

Creative industries, housing markets and residential gentrification

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Supporting inclusive economic growth in the West Midlands and across the UK

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Overview

- **What we do:** test the link between creative industries presence and housing market change in UK geographies, 2000-2018.
- **Why this matters:** creative industries link to urban post-industrial transformation
 - What is the relationship between CI presence and housing market changes?
 - What is the relationship between CI presence and gentrification?
 - What are the mechanisms? Demand-side vs supply-side
 - How can policy help?



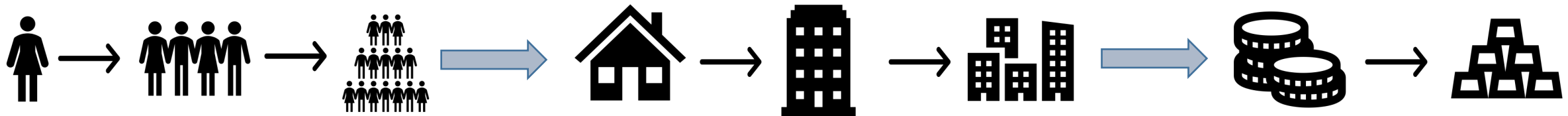
Overview

- **Approach:** Estimate relationship between % creative industries and time-consistent house prices/rents (levels & changes) in different UK geographies (OAs, MSOAs, TTWAs, London & Birmingham OAs)
- **Findings so far:** 1) positive links between CI and house price changes 2) mostly explained by historically cheaper areas 3) links between CI and gentrification in L&B 4) creative producers rather than amenities are behind these effects 5) rent rises focused on historically expensive neighbourhoods with amenities



Background

- Gentrification and its drivers
 - Class-based population replacement (Glass 1964)
 - Post-industrial city – urban revival transformations (Glaeser 2011, Moretti 2012; 2013, Couture and Handbury 2019)
 - Supply (jobs & speculative development) and demand (arts) pull factors



Background

- Gentrification and the creative industries

- CI highly urbanised
- General perception



- Empirically unclear
 - ❖ Direction of causality (🐔🥚)
 - ❖ Mechanism (amenities/producers)
 - ❖ Varying location preferences within CI

Background

- Creative city policies and gentrification
 - Rise in creative city policies since 2000s (Hutton 2008, Clifton and Cooke 2009, Evans 2009, Pratt and Jeffcut 2009)
 - Gentrification criticism but lack of robust evidence on causality and mechanisms
 - Scope for policy to mitigate ‘inevitability’ of gentrification (Hutton 2008, 2015)



Challenges

- Gentrification as a self-reinforcing process
- Exogenous forces driving neighbourhood change and CI locations
- Spatial unit. Gentrification a localised phenomenon but what is a 'neighbourhood'?
- Housing market outcomes beyond price paid
- Creative industries beyond arts



This paper

- Link between CI, housing markets and gentrification but less awareness of mechanisms & nuances
- Contribution
 - a) Leverage data sources (OpenCorporates, FAME, Land Registry, Zoopla, Edina, ONS Census)
 - b) Range of geographies (OAs (157,000), MSOA (7,000), TTWA (173), London and Birmingham (28,000))
 - c) Rich research design (fe, ols + fe + clustered errors, arbitrary spatial clustering)
 - d) Time-consistent prices, gentrification dummy, rents
 - e) Breakdown of CIs (CI, pioneers a la Behrens et al 2019, creative producers, creative amenities, creative services, arts)
 - f) Test four hypotheses



Hypotheses

H1: creative industries help drive the gentrification process: there are robust links between creative industry presence in cheaper areas, the arrival of richer/more skilled residents, and subsequent rises in housing costs

H2: creative industries follow the gentrification process: creative industry presence and subsequent housing cost change is concentrated in richer areas;



Hypotheses

H3: creative amenities and the arts – which are directly consumable – are more important in explaining subsequent gentrification than the presence of creative producers or services;

H4: the presence of creative producers are more important in explaining subsequent gentrification than the presence of amenities or the arts.



