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JOB SATISFACTION AMONGST ACADEMIC ECONOMISTS IN THE UK.

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We explore and explain the determinants of job satisfaction for academic Economists in the UK using rich new data measuring individual (demographic, productivity and job related) and workplace characteristics. We find the majority, male and female, are satisfied with their job and that workplace characteristics are the most important determinants of that satisfaction, especially working in a co-operative and gender inclusive environment.

JEL A1, A11, A2, I3, J01, J31, J7

Key words: economics; gender; pay; satisfaction; gaps; academia.

1. Introduction

Job satisfaction has long been recognised as important, but under explained (Freeman, 1978). Within the complex university sector, it is essential to consider workplace and worker characteristics when seeking to explain the job satisfaction of academics (Bentley *et al.,* 2012). For example, UK academics working in institutions where research is prioritized may feel overwhelmed trying to maintain research output whilst adapting to sector-wide increasing teaching quality and external policy-related impact demands. Academics will vary in those characteristics associated with their capacity to reach departmental aspirations and performance requirements. Own-wage could potentially compensate academics and influence their reported job satisfaction. Furthermore, an employee who values their own relative utility may be dissatisfied if their wage is lower than co-workers; alternatively, higher co-worker wage may be seen as a signal of future own-wage growth (Card *et al.,* 2012).

Gender may also be important, early studies reveal women reporting higher levels of job satisfaction (Clark, 1997). This may no longer be the case if women are now forming similar workplace expectations to men (Green *et al.,* 2018). Recent studies also highlight a range of gender inequities in the Economics discipline (Lundberg and Stearns, 2018; Mumford and Sechel, 2019) that might reasonably alienate females and lower their job satisfaction (Ceci *et al*., 2014).

We believe this is the first study to provide a detailed explanation of job satisfaction for academic Economists; enabling a greater focus on the determinants of job satisfaction than previously possible for this group of employees, enriching the understanding of their job satisfaction, and broadening the literature in this field.

2. Data

We employ a rich source of new data generated by the authors from surveying individual academic Economists in the UK in 2016. These data are combined with institutional information collected from the Royal Economic Society Women's Committee (RESWC) surveys.[1] In total, there were 668 responses, however, many had little or no information and may have been accessed to simply look at the questionnaire rather than to participate in the survey. Respondents were reticent to reveal job satisfaction in combination with wages; 443

[1] Further information regarding the data is available in the Online Appendix.

respondents reported levels of job satisfaction but only 308 of these also provided wage information. The RESWC (Tenreyro, 2017) suggests there were 2077 workers across the entire UK academic economics workforce in 2016. This would imply a total response rate for our survey of 32.7% (668/2077), with a response rate of 21.3% (443/2077) for job satisfaction and 14.8% (308/2077) for those who also provided wage information.[2]

The job satisfaction question asked was; "Overall how satisfied are you with your job these days?" The Likert scale of potential answers ranges from 1 (completely unsatisfied) to 10 (completely satisfied). Table 1 presents variable definitions and summary statistics. The majority of UK academic Economists, male (67%) and female (62%), are satisfied with their job, these figures are low compared to those reported for US academics (Card *et al.,* 2014) but the gender difference is comparable (Ceci *et al.,* 2014). There is also a notable gender wage difference; men earn 16% more than women at the mean.

[TABLE 1]

Of the individual productivity measures, roughly one-in-three academics have been awarded more than £100,000 in research grants in the previous 5 years, and one-in-five consider themselves excellent teachers. Males are more likely to report a higher average REF (Research Excellence Framework)[3] style publication score for their career best three publications. Females are more likely to have a first class undergraduate degree

Among the workplace characteristics, a similar proportion of both genders work in a top quartile 2014 REF ranked department and/or in the "old" pre-1992 universities. Women are more likely to work with other women (i.e. in a more feminised workplace) than are men, and to believe their workplace is competitive.

