Do cultural capital and social capital explain the social origin pay gap?

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Motivation

Well established that the family you are born into matters for:

- Educational attainment
  - Higher education disproportionately middle class
  - Individuals from working-class backgrounds significantly less likely to obtain the grades to get into university
- Occupational attainment
  - Class reproduction common, e.g. medicine, law etc.
  - Professional and creative occupations do not reflect population at large

Policy consensus: improve educational attainment of disadvantaged groups to solve occupational mobility and income inequality

Background: Unexplained social origin pay gap identified using several UK datasets

- Higher Education Statistics Agency (HESA) graduate follow up survey (Crawford and Vignoles, 2014)
- British Cohort Study 1970 (Crawford and van der Erve, 2015)
- Matched university and tax data (Britton et al, 2019)
- Labour Force Survey (Laurison and Friedman, 2016, 2019)

However, research on the class ceiling has controlled for educational attainment and a range of labour market observables, highlighting that strictly human capital factors do not fully explain individuals' earnings.

Limits of the 'class ceiling' literature

- Cultural capital
  - Sociologists identify an individual's cultural capital (Bourdieu, 1986) as various elements that both signal and reinforce social position such as accent, mannerisms, speech, linguistics, tastes etc.
  - Also correlated with cultural consumption, interests and knowledge. 'Highbrow' culture regraded as 'legitimate' in society.
- Social capital
  - Social capital theory argues that specific benefits derive from the extent, type and quality of relations among individuals (Bourdieu, 1993, Coleman, 1988), both collectively (e.g. Putnam 1993) and individually (Coleman 1988; Lin 1999).
  - Available evidence suggests social capital is positively associated with wages (e.g. Stone et al, 2004) and job quality (Franzen & Hangartner, 2006; Oesch & Ow, 2017).

Research Question

- To what extent do cultural capital and social capital explain the social origin pay gap?

Data

- Dataset
  - Understanding Society (USoc)
  - USoc is the largest UK household longitudinal survey that tracks approximately 100,000 individuals across 40,000 households on an annual basis to see how their economic, social, and personal circumstances changes over time.
- Sample
  - Waves 1-9 (data from 2009-2019)
- Sample restrictions:
  - Earning wage income
  - Aged 16-64
  - Reporting social origin (NS-SEC code of father and/or mother when respondent was aged 14)
  - Reporting on cultural capital and social capital proxies

Parental occupation as a proxy for social origin

- Rests on a theoretical argument from sociology that those who share similar occupational conditions share similar material and social conditions – can be identified as a social class.
- Competing approaches, but none as convenient to implement in surveys
- Uses the occupational status of previous generation to proxy social origin/class
  - Specifically, the 'higher' occupational status of the respondent's parents aged 14
- Weaknesses
  - Information required from a sequence of questions to derive variable
  - Occupational framework may not capture reality of respondents

The National Statistics Socio-economic classification (NS-SEC)

- NS-SEC 1: Higher managerial and professional occupations (e.g. lawyer, doctor, engineer)
- NS-SEC 2: Lower managerial and professional occupations (e.g teacher, nurse)
- NS-SEC 3: Intermediate (e.g. graphic designers, medical secretaries)
- NS-SEC 4: Small employers and own account (self-employed)
- NS-SEC 5: Lower supervisory and technical (e.g. bakers, electricians)
- NS-SEC 6: Semi-routine (e.g. farm workers, housekeepers)
- NS-SEC 7: Routine (e.g. cleaners, labourers)
- NS-SEC 8: Never worked and long-term unemployed

Final response rate in achieved sample for social origin

Table 1 - Social origin (NS-SEC 8 class)

'Higher' parental NS-SEC when respondent was 14	Freq.	Percentage	Cum.
NS-SEC 1: Higher managerial and professional occupations	20,530	12.16	12.16
NS-SEC 2: Lower managerial and professional occupations	29,216	17.30	29.46
NS-SEC 3: Intermediate	21,193	12.55	42.01
NS-SEC 4: Small employers and own account	18,202	10.78	52.78
NS-SEC 5: Lower supervisory and technical	12,384	7.33	60.12
NS-SEC 6: Semi-routine	20,764	12.30	72.41
NS-SEC 7: Routine	17,237	10.21	82.62
Undefined social origins	29,352	17.38	100
Total	168,878	100.00	

