

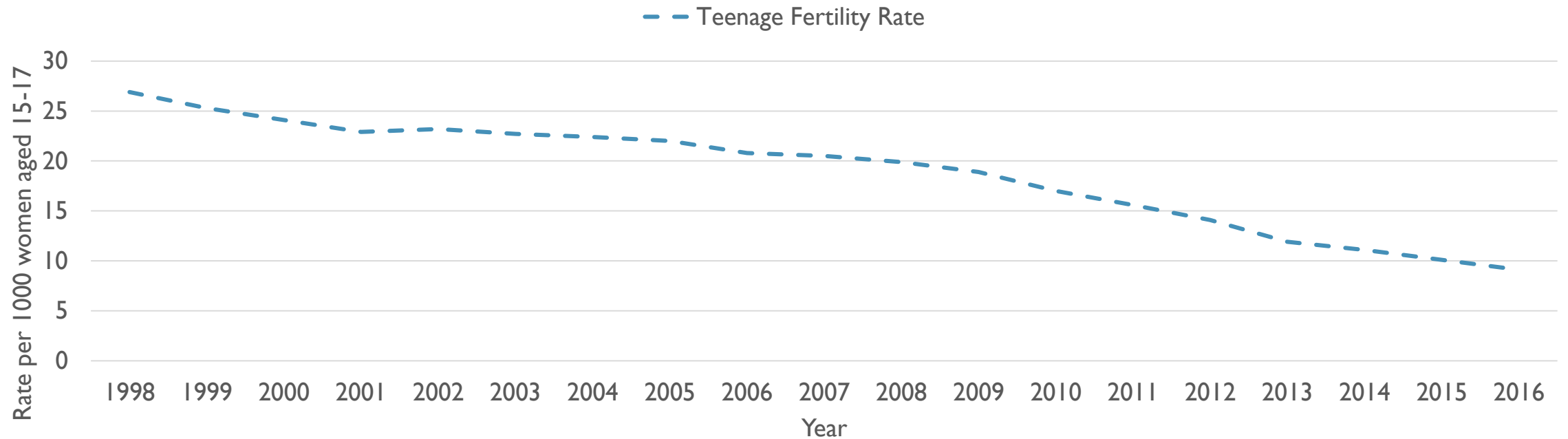
EXPLAINING THE UNEXPECTED DECLINE OF TEENAGE FERTILITY IN ENGLAND: AN ECOLOGICAL APPROACH

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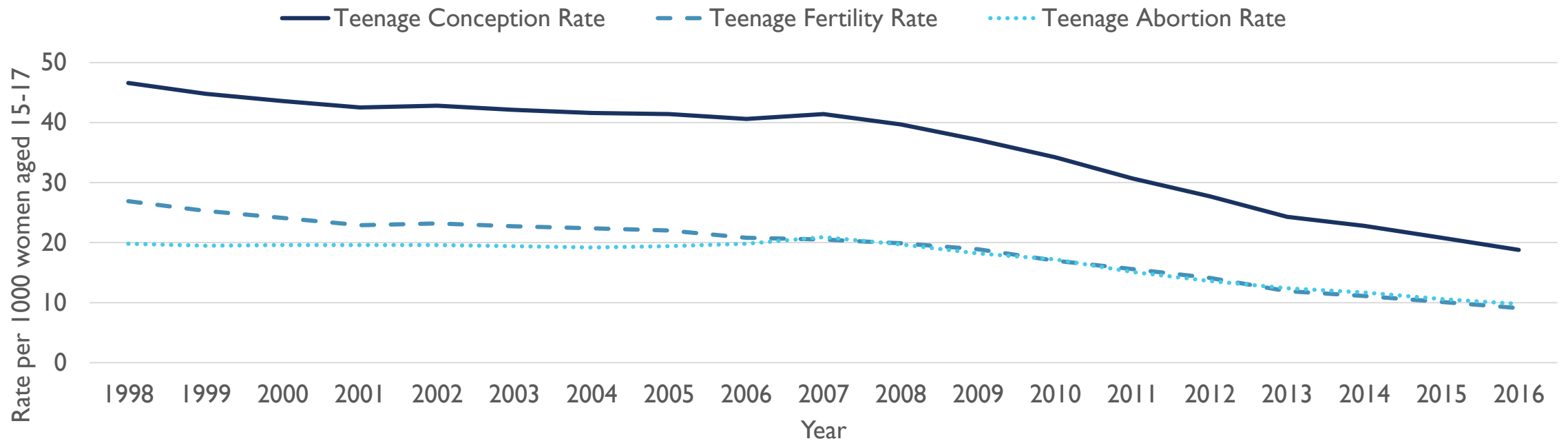
MOTIVATION - I