3. Methodology and estimation.

The job satisfaction S of worker i in institution k (S_{ik}) is modelled as:

$$S_{ik} = \alpha + X_{ik}\beta + \varepsilon_{ik} \quad (1)$$

where X_{ik} is a vector of observable individual and institutional characteristics.

[2] Further discussion of responses and potential bias is provided in the Online Appendix.
[3] REF is an ongoing exercise judging the research quality of HEIs in the UK (https://www.ref.ac.uk).

We use OLS regressions to estimate $S_{ik.}$ (Ferrer-i-Carbonell and Frijters, 2004). The estimation results are presented in Table 2. The overall model fit is comparable to similar studies (Green *et al.,* 2018) but is not high in absolute terms.

[TABLE 2]

4. Estimation results and discussion.

Column 1 of Table 2 presents findings for the pooled sample including measures of the academic's own wage (W_{ik}) and their relative wage ($W_{ik} - \overline{W_i}$), where $\overline{W_i}$ is the average wage of his/her reference group set at the mean wage in either the old or new universities. Job satisfaction is found to be positively related to own wage and negatively related to co-worker wage; consistent with the relative utility model. These results are, however, not statistically significant perhaps due to the low sample size. Removing wages from the analysis allows for a larger sample in the estimation (see column 2). We address the possibility of correlation between institution and workplace characteristics by including institutional fixed effects in the estimation reported in column 3; we consider this to be our benchmark model. Table 2 also includes results for the estimation of the benchmark model for males (column 4) and females (column 5), separately.

Our most consistent results occur with the workplace characteristics. Job satisfaction is significantly related to working with proportionately more women (negative); working in London (positive); or working in a co-operative environment (positive). The latter relationship is particularly substantial. Never having had a mentor is negatively related to job satisfaction for these academics. Having a network available for professional advice is positively associated with satisfaction for women, but not for men. Notably, we do not find significant relationships between the higher research ranked, or older universities, and job satisfaction.

We find few substantial, statistically significant, relationships between the individual characteristics (either productivity or job-related) and job satisfaction. Of the productivity measures, men with higher quality publications report more job satisfaction; this relationship is neither sizable nor statistically significant for women. Unsurprisingly, amongst the job-related characteristics, being rejected for promotion is negatively related to job satisfaction, this is particularly so for women. Whereas, working part-time is strongly and significantly

associated with job-satisfaction (positive) for men but not women. Finally, the demographic variables do not add to the overall explanation of job satisfaction.[4]

Academia is essentially a collegial role, so the strong relationship between a cooperative environment and job satisfaction is understandable. Having proportionately more women in the workplace, however, lowers job satisfaction. Women appear not to be integrating as well with their colleagues, decreasing satisfaction across the workforce. For women, never having had a mentor may also indicate a lack of support and guidance into the nuances of their work environment, reinforcing their difficulties integrating. Those women with a workplace network providing professional advice report considerably higher job satisfaction. Actions to improve mentoring and inclusion for women would therefore increase job satisfaction for both genders.

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Conflicts of interest to declare – none.

References

Bentley, P., Coates, H., Dobson, I., Goedegeburre, L., Meek, V.L. (2012). *Job Satisfaction Around the World.* (Springer Science).

Card, D., Mas, A., Moretti, E. and Saez, E. (2012). 'Inequality at work: The effect of peer salaries on job satisfaction', *Amer.Econ.Rev„* vol. 102(6), pp. 2981-3003.

Ceci, S., Ginther, D., Kahn, S., Williams, W. (2014). 'Women in academic science: A changing landscape', *Psych.Sci.Pub.Inter.*, vol. 15(3), 75-141.

Clark, A.E. (1997). 'Job satisfaction and gender: Why are women so happy at work?', *Lab.Eco.*, vol. 4, pp. 341-372.

Ferrer-i-Carbonell, A., Frijters, P., (2004), 'How important in methodology for the estimates of the determinants of happiness', *Eco.Jour.,* vol. 114, pp. 641-659.

