Does a Civil Service Job Matter? The Influence of Civil Service Employment on the Transition to the First and Second Child for Women and Men in Germany

Paul Severin Löwe

Online Appendix

1 Appendix

Table 1: Steps of Preparing the Samples

Step	Action	Number of Cases	Number of Spells	Number of cases with transition to child
First child				
1	Merge the data set from the Anchor and Demo Diff Data Set Wave 1-12	18912		
2	Excluding all cases with children (both biological and other) in the first and 11th refreshment wave	12461		
3	Recoding of dependant variable. Identifying the wave in which the child variable was filled for the first time, backdated by 9 months, using the exact interview date and date of birth, excluding all cases where the child is born before the first interview	12443		
4	Expanding the data, process time based on the period between the age of 14 and the highest age at which the person is observed; process time ends with first pregnancy or the end of the observation period; recoding of time-varying variables, always using the latest information available before the first pregnancy	12443	50862	1110
5	Excluding all cases without at least one employment spell in the private sector or in the civil service	6344	34724	865
6	Implementation of event history models, with control and interaction variables	5952, 2729 women; 3223 men	26725; 12241 women; 14484 men	673; 541 private sector, 132 in civil service with 19 transitions for civil servants
Second child				
1	Merge the data set from the Anchor and Demo Diff Data Set Wave 1-12	18912		
2	Excluding all cases with second or more children (both biological and other) in the first and the 11th refreshment wave	14868		
3	Recoding of dependant variable. Identifying the wave in which the second child variable was filled for the first time, backdated by 9 months, using the exact interview date and date of birth, excluding all cases where the child is born before the first interview	3663		
4	Expanding the data, process time based on the period between the birth of first child and the highest age at which the person is observed; process time ends with second pregnancy or the end of the observation period; recoding of the time-varying variables, always using the latest information available before the second pregnancy	3663	26973	892
5	Excluding all cases without at least one employment spell in the private sector or in the civil service	3070	23515	750

6	Implementation of event history models, with control and interaction variables	2738; 1554 women; 1184 men	10324; 6200 women; 4124 men	611; 472 private sector, 139 in civil service with 18 transitions for civil servants

Source: Pairfam 2008-2020; *Note:* Own illustration

2 Heterogeneity of the Civil Service Influence

We conduct robustness checks to account for potential heterogeneities related to fixed-term and permanent contracts, the employment status of the partner, and regional differences between East and West Germany, as several studies suggest that these factors may moderate the influence of civil service employment

2.1 Interaction: Civil Service and Contract Status

Several studies suggest that the advantageous job characteristics associated with civil service employment are primarily limited to employees on permanent contracts, whereas fixed-term contracts in the civil service tend to be more precarious than those in the private sector (Brülle 2013; Giesecke 2006; Gottschall et al. 2015; Hohendanner and Gerner 2010; Hohendanner, Ostmeier and Ramos-Lobato 2015). Consequently, the benefits of civil service employment discussed thus far are expected to be less pronounced for employees on fixed-term contracts. Given that fixed-term employment is more prevalent in the civil service (16% of all employees) compared to the overall economy (8%; Statistisches Bundesamt 2016; Statistisches Bundesamt 2022), we anticipate a negative moderating influence of fixed-term employment on the influence of civil service status, particularly concerning the transition to the first and second child.

Women

Table 2: Civil Service Effect for Women with a Permanent and a Fixed-Term Contract; Interaction Effect; First Child

	Interaction Average Marginal Effects (p-value)
Sector (ref. private sector) Civil service	
Civil Service Effect for Women with a Permanent Contract	-0.002 (0.687)
Civil Service Effect for Women with a Fixed-Term Contract	0.006 (0.496)
Interaction	0.008 (0.438)
N (spells)	12241

Source: Pairfam 2008-2020; authors' calculations;
Note: *p<0.05, **p<0.01, ***p<0.001, controls included.

Table 3: Civil Service Effect for Women with a Permanent and a Fixed-Term Contract; Interaction Effect; Second Child

	Interaction Average Marginal Effects (p-value)
Sector (ref. private sector) Civil service	
Civil Service Effect for Women with a Permanent Contract	0.014 (0.186)
Civil Service Effect for Women with a Fixed-Term Contract	0.043 (0.054)
Interaction	0.028 (0.257)
N (spells)	6200

Source: Pairfam 2008-2020; authors' calculations;
Note: *p<0.05, **p<0.01, ***p<0.001, controls included.

