

Technical Appendix to 'Brexit and the impact of immigration on the UK'

This Appendix contains additional Tables and Figures relevant to CEP's report on 'Brexit and impact of immigration on the UK'.

Figure A1 gives the shares of occupations of UK nationals, EU immigrants and non-EU immigrants. Immigrants are over-represented in low skilled jobs and under-represented in 'graduate jobs'¹ relative to what we might expect from their educational attainment.

Figure A2 gives the levels of wages for workers in the 10th median and 90th percentile.

Figures A3-A6 repeat the analysis in the main Report except the start year is changed to 2011 when the Eurozone crisis really began to bite (instead of 2008, the onset of the Great Recession as it is in the main report). The figures show the relationship between the change in the EU immigrant share at the local level and (i) the change in the unemployment rate, (ii) real wages, (iii) the NEET rate for the low skilled and (iv) real wages for the low skilled respectively.

Figures A7-A10 repeat the same analysis for the period 2004-15 (instead of 2008-15). This is the first year for which the LFS has comprehensive wage data that can be disaggregated to the local authority level and is, coincidentally when the A8 countries joined.

What is striking is that there appears to be no effect of EU immigrants on any of the labour market outcomes.

Wadsworth (2015) conducts a similar analysis for all immigrants (including non-EU), which shows the same absence of an effect on the labour market position of the UK born.

We also tested the analysis by (i) dropping all London local authorities; (ii) repeating the analysis at the higher regional level instead of local authority level and (iii) dealing with endogeneity by the standard method of instrumenting the 2008-2015 change with the level of immigration in the area in 2004. Throughout all these three sets of experiments there are still no significant relationship between labour market outcomes of the UK born and EU immigration.

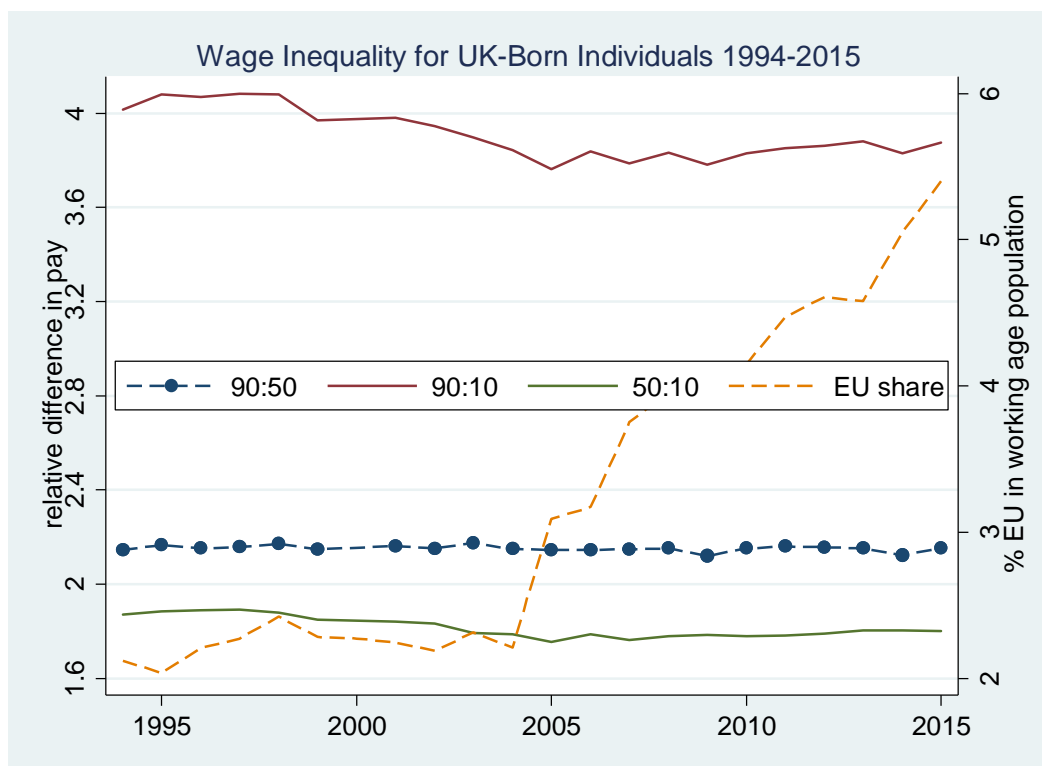
¹ A graduate job is defined as belonging to Standard Occupation Classification groups 1 to 3. This may also be relevant in the event of a Brexit, since current work visas for non-EU nationals state that leave to remain is dependent on being in a graduate job (approximately occupations 1 to 3 in the 1 digit SOC) and with a salary in excess of £35,000 a year after five years in the country. There are some exemptions for shortage and PhD-level occupations.