Freeman, R. (1978). 'Job satisfaction as an economic variable', *Amer.Econ.Rev.*, vol. 68(2), pp. 135-141

Green, C., Heywood, J., Kier, P., Leeves, G. (2018). 'Paradox lost: The disappearing female job satisfaction premium', *Brit.Jour.Indus.Relat.,* 56(3), pp. 484-502.

Lundberg, S., Stearns, J. (2018). 'Women in Economics: Stalled progress', *IZA DP* 11974.

Mumford, K., Sechel, C. (2019). 'Pay and job rank among academic Economists in the UK', *Brit.Jour.Indus.Relat.,* forthcoming. doi:10.1111/bjir.12468.

[4] They are not jointly significant in any of the models considered.

Table 1. Variable definitions and summary statistics.

	Means			Definitions
	Pooled sample	Males	Females	
job satisfaction	6.11	6.13	6.07	Overall, how satisfied are you with your job these days: 1 – completely dissatisfied; 2; 3; 4; 5; 6; 7; 8; 9; or 10 – completely satisfied.
satisfied	0.65	0.67	0.62	Satisfied is answered 6 or above to job satisfaction.
Demographics				
male	0.57			
non-white	0.14	0.13	0.16	Ethnic group not white (Mixed/Multiple; Asian/Asian British; Black/African/Caribbean/Black British; or Other).
married	0.74	**0.79**	**0.66**	Married or cohabitating together.
children	0.54	**0.58**	**0.48**	
age	46	**47**	**43**	
Individual measures				
first class UG degree	0.70	**0.63**	**0.78**	
publication score	2.58	**2.75**	**2.35**	Average REF type ranking (range: 1-4) of three best career outputs.
research income > 100K	0.30	0.28	0.33	Awarded more than £100 k of external research funding over the last five years.
excellent teaching score	0.20	0.22	0.19	Teaching ranked as outstanding (self-ranked from: 1 - weak; 2; 3; 4; 5 - outstanding).
external appointment	0.55	0.56	0.54	Current post appointed from outside the current place of employment.
career break	0.54	0.54	0.53	Years in labour market > years in academic labour market.

Table 1. *Continued*

part-time	0.10	0.08	0.11	Current post is on a part-time basis.
rejected promotion in last 10 years	0.21	0.22	0.19	Was ever rejected for promotion in the last 10 years.
Professor	0.36	**0.42**	**0.28**	
Workplace characteristics				
REF GPA 4th quartile	0.36	0.34	0.39	Departmental REF2014 score in highest quartile.
old university	0.86	0.84	0.88	Awarded university charter prior to the movement of former Polytechnic and Central Institutions into the UK university sector in 1992.
% staff female	26.77	**25.34**	**28.65**	Percentage of females in the department workforce.
professional networks available	0.68	0.70	0.65	Workplace provides networks that can be used for advice concerning professional advancement.
no mentor	0.24	0.25	0.22	Never had an effective mentor for work related advice.
competitive	0.49	**0.43**	**0.58**	Workplace is competitive (self-identified as 4 or 5 from: 1 - not at all competitive; 2; 3; 4; 5 - extremely competitive).
cooperative	0.48	0.49	0.46	Workplace is cooperative (self-identified as 4 or 5 from: 1 - not at all cooperative; 2; 3; 4; 5 - extremely cooperative).
Region				
institution in England (excl. London)	0.63	0.65	0.61	
London	0.18	0.16	0.20	
Scotland	0.15	0.15	0.15	
Wales/N. Ireland	0.05	0.05	0.04	
Observations	437	248	189	
wage	67503	**71686**	**61916**	Current annual gross salary (full time equivalent)
Observations	306	175	131	

Mean pairs difference: bold p<0.05.

Table 2. OLS coefficients of job satisfaction.

