.5% 1.8%	3.0% 3.9%	3.0% 3.4%
Non-migrant SC IV&V	3.7% 5.0%	4.1% 5.3%	2.4% 3.0%	4.7% 6.3%	4.7% 5.7%
Migrant SC IV&V	3.4% 4.7%	3.8% 5.0%	2.3% 2.8%	4.4% 6.0%	4.4% 5.3%

- Migrants always have a lower probability of LLTI than non-migrants
- Lower social classes have higher probability of LLTI than higher social classes
- Black Africans =lowest probability of LLTI, South Asian groups =highest probability of LLTI
- Additional difference between ethnic groups not explained by social class, tenure and education – income? Wealth?

Source: SARs

Predicted probabilities (LLTI): age-specific

Socioeconomic and migrant status	Ethnicity	Probability of LLTI (2001)			
		16-29	30-44	45-64	65-74
Migrant, social classes I & II	White	3.3%	5.7%	17.2%	39.2%
	Indian	2.6%	6.3%	23.9%	54.6%
	Pakistani & Bangladeshi	2.9%	4.6%	23.1%	56.3%
Migrant, social classes IV & V	White	5.4%	9.6%	24.4%	42.8%
	Indian	4.3%	10.6%	32.8%	58.3%
	Pakistani & Bangladeshi	4.7%	7.9%	31.8%	59.9%
Non-migrant, social classes I & II	White	3.7%	7.0%	16.9%	37.4%
	Indian	3.0%	7.7%	23.5%	52.7%
	Pakistani & Bangladeshi	3.3%	5.7%	22.7%	54.4%
Non-migrant, social classes IV & V	White	6.1%	11.7%	24.0%	41.0%
	Indian	4.8%	12.9%	32.4%	56.%
	Pakistani & Bangladeshi	5.3%	9.7%	31.4%	58.1%