Figure A1: Occupational spread of UK, EU and other nationals 2015

Occupation	UK National	% Share in each occ.	EU workforce	% Share in each occ.	Non-EU immigrant workforce	% Share in each occ.
Managers	3,000,000	10.8	110,000	3.0	320,000	9.9
Professionals	5,570,000	19.8	310,000	5.0	800,000	12.9
Associate Professionals	4,000,000	14.2	210,000	5.0	340,000	8.1
Administrative	3,100,000	11.0	150,000	4.4	270,000	8.0
Skilled Trades	3,120,000	11.1	240,000	7.1	230,000	6.9
Caring & Leisure	2,600,000	9.2	170,000	5.9	340,000	11.8
Sales	2,310,000	8.2	90,000	3.6	200,000	8.5
Processing	1,640,000	5.8	240,000	12.2	220,000	11.1
Elementary	2,800,000	9.9	460,000	13.1	380,000	10.9
Total	28,200,000		2,000,000		3,100,000	

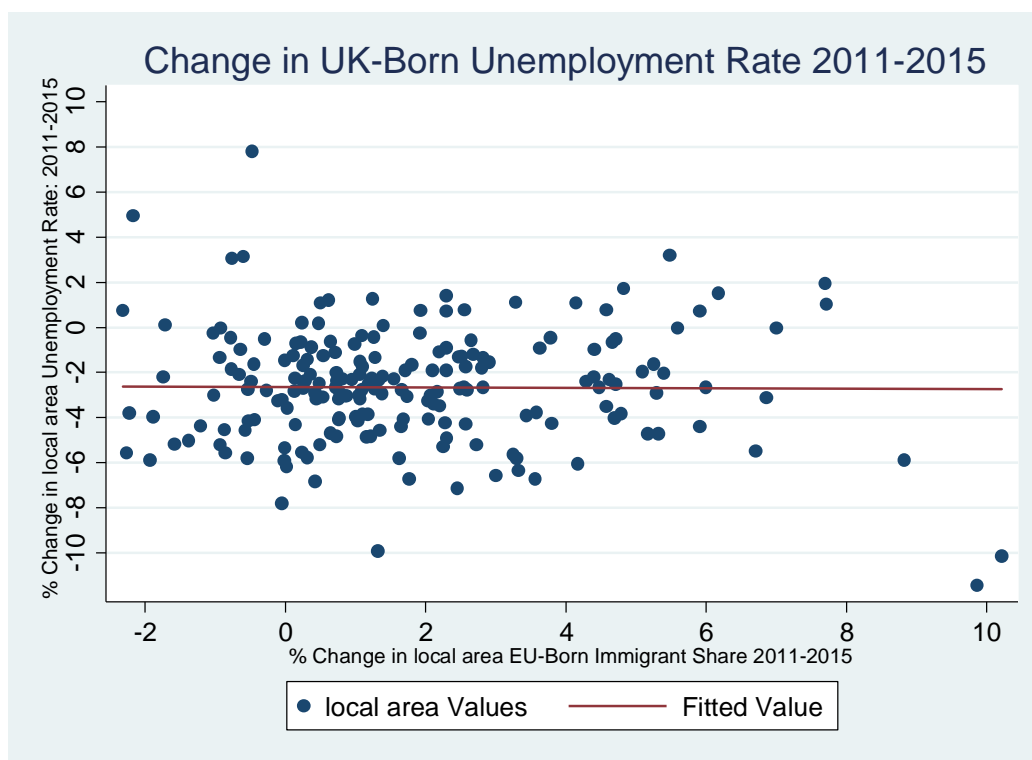
Source: CEP analysis of Labour Force Survey.