	OLS		OLS with institutional FE		
	(1)	(2)	(3)	(4)	(5)
Dependent variable: job satisfaction	reduced pooled	full pooled	full pooled	full males	full females
ln(salary)	1.299				
	(1.318)				
relative salary (÷ 1000)	-0.008				
	(0.012)				
Workplace characteristics					
REF GPA 4th quartile	-0.259	-0.134			
	(0.292)	(0.208)			
old university	-0.302	0.363			
	(0.545)	(0.339)			
% staff female	-0.052***	-0.036**			
	(0.015)	(0.015)			
professional networks available	0.197	0.428**	0.322	**0.070**	**0.817***
	(0.261)	(0.196)	(0.224)	(0.315)	(0.450)
no mentor	-0.654**	-0.543***	-0.670***	-0.689*	-0.645*
	(0.292)	(0.201)	(0.222)	(0.359)	(0.349)
competitive	-0.020	-0.023	-0.086	-0.267	0.002
	(0.221)	(0.185)	(0.209)	(0.344)	(0.432)
cooperative	1.538***	1.501***	1.555***	1.583***	1.697***
	(0.218)	(0.173)	(0.191)	(0.340)	(0.385)
Region, omitted England excl. London					
London	1.010***	0.897***			
	(0.358)	(0.235)			
Scotland	0.083	-0.013			
	(0.267)	(0.267)			
Wales/N. Ireland	-0.907*	-1.033**			
	(0.531)	(0.458)			
Individual					
Productivity related					
first class degree	0.302	0.179	0.345	0.283	0.066
	(0.244)	(0.217)	(0.232)	(0.341)	(0.408)
publication score	0.061	0.064	0.129	***0.330****	***0.008***
	(0.097)	(0.070)	(0.080)	(0.153)	(0.131)
research income > 100	0.053	0.070	0.067	0.128	-0.151
	(0.267)	(0.215)	(0.269)	(0.327)	(0.633)
excellent teaching score	0.222	0.224	0.257	**-0.097**	**0.653**
	(0.214)	(0.155)	(0.186)	(0.266)	(0.445)

Table 2. *Continued*

	OLS		OLS with institutional FE		
	(1) reduced pooled	(2) full pooled	(3) full pooled	(4) full males	(5) full females
Job related					
part-time	0.672*	0.558	0.611*	**1.203****	**0.110**
	(0.372)	(0.339)	(0.332)	(0.502)	(0.531)
career break	-0.244	-0.303*	-0.191	-0.420	-0.003
	(0.208)	(0.173)	(0.192)	(0.318)	(0.448)
external appointment	-0.085	0.106	0.300	0.135	0.290
	(0.215)	(0.198)	(0.250)	(0.378)	(0.411)
rejected promotion in last 10 years	-0.609**	-0.621**	-0.680**	**-0.398**	**-1.599****
	(0.272)	(0.245)	(0.304)	(0.375)	(0.615)
Professor	-0.167	0.354	0.252	-0.086	0.357
	(0.374)	(0.238)	(0.285)	(0.439)	(0.725)
Demographic					
male	0.047	-0.072	-0.043		
	(0.227)	(0.178)	(0.187)		
non-white	0.017	0.212	0.210	0.299	0.334
	(0.293)	(0.252)	(0.280)	(0.428)	(0.666)
married	-0.168	-0.227	-0.220	-0.392	-0.149
	(0.267)	(0.215)	(0.224)	(0.390)	(0.400)
children	-0.258	-0.206	-0.326	-0.113	-0.615
	(0.244)	(0.199)	(0.228)	(0.310)	(0.407)
age	-0.066	-0.059	0.003	0.004	0.085
	(0.089)	(0.066)	(0.077)	(0.111)	(0.173)
age^2	0.001	0.001	0.000	0.000	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
Constant	-5.624	6.932***	4.657***	4.785*	3.001
	(13.424)	(1.573)	(1.687)	(2.652)	(3.880)
Observations	306	437	437	248	189
Adjusted R-squared	0.267	0.275	0.340	0.301	0.374

* p<0.10, ** p<0.05, *** p<0.01. Standard errors in parenthesis (clustered at institution level). Coefficient pairs in italics are significantly different from each other at the 90% confidence level; in italics and bold at 95%.