The Decline of Teenage Fertility Rates in England, 1998-2016



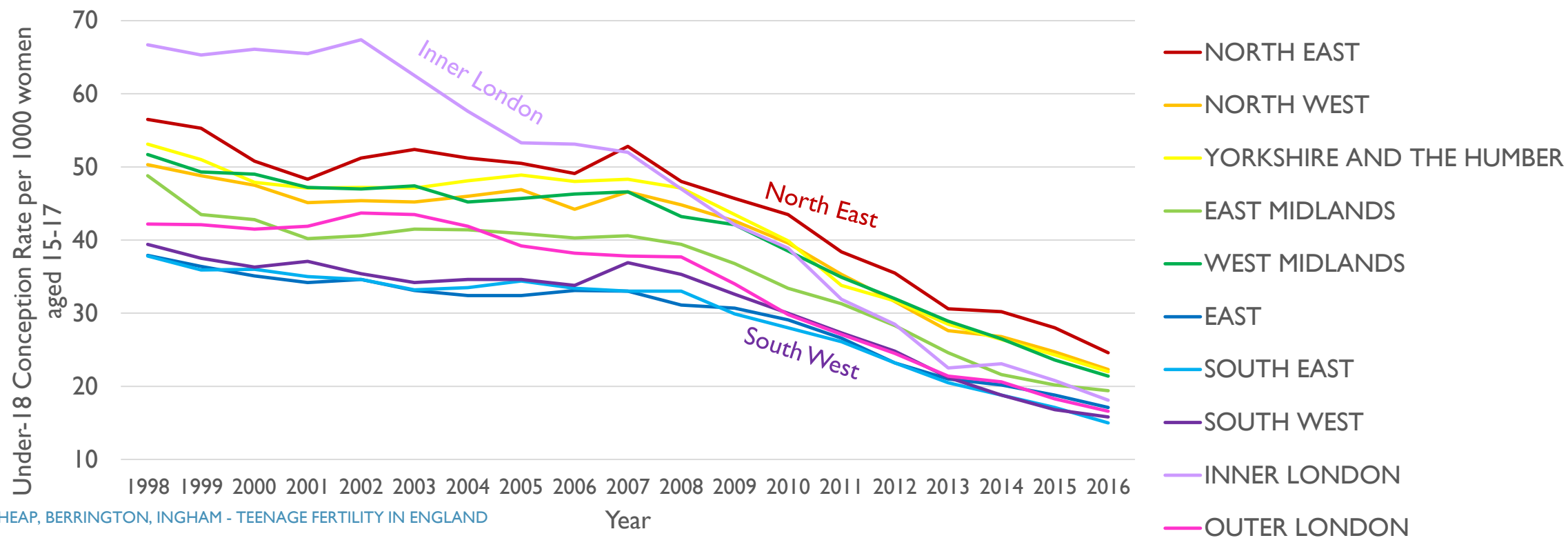
MOTIVATION - 2

The Decline of Teenage Fertility Rates in England, 1998-2016



MOTIVATION - 3

The Regional Average Under-18 Conception Rates in England, 1998-2016



AIMS AND RESEARCH QUESTIONS

To understand England's geographical variation in the level of and change in under-18 fertility by conception rates (and abortion ratios) in this period of decline.