Figure A2: Real wage changes for high, middle and low earners: UK-born 2001-2015



Source: CEP analysis of Labour Force Survey.

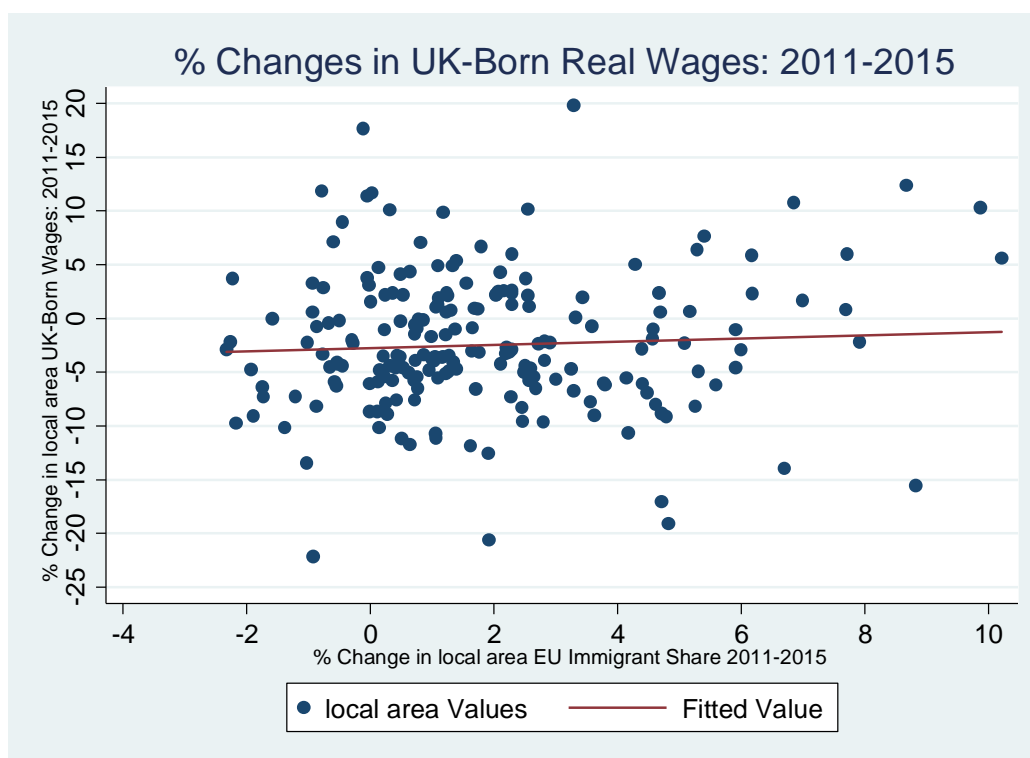
Figure A3: Changes in UK-born unemployment rate 2011-15



Source: CEP analysis of Labour Force Survey.

Notes: Each dot represents a UK local authority. The solid line is the predicted 'best fit' from a regression of changes in unemployment on the change in share of EU immigrants in each UK local authority. These are weighted by the sample population in each area.

