

Career transitions among doctoral graduates in Sweden: How gender and family situation influence departure from the university sector

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Research Domains

Academic practice, work, careers and cultures (AP)

Abstract

This study addresses the question of how family formation—such as having small children during doctoral studies or becoming a parent during the early career phase—affects graduates' decisions to leave the Swedish higher education sector. The findings highlight significant gender differences, with men more likely than women to leave academia. We also find that having small children during doctoral education or becoming a parent during the early career phase significantly reduces the probability of leaving academia. However, there is a notable interaction effect between family formation and gender. Unexpectedly, the presence of small children primarily influences men's career decisions: men with small children during doctoral studies are less likely to leave academia, whereas the presence of children does not significantly affect the career decisions of female doctoral graduates. The results are discussed in relation to the unique Swedish context.

Full paper

Introduction

The aim of this study is to investigate how gender and family formation affect doctoral graduates' decisions to leave academia in Sweden. Previous research suggests that these factors play a significant role in shaping whether doctoral graduates remain in or exit academic careers (Ahmad, 2017; European Commission, 2012; Wolfinger et al., 2008). These studies also suggest that women—particularly mothers—face greater challenges in balancing academic careers with family life, leading to higher rates of attrition compared to men. However, few studies have examined this issue in Sweden, which consistently ranks highly internationally for gender equality across social, economic, and political dimensions (Silander et al., 2022). This makes Sweden an interesting case, as it features generous social policies such as paid parental leave and extensive childcare services (Silander et al., 2022).

Our analysis is based on a sample of 20,982 Swedish doctoral graduates who completed their studies between 2006 and 2014. We follow these cohorts up to and including 2022.

Results

The propensity to leave the university sector is significantly affected by both gender and family formation (Table 1). Surprisingly, men are more likely to leave the university sector than women. Having small children during doctoral education, as well as becoming a new parent during the early career phase, decreases the likelihood of leaving the sector.

Table 1. Logistic regression for leaving the university sector after completion of doctoral studies.

Predictor	Model 1			Model 2		
	Coefficient	Std. err.	P>z	Coefficient	Std. err.	P>z
Gender (female = 1)	-0.35	0.04	0.000	-0.48	0.05	0.000
Age at completion of doctoral studies	0.02	0.00	0.000	0.02	0.00	0.000
Immigrant	-0.04	0.05	0.337	-0.05	0.05	0.316
Postdoctoral fellowship	-6.86	0.50	0.000	-6.86	0.50	0.000
Net study time	-0.04	0.01	0.000	-0.04	0.01	0.000
Health as doctoral student (sick leave days > 1 S.D.)	-0.06	0.09	0.500	-0.06	0.09	0.520
Health as postdoc (sick leave days > 1 S.D.)	-0.05	0.09	0.601	-0.05	0.09	0.581