Data

- **Business** (OpenCorporates, FAME) 10m obs 2000-2018
- **Housing market** (Land Registry, Zoopla) >24 million obs 1995-2018
- **Controls** (Census, Edina)
- **Variables of interest:**
 - Time consistent house prices/rents & change over time (median house prices in 2015 prices)
 - Gentrification dummy (increase in house prices & share NVQ4+ between censuses)
 - Local share of creative industries



Research Design

1) Descriptives for different areas

- relationship between creative industries and time-consistent prices

2) Panel controlling for year, fixed-area & time-invariant characteristics and local business stock

- $Y_{it} = bCl_{it} + cX_{it} + I_i + T_t + e_{it}$ (1)

- $Y_{i(dt)} = bCl_{it} + cX_{it} + I_i + T_t + e_{it}$ (2)

3) London & Birmingham

- $Y_{it-tn} = \alpha + bCl_{itn} + dX_{itn} + C_c + e_{ic}$ (3)

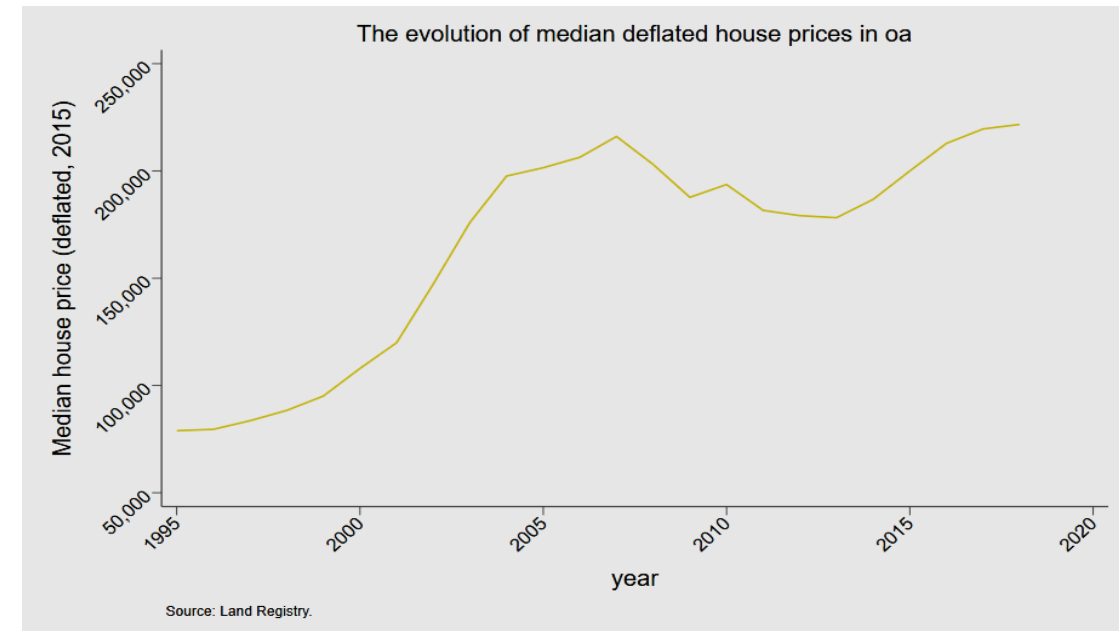
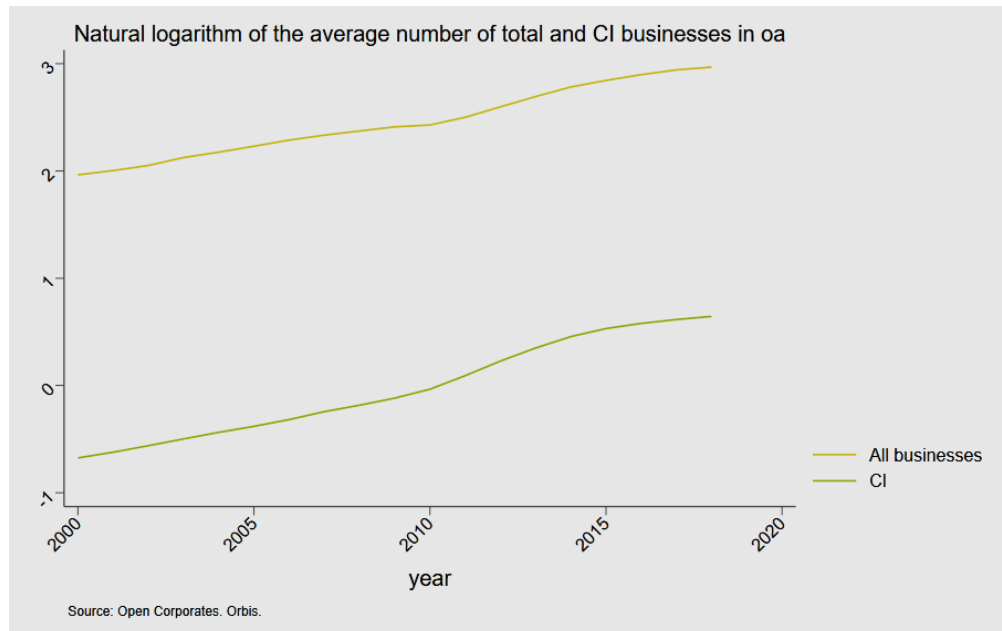
- $Y_{it-tn} = \alpha + bCl_{itn} + \gamma Cl_{itn} * P_{itn} + dX_{itn} + C_c + e_{ic}$ (4)