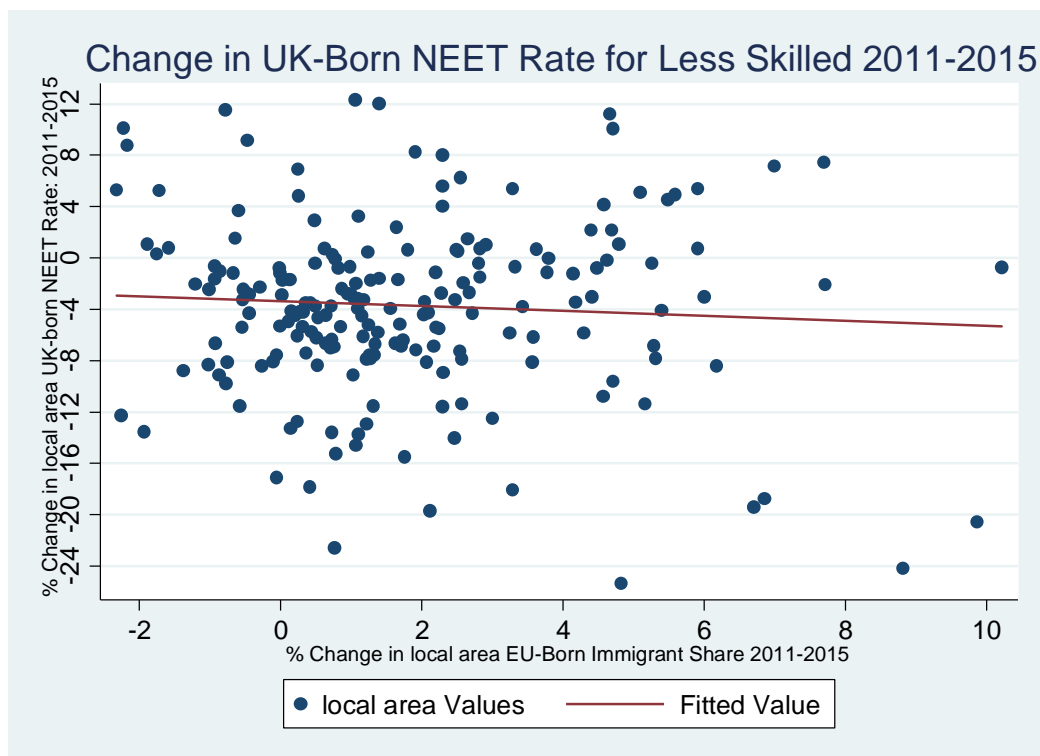
Figure A4: Changes in UK-born real wages 2011-15



Source: CEP analysis of Labour Force Survey

Notes: Each dot represents a UK local authority. The solid line is the predicted 'best fit' from a regression of local authority's percentage change in wages on the change in share of EU immigrants. These are weighted by the sample population in each area.