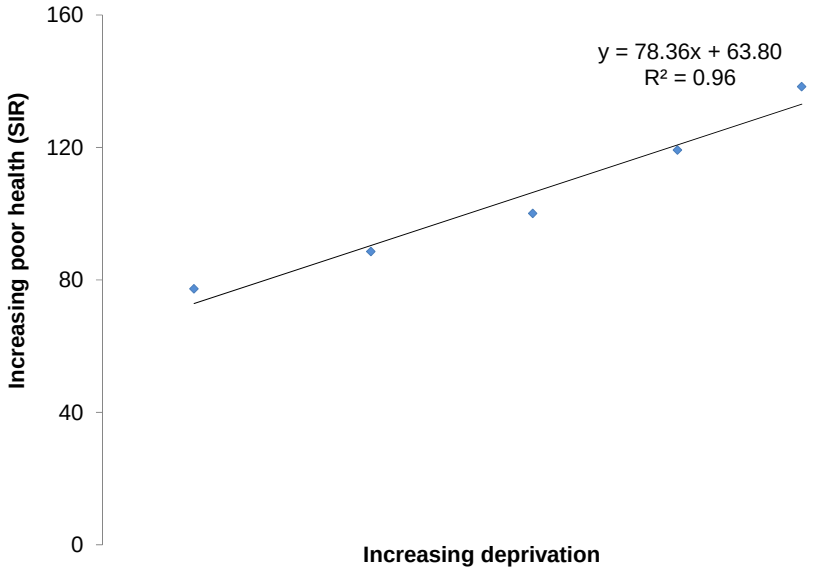
Source: SARs

Evidence that selective sorting widens health gradients

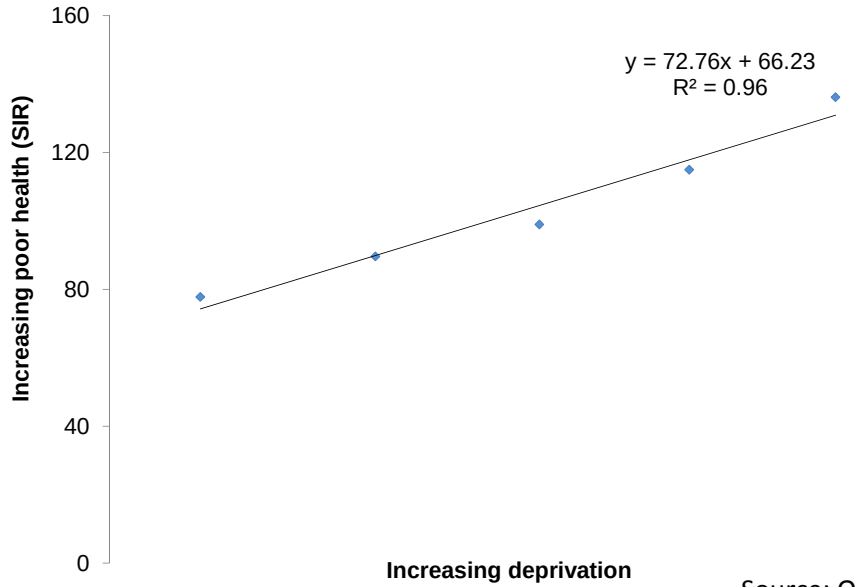
RII	91-01	01-11	91-01 (MEG)	01-11 (MEG)
By destination deprivation: with mobility	**1.23**	**1.23[a]**	**0.81**	**1.15**
By origin deprivation: putting people back	1.03	1.10[b]	0.63	1.11
Stable groups	1.37	1.56	0.72	1.17