- RQ1 – How are Local Authority District (LAD) characteristics associated with under-18 conception rates throughout 1998-2016, and have these relationships changed?
- RQ2 – How are changes in the time-varying Local Authority District characteristics associated with the changes in under-18 conception rates throughout 1998-2016?

METHODS

- 326 Local Authority Districts which each have 19 observations.
- Repeated measures/panel/multilevel models which cluster annual rates (observations) within each LAD.
 - For RQ1 – Random intercept models to examine the levels of teenage conception rates.
 - For RQ2 – Fixed effect models to examine the change in teenage conception rates.

LAD MEASURES

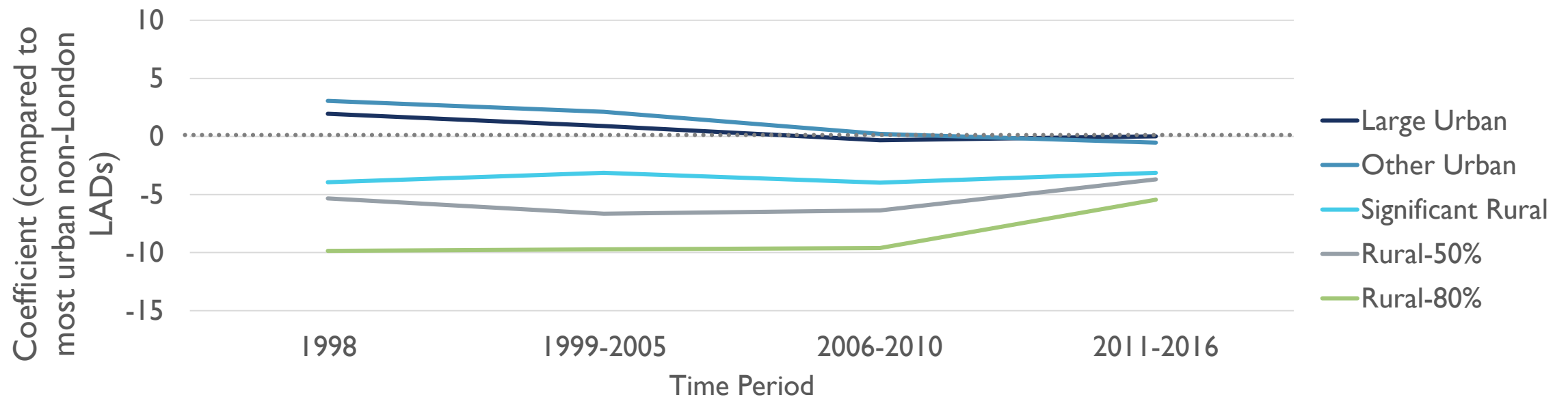
- Jobseekers' Allowance Claimant rates,
- % of teenagers eligible for Free School Meals,
- % of teenagers attaining 5 A*-C in GCSEs.
- % of teenagers registered as Black,
- % of teenagers registered as South Asian.
- Social housing units per 100 adults,
- House price to workplace earnings ratio.
- Teenage Pregnancy Strategy funding per female aged 13-17.
- Urban/rural measure.
- Time period