Observable characteristics

Table 2: Observable characteristics by social origin

	Professional origins (n=49,746)	Intermediate origins (n=39,395)	Routine origins (n=50,385)	Undefined origins (n=29,352)
Demographics				
Age	40.2	42.5	44.6	38.8
Sex - females	52.8%	52.1%	51.9%	59.9%
Education				
School leaving age	16.9	16.5	16.1	16.2
Degree holders	46.5%	27.6%	16.6%	13.6%
No qualifications	2.2%	6.4%	11.7%	15.4%
Labour market observables				
NS-SEC 1 job	21.1%	12.7%	9.9%	6.1%
NS-SEC 2 job	37.6%	31.1%	25.8%	21.5%
Gross monthly pay	£2,360	£1,977	£1,787	£1,479
Gross monthly pay by degree	£2,986	£2,673	£2,557	£2,624
Gross monthly pay in NS-SEC 1	£3,848	£3,427	£3,264	£3,484
Gross monthly pay in NS-SEC 2	£2,613	£2,448	£2,279	£2,380
Paid by salary	73.7%	65.2%	55.7%	46.9%
Managerial duties	29.9%	21.9%	18.8%	12.6%
Firm size more than 500	16.4%	13%	10.6%	7.5%

Cultural engagement

- Attended a classical music performance
- Ballet
- Been a member of a book club
- Contemporary dance
- Dance, including ballet
- Event connected with books or writing
- Opera/operetta
- Painting, drawing, printmaking or sculpture
- Photography, film or video making as an artistic activity
- Played a musical instrument
- Read for pleasure (not newspapers, magazines or comics)
- Rock, pop or jazz performance
- Textile crafts, wood crafts or any other crafts e.g. embroidery
- Used a computer to create original artworks or animation
- Used a public library service
- Visited a museum or gallery
- Written any stories, plays or poetry
- Written music

