

The impact of internal migration on widening health inequalities in Scotland

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Introduction

- Migration can change the composition of an area's population over time
- The likelihood and ability of people to move to and from places is associated with their characteristics
 - Age / stage of lifecourse
 - Their socio-economic situation
 - Their health
- The influence of these may vary by the distance moved and age at move
- There may also be “push” factors – lack of employment in area.

Introduction cont.

- So deprived areas may see a loss of population and a net loss of better off and healthier people
- Widening health inequalities both across socio-economic groupings and areas have been observed
- Could this be down to selective migration?
 - Cannot tell from cross-sectional studies
 - Longitudinal data needed
- Selective migration may also mask the impact of area based interventions

Introduction cont.

- Limited evidence to date
 - One study found that 50% of the *widening* health gap may be due to selective migration
 - May depend on the size of the areas being studied
- The gap between Glasgow and the rest of Scotland for premature mortality was found to have grown 1981 thru 1991 to 2001 – a Glasgow effect?
 - Is it selective migration?

Main questions

- Does internal migration change the socio-economic / health profile of areas?
 - and is this why the socio-economic / health gap between areas is widening
- Is the widening mortality gap between Glasgow and the rest of Scotland due to internal migration?

Methods

- Scottish Longitudinal Study. An anonymised 5.3% sample of the Scottish population linking 1991, 2001 census data to vital events data
 - See <http://www.lscs.ac.uk/sls/> for more details
- For this study use 1991, 2001 census data and mortality data
- Main sample is a closed sample who appear in both 1991 and 2001 censuses
 - Aged 15 to 64 in 1991
 - 137,073 people

Methods cont.

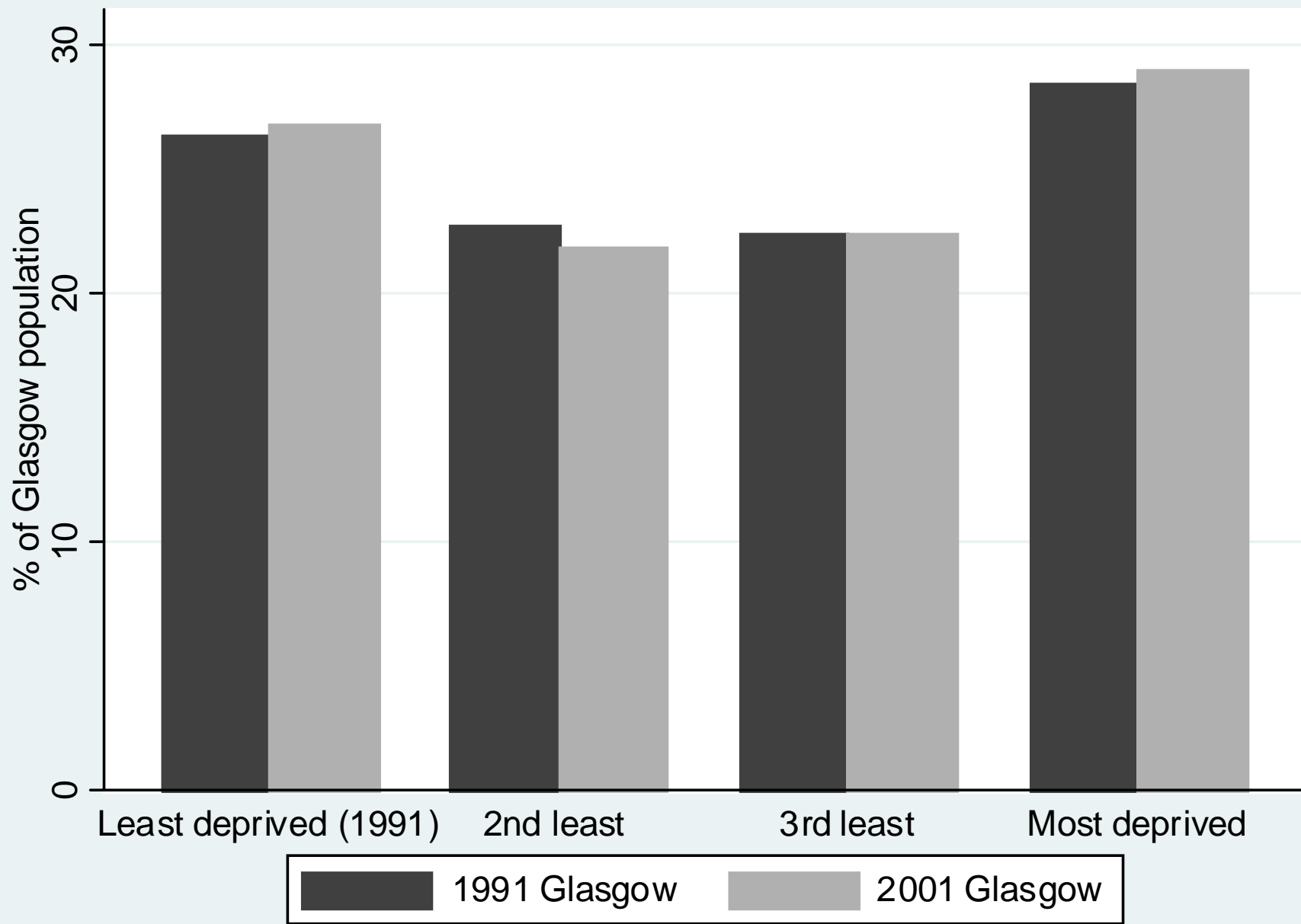
- Split Scotland into three: Glasgow; Edinburgh, Dundee and Aberdeen combined; and the rest of Scotland
- Created individual level deprivation index using three measures of socio-economic position in 1991.
 - Household car access
 - Tenure
 - Social class (own or partner's, parents' etc.)
- Also studied self reported limiting long term illness