- Errors clustered on OAs and arbitrary spatial clustering (Colella et al., 2019)



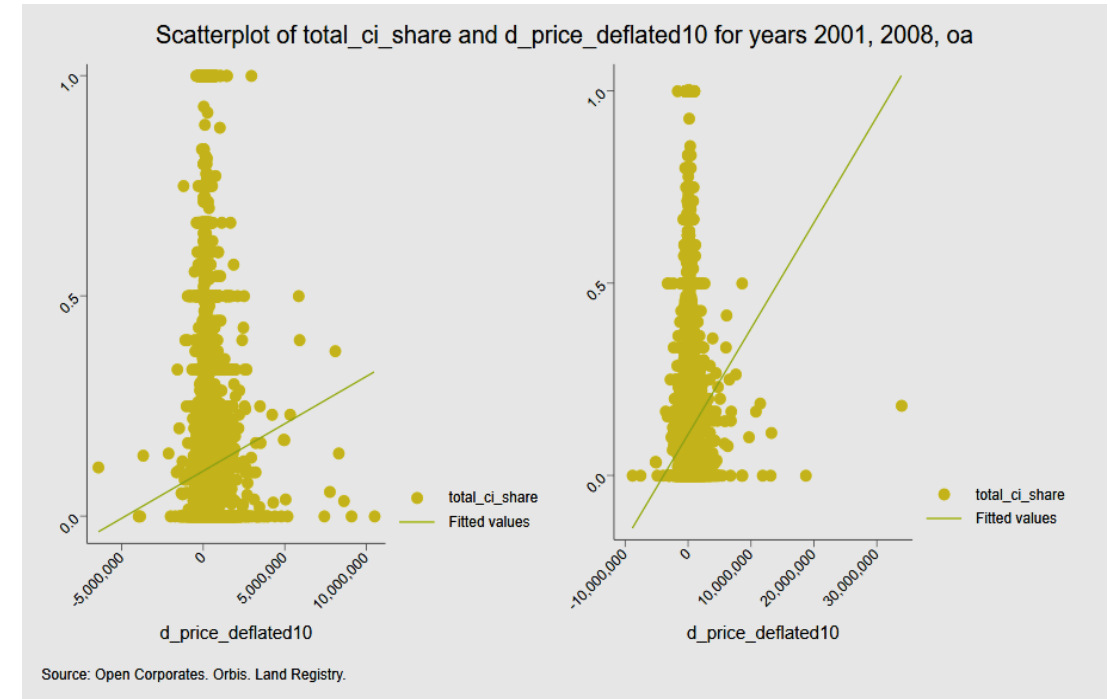
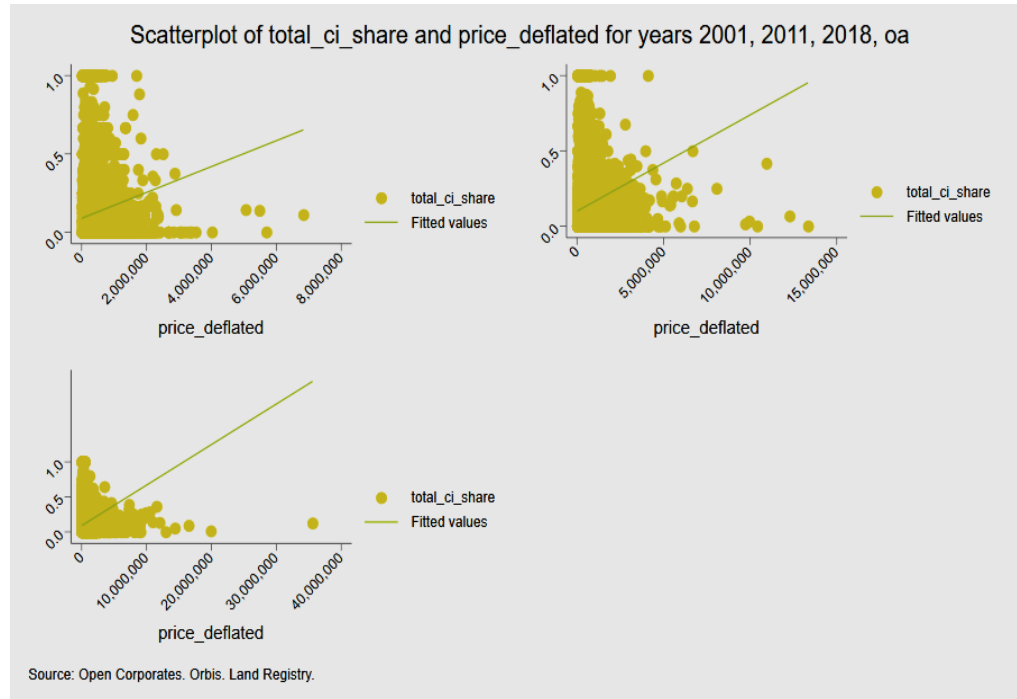
1) Descriptive analysis

- The evolution of average business and CI stock and median time consistent prices in OAs



