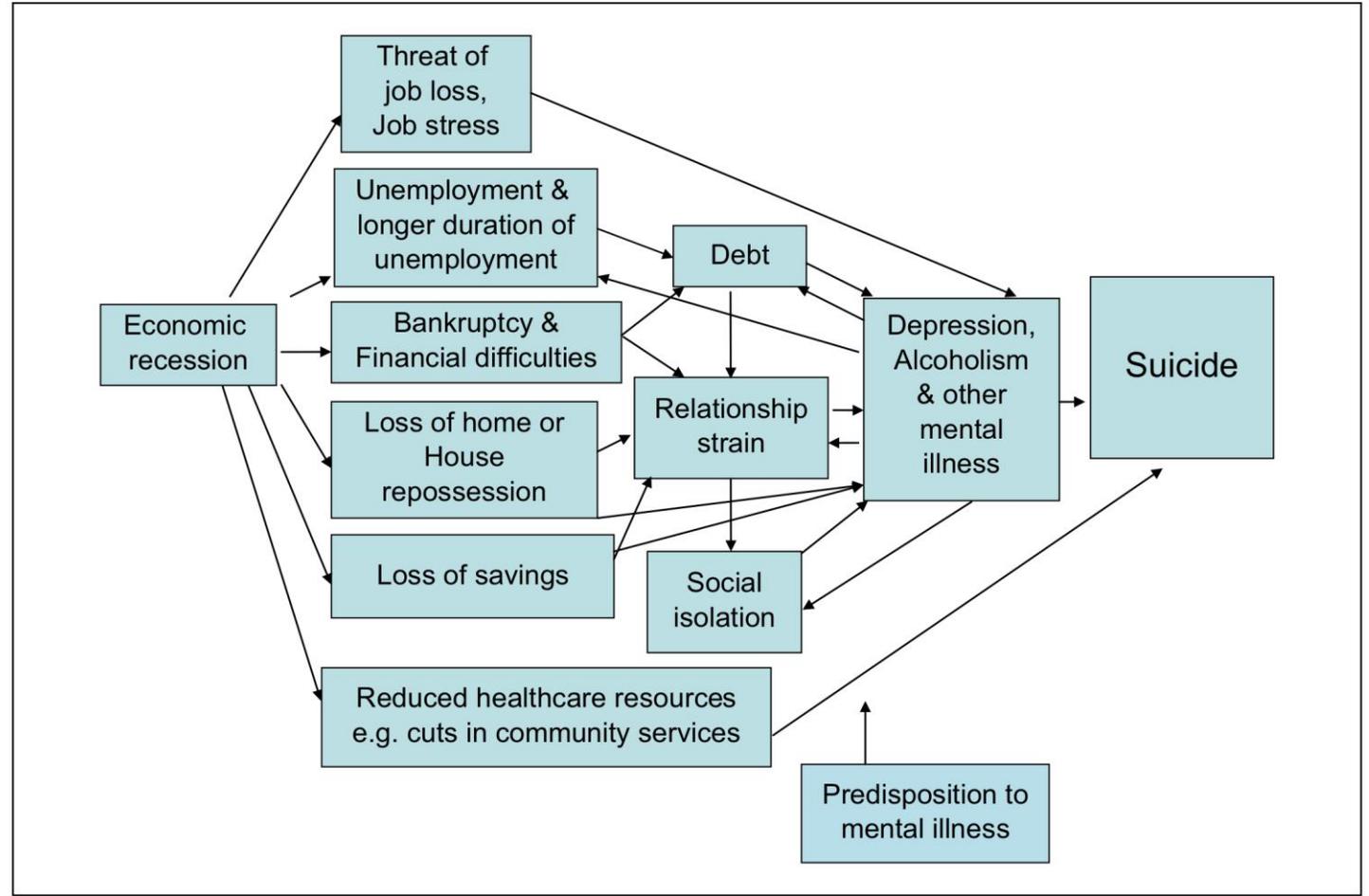


The Great Recession, austerity and mental health in Scotland: moderating roles of green space and social cohesion

Mark Cherrie, Sarah Curtis, Gergo Baranyi,
Niall Cunningham, Chris Dibben, Clare Bambra, Jamie Pearce
GEOMED 2019