Source: ONS LS

[a]2001-2011: Destination deprivation



[b]2001-2011: Origin deprivation

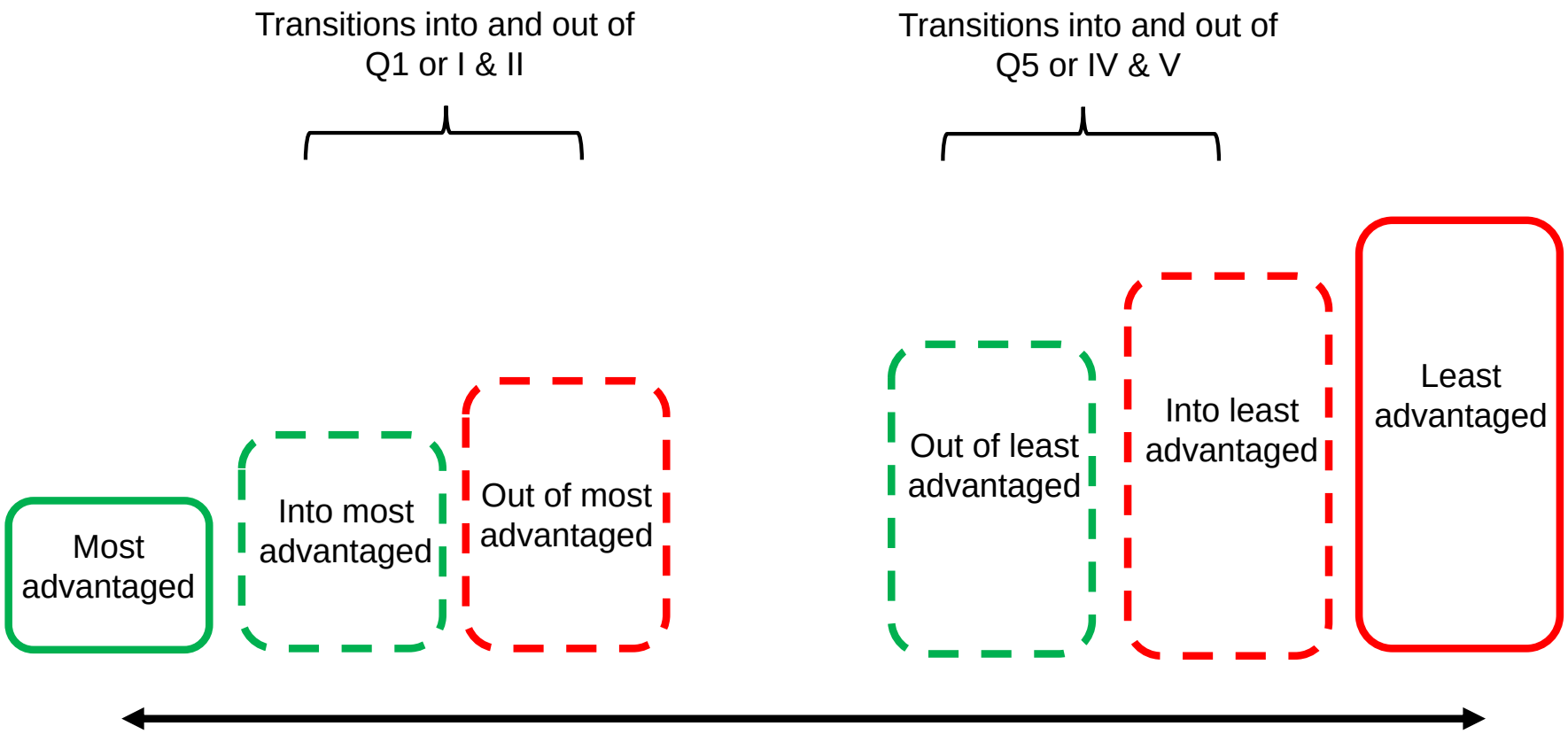


Source: ONS LS

White Rose Social Science DTC
Universities of Leeds, Sheffield & York

UNIVERSITY OF LEEDS

Widening health gradients? The patterning of health