1) Descriptive analysis

- Positive relationship between share of CI and time-consistent house prices

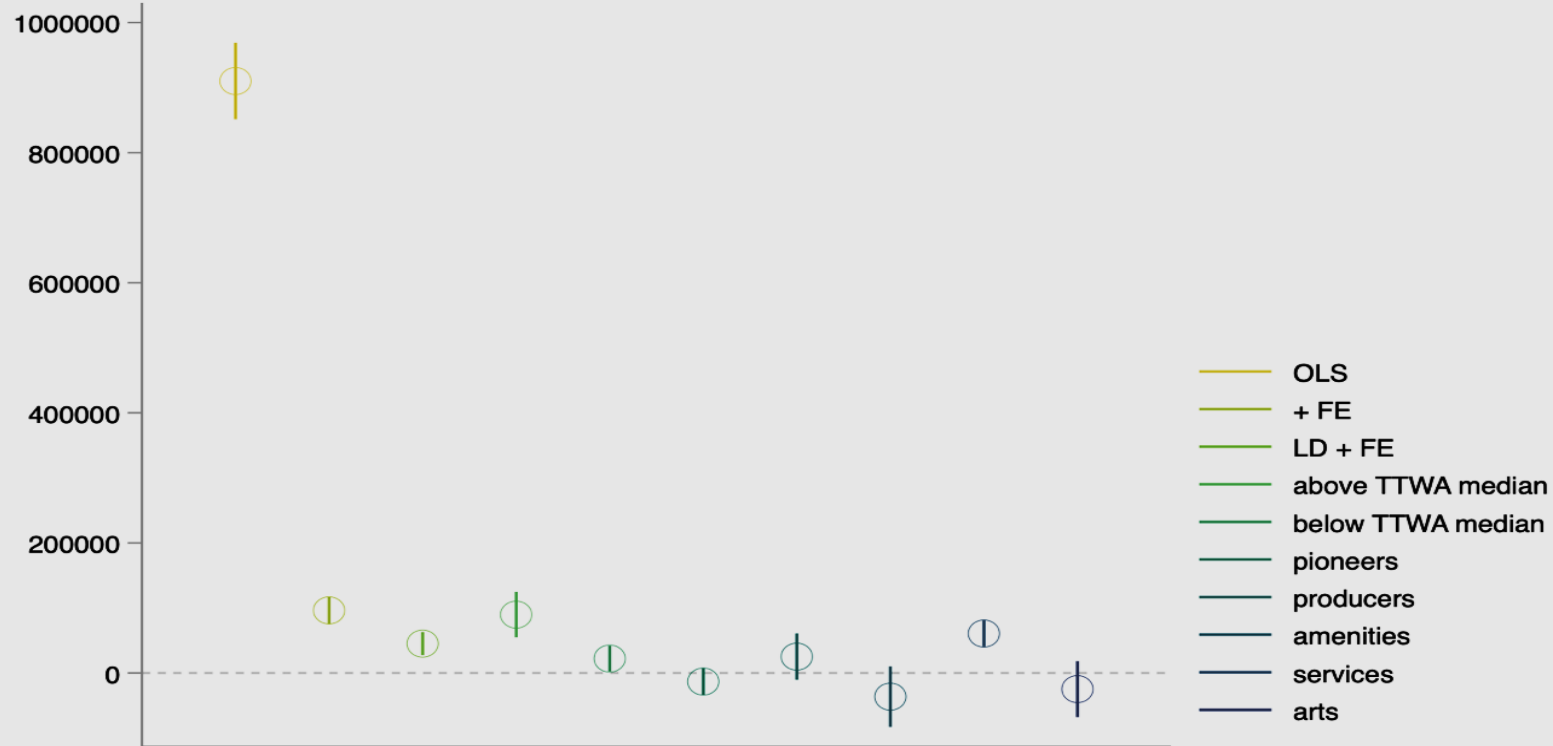


2) Panel regressions

$$Y_{it} = bC_{it} + cX_{it} + I_i + T_t + e_{it} \quad (1)$$

$$Y_{i(dt)} = bC_{it} + cX_{it} + I_i + T_t + e_{it} \quad (2)$$

price_deflated, Middle Layer Super Output Area



Source: Land Registry 2001-2018. Each point shows coefficient and 95% confidence interval.
OLS = same year. LD = 10-year change.
All models control for total firms and cluster standard errors on MSOA.