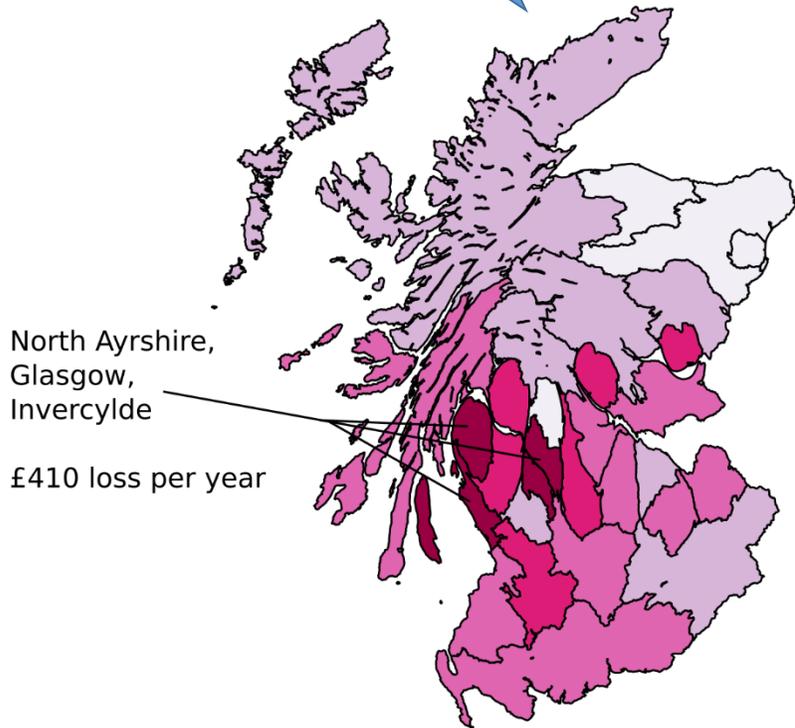
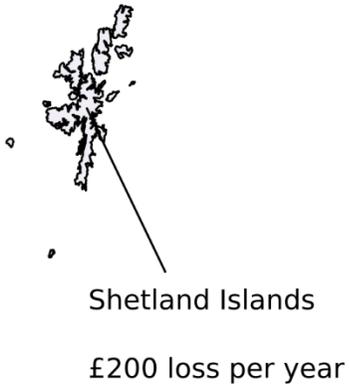
Recession and mental health

- Economic recession increase **precarious employment conditions**, which is an important 'wider' determinant of mental health
- In 2014, affected around two thirds of the EU salaried workforce