Migration results

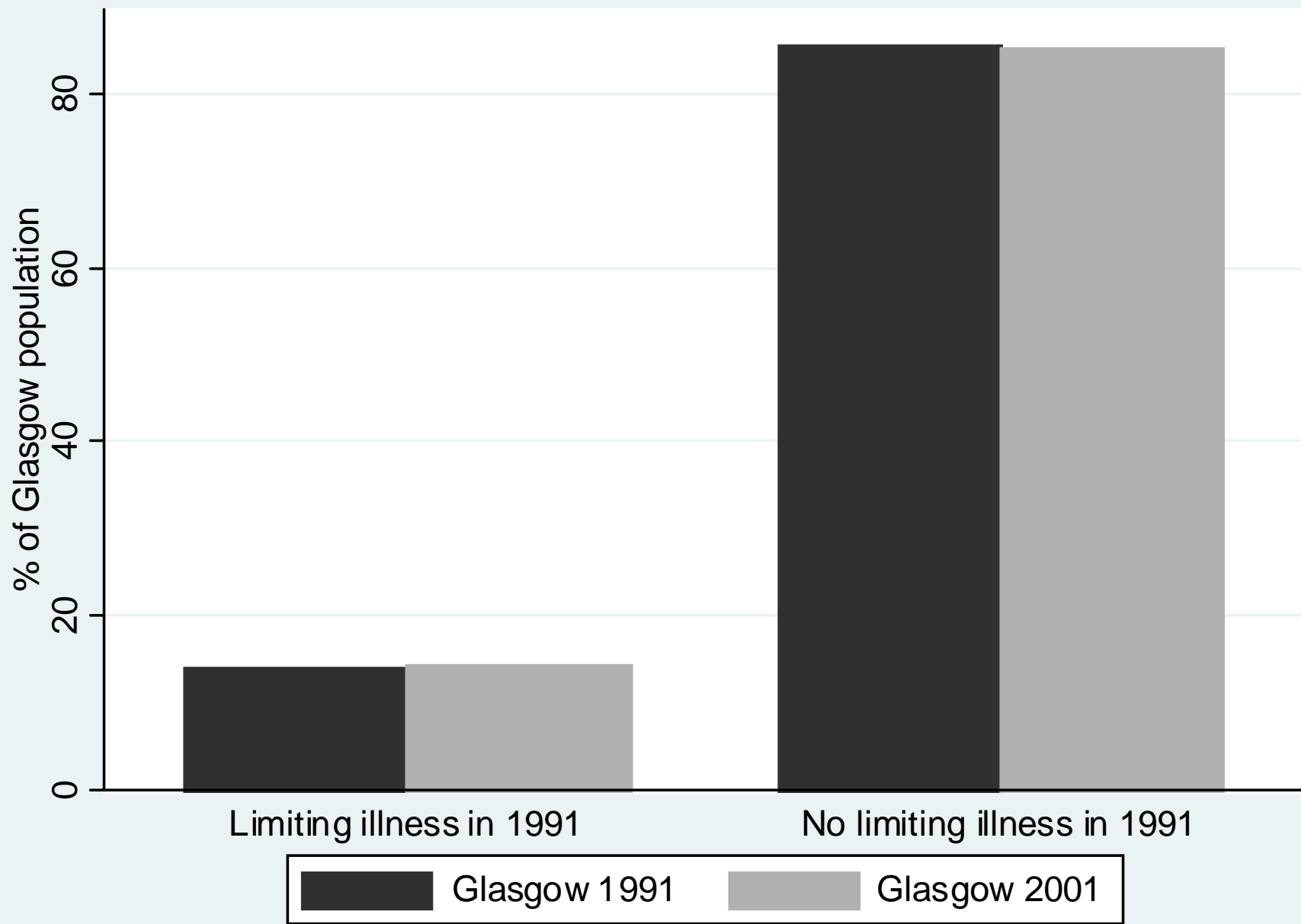
- Net population change 1991 to 2001
 - Glasgow = -7.1% (Out 18.4%, in 11.3%)
 - 3 cities = -3.4% (Out 14.8%, in 11.4%)
 - Else = +1.7% (Out 3.7%, in 5.4%)
- In and out migration rates tended to be higher amongst the better off and those without a limiting illness (and the young)

Migration results cont.

- As a result less difference in net population change by socio-economic position and health
- So (in this study) although in and out migration are selective, net population change is less so
- As a result it seems to have little impact on the distribution of *baseline* characteristics in the areas studied