- 1% -> £900,000 median house price (OLS)
- £96,000 (FE)
- £45,000 (LD+FE)
- Driven by more expensive neighbourhoods
- Driven by creative producers & services (£60,000)
- OAs less impact, still on producers
- Rents different impacts

2) Panel regressions

Overall

- +ve links between creative industries, house price levels and changes
- Creative producers and services drive these links rather than amenities
- Area definition (OAs vs MSOAs) shifts neighbourhood change from cheaper to more expensive areas
- CI presence linked to higher rents in more expensive neighbourhoods that is explained by amenities/arts



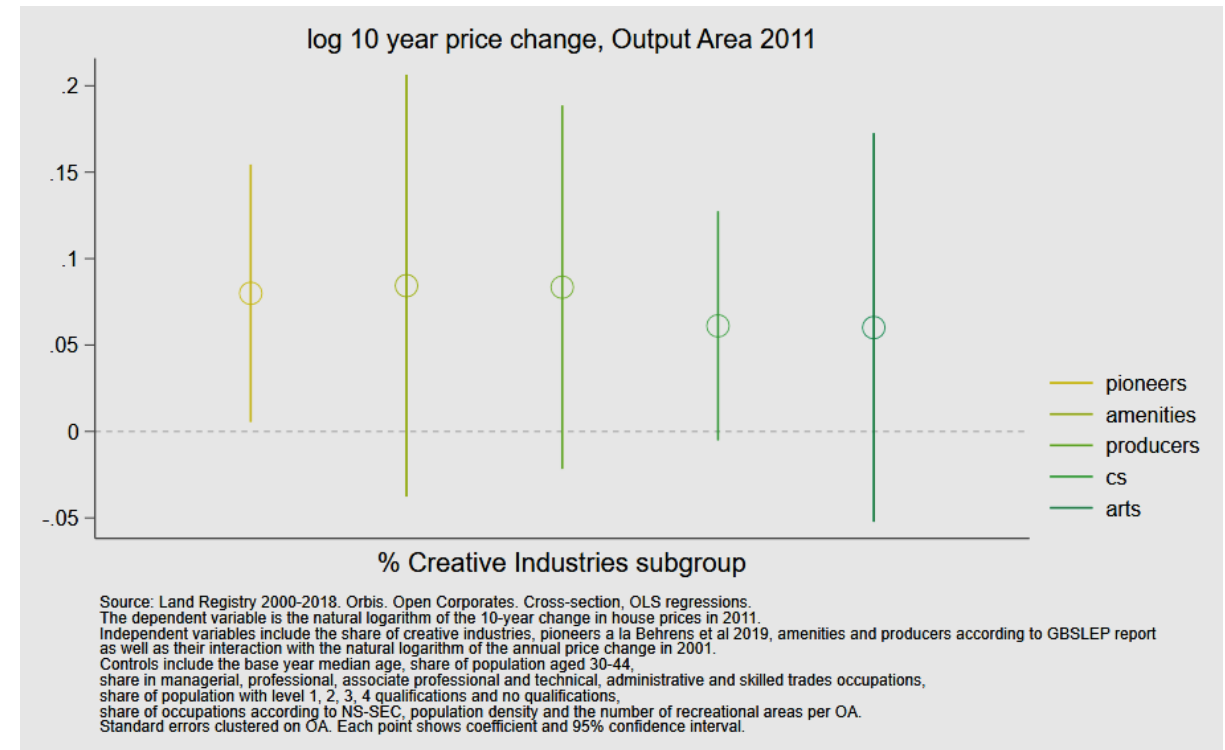
3) London & Birmingham

- $Y_{it-tn} = \alpha + bCl_{itn} + dX_{itn} + C_c + e_{ic} \quad (3)$
- $Y_{it-tn} = \alpha + bCl_{itn} + \gamma Cl_{itn} * P_{itn} + dX_{itn} + C_c + e_{ic} \quad (4)$
- Errors clustered on OAs and arbitrary spatial clustering (Colella et al., 2019)

	(1)	(2)	(3)	(4)
	OLS	ASC	OLS with interaction	ASC with interaction
ci	0.0637** (0.030)	0.0637** (0.030)	-0.289 (0.755)	-0.289 (0.751)
ci x ln_price			0.0288 (0.062)	0.0288 (0.062)
ln_price	0.178*** (0.028)	0.178*** (0.029)	0.175*** (0.029)	0.175*** (0.030)
N	14447	14447	14447	14447
F	92.319		87.644	
R ²	0.334	0.334	0.334	0.334

Source: Land Registry 2000-2018. Orbis. Open Corporates. Cross-section, OLS regressions. The dependent variable is the natural logarithm of the 10-year change in house prices in 2011.