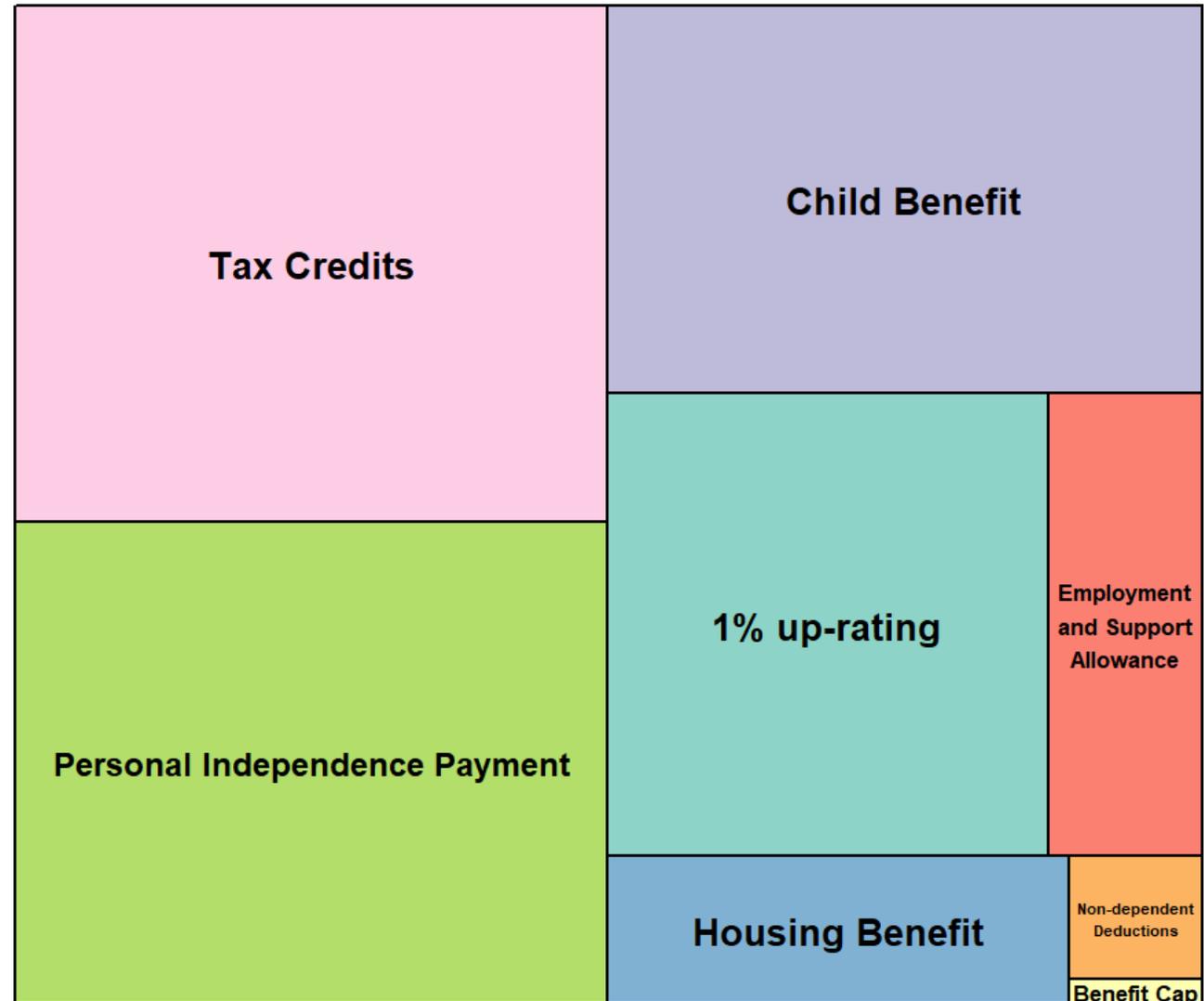
£316

a working age
adult lost on
average (p.a
2010-2015)



Source: (Beatty & Fothergill et al., 2016)

... and Austerity



Evidence

- Decline in mental health and an increase in suicide in European countries;
BUT evidence had substantial risk of bias, measurement error and key

limitations (Parmar et al., 2016)

Bias	Measurement Error	Limitations
<ul style="list-style-type: none">• Selection• Ecological Fallacy• Confounding• Time	<ul style="list-style-type: none">• Exposure• Outcome	<ul style="list-style-type: none">• Mechanisms• Lag effects

Aims

- What is the relationship between changes to labour market trends and antidepressants prescriptions in employed individuals?
 - How is this relationship mediated by austerity policies (welfare reforms)?
 - How is this relationship modified by neighbourhood conditions (availability of greenspace and social cohesion)?

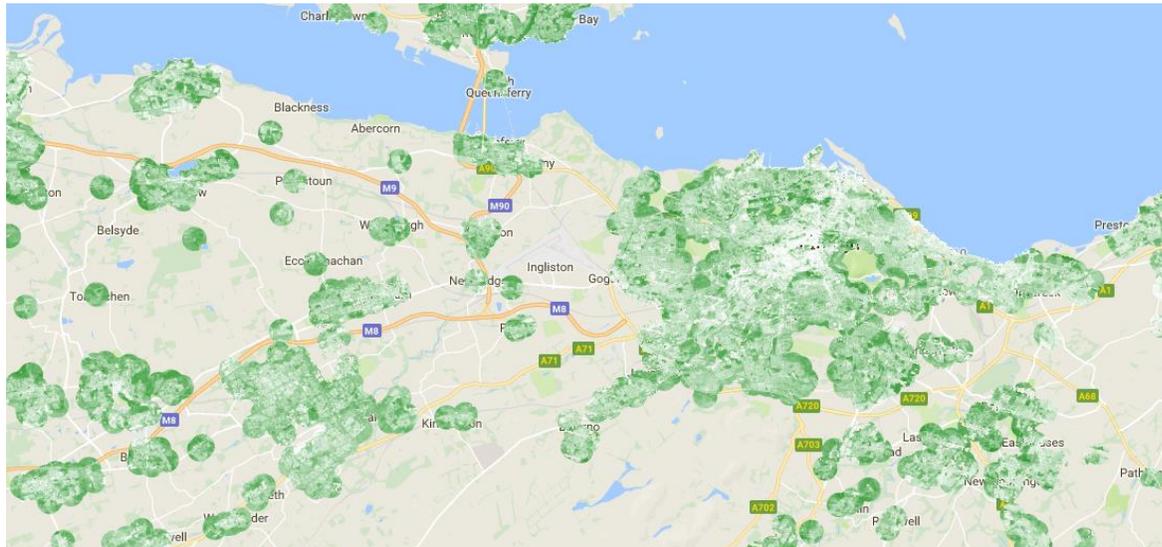
Administrative Data



- Scottish Longitudinal Study
 - Longitudinal, based on 1991, 2001 and 2011 censuses
 - 5.3% population representative sample
 - Demographic and socioeconomic predictors of mental illness
 - Residence of local authority 2011; datazone 2011

Neighbourhood conditions

- Greenness
 - Normalised difference vegetation index (NDVI)
 - Mean NDVI from 16 day Landsat 7 images (2011)



Neighbourhood conditions

- Social Fragmentation (2011) (Congdon, 1996)
- Index created from four census variables:
 - Number of unmarried persons
 - Single-person households
 - Number of privately rented households
 - Mobility in the previous year