ONLINE APPENDIX – JOB SATISFACTION AMONGST ACADEMIC ECONOMISTS IN THE UK.

intended for online publication only.

Survey and data.

The authors gathered information from an online survey emailed to individual academic staff members via their Heads of Department or similar department contact between February 26 and March 28, 2016. The individual staff member's responses were collated automatically via the survey software (Qualtrics) in an anonymised manner. Hard copies of the survey were also circulated at the 2016 Royal Economic Society Conference (March 21-23, 2016), resulting in a further 24 usable responses. In total, there were 668 responses, however, many had little or no information and may have been accessed to simply look at the questionnaire rather than to participate in the survey. Respondents were reticent when it came to revealing their job satisfaction in combination with other potentially identifying information; 443 respondents reported levels of job satisfaction but only 308 of these also provided wage information

Supplementary institutional information is collected from the Royal Economics Society Women's Committee Survey (Mitka et al., 2015; Tenreyro 2017). The Women's Committee Survey (RESWC) harvests information primarily from CHUDE listed university department webpages on the individual academic staff by grade of employment and gender. These survey entries are then emailed biennially to respective institutions for verification. Their overall verified survey response rate was high in 2015 with some 84% of the institutions responding, it was 57% in 2016.

The RESWC 2016 (Tenreyro, 2017) suggests there were 2077 workers across the entire UK academic economics workforce in 2016. This would imply a total potential response rate for our survey of 32.7% (668/2077), with a response rate of 21.3% (443/2077) for job satisfaction and 14.8% (308/2077) for those who also provided wage information.

There are concerns that the sample does not fully reflect the population. This concern is obvious in two main places. First, females make up some 43% of our total sample; however, Tenreyro (2017) found the proportion of the UK academic economics workforce that is female is only 28%. We consider weighting our estimation sample to match the gender balance in the RESWC sample (see Table OA1) and find no significant, qualitative or statistical, differences.

Second, a little over a third of our sample are Professors (Table 1), 28% of the women and 42% of the men. Tenreyro (2017; Table 1) found 25.5% of the workforce were Professors; 29.9% of the men and only 14.2% of the women. There is clearly an overrepresentation of Professors in our sample. We control for Professors throughout (see Table 2 and Table OA1) and find no statistically significant relationship with job satisfaction.

The percentage of females in the workplace is taken from the RES Women's Committee survey data for 2014 (Mitka et al., 2015), this avoids potential difficulties extrapolating from our sample when calculating this measure. Using this institutional measure, the men in our sample are typically working in a workforce that is 25% female whilst for women this value is 29%.

Online Appendix References.

Mitka, M., Mumford, K.A. and Sechel, C. (2015). *The 10th Royal Economic Society Women's Committee Survey: The Gender Balance of Academic Economics in the UK 2014*. Royal Economics Society, July 2015.

Tenreyro, S. (2017). *Royal Economic Society's Report on The Gender Balance in UK Economics Departments and Research Institutes in 2016*. Royal Economics Society, March 2017.

Table OA1. OLS coefficients of job satisfaction (weighted).