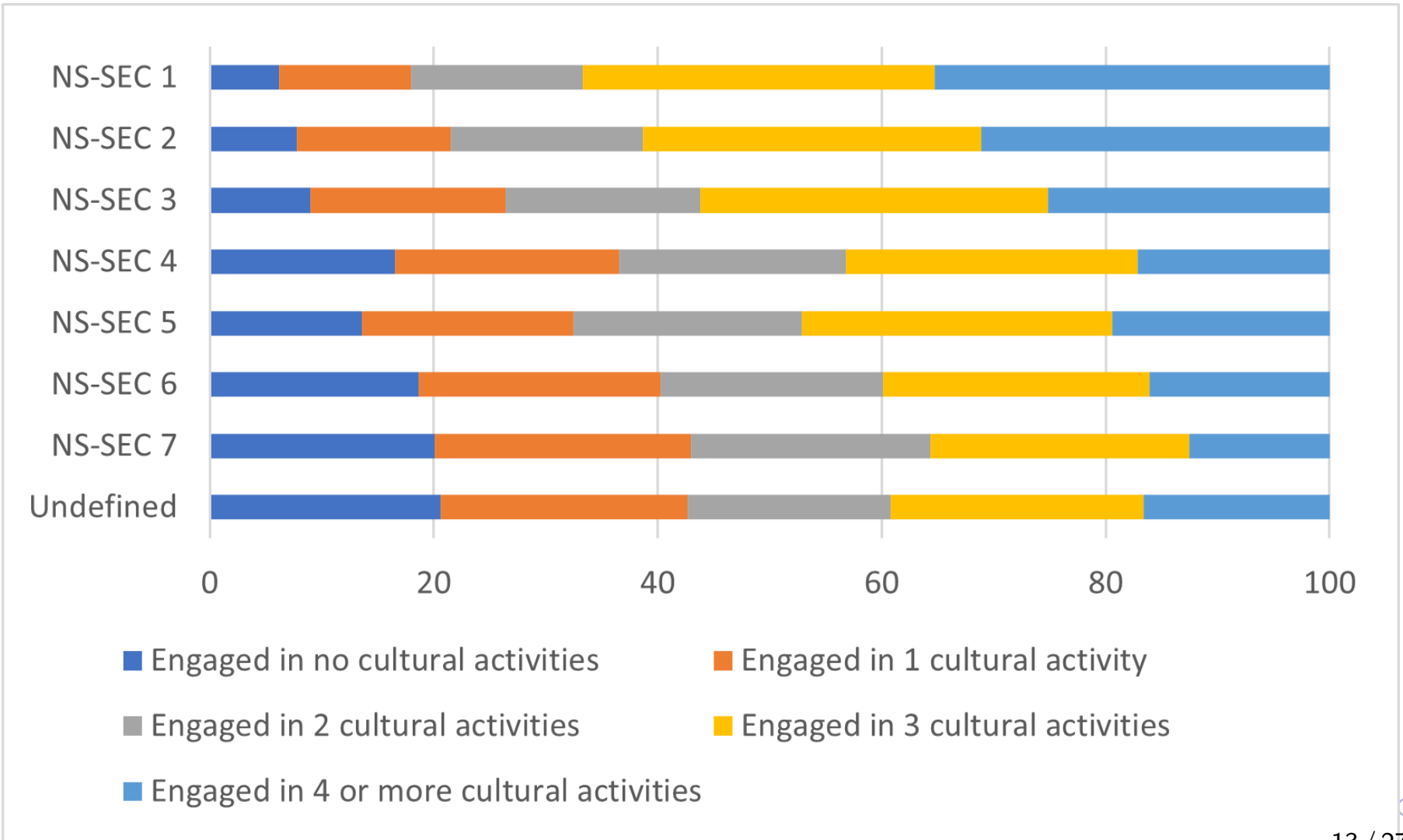
Social origin and cultural capital

Table 3: Highbrow cultural engagement by social origin

Cultural capital - activity mentioned (%)	NS-SEC 1	NS-SEC 2	NS-SEC 3	NS-SEC 4	NS-SEC 5	NS-SEC 6	NS-SEC 7	Undefined
Used a public library	39.20	37.56	31.64	31.31	29.98	28.29	28.30	29.77
Museum library archive	5.31	5.23	3.33	2.97	3.10	2.65	2.65	3.24
Visited museum or gallery	59.02	53.27	46.83	38.68	40.70	34.40	30.96	34.50
Dance including ballet	10.39	11.14	11.04	9.43	10.63	8.63	8.22	7.67
Sang to an audience	8.54	7.61	5.93	4.54	4.60	4.60	3.17	4.44
Played musical instrument	19.27	15.97	11.17	8.33	8.75	7.30	6.54	8.12
Written music	3.46	3.49	2.10	1.88	1.62	1.37	0.94	2.02
Performed drama theatre	3.13	3.45	2.14	1.68	1.76	1.77	1.05	2.08
Painting drawing sculpture	17.34	17.19	15.63	12.88	11.80	12.95	10.46	12.75
Photography film video	18.96	18.20	15.72	11.61	12.02	11.78	9.18	11.22
Computer artworks	10.90	10.46	9.39	6.97	7.48	6.77	5.58	7.25
Textile crafts	22.96	22.54	21.20	18.56	19.90	18.14	17.18	15.63
Read for pleasure	80.01	75.53	74.49	62.22	66.26	61.53	59.04	58.50
Written stories plays poet	7.24	7.66	5.66	4.13	4.15	4.48	3.06	4.25
Member book club	4.82	4.40	3.27	1.82	2.85	1.54	1.61	2.07
Event book writing	10.31	10.01	7.55	5.51	5.46	4.46	3.55	5.10
Opera	7.14	4.66	4.20	3.33	3.15	1.76	1.98	2.88
Classical music performance	15.70	11.08	9.59	6.76	6.23	3.95	4.74	6.02
Rock pop jazz performance	36.08	35.02	34.43	25.41	28.85	22.75	20.86	22.55
Ballet	7.22	5.10	4.93	2.73	3.71	2.76	2.02	2.26
Contemporary dance	6.07	4.61	4.09	3.21	3.10	2.45	2.97	2.90