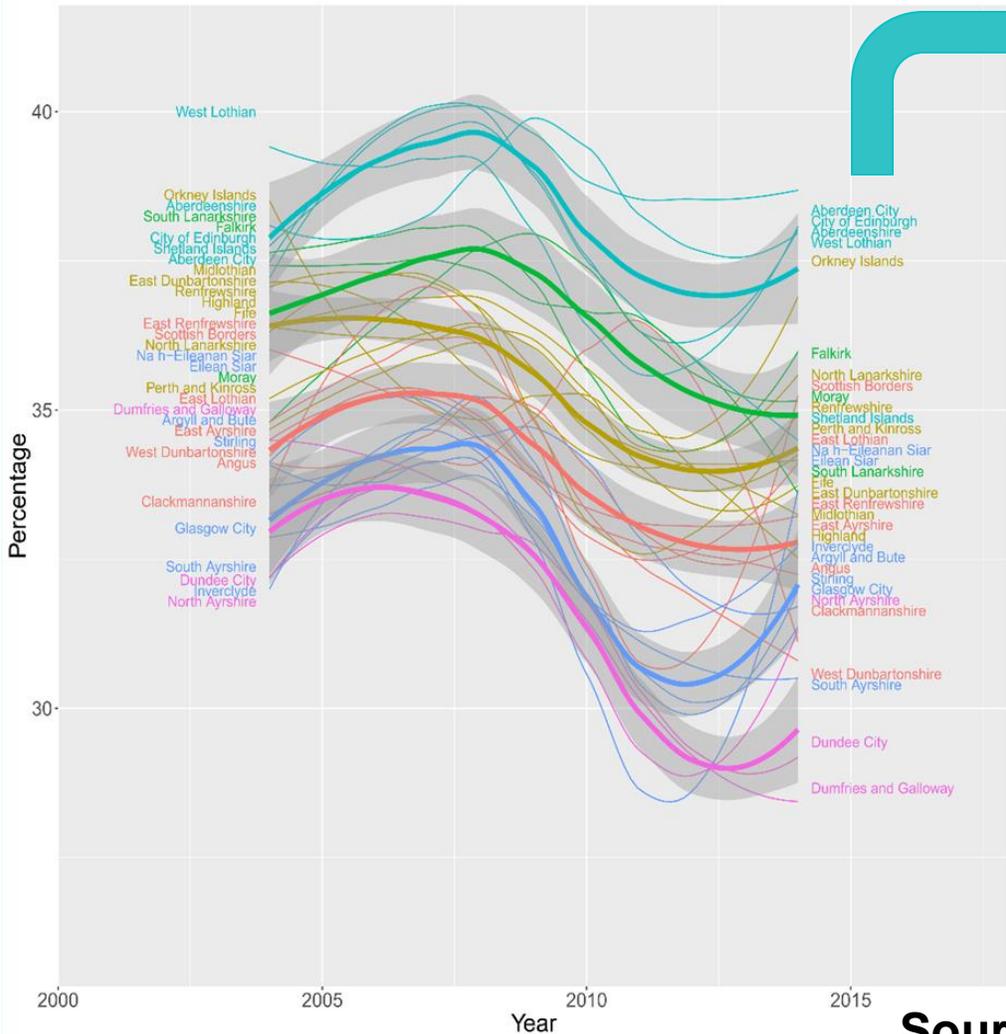
Prescriptions Data

- NHS Scotland Prescribing Information
 - Monthly Jan 2009 – Dec 2014
 - Antidepressants (BNF: 4.3)
 - Exclusions of low dose amitriptyline and nortriptyline using free text dose instructions (McTaggart et al., 2018)
- Newly prescribed since 2009

