

ONLINE APPENDIX
PARENTHOOD AND ACADEMIC CAREER TRAJECTORIES
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A1. Sample Composition, by Degree and by Gender

	Women	Age at Enrollment	Graduation Rates	Publishing	First Child Before Enroll	At Least One Child	Year of Enrollment	N
By Degree								
Economics	0.27 (0.45)	27.90 (4.35)	0.60 (0.49)	0.35 (0.48)	0.19 (0.39)	0.67 (0.47)	2007.52 (6.62)	547
Business Economics	0.44 (0.50)	29.89 (5.96)	0.51 (0.50)	0.26 (0.44)	0.29 (0.46)	0.71 (0.46)	2007.65 (6.52)	451
Statistics	0.47 (0.50)	27.55 (2.97)	0.66 (0.47)	0.60 (0.49)	0.17 (0.36)	0.65 (0.48)	2007.79 (7.14)	98
Economics and Math	0.36 (0.48)	26.34 (2.65)	0.65 (0.48)	0.48 (0.50)	0.08 (0.29)	0.73 (0.44)	2006.74 (7.06)	113
Resource Economics	0.30 (0.46)	29.08 (4.86)	0.52 (0.50)	0.41 (0.50)	0.29 (0.45)	0.80 (0.40)	2009.34 (5.99)	56
By Gender								
Women	-	28.76 (4.79)	0.53 (0.50)	0.36 (0.48)	0.26 (0.44)	0.62 (0.45)	2008.58 (6.23)	454
Men	-	28.34 (5.09)	0.60 (0.49)	0.35 (0.48)	0.19 (0.39)	0.68 (0.47)	2007.05 (6.81)	811
Total	0.36 (0.48)	28.50 (4.98)	0.57 (0.49)	0.35 (0.48)	0.22 (0.41)	0.69 (0.46)	2007.60 (6.64)	1265

Note: The table reports the sample composition by the type of Master's Degree, and by Gender. We report the share of women, age at enrollment, share graduating, the share of individuals ever publishing, the share who had a child before enrollment in the Ph.D. program, the share who became parents before 2018, and the year of enrollment in the Ph.D. Standard errors are reported in parentheses.

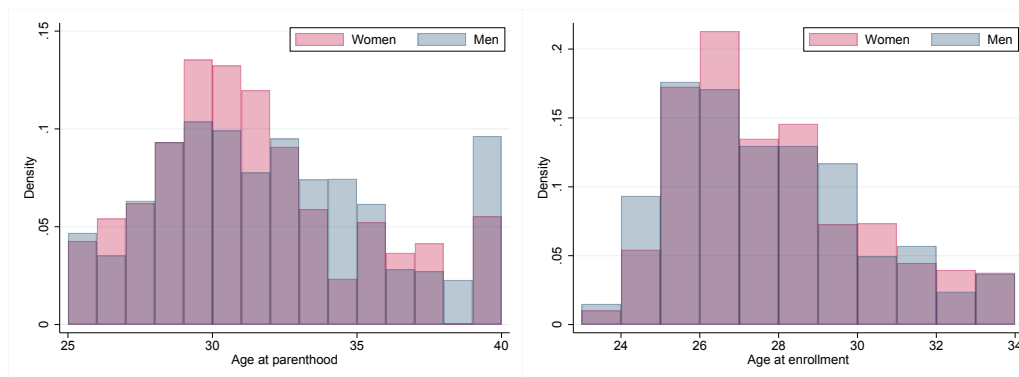


Figure A1.1 : Age at Parenthood, and Age at enrollment, by Gender

Note: The left-hand panel shows the age at parenthood for men and women, respectively, with truncated tails to mask individual observations. The right-hand panels show the age at enrollment for men and women, respectively.

A2. Position of Researchers - Collective bargaining and earnings

To infer to position of researchers, we combine yearly earnings and thresholds obtained from collective bargaining. The data on collective bargaining has been collected from the archives of the trade union for academics (*Dansk Magisterforening*). In collective bargaining, earnings consist of a base salary (*grundløn*) and an allowance (*tillæg*). The archives covered the years 1997-2014, and 2022 and 2021. The union further provided an index covering 2011 to 2021, which is used for adjustment for the years where the precise levels are unavailable.