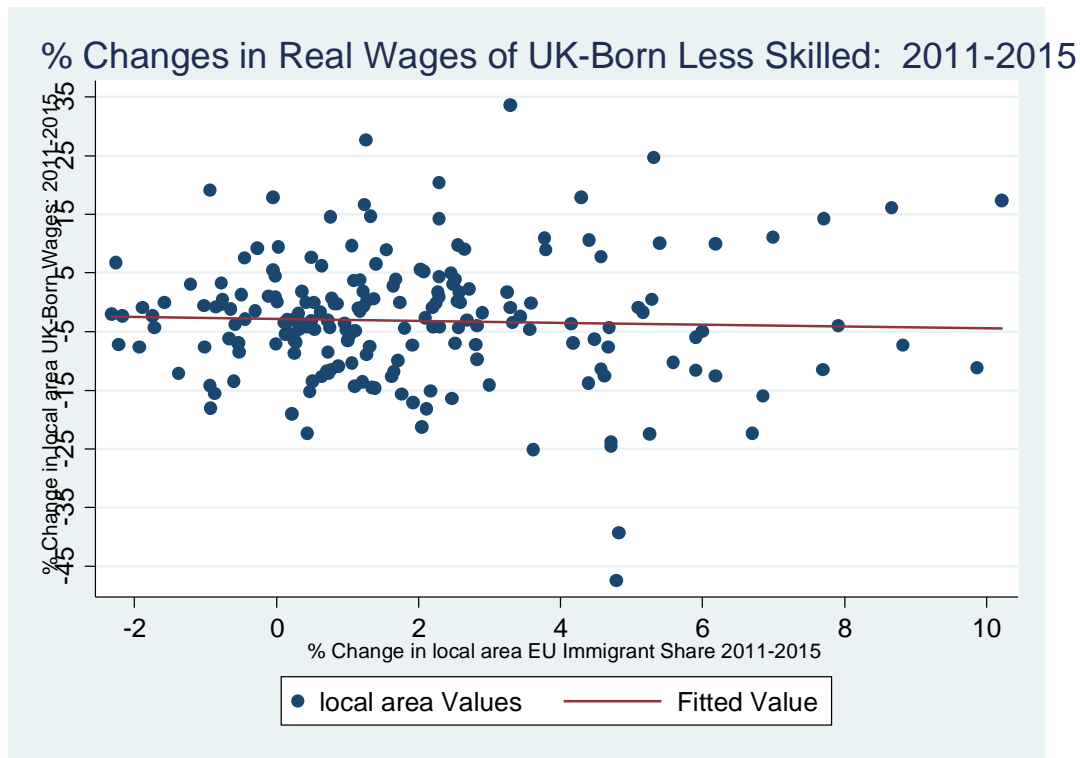
Figure A5: Changes in UK-born NEET rate for less skilled 2011-15



Source: CEP analysis of Labour Force Survey.

Notes: Each dot represents a UK local authority. The solid line is the predicted 'best fit' from a regression of local authority's changes in NEET rates for the less skilled on the change in share of EU immigrants. These are weighted by the sample population in each area. NEET stands for those 'not in education, employment or training.' Less skilled is defined by those who left school at 16 or earlier.

Figure A6: Changes in real wages of UK-born less skilled 2011-15



Source: CEP analysis of Labour Force Survey.

Notes: Each dot represents a UK local authority. The solid line is the predicted 'best fit' from a regression of local authority's changes in the wages of the less skilled on the change in share of EU immigrants. These are weighted by the sample population in each area. Low skill is defined by those who left school at 16 or earlier. Less skilled is defined by those who left school at 16 or earlier.

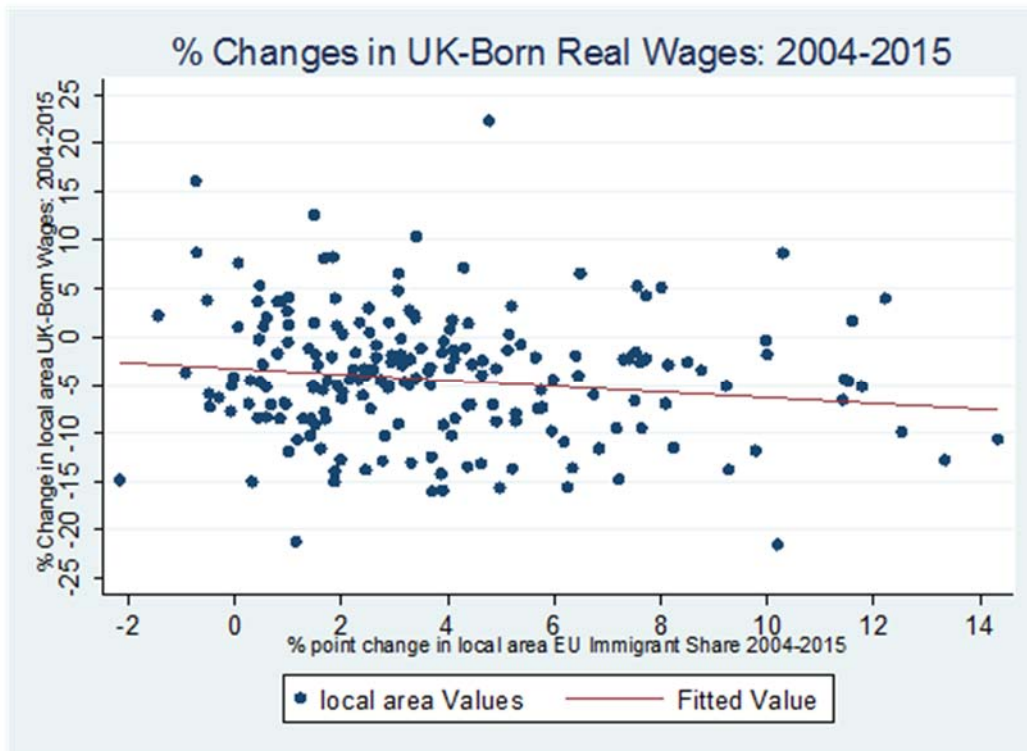
Figure A7: Changes in UK-born unemployment rate 2004-15