Men

Table 4: Civil Service Effect for Men with a Permanent and a Fixed-Term Contract; Interaction Effect; First Child

	Interaction Average Marginal Effects (p-value)
Sector (ref. private sector) Civil service	
Civil Service Effect for Men with a Permanent Contract	0.007 (0.283)
Civil Service Effect for Men with a Fixed-Term Contract	0.004 (0.619)
Interaction	-0.004 (0.721)
N (spells)	14484

Source: Pairfam 2008-2020; authors' calculations;
Note: *p<0.05, **p<0.01, ***p<0.001, controls included.

Table 5: Civil Service Effect for Men with a Permanent and a Fixed-Term Contract; Interaction Effect; Second Child

	Interaction Average Marginal Effects (p-value)
Sector (ref. private sector) Civil service	
Civil Service Effect for Men with a Permanent Contract	-0.025 (0.037)
Civil Service Effect for Men with a Fixed-Term Contract	0.000 (0.996)
Interaction	0.025 (0.434)
N (spells)	4124

Source: Pairfam 2008-2020; authors' calculations;
Note: *p<0.05, **p<0.01, ***p<0.001, controls included.

2.2 Interaction: Civil Service and Working Status of the Partner

We examine the partner's employment status, as it can be assumed that the likelihood of having a child increases when a couple can jointly provide both income and family work (Becker 1981), which is influenced by the partner's job situation. As previously argued, paid employment is crucial for both genders; however, the role of civil service employment is expected to vary depending on the partner's work status. For women, the positive influence of

civil service employment on the transition to the first and second child should be more pronounced when they can combine the high compatibility of paid work and family responsibilities (as outlined in Section 2.2) with a partner who contributes a significant share of household income. Conversely, if a woman's partner is not employed, the household's financial resources are likely to be lower, which should attenuate the positive influence of civil service employment on the likelihood of transitioning to the first and second child.

Women

Table 6: Civil Service Effect for Women with a Partner Not Working, Working Full-Time and Working Part-Time; Interaction Effect; First Child

	Interaction Average Marginal Effects (p-value)
Sector (ref. Private Sector) Civil service	
Civil Service Effect for Women with a Partner Not Working	-0.003 (0.831)
Civil Service Effect for Women with a Partner Working Full-Time	0.000 (0.942)
Civil Service Effect for Women with a Partner Working Part-Time	-0.000 (0.990)
Interaction Full-Time vs. Not Working	0.003 (0.825)
Interaction Part-Time vs. Not Working	0.003 (0.925)
N (spells)	12241

Source: Pairfam 2008-2020; authors' calculations;
Note: *p<0.05, **p<0.01, ***p<0.001, controls included.

Table 7: Civil Service Effect for Women with a Partner Not Working, Working Full-Time and Working Part-Time; Interaction Effect; Second Child

	Interaction Average Marginal Effects (p-value)
Sector (ref. Private Sector) Civil service	
Civil Service Effect for Women with a Partner Not Working	0.047 (0.144)
Civil Service Effect for Women with a Partner Working Full-Time	0.016 (0.119)
Civil Service Effect for Women with a Partner Working Part-Time	0.035 (0.421)
Interaction Full-Time vs. Not Working	-0.031 (0.362)
Interaction Part-Time vs. Not Working	-0.013 (0.811)
N (spells)	6200

Source: Pairfam 2008-2020; authors' calculations;
Note: *p<0.05, **p<0.01, ***p<0.001, controls included.

Men

For men, the negative influence of civil service employment on the transition to the first and second child is expected to be weaker if their partner assumes a greater share of family work. Conversely, if a man's partner is more focused on paid employment, the availability of time for caregiving responsibilities is likely to be reduced, thereby amplifying the negative influence of civil service employment on the likelihood of transitioning to the first and second child for men.

Table 8: Civil Service Effect for Men with a Partner Not Working, Working Full-Time and Working Part-Time; Interaction Effect; First Child

	Interaction Average Marginal Effects (p-value)
Sector (ref. Private Sector) Civil service	
Civil Service Effect for Men with a Partner Not Working	0.002 (0.840)
Civil Service Effect for Men with a Partner Working Full-Time	0.006 (0.371)
Civil Service Effect for Men with a Partner Working Part-Time	0.019 (0.358)
Interaction Full-Time vs. Not Working	0.003 (0.673)
Interaction Part-Time vs. Not Working	0.003 (0.441)
N (spells)	14484

Source: Pairfam 2008-2020; authors' calculations;
Note: *p<0.05, **p<0.01, ***p<0.001, controls included.