	OLS		OLS with institutional FE		
	(1)	(2)	(3)	(4)	(5)
Dependent variable: job satisfaction	reduced pooled	full pooled	full pooled	full males	full females
ln(salary)	1.297				
	(1.266)				
relative salary (÷ 1000)	-0.007				
	(0.012)				
Workplace characteristics					
REF GPA 4th quartile	-0.197	-0.063			
	(0.270)	(0.211)			
old university	-0.335	0.296			
	(0.523)	(0.342)			
% staff female	-0.053***	-0.031*			
	(0.015)	(0.016)			
professional networks available	0.130	0.381*	0.248	**0.070**	**0.817***
	(0.256)	(0.192)	(0.223)	[0.0857]	
no mentor	-0.622**	-0.550***	-0.683***	-0.689*	-0.645
	(0.299)	(0.202)	(0.226)	[0.9370]	
competitive	-0.066	-0.060	-0.138	-0.267	0.002
	(0.230)	(0.191)	(0.215)	[0.5598]	
cooperative	1.644***	1.535***	1.551***	1.583***	1.697***
	(0.225)	(0.185)	(0.214)	[0.7950]	
Region, omitted England excl. London					
London	0.988***	0.885***			
	(0.326)	(0.243)			
Scotland	0.047	-0.079			
	(0.264)	(0.306)			
Wales/N. Ireland	-0.917*	-1.000**			
	(0.546)	(0.463)			
Individual					
Productivity related					
first class degree	0.254	0.139	0.343	0.283	0.066
	(0.264)	(0.233)	(0.241)	[0.5723]	
publication score	0.100	0.095	0.171**	***0.330****	***0.008***
	(0.099)	(0.074)	(0.084)	[0.0498]	
research income > 100	-0.042	-0.017	0.075	0.128	-0.151
	(0.264)	(0.206)	(0.256)	[0.5885]	
excellent teaching score	0.112	0.131	0.149	**-0.097**	**0.653**
	(0.223)	(0.158)	(0.179)	[0.0920]	

Table OA1. ***Continued***

	OLS		OLS with institutional FE		
	(1) reduced pooled	(2) full pooled	(3) full pooled	(4) full males	(5) full females
Job related					
part-time	0.878**	0.683*	0.778**	**1.203****	**0.110**
	(0.369)	(0.357)	(0.337)	[0.0717]	
career break	-0.408**	-0.419**	-0.266	-0.420	-0.003
	(0.201)	(0.176)	(0.195)	[0.3774]	
external appointment	0.004	0.167	0.266	0.135	0.290
	(0.217)	(0.207)	(0.258)	[0.7507]	
rejected promotion in last 10 years	-0.499*	-0.539**	-0.557*	**-0.398**	**-1.599****
	(0.273)	(0.244)	(0.290)	[0.0550]	
Professor	-0.278	0.255	0.188	-0.086	0.357
	(0.382)	(0.224)	(0.270)	[0.5125]	
Demographic					
male	0.015	-0.078	-0.038		
	(0.232)	(0.174)	(0.178)		
non-white	-0.097	0.169	0.192	0.299	0.334
	(0.291)	(0.229)	(0.262)	[0.9579]	
married	-0.207	-0.194	-0.248	-0.392	-0.149
	(0.274)	(0.220)	(0.232)	[0.5699]	
children	-0.120	-0.133	-0.273	-0.113	-0.615
	(0.245)	(0.197)	(0.228)	[0.1563]	
age	-0.037	-0.030	0.004	0.004	0.085
	(0.090)	(0.069)	(0.081)	[0.5882]	
age^2	0.000	0.000	0.000	0.000	-0.001
	(0.001)	(0.001)	(0.001)	[0.6367]	
Constant	-6.138	6.157***	4.696**	4.785*	3.001
	(13.061)	(1.688)	(1.790)		
Observations	306	437	437	248	189
Adjusted R-squared	0.276	0.268	0.347	0.301	0.374

* p<0.10, ** p<0.05, *** p<0.01. Standard errors in round parenthesis (clustered at institution level). Weights applied to match RESWC 2016 sample: 28/43 for women and 72/57 for men. Weighted gender regressions are identical to non-weighted regressions (see Table 2). Gender differences tested using **suest** command in Stata version 15.1 with reported p-values in square parentheses from Wald Chi-squared tests obtained using **test** command. (H_0: $\beta^m = \beta^f$) Coefficient pairs in bold are significantly different from one another at the 90% confidence level; in italics and bold at 95%.