RANDOM INTERCEPT MODEL RESULTS

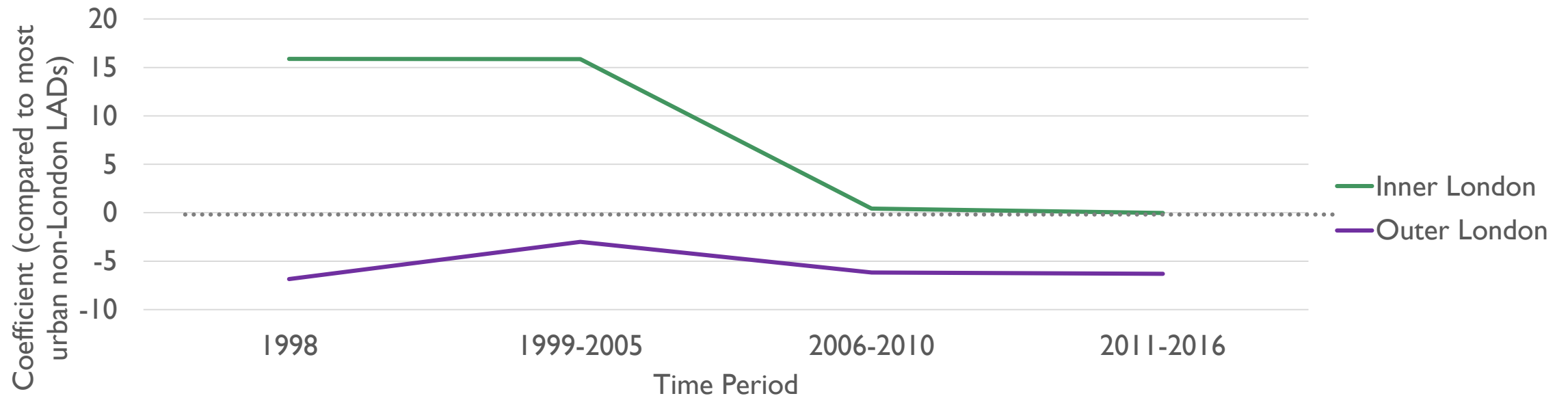
RESULTS – URBAN/RURAL DIFFERENCES (AFTER CONTROLS)

The interaction effect of Rural/Urban and time period measures for under-18 conception rates 1998-2016

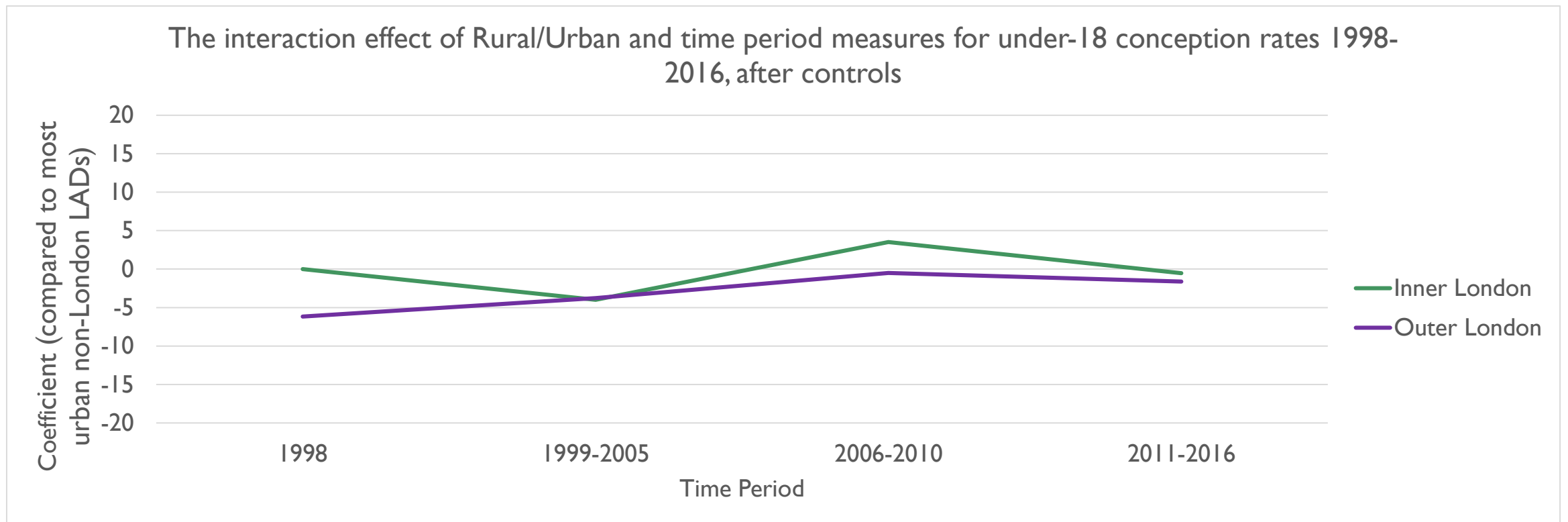


RESULTS – THE LONDON EFFECT (BEFORE CONTROLS)