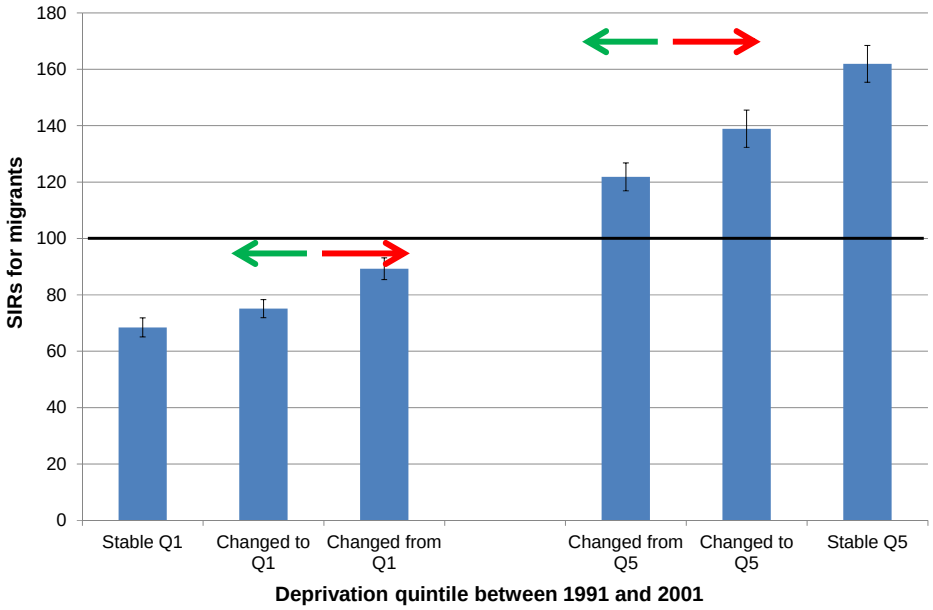


White Rose Social Science DTC
Universities of Leeds, Sheffield & York

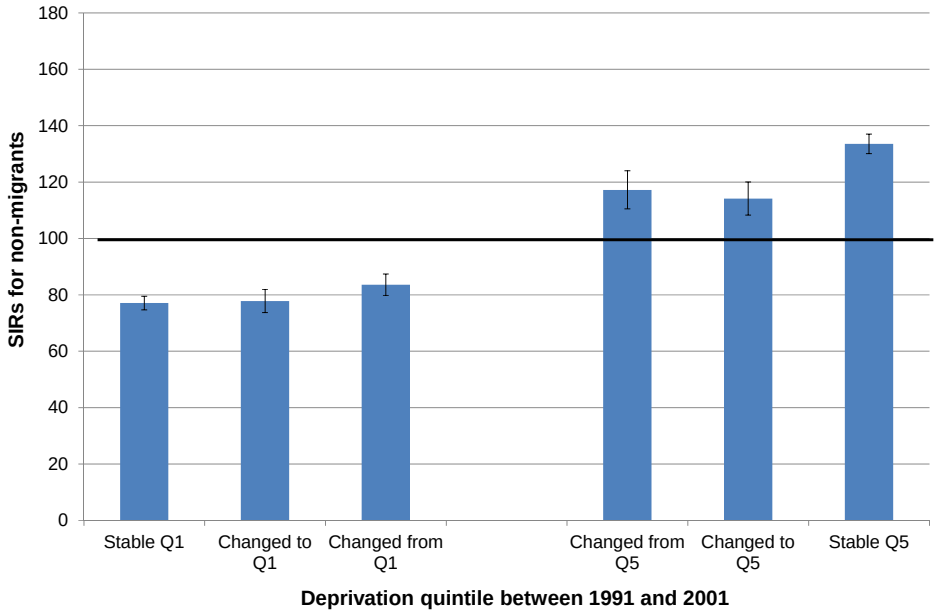
UNIVERSITY OF LEEDS

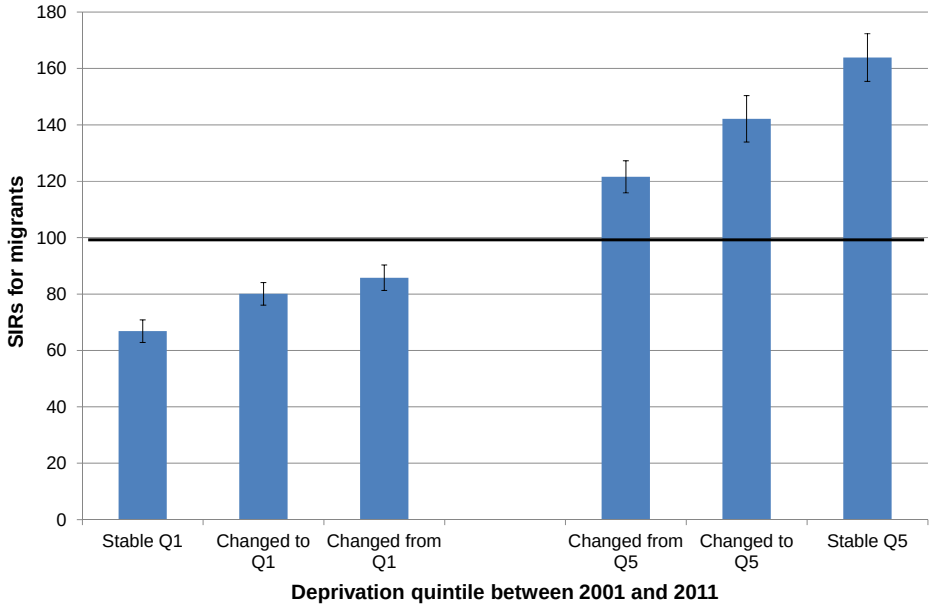
Changing overall health gradients (deprivation)