The base salary varies by years of relevant sector experience. According to the union, Ph.D. students are usually placed on the lowest level, assistant professors on a salary level corresponding to four years of experience, and associate professors and professors on a salary level corresponding to seven years of experience. The allowance varies by position. The evolution of the base salary for the relevant levels as well as the allowances for each type of position are reported here.

An assistant professor can then be defined as having a salary with four years of experience + the assistant professor allowance, but below the level of seven years of experience + the associate professor allowance for a given year, i.e. between the light grey and dashed blue line. Both an associate professor and a professor would earn at least the base salary corresponding to 7 years of experience but their allowances would differ. Head of Department, Head of the Ph.D. school, etc. are likely to receive a bonus and thus earn a professor wage. Moreover, members of management also earn wages at the professor level. In addition, bonuses may be given for e.g. teaching excellence, success in funding, and publications.

As of 1997, a change to the collective agreement system was agreed on and gradually phased in. Until 1997, wages increased mechanically with years of employment and the position of the researcher. This was replaced with a system with fewer steps and more discretion to allocate bonuses, whether yearly or permanent. From 1997 to 2008, new hires could choose between the 2 schemes. As of 2008, the new scheme was fully in place, leading to a discrete jump in the base salary for all individuals, regardless of experience. Information on the wage scheme before this reform was unavailable.

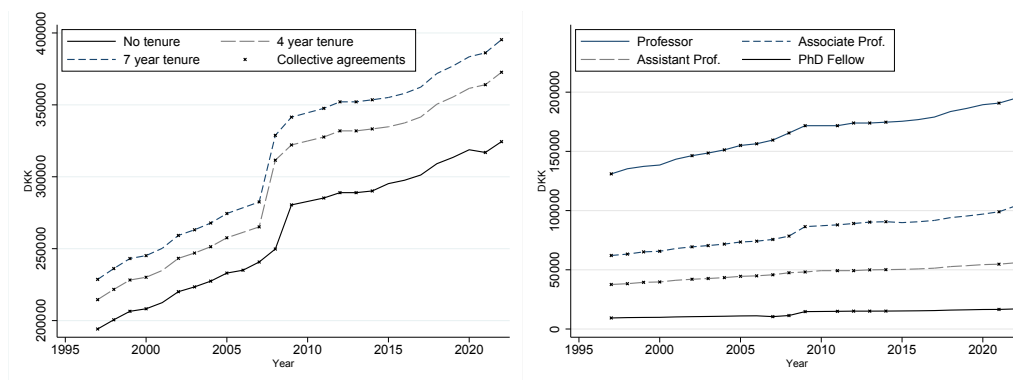


Figure A2. : Evolution of base wages and allowances, by years of experience and positions

Note: The left-hand panel shows the base earnings for each year of tenure in the sector. Ph.D. students would usually be placed on the lowest level (marked in solid black). Assistant professors would be placed as having at least four years of experience (marked in dashed grey) and senior researchers would be placed as having at least seven years of experience (marked in dashed blue). The right-hand panel shows the additional allowance for each position in academia ranging from Ph.D. students (in black), assistant professors (in dashed grey), associate professors, (in dashed blue), and full professors (in dashed black).

Source: Collective bargaining data obtained via the Danish labor union for academics (*Dansk Magisterforening*) marked with crosses. For years without data, the levels are calculated using an index provided by the union.