Total cultural engagement

Figure 1: Levels of cultural engagement by social origin



Social origin and cultural capital

Table 4: Highbrow cultural engagement by social origin

Cultural capital - activity mentioned (%)	NS-SEC 1	NS-SEC 2	NS-SEC 3	NS-SEC 4	NS-SEC 5	NS-SEC 6	NS-SEC 7	Undefined
Attended classical music performance	15.70	11.08	9.59	6.76	6.23	3.95	4.74	6.02
Ballet	7.22	5.10	4.93	2.73	3.71	2.76	2.02	2.26
Contemporary dance	6.07	4.61	4.09	3.21	3.10	2.45	2.97	2.90
Member of a book club	4.82	4.40	3.27	1.82	2.85	1.54	1.61	2.07
Opera	7.14	4.66	4.20	3.33	3.15	1.76	1.98	2.88
Performed drama theatre	3.13	3.45	2.14	1.68	1.76	1.77	1.05	2.08
Visited a museum or gallery	59.02	53.27	46.83	38.68	40.70	34.40	30.96	34.50

Social origin and social capital

- How respondents first met their best friends
  - He/she is a relative, Through my family, At work, In the neighbourhood, At school, At college or university, Through friends, Through my religious community, At a pub or club, Through the internet, While travelling or on holiday, Through an organisation or activity or Elsewhere
- Employment status of respondents' best friends
  - Full-time employment, Part-time employment, Unemployed, Full-time education/ Full-time housework, Fully retired
- Proportion of friends with similar education, employment and income
  - All of them, More than half, About half or Less than half

Social origin and social capital 1

Table 5: How respondents first met their best friends

How respondents first met their friends	NS-SEC 1	NS-SEC 2	NS-SEC 3	NS-SEC 4	NS-SEC 5	NS-SEC 6	NS-SEC 7	Undefined
Best friend no 1: In the neighbourhood	7.12	9.98	7.94	12.15	10.04	10.26	12.34	12.86
Best friend no 2: In the neighbourhood	5.25	8.79	7.35	7.36	7.77	10.22	7.69	9.91
Best friend no 3: In the neighbourhood	8.67	6.69	8.12	8.57	7.72	6.20	5.22	9.67
Best friend no 1: At school	20.31	20.05	22.66	22.23	19.51	20.40	21.48	28.22
Best friend no 2: At school	14.35	16.65	14.06	18.93	19.33	16.59	14.85	20.90
Best friend no 3: At school	16.05	17.91	12.83	18.41	16.07	16.30	15.16	21.99
Best friend no 1: College or University	15.86	11.72	10.07	8.54	6.53	7.65	9.10	9.68
Best friend no 2: College or University	16.13	14.59	9.94	8.40	8.12	8.02	8.54	11.49
Best friend no 3: College or University	8.82	13.19	8.40	8.12	6.69	6.88	5.44	10.49
Best friend no 1: Via an organisation	5.87	4.74	4.32	3.43	2.61	2.66	2.19	2.74
Best friend no 2: Via an organisation	4.99	4.05	5.32	4.59	3.00	3.49	2.51	2.40
Best friend no 3: Via an organisation	9.16	4.51	3.23	3.05	4.12	2.81	2.28	2.69

Social origin and social capital 2

Table 6: Employment status of respondents best friends

Employment of respondent's best friends	NS-SEC 1	NS-SEC 2	NS-SEC 3	NS-SEC 4	NS-SEC 5	NS-SEC 6	NS-SEC 7	Undefined
Best friend no 1: Full-time employment	64.44	62.12	61.13	58.09	58.68	56.33	56.51	54.83
Best friend no 1: Unemployed	3.74	4.87	4.10	5.80	6.18	6.96	8.63	9.44
Best friend no 2: Full-time employment	63.55	62.58	61.54	59.12	59.11	58.35	57.79	54.72
Best friend no 2: Unemployed	4.17	4.44	4.32	5.41	5.82	6.75	8.14	8.96
Best friend no 3: Full-time employment	64.50	62.56	60.99	58.05	58.62	56.32	57.41	54.60
Best friend no 3: Unemployed	3.59	4.69	3.94	5.79	6.37	7.28	8.28	9.31