The interaction effect of Rural/Urban and time period measures for under-18 conception rates 1998-2016, before controls

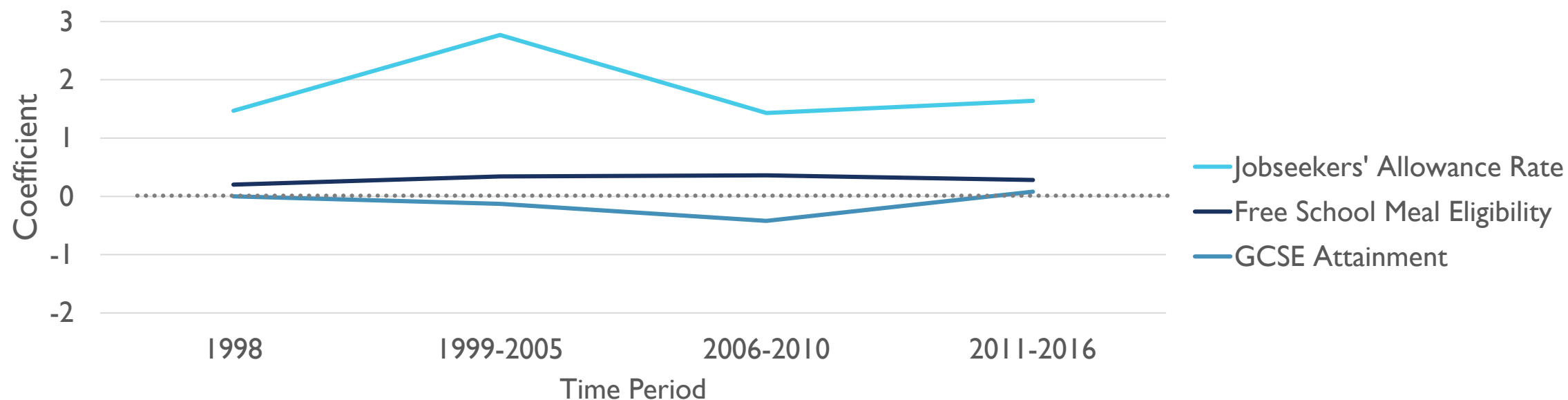


RESULTS – THE LONDON EFFECT (AFTER CONTROLS)



RESULTS – THE EFFECTS OF LAD DEPRIVATION (AFTER CONTROLS)