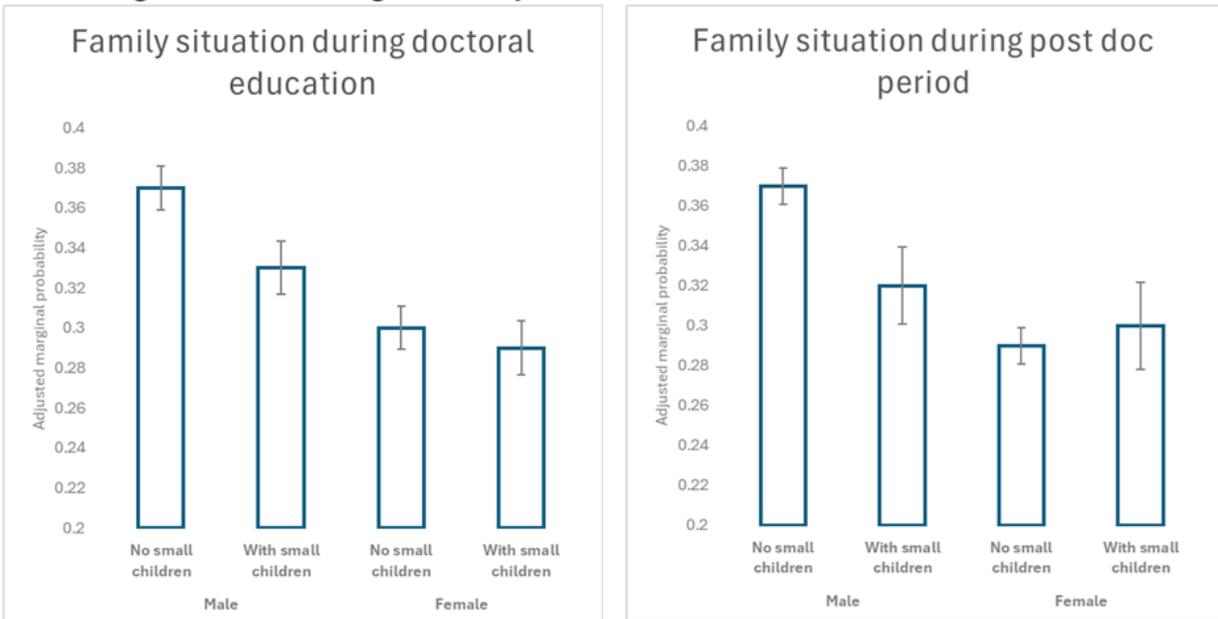
Gender#Small children as doctoral student				0.17	0.08	0.021
Becoming parent during early career	-0.13	0.05	0.011	-0.27	0.07	0.000
Gender#Becoming parent during early career				0.34	0.09	0.000
Doctoral studies in large metropolitan area	0.19	0.05	0.000	0.19	0.05	0.000
Year of completion of doctoral studies (ref. 2006)						
2007	0.00	0.07	0.996	0.00	0.07	0.982
2008	0.11	0.07	0.107	0.11	0.07	0.125
2009	-0.02	0.07	0.832	-0.02	0.07	0.768
2010	0.09	0.07	0.183	0.09	0.07	0.217
2011	0.15	0.07	0.033	0.15	0.07	0.039
2012	0.15	0.07	0.039	0.15	0.07	0.043
2013	0.22	0.07	0.003	0.21	0.07	0.003
2014	0.18	0.07	0.009	0.18	0.07	0.011
Research area (ref Natural science)						

Health and medicine	0.01	0.05	0.906	0.00	0.05	0.934
Agricultural sciences	0.11	0.12	0.335	0.10	0.12	0.383
Social science	-1.29	0.06	0.000	-1.29	0.06	0.000
Humanities	-1.12	0.08	0.000	-1.12	0.08	0.000
Higher education institution (ref older universities)						
New universities	-0.46	0.07	0.000	-0.46	0.07	0.000
University colleges	-0.64	0.16	0.000	-0.63	0.16	0.000
Constant	-0.25	0.12	0.033	-0.23	0.12	0.053

Note. No observations 20982. Model 1: LR chi2(25) = 6048.98, Pseudo R-square = 0.23, AUC 0.78. Model 2: LR chi2(27) = 6062.86, Pseudo R2 = 0.23, AUC = 0.78.

The interaction effect between gender and family formation, displayed in Table 1, cannot be interpreted without calculating the adjusted marginal probabilities (Figure 1). Unexpectedly, the presence of small children primarily influences men's career decisions: men with small children are less likely to leave academia, whereas the presence of children does not significantly affect the career decisions of female doctoral graduates.

Figure 1. Adjusted marginal probability for leaving the university sector: interaction between gender and change in family situation.



Discussion and conclusion

We conclude that men are more likely than women to leave academia. Having small children during doctoral education, or becoming a parent during the early career phase, significantly reduces the probability of leaving academia. There is a notable interaction between family formation and gender. Children primarily influence men’s career decisions, such that men with small children are less likely to leave academia, whereas the presence of children does not significantly affect the career decisions of female doctoral graduates. Our results—which differ from the main patterns observed in previous research—may be related to the Swedish context, which is characterized by high gender equality. In Sweden, many of the policies previously suggested to reduce gendered attrition, such as work–family policies and the provision of childcare (Ahmad, 2017), are already in place.