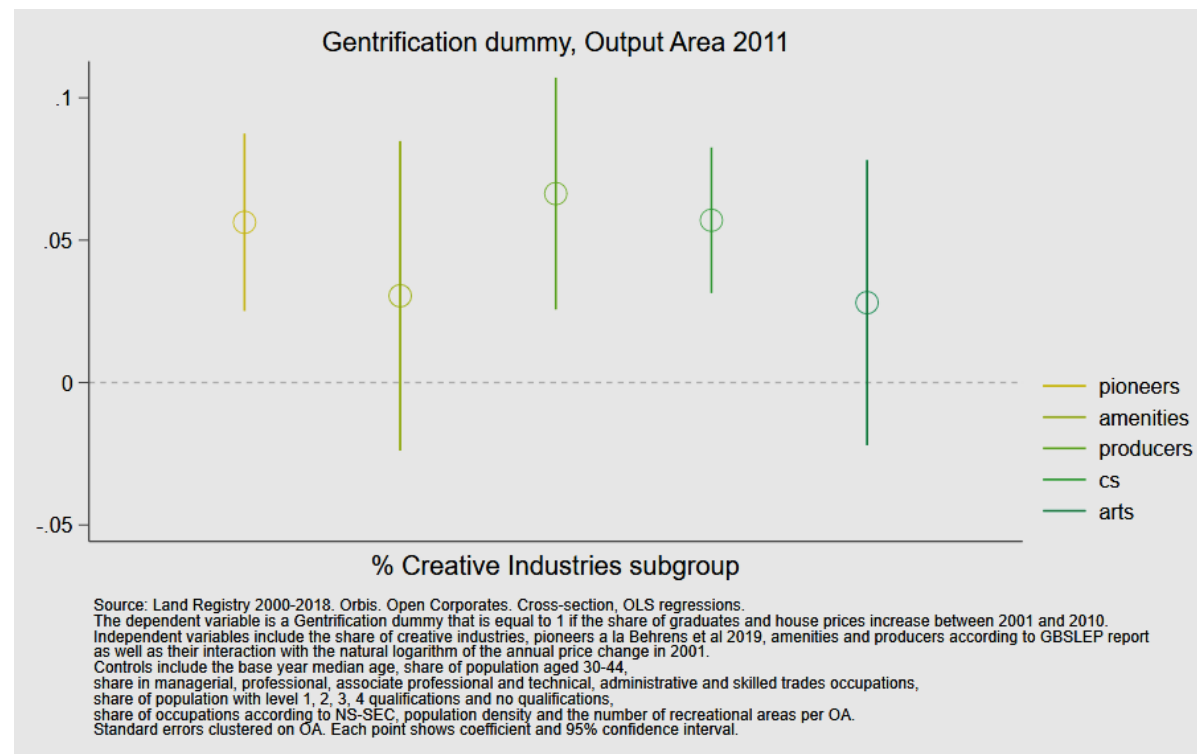
Independent variables include the share of creative industries, pioneers a la Behrens et al 2019, amenities and producers according to GBSLEP report as well as their interaction with the natural logarithm of the annual price change in 2001. Controls include the base year median age, share of population aged 30-44, share in managerial, professional, associate professional and technical, administrative and skilled trades occupations, share of population with level 1, 2, 3, 4 qualifications and no qualifications, share of occupations according to NS-SEC, population density and the number of recreational areas per OA. Standard errors clustered on OA.