Source: CEP analysis of Labour Force Survey.

Notes: Each dot represents a UK local authority. The solid line is the predicted 'best fit' from a regression of changes in unemployment on the change in share of EU immigrants in each UK local authority. These are weighted by the sample population in each area.

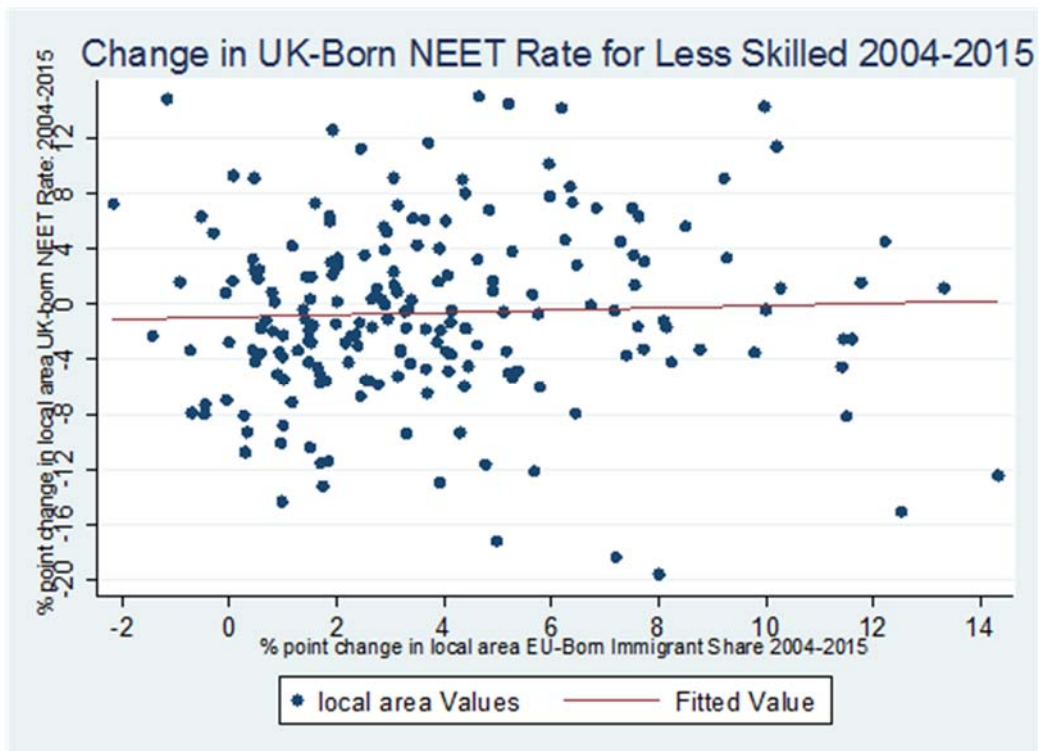
Figure A8: Changes in UK-born real wages 2004-15



Source: CEP analysis of Labour Force Survey.