Table 9: Civil Service Effect for Men with a Partner Not Working, Working Full-Time and Working Part-Time; Interaction Effect; Second Child

	Interaction Average Marginal Effects (p-value)
Sector (ref. Private Sector) Civil service	
Civil Service Effect for Men with a Partner Not Working	-0.028 (0.160)
Civil Service Effect for Men with a Partner Working Full-Time	-0.011 (0.587)
Civil Service Effect for Men with a Partner Working Part-Time	-0.018 (0.229)
Interaction Full-Time vs. Not Working	0.017 (0.536)
Interaction Part-Time vs. Not Working	0.010 (0.696)
N (spells)	4124

Source: Pairfam 2008-2020; authors' calculations;
Note: *p<0.05, **p<0.01, ***p<0.001, controls included.

2.3 Interaction: Civil Service and Region

We examine regional differences in the influence of civil service employment between East and West Germany. The extent to which civil service employment facilitates family formation may depend on the economic environment and institutional conditions. Gender roles, childcare provision, the organization of work and family life, and the economic stability of families continue to differ between East and West Germany (Adler 2004; Goldstein and Kreyenfeld 2011; Kreyenfeld 2003; Kreyenfeld and Konietzka 2008a; Lechner 2001; Matysiak and Steinmetz 2008).

In East Germany, women's demand for jobs that support work-life balance is likely to be lower due to better childcare provision and a stronger employment orientation. This may diminish the importance of civil service employment for the reconciliation of family and work, thereby weakening its influence. However, the combination of a high employment orientation with a more precarious economic environment may lead women to prioritize job security, which could, in turn, strengthen the effect of civil service employment. Given these opposing mechanisms, it is not possible to establish clear expectations for women.

Women

Table 10: Civil Service Effect for Women living in West and East Germany; Interaction Effect; First Child

	Interaction Average Marginal Effects (p-value)
Sector (ref. private sector) Civil service	
Civil Service Effect Women Living in West Germany	-0.002 (0.628)
Civil Service Effect Women Living in East Germany	0.018 (0.143)
Interaction	0.020 (0.122)
N (spells)	12241

Source: Pairfam 2008-2020; authors' calculations;
Note: *p<0.05, **p<0.01, ***p<0.001, controls included.

Table 11: Civil Service Effect for Women living in West and East Germany; Interaction Effect; Second Child

	Interaction Average Marginal Effects (p-value)
Sector (ref. private sector) Civil service	
Civil Service Effect Women Living in West Germany	0.022 (0.060)
Civil Service Effect Women Living in East Germany	0.013 (0.304)
Interaction	-0.009 (0.584)
N (spells)	6200

Source: Pairfam 2008-2020; authors' calculations;
Note: *p<0.05, **p<0.01, ***p<0.001, controls included.

Men

For men, the situation is more straightforward. Higher female labor force participation in East Germany is primarily driven by better institutional support for childcare rather than an increased involvement of men in caregiving responsibilities. Moreover, in a more challenging economic environment, job security becomes increasingly important, making civil service employment comparatively more attractive. Therefore, we expect the negative influence of civil service employment on men's transition to parenthood to be weaker in East Germany compared to West Germany.

Table 12: Civil Service Effect for Men living in West and East Germany; Interaction Effect; First Child

	Interaction Average Marginal Effects (p-value)
Sector (ref. private sector) Civil service	
Civil Service Effect Men Living in West Germany	0.006 (0.377)
Civil Service Effect Men Living in East Germany	0.014 (0.206)
Interaction	0.020 (0.509)
N (spells)	14484

Source: Pairfam 2008-2020; authors' calculations;
Note: *p<0.05, **p<0.01, ***p<0.001, controls included.

Table 13: Civil Service Effect for Men living in West and East Germany; Interaction Effect; Second Child

	Interaction Average Marginal Effects (p-value)
Sector (ref. private sector) Civil service	
Civil Service Effect Men Living in West Germany	-0.029 (0.023)
Civil Service Effect Men Living in East Germany	0.016 (0.471)
Interaction	0.044 (0.084)
N (spells)	4124

Source: Pairfam 2008-2020; authors' calculations;
Note: *p<0.05, **p<0.01, ***p<0.001, controls included.

For neither women nor men do we find a statistically significant interaction between civil service employment and any of the interaction variables. Nevertheless, particularly for the transition to the second child, the effect sizes suggest potential differences in the influence of civil service employment based on contract status, region, and the partner's employment status.

Notably, the influence of civil service employment appears stronger for men in East Germany compared to West Germany in the transition to the second child, reaching at least a weak statistical significance level of 10%. This finding may indicate that in the weaker

economic conditions of the East German labor market, the higher job security associated with civil service employment plays a role in the decision to have a second child. This would be consistent with findings from other European countries with challenging labor markets for young people, such as Italy (Conti and Sette 2013) and Spain (Martin-Garcia and Castro-Martin 2013), where civil service employment has been shown to have a clear positive effect on fertility decisions.