3) London & Birmingham

- $Y_{it-tn} = \alpha + bCl_{itn} + dX_{itn} + C_c + e_{ic} \quad (3)$
- $Y_{it-tn} = \alpha + bCl_{itn} + \gamma Cl_{itn} * P_{itn} + dX_{itn} + C_c + e_{ic} \quad (4)$
- Errors clustered on OAs, arbitrary spatial clustering (Colella et al., 2019), probit

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	ASC	Probit	OLS with interactio n	ASC with interactio n	Probit with interaction
ci	0.0527*** (0.012)	0.0527*** (0.012)	0.202*** (0.052)	-0.471 (0.320)	-0.471 (0.327)	-1.245 (1.234)
ci x ln_price				0.0427 (0.026)	0.0427 (0.027)	0.118 (0.100)
ln_price	-0.0677*** (0.010)	-0.0677*** (0.011)	-0.235*** (0.036)	-0.0725*** (0.011)	-0.0725*** (0.011)	-0.248*** (0.037)
N	16860	16860	16856	16860	16860	16856
F	39.814			37.827		
R ²	0.100	0.100		0.100	0.100	



3) London & Birmingham

Overall

- +ve links between creative industries, house price changes
 - A 1% increase in share of CI -> 0.06% in house price increase over the next 10-year
 - An extra CI business -> 0.5-1.6% or £637 - £1,182 in house price change over the next 10-year
- Creative producers and services drive these links rather than amenities
- +ve links between creative industries and gentrification
 - A 1% increase in share of CI -> 0.0005 in probability to gentrify
 - An extra CI business -> 0.4-1.3% in probability to gentrify



Conclusions

Post industrial city & the links between CI, housing markets and gentrification?

- Robust +ve links between CI and subsequent change in time-consistent house prices
 - Small but significant effects on house price changes (£600-£1,200)
- Mostly explained by historically cheaper areas at the OA level (H1)
- +ve links between CI, house price changes and gentrification in London and Birmingham
 - Increased probability to gentrify by 0.4-1.6% per new CI business
- Creative producers & services drive these results (H3)
- Rental markets work differently. Most increases in richer areas (H2) and linked to amenities/arts rather than producers (H4)



Conclusions

Complex story:

- Creative industries linked to house price changes and gentrification via producers but not artists
- Rents are linked to artists and richer areas

Policy implications:

- Understanding nuances to better design and communicate impacts
- Combination of planning and housing market interventions to ensure supply of affordable residential and workplace spaces



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Next Steps

- Alternative gentrification proxies
- Disaggregate property types
- Harbingers of gentrification (per Behrens et al 2019, Grodach et al 2016)



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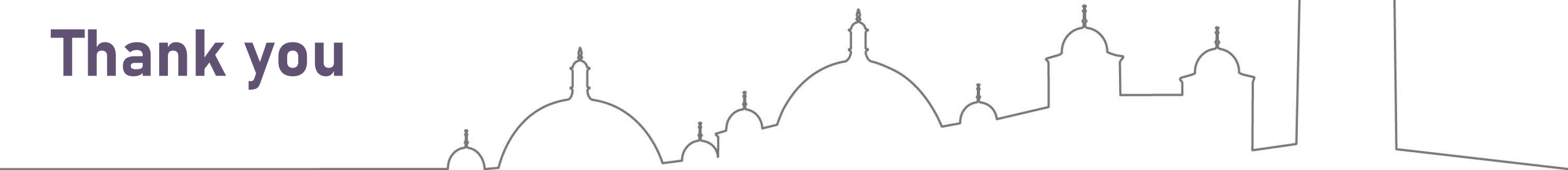
****WP coming out soon****

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Thank you



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Appendix

A note on terminology - Creative industries

[\[Back\]](#)

- advertising and marketing;
- architecture;
- crafts;
- design;
- film, TV, video, radio and photography;
- IT, software and computer services;
- publishing;
- museums, galleries and libraries;
- music, performing and visual arts.



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