Social origin and social capital 3

Table 7: Proportion of friends with similar education and income

Proportion of respondents' friends with similar	NS-SEC 1	NS-SEC 2	NS-SEC 3	NS-SEC 4	NS-SEC 5	NS-SEC 6	NS-SEC 7	Undefined
Education - All similar	28.66	29.52	33.43	35.34	39.23	38.42	38.53	36.27
Education - More than half	43.52	40.44	36.67	32.87	31.5	29.95	30.44	33.25
Income - All similar	11.92	11.63	12.81	15.30	17.64	16.36	17.27	15.37
Income - More than half	34.45	33.98	33.08	31.36	28.35	29.04	29.84	30.44

Random effects model

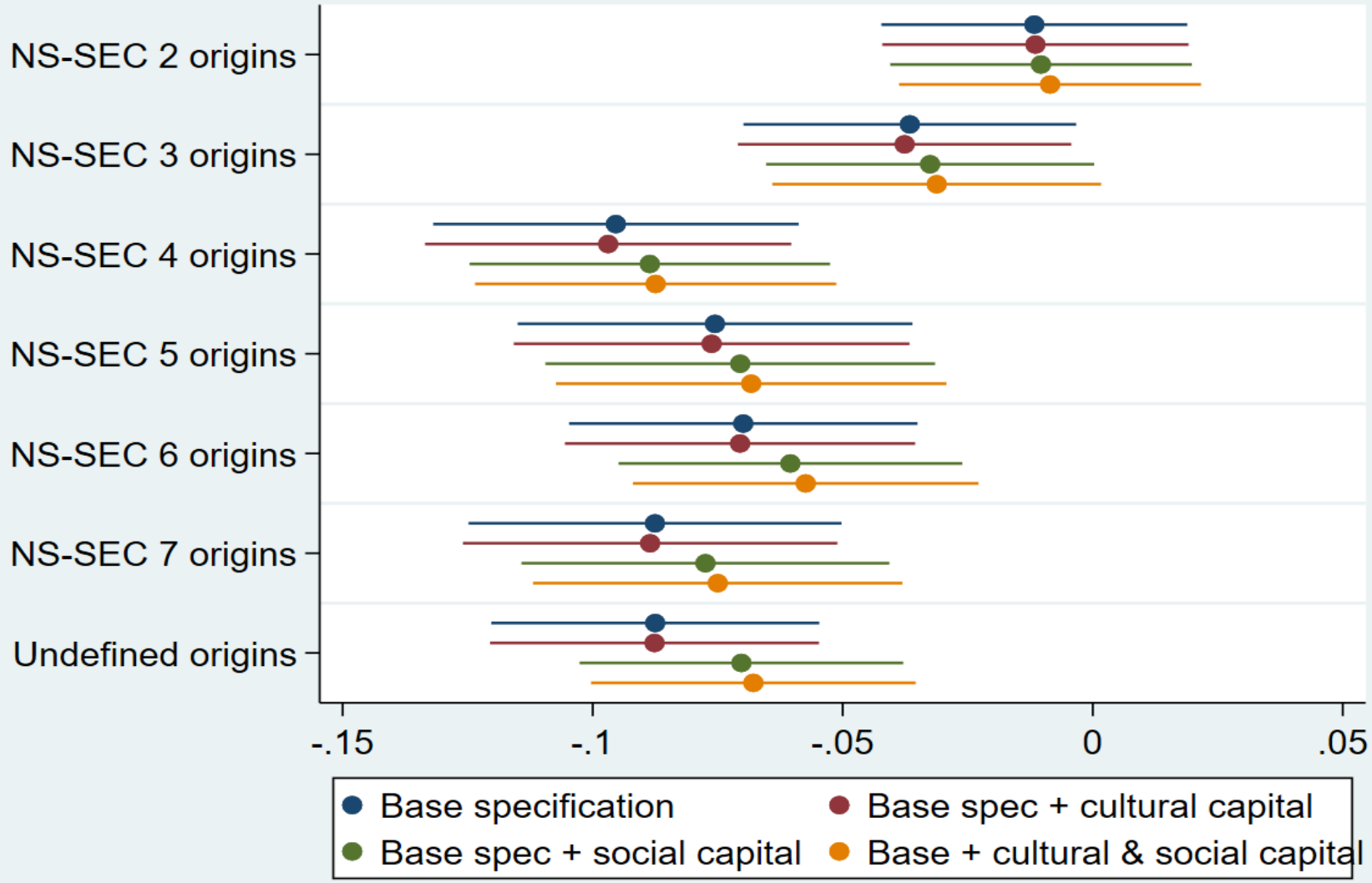
Wage equation:

$$\ln(w) = \alpha + \beta_i S_{jt} + \gamma_1 X + \gamma_2 X2_{jt} + \delta_j Ck + \epsilon$$

- ***ln(w)***: gross monthly pay
- ***S***: Social origin dummies
- ***X***: Age
- ***Ck***: Controls
  - Model 1: **base specification** controlling for a) demographics, b) highest education qualification and c) labour market observables (work sector, permanent job, firm size, managerial duties and occupational status)
  - Model 2: Model 1 + cultural capital variables only
  - Model 3: Model 1 + social capital variables only
  - Model 4: Model 1 + cultural & social capital variables

Results

Figure 2: Longitudinal wage equations



Results

Table: **8:** Longitudinal wage equations (2009-2019)

	Model 1	+ Cultural capital	+ Social capital	+ Culutal & Social
NS-SEC 2 origins	-.012	-.011	-.010	-.009
	(.0156)	(.0156)	(.0154)	(.0154)
NS-SEC 3 origins	-.037**	-.038***	-.033*	-.031*
	(.0170)	(.0170)	(.0167)	(.0167)
NS-SEC 4 origins	-.095***	-.097***	-.089***	-.087***
	(.0186)	(.0187)	(.0184)	(.0184)
NS-SEC 5 origins	-.076***	-.076***	-.070***	-.068***
	(.0201)	(.0202)	(.0199)	(.0199)
NS-SEC 6 origins	-.070***	-.071***	-.060***	-.057***
	(.0178)	(.0178)	(.0175)	(.0176)
NS-SEC 7 origins	-.088***	-.089***	-.077***	-.075***
	(.0190)	(.0191)	(.0188)	(.0188)
Undefined origins	-.087***	-.088***	-.070***	-.068***
	(.0167)	(.0168)	(.0165)	(.0166)
Observations	82,493	82,493	82,493	82,493
No of individuals	13,326	13,326	13,326	13,326
R-squared	0.4513	0.4521	0.4637	0.4642