Notes: Each dot represents a UK local authority. The solid line is the predicted 'best fit' from a regression of local authority's percentage change in wages on the change in share of EU immigrants. These are weighted by the sample population in each area.

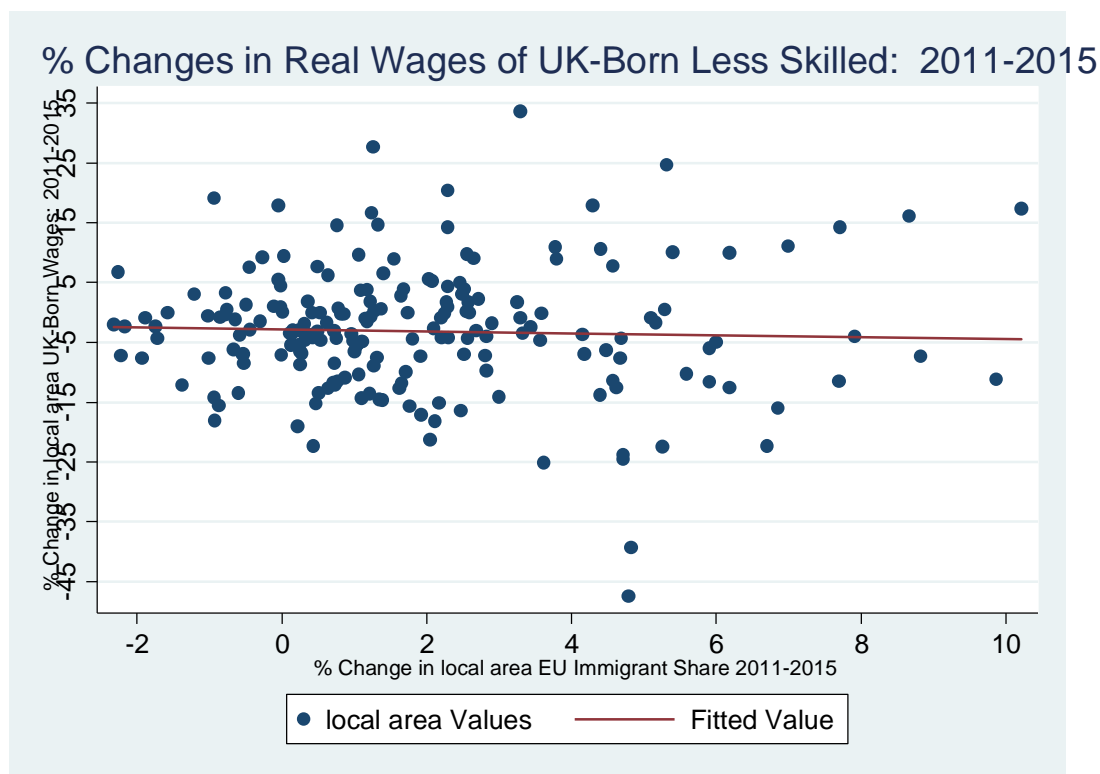
Figure A9: Changes in UK-born NEET rate for less skilled 2004-15



Source: CEP analysis of Labour Force Survey.

Notes: Each dot represents a UK local authority. The solid line is the predicted 'best fit' from a regression of local authority's changes in NEET rates for the less skilled on the change in share of EU immigrants. These are weighted by the sample population in each area. NEET stands for those 'not in education, employment or training.' Less skilled is defined by those who left school at 16 or earlier.

Figure A10: Changes in real wages of UK-born less skilled 2011-15



Source: CEP analysis of Labour Force Survey.

Notes: Each dot represents a UK local authority. The solid line is the predicted 'best fit' from a regression of local authority's changes in the wages of the less skilled on the change in share of EU immigrants. These are weighted by the sample population in each area. Low skill is defined by those who left school at 16 or earlier. Less skilled is defined by those who left school at 16 or earlier.