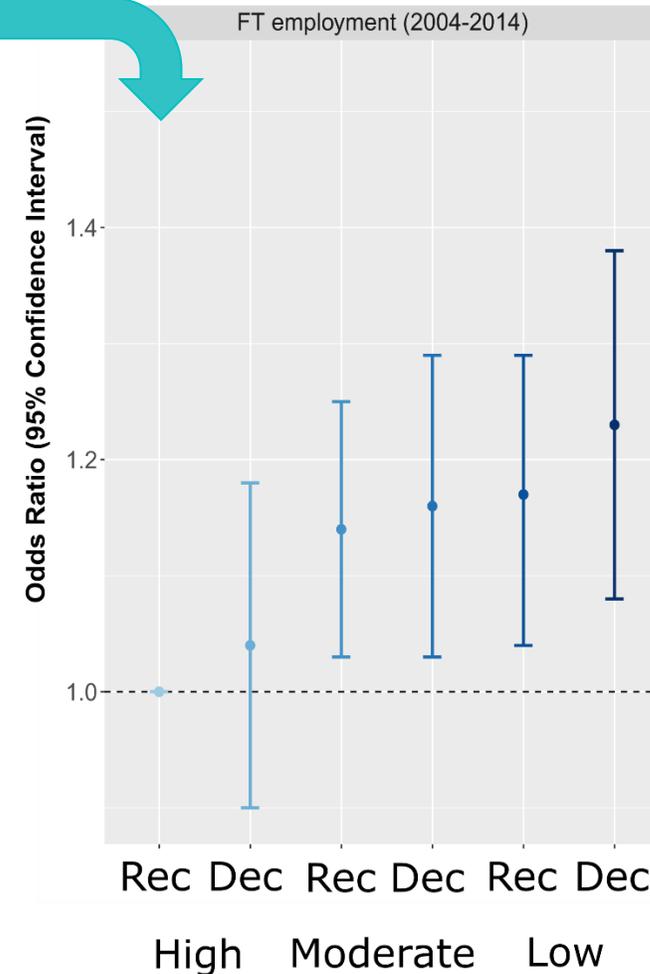


 Scan me

Relationship between labour market trend and antidepressants



Source: NOMIS



Key

Baseline

High – High full time Employment

Moderate – Moderate full time employment

Low – Low full time employment

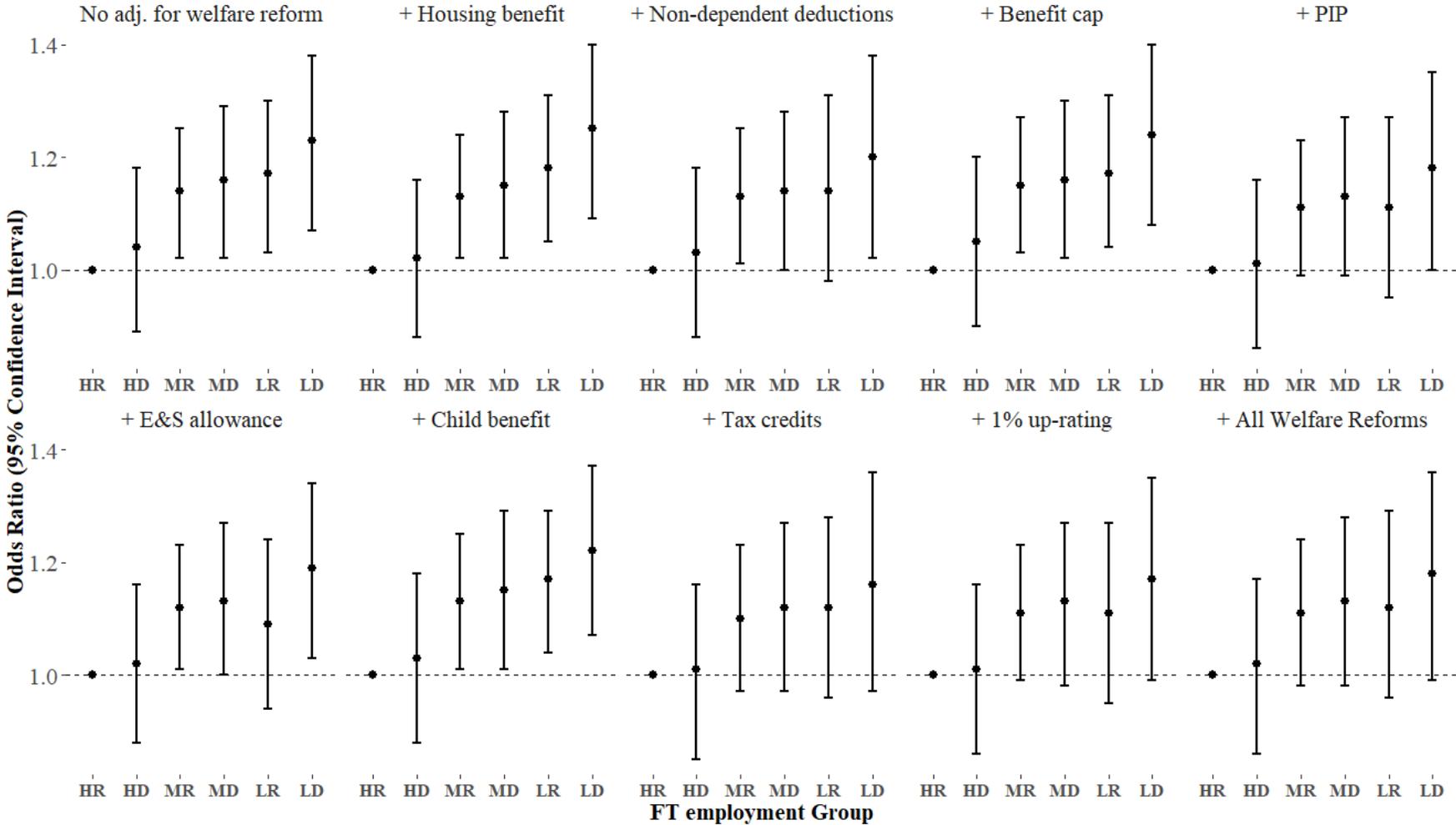
Change post Recession

Rec - Recovered

Dec - Declined

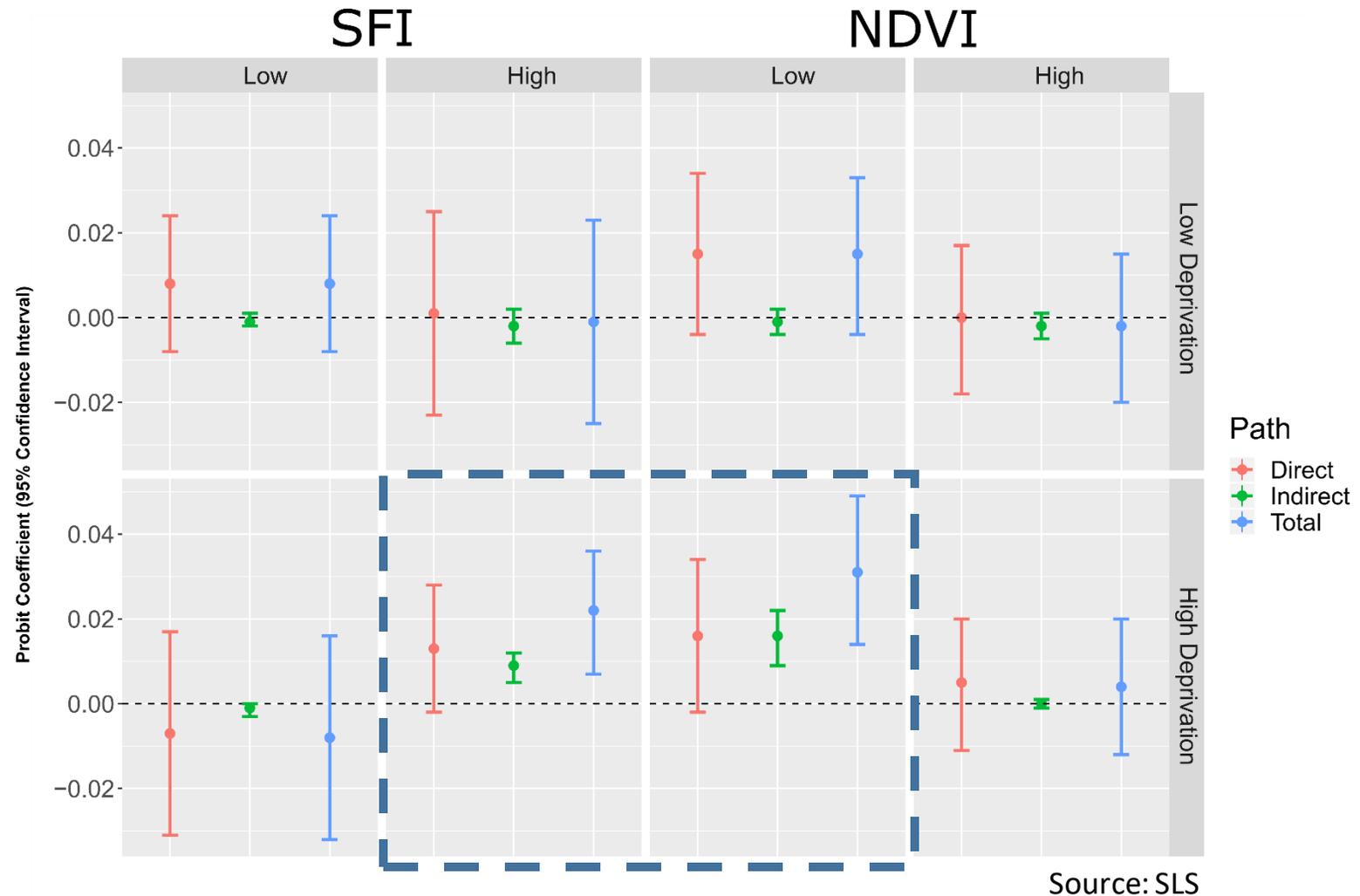
Source: SLS

Mediation by welfare reforms



Modification by socio-environmental context

- When considering the indirect path of the Recession on mental illness through austerity
- Association greatest in those living in areas with higher deprivation
- ... and lower greenness (NDVI)
- ... or (to a lesser extent) higher social fragmentation (SFI)



Main Findings

- The impacts of the Great Recession and austerity on mental health is not limited to individuals directly affected by unemployment but extends across the population
- Employed individuals living in regions characterised by full-time employment rates that were low and had declined had a greater likelihood of beginning a new course of antidepressants