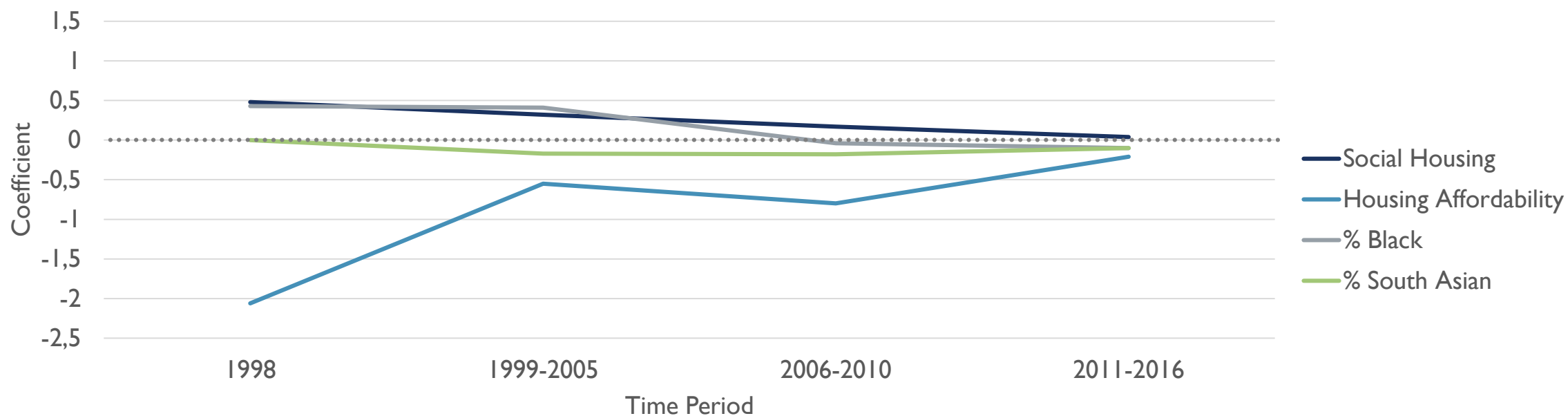
The interaction effects between deprivation measures and time period for under-18 conception rates 1998-2016



*The two economic deprivation measures were examined in separate models due to collinearity.

RESULTS – LAD CHARACTERISTIC EFFECTS (AFTER CONTROLS)

The interaction effects between LAD measures and time period for under-18 conception rates 1998-2016





FIXED EFFECT MODEL RESULTS

RESULTS – FIXED EFFECT MODEL OF ENGLAND’S LADS’ UNDER-18 CONCEPTION RATES 1998-2016

VARIABLES		Time Period Only	Overall Adult Deprivation	Teenage Deprivation
Time Period (Ref. = 1998-2005)		REF.	REF.	REF.
2006-2010		-3.73***	-0.46*	-0.32
2011-2016		-16.72***	-8.14***	-10.03***
% Pupils Black		...	-0.36***	-0.42***
% Pupils South Asian		...	-0.36***	-0.38***
TPS Funding per each Female aged 13-17		...	0.27***	0.26***
Median House Price to Workplace Earnings Ratio		...	-0.17**	-0.44***
Social Housing Units per 100 adults		...	0.47***	0.52***
% of Pupils Attaining at least 5 GCSEs A-C		...	-0.16***	-0.01
16-64-year-old Jobseekers per 1000		...	2.28***	...
% Pupils Eligible for Free School Meals		0.58***
Constant		39.73***	40.42***	31.98***
Random Effects	sigma_u	10.79	8.57	8.24
	sigma_e	6.32	5.68	5.76
	rho	0.74	0.69	0.67



WHAT DO THESE FINDINGS MEAN?