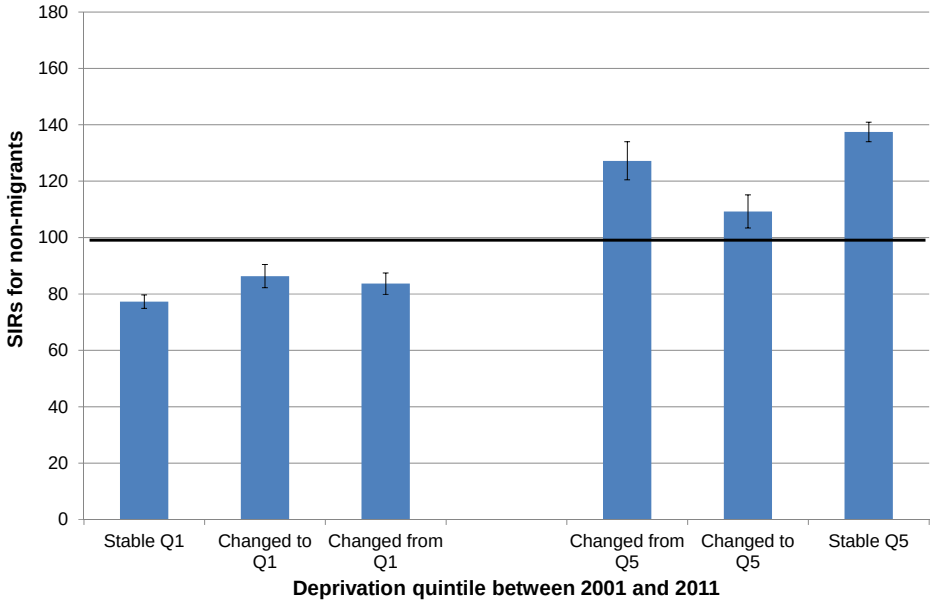
Movers



Stayers

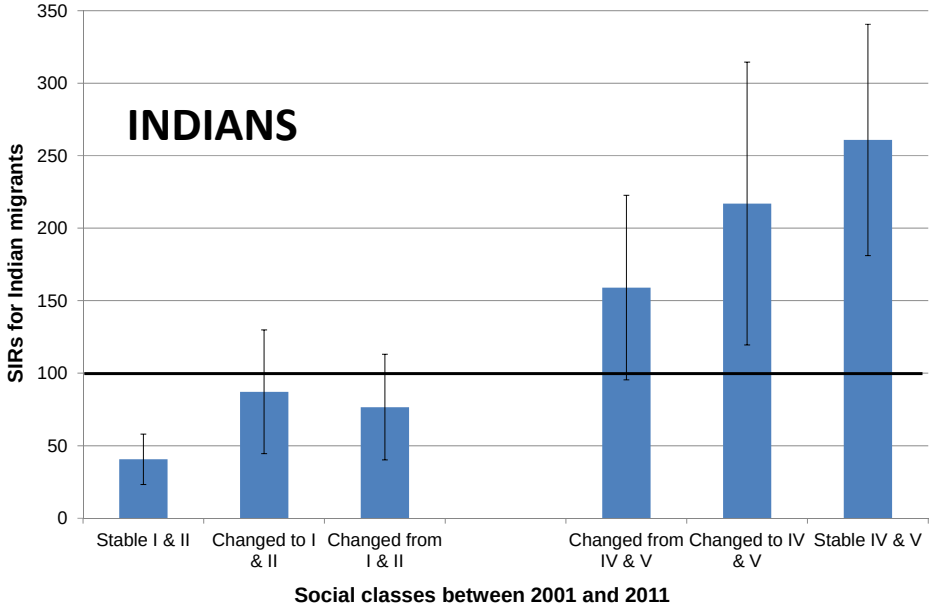




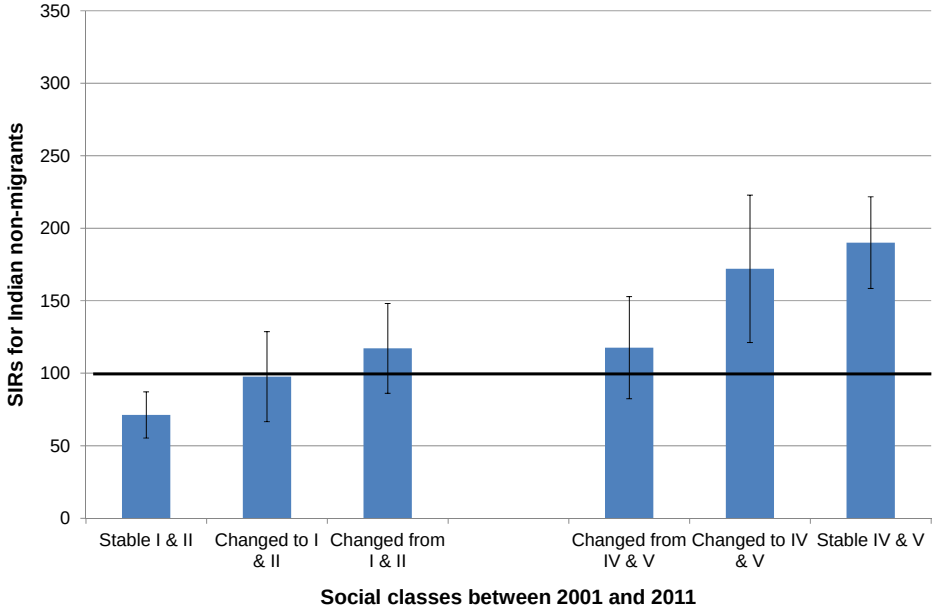


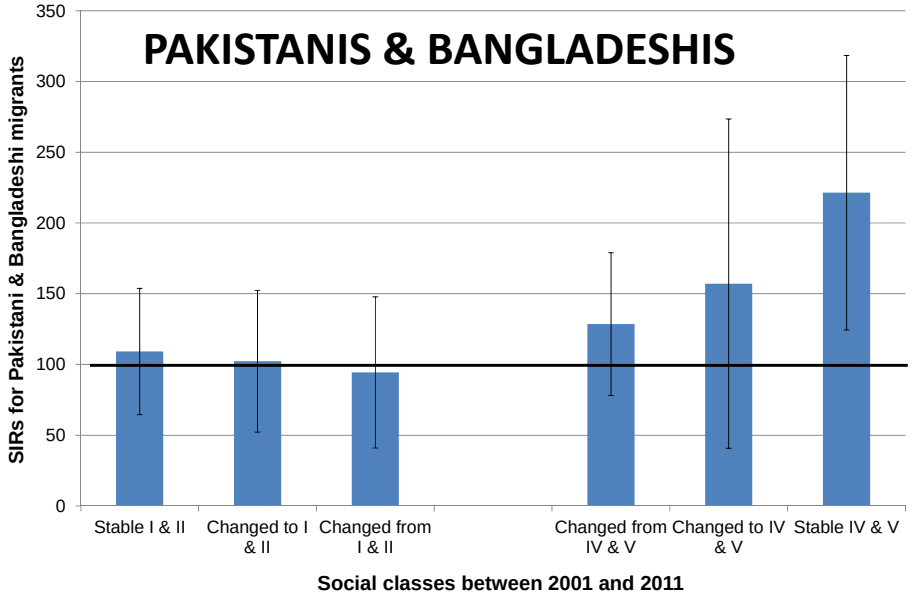
Changing *ethnic* health gradients (social class)

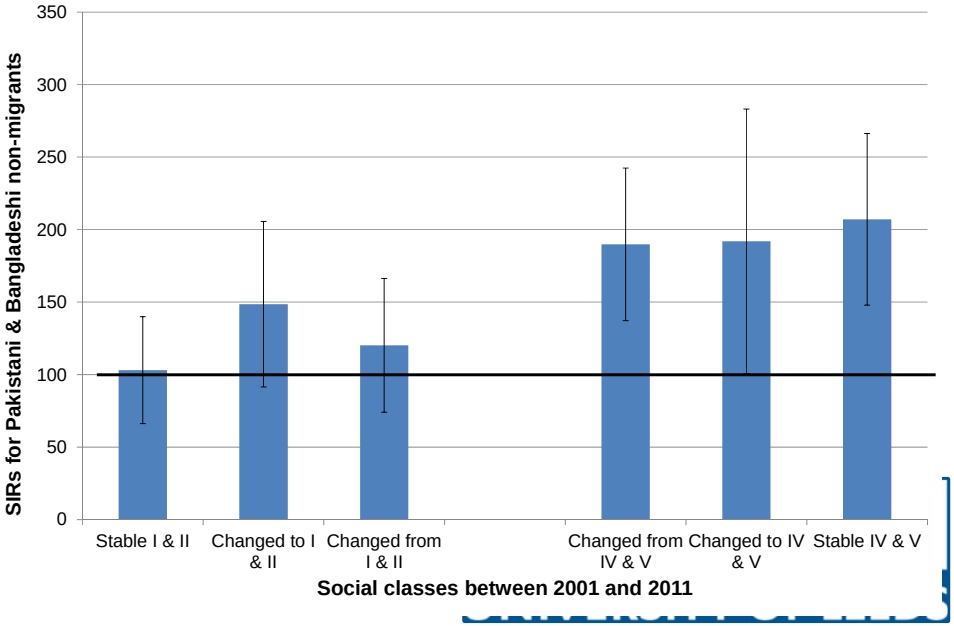
Movers



Stayers







Conclusions

- Health varies between ethnic groups: **(dis)advantage differently rewarding for different ethnic groups**; inequalities between ethnic groups appear to open up in older ages
- Variations in relationship between social class, migrant status and health by ethnic group: differences in selective sorting?
- Trajectories of selective sorting also likely influenced by different socioeconomic and spatial experiences of different ethnic groups
- Selective sorting contributing to **widening overall health gradients**, but **stronger influence on ethnic health gradients through social mobility**

- Implications of a less mobile minority population?
- Further work has shown: **Indians** and **Pakistanis and Bangladeshis** always **lowest probabilities of moving**: particularly when in less advantaged circumstances and in poorer health

Thank you

The permission of the Office for National Statistics to use the Longitudinal Study is gratefully acknowledged, as is the help provided by staff of the Centre for Longitudinal Study Information & User Support (CeLSIUS). CeLSIUS is supported by the ESRC Census of Population Programme (Award Ref: ES/K000365/1). The authors alone are responsible for the interpretation of the data.

http://www.geog.leeds.ac.uk/people/f.darlington

http://popgeog.org/

gyfd@leeds.ac.uk

@F_Darlington

White Rose Social Science DTC
Universities of Leeds, Sheffield & York

UNIVERSITY OF LEEDS