Main Findings

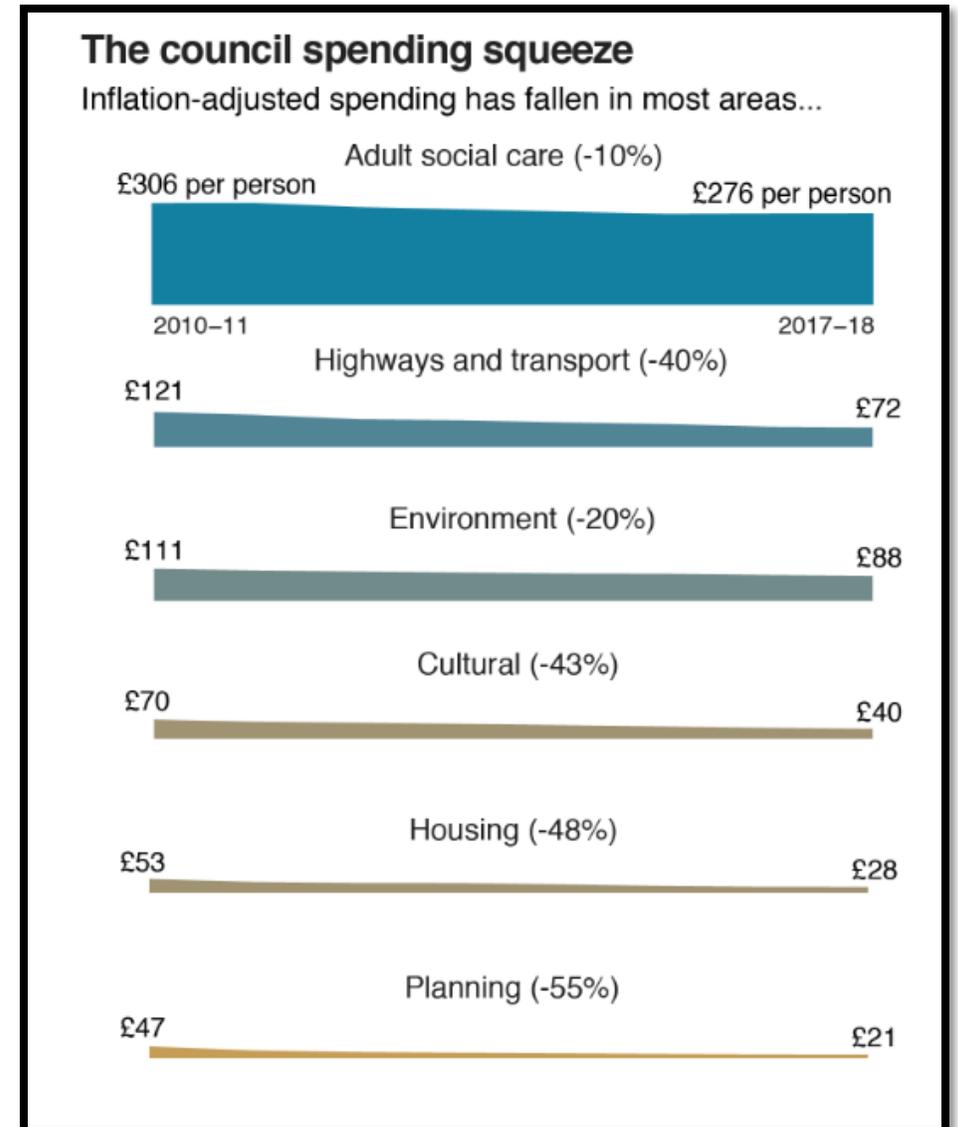
- The effect was mediated by the 2010-2015 welfare reforms, especially by tax credits, the 1% up-rating and personal independence payments
- Social cohesion and access to greenspace may increase resilience to economic changes, especially for those living in the most deprived neighbourhoods

Implications

- Concentrate on people living in areas most impacted by Recession and austerity (Dumfries and Galloway, Dundee City and North Ayrshire), by:
 - Increasing efforts to protect mental health in workplaces
 - Increasing efforts to meet the increasing demand for treatment of depression

Implications

- Reverse budget cuts to local services, which have put greenspace/community cohesion at risk of disrepair and fragmentation



Source: BBC

Implications

- Welfare reforms applied by the government from 2010-2015 resulted in financial savings that were far lower than anticipated (Bayliss et al., 2017)
- Our evidence of increased spending on antidepressants to treat mental illness reduce the economic arguments for applying welfare reforms
- **Which is important because...**

'End of austerity'?

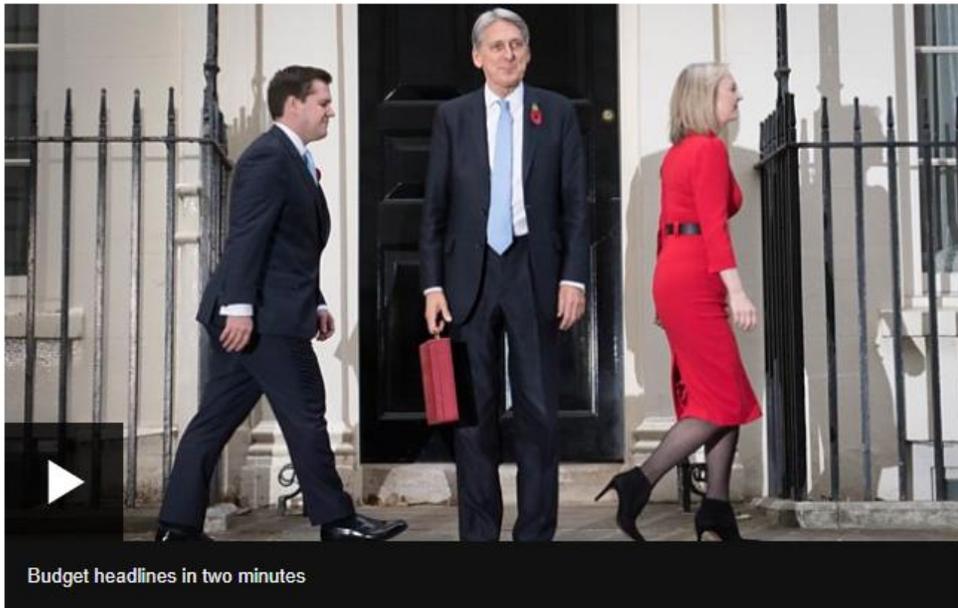
Budget 2018: Austerity finally coming to an end, says Hammond