A3. Parenthood and graduation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Ever graduating				Time to graduation					
Female	-0.0570*	0.0313	-0.0275	-0.00606	-0.0496	-0.0256	0.249**	0.0360	-0.0909	0.0457
	(0.0293)	(0.0508)	(0.0410)	(0.0334)	(0.0329)	(0.0269)	(0.1115)	(0.284)	(0.163)	(0.158)
Child during PhD			0.0973***	0.0854***					0.162	-0.0413
			(0.0353)	(0.0306)					(0.131)	(0.135)
Female#Child during PhD			0.0232	0.0290					0.780***	0.506***
			(0.0468)	(0.0392)					(0.186)	(0.186)
Ever Parent		0.416***						0.191		
		(0.0352)						(0.182)		
Female#Ever Parent		0.267***						0.449*		
		(0.0491)						(0.251)		
Child before PhD					0.0707	0.0629				
					(0.0476)	(0.0450)				
Female#Child before PhD					0.0172	0.0345				
					(0.0554)	(0.0498)				
Constant	0.544***	0.262***	0.502***	0.700***	0.532***	0.709***	3.828***	3.667***	3.751***	4.634***
	(0.0175)	(0.0289)	(0.0231)	(0.189)	(0.0191)	(0.189)	(0.0664)	(0.168)	(0.0902)	(0.964)
N	1,265	1,265	1,265	1,265	1,265	1,265	662	662	662	662
R-squared	0.003	0.121	0.009	0.394	0.005	0.391	0.007	0.014	0.035	0.198
Time FE				YES		YES				YES
Age FE				YES		YES				YES

Note: The table reports gender gaps and the relationship between parental status and graduation rates (columns 1-6) and parental status and time to graduation (columns 7-10), conditional on graduating. The sample consists of individuals who enrolled in a Ph.D. between 1996 and 2018, and naturally not all have graduated.

*** p<0.01, ** p<0.05, * p<0.1

A4. Child penalty estimates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Total research		Universities		Broader Researcher		Senior Position		AP at uni	
Prior	-0.00238 (0.0175)	-0.0203 (0.0198)	-0.0143 (0.0182)	-0.0262 (0.0204)	0.0119 (0.0126)	0.00591 (0.0135)	-0.0229 (0.0141)	-0.0255 (0.0174)	-0.00286 (0.0140)	0.00194 (0.0170)
Female	0.00503 (0.0378)	0.0439 (0.0454)	-0.0277 (0.0359)	-0.0238 (0.0445)	0.0327 (0.0222)	0.0678** (0.0302)	-0.0828*** (0.0262)	-0.0342 (0.0335)	-0.0108 (0.0136)	-0.0327 (0.0270)
Prior#Female		0.0512 (0.0351)		0.0348 (0.0352)		0.0164 (0.0245)		0.00574 (0.0272)		-0.0133 (0.0283)
Immedidate	-0.0299 (0.0194)	-0.00297 (0.0219)	-0.0409** (0.0192)	-0.0356 (0.0219)	0.0110 (0.0127)	0.0326** (0.0146)	-0.00240 (0.0158)	0.0313 (0.0194)	-0.00901 (0.0148)	-0.0230 (0.0177)
Immedidate#Female		-0.0846** (0.0351)		-0.0174 (0.0366)		-0.0672*** (0.0232)		-0.104*** (0.0282)		0.0435 (0.0269)
Medium	-0.0430 (0.0346)	-0.0140 (0.0371)	-0.0543 (0.0332)	-0.0455 (0.0368)	0.0113 (0.0207)	0.0315 (0.0217)	-0.0194 (0.0291)	-0.00116 (0.0331)	-0.0172 (0.0189)	-0.0302 (0.0210)
Medium#Female		-0.0960* (0.0526)		-0.0300 (0.0520)		-0.0660* (0.0356)		-0.0584 (0.0453)		0.0427 (0.0327)
Constant	0.801*** (0.180)	0.801*** (0.177)	0.420* (0.226)	0.424* (0.222)	0.382* (0.225)	0.377 (0.229)	0.0395* (0.0208)	0.0312* (0.0181)	0.0296 (0.0243)	0.0284 (0.0263)
Observations	3,961	3,961	3,961	3,961	3,961	3,961	3,961	3,961	3,956	3,956
R-squared	0.065	0.068	0.086	0.086	0.112	0.115	0.116	0.119	0.049	0.051

Note: Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1

The table reports the event time coefficients estimated from equation (1) and corresponding to Figure 1 for different outcomes: working in research, working at universities, working in the broader research sector, and working as a senior researcher. To gain precision, we have collapsed to one period before parenthood, and two periods after parenthood. We also report the outcome of holding a junior position at a university. The sample consists of individuals who enrolled in a Ph.D. in 1996 or later, and who became parents after enrollment. The effects on senior positions are unconditional on sectorial employment. A senior researcher is defined as i) working in research and ii) earning at or above the associate professor level. A junior position is defined as having lower earnings than an associate professor.