Results

Table 9: Longitudinal wage equations

VARIABLES	(1) log(Gross monthly wage)	(2) log(Gross monthly wage)	(3) log(Gross monthly wage)	(4) log(Gross monthly wage)
NS-SEC 2 origins	-0.012	-0.011	-0.010	-0.009
NS-SEC 3 origins	-0.037**	-0.038**	-0.033*	-0.031*
NS-SEC 4 origins	-0.095***	-0.097***	-0.089***	-0.087***
NS-SEC 5 origins	-0.076***	-0.076***	-0.070***	-0.068***
NS-SEC 6 origins	-0.070***	-0.071***	-0.060***	-0.057***
NS-SEC 7 origins	-0.088***	-0.089***	-0.077***	-0.075***
Undefined origins	-0.087***	-0.088***	-0.070***	-0.068***
Attended classical music performance		-0.009		0.017
Visited a museum or gallery		0.015		0.016*
Performed drama theatre		-0.100***		-0.085***
Member of a book club		-0.049*		-0.033
Opera		-0.003		0.018
Ballet		0.002		0.011
Contemporary dance		0.012		-0.002
Employment status of best friend 1 (1= employed, 0=otherwise)			0.071**	0.071**
Employment status of best friend 2 (1= employed, 0=otherwise)			0.106***	0.106***
Employment status of best friend 3 (1= employed, 0=otherwise)			0.053*	0.053*
Prop of friends similar income - All similar			-0.011	-0.011
Prop of friends similar income - More than half			0.012	0.013
Prop of friends similar income - About half			0.017	0.017
Prop of friends similar income - Less than half (ref category)				
Prop of friends similar education - All similar			0.019	0.019
Prop of friends similar education - More than half			0.032*	0.030*
Prop of friends similar education - About half			-0.003	-0.003
Prop of friends similar education - Less than half (ref category)				
Prop of friends who have a job - All of them			0.235***	0.237***
Prop of friends who have a job - More than half			0.152***	0.154***
Prop of friends who have a job - About half			0.056***	0.058***
Prop of friends who have a job - Less than half (ref category)				

Results

Table 10: Longitudinal wage equations

Attended classical music performance	-0.009		0.017
Visited a museum or gallery	0.015		0.016*
Performed drama theatre	-0.100***		-0.085***
Member of a book club	-0.049*		-0.033
Opera	-0.003		0.018
Ballet	0.002		0.011
Contemporary dance	0.012		-0.002
Employment status of best friend 1 (1= employed, 0=otherwise)		0.071**	0.071**
Employment status of best friend 2 (1= employed, 0=otherwise)		0.106***	0.106***
Employment status of best friend 3 (1= employed, 0=otherwise)		0.053*	0.053*
Prop of friends similar income - All similar		-0.011	-0.011
Prop of friends similar income - More than half		0.012	0.013
Prop of friends similar income - About half		0.017	0.017
Prop of friends similar income - Less than half (ref category)			
Prop of friends similar education - All similar		0.019	0.019
Prop of friends similar education - More than half		0.032*	0.030*
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Prop of friends who have a job - All of them		0.235***	0.237***
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Prop of friends who have a job - About half		0.056***	0.058***
Prop of friends who have a job - Less than half (ref category)			

Discussion

- We find that the social origin pay gap marginally increases once we control for cultural engagement but decreases when controlling for social capital. This suggests that part of the class wage disadvantage is likely to represent the impact of unequal access to social capital.
- When we consider both forms of capital together, we observe that the pay gaps are further reduced compared to when only controlling for social capital. This indicates that accounting for both forms of capital explains the pay gap more than just controlling for social capital.
- This may suggest, in line with previous literature (Edelmann and Vaisey, 2014; Lizardo, 2006; Pachucki and Breiger, 2010; Reeves and de Vires, 2019), that these forms of capital complement each other and the consideration of both may play a role in explaining the social origin pay gap.

Limitations

- The effects of cultural capital on wages are difficult to disentangle due to their high correlation with educational attainment; those who are more highly educated are generally more likely to participate in 'highbrow' cultural activities.
- USoc only asks if respondents have engaged in the activity in the past 12 months and thus only provides a binary response i.e., mentioned or not mentioned; thus it does not measure the volume or frequency of their engagement.
- Some cultural activities are contingent on income (e.g., attending the opera).
- Social capital variables are insightful but information on friends education levels/qualifications and occupational status would provide us with a better understanding of the effects of social capital.

Conclusions

- We find those from upper-class backgrounds are significantly more likely to engage in highbrow cultural activities and have more advantageous social networks.
- We observe significant pay gaps for all social origin groups, except for those from NS-SEC 2 origins, after controlling for respondents' demographics, education and labour market observables.
- We find that the social origin pay gap marginally increases after controlling for cultural capital but decreases when controlling for social capital.
- When we consider both forms of capital, we observe the pay gaps are further reduced compared to when only controlling for social capital. This suggests that both forms of capital complement each other and consideration of both may play a role in explaining the social origin pay gap.

Thank you for listening.
Any feedback would be greatly appreciated.