CONCLUSIONS – THE ROLE OF LAD CHARACTERISTICS

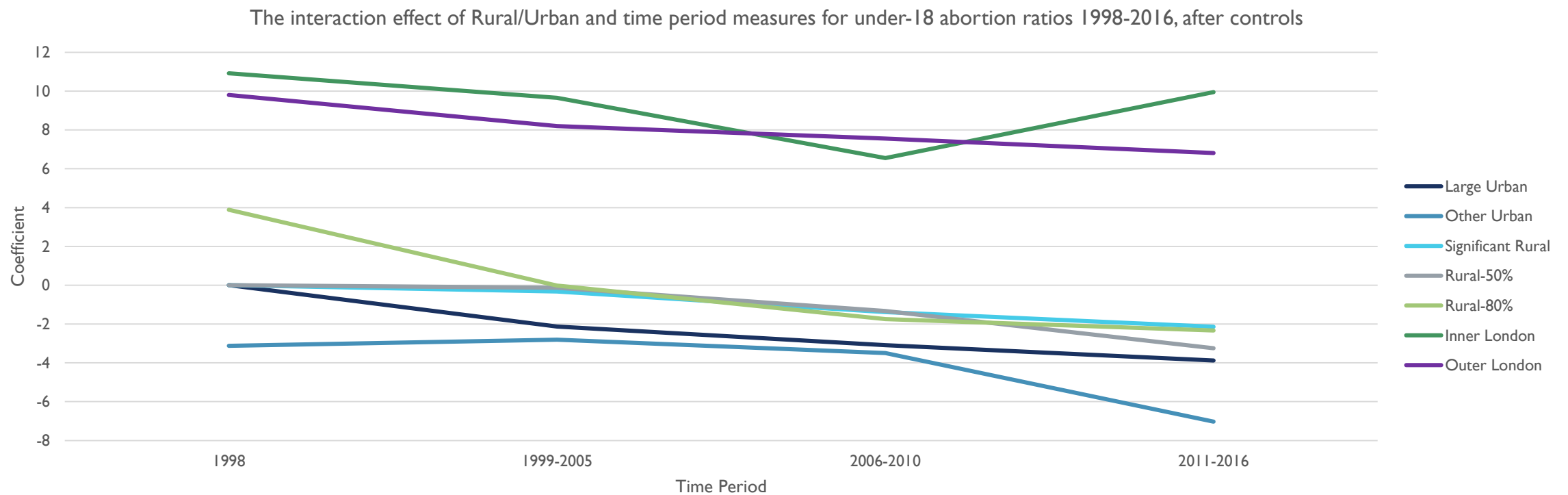
- The relationships between LAD characteristics and the under-18 conception rates have altered.
- LAD characteristics are better at explaining the levels rather than the change.
- Overall LAD adult economic deprivation has more explanatory power than teenage-specific economic deprivation.
- Rural and Outer London LADs are different to the most urban non-London LADs beyond these characteristics.
- Some of the geographical variation has been explained...However, parts of the decline may be due to *unmeasured* or *immeasurable* characteristics.



THANK YOU

FOR MORE INFORMATION: K.HEAP@SOTON.AC.UK

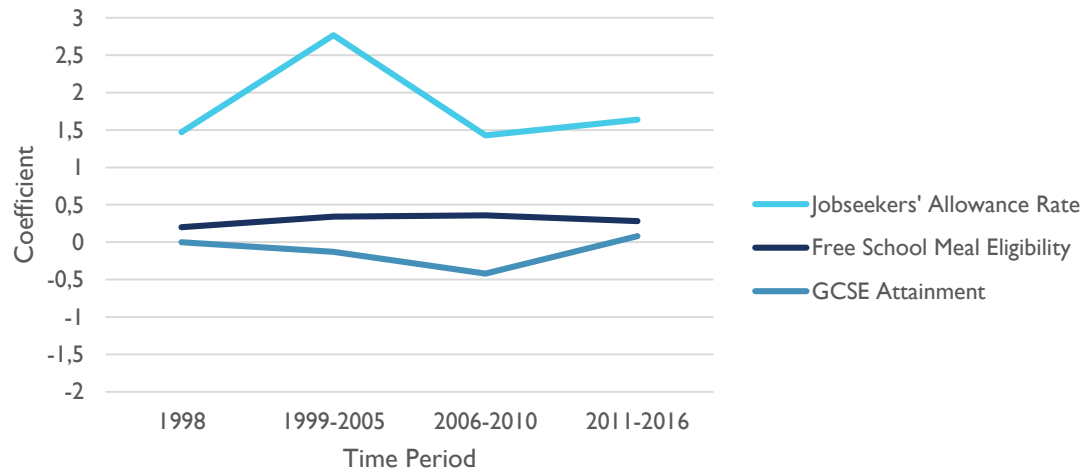
RESULTS – THE LONDON EFFECT (TEENAGE ABORTION RATIOS)