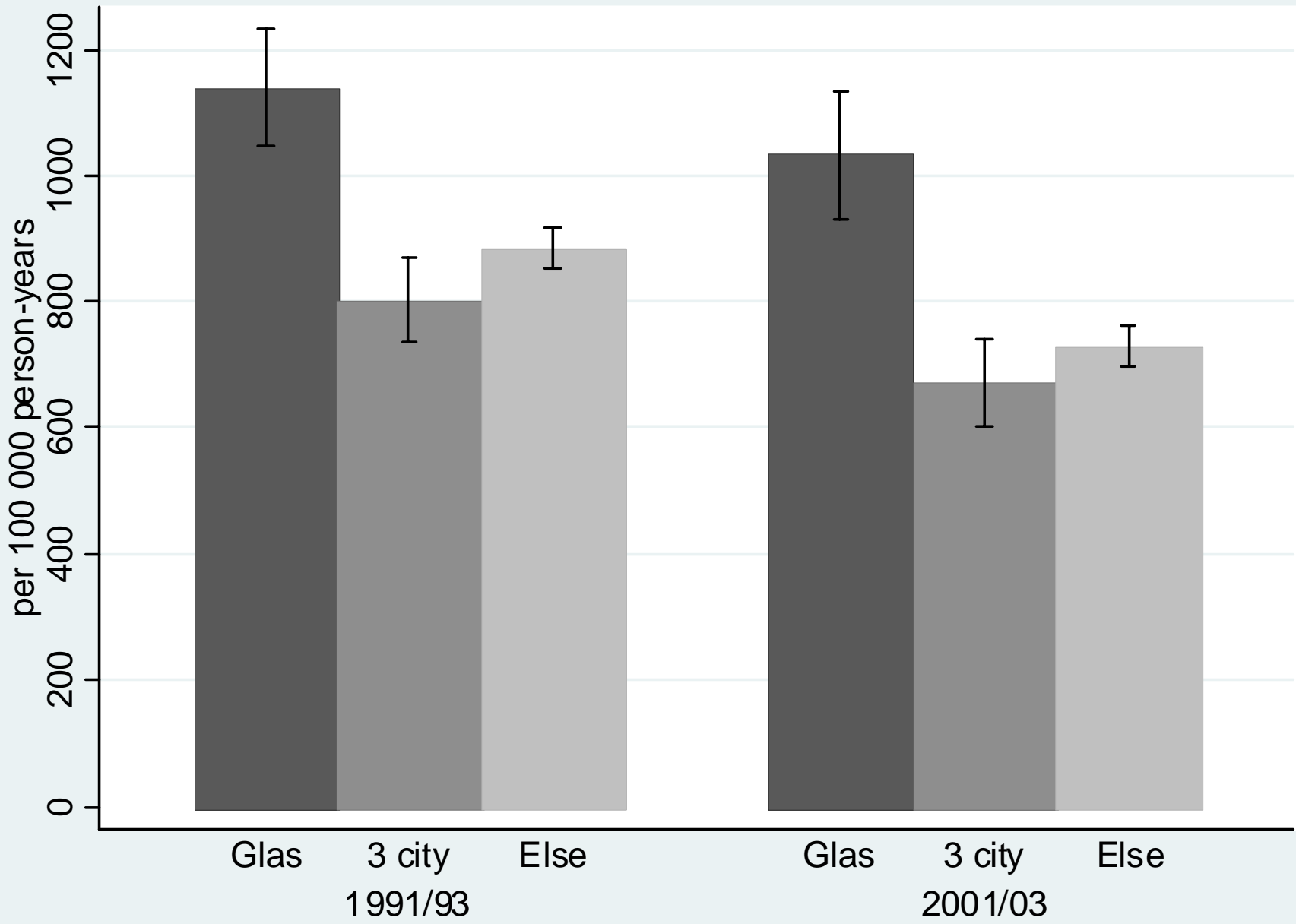


Source: Scottish Longitudinal Study

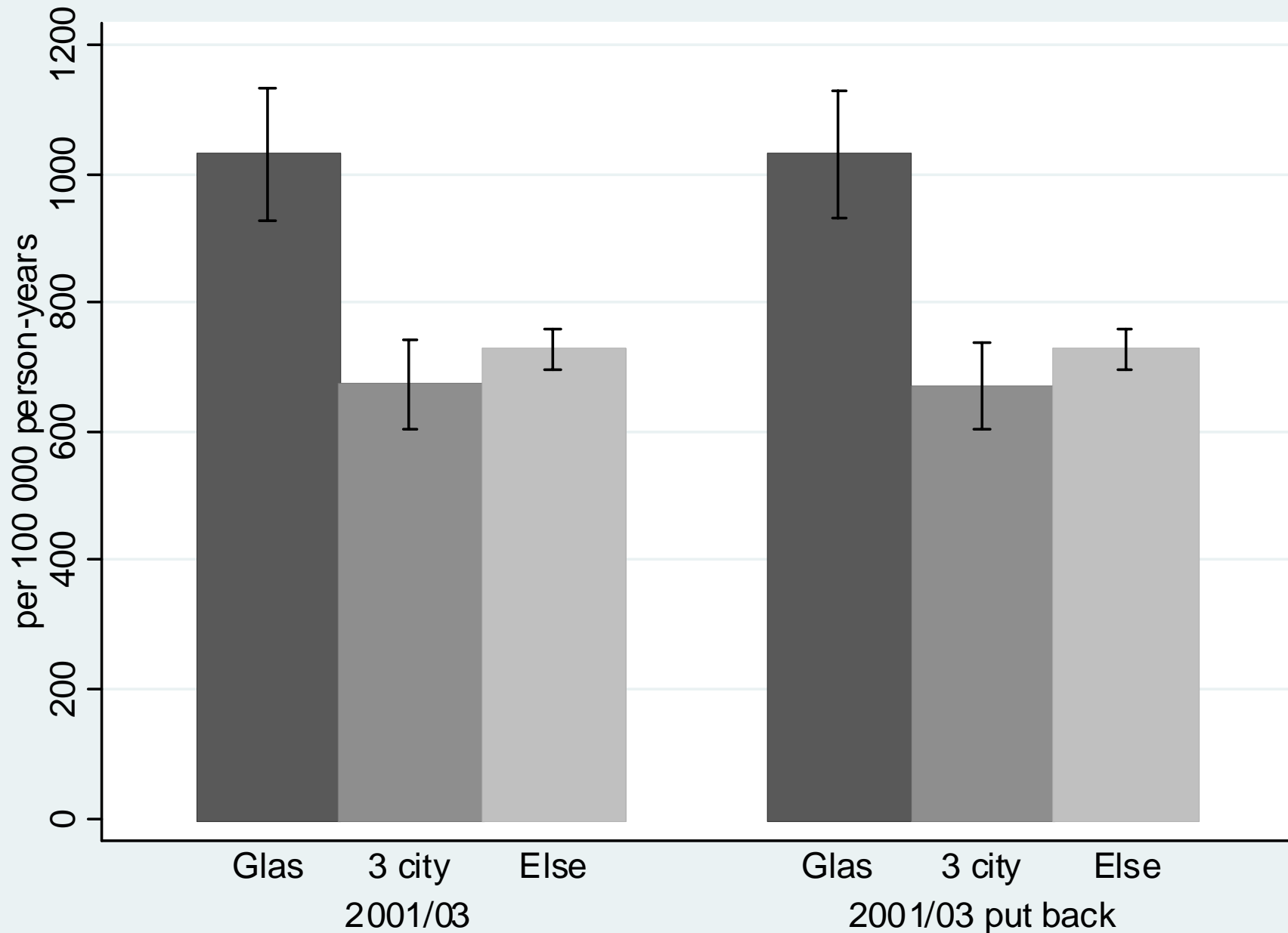


Mortality analysis

- Aged 25 to 74
- Followed for 3 years
- Deaths in Scotland
 - Exits from Scotland taken into account
- Age and sex standardised rates



Source: Scottish Longitudinal Study



Conclusions

- In and out internal migration selective but also correlated
- This meant that net population change was not that selective and so distribution of baseline line characteristics little changed
- Little evidence of internal migration leading to the widening gap in mortality observed
 - Migrants relatively unlikely to die (mainly due to their younger age profile)
 - Not the 'Glasgow effect'?
- However.....

Conclusions cont.

- Glasgow in 1991 was already much poorer and unhealthier than the other areas
- Perhaps need to go back to when areas were more similar to understand impact of subsequent migration
- Population loss per se may be detrimental for health
 - Evidence is mixed on this
- Further study looking at the impact of migration within Greater Glasgow and West of Scotland by area deprivation

Acknowledgements

- Research was funded by a Chief Scientist's Office small grant
- The help provided by staff of the Longitudinal Studies Centre - Scotland (LSCS) is acknowledged. The LSCS is supported by the ESRC/JISC, the Scottish Funding Council, the Chief Scientist's Office and the Scottish Government. The authors are responsible for the interpretation of the data. Census output is Crown copyright and is reproduced with the permission of the Controller of HMSO and the Queen's Printer for Scotland