29 October 2018



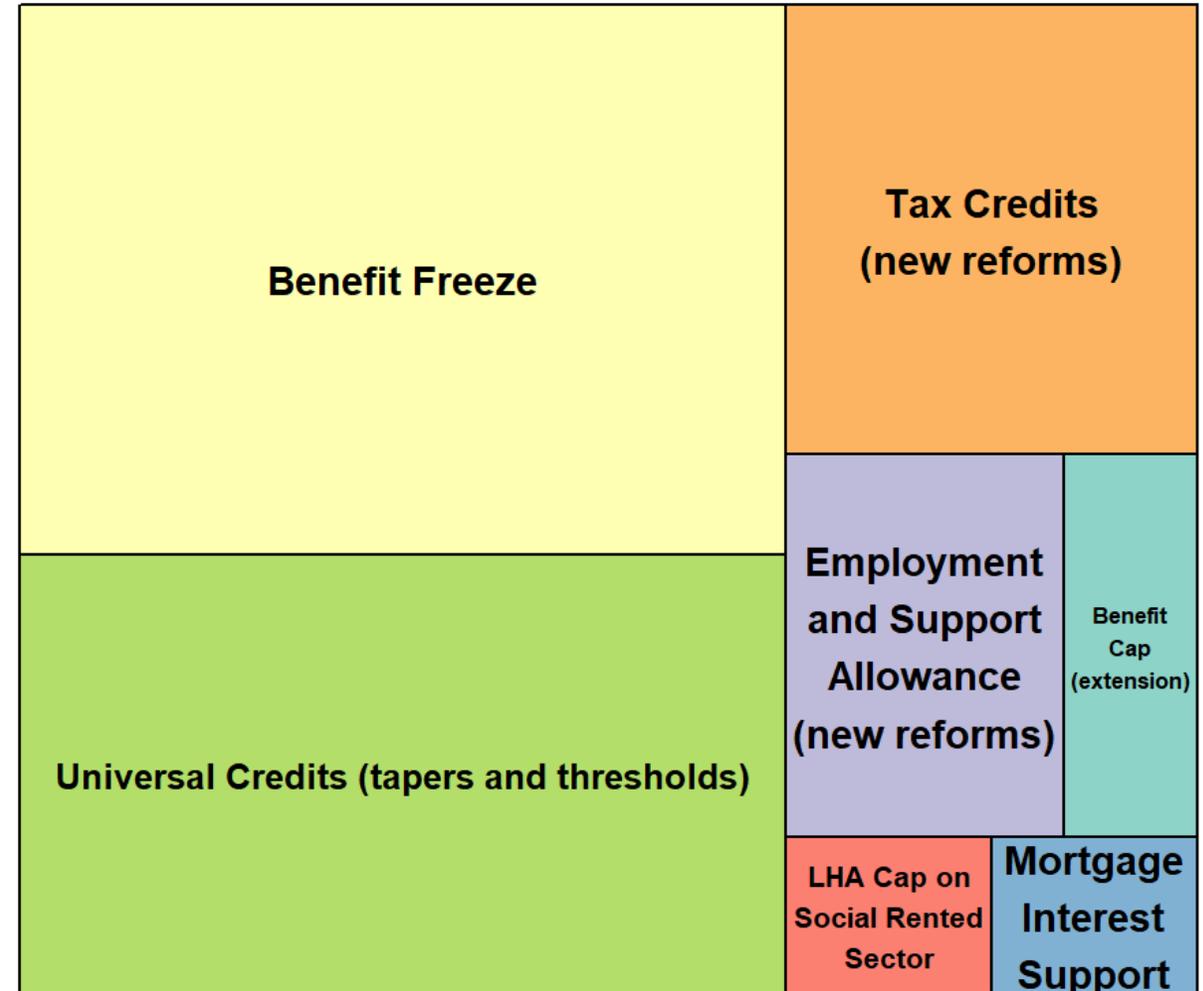
f [social icons] Share

Budget 2018



Philip Hammond has said the "era of austerity is finally coming to an end", in his last Budget before Brexit.

Another £304 p.a. predicted to be lost on average per working age adult from 2015-2022:



We acknowledge:

The help provided by staff of the Longitudinal Studies Centre Scotland is acknowledged. The LSCS is supported by the ESRC /JISC, the Scottish Funding Council, the Scientists Office and the Scottish Government. The authors alone 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.

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- The Administrative Data Research Centre, University of Edinburgh
- NOMIS, Durham University



Thanks, any questions?

mark.cherrie@ed.ac.uk

www.markcherrie.net

 @mark_cherrie