RESULTS – THE CHANGING COEFFICIENTS' EFFECTS OF DEPRIVATION

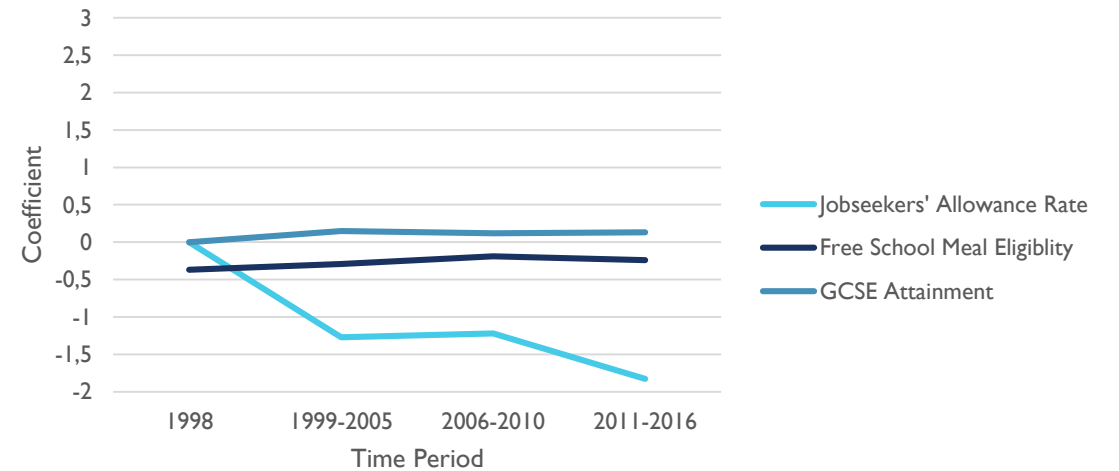
Teenage Conceptions

The interaction effects between deprivation measures and time period for under-18 conception rates 1998-2016



Teenage Abortion Ratios

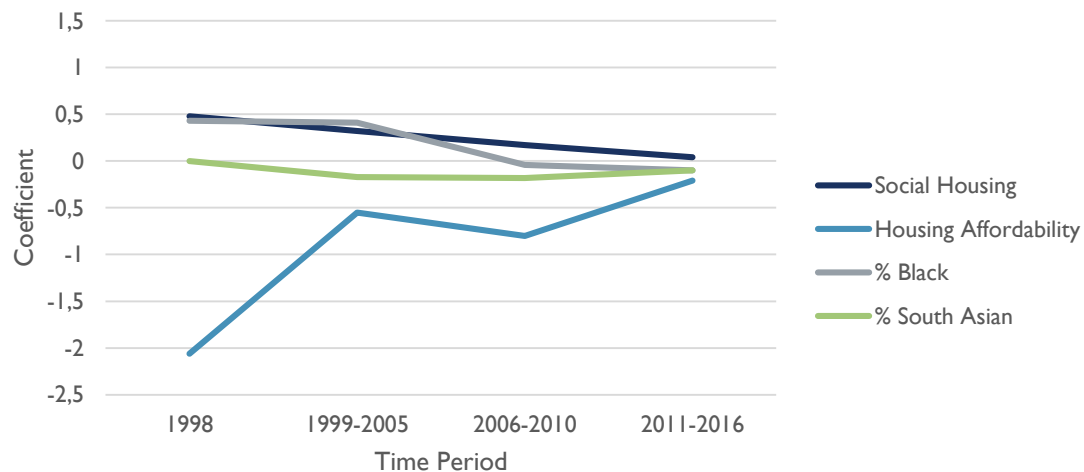
The interaction effects between deprivation measures and time period for under-18 abortion ratios 1998-2016



RESULTS – THE CHANGING COEFFICIENTS' EFFECTS

Teenage Conceptions

The interaction effects between LAD measures and time period for under-18 conception rates 1998-2016



Teenage Abortion Ratios

The interaction effects between LAD measures and time period for under-18 abortion ratios 1998-2016

