The Response of Firms to Maternity Leave and Sickness Absence

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Online Appendix

Table A1: CBO-2002 Major Occupation Group Classifications

Code	Title
1	Public Administration and Management
2	Professionals in Science and Arts
3	Mid-level Technicians
4	Administrative Services
5	Service Workers and Vendors
6	Agriculture, Fishing, and Forestry
7	Production of Industrial Goods and Services
8	Production of Industrial Goods and Services
9	Repair and Maintenance

Notes: The table displays English translations of major occupation group classifications from the 2002 vintage of the *Classificação Brasileiro de Ocupações*. The first digit of the 6-digit occupation code indicates the major occupation group. Group 7 employees work in production systems that tend to be more discreet and deal with the shape of the product, while group 8 employees deal with the physical-chemical content.

Table A2: Descriptive Statistics of Plants in 2015

	With Maternity Leaves		With Sickness Leaves		All
	Clean	All	Clean	All	Plants
	(1)	(2)	(3)	(4)	(5)
Industry					
Agriculture/Forestry/Fishing	0.017	0.017	0.050	0.046	0.054
Mining	0.001	0.002	0.004	0.005	0.003
Manufacturing	0.103	0.127	0.137	0.171	0.114
Utilities: Electric/Gas	0.001	0.001	0.002	0.002	0.001
Utilities: Water/Sewage/Waste	0.002	0.002	0.004	0.005	0.003
Construction	0.011	0.017	0.032	0.053	0.045
Wholesale/Retail Trade	0.442	0.398	0.374	0.326	0.392
Transportation/Storage/Mail	0.024	0.027	0.048	0.060	0.046
Accommodation/Food	0.104	0.099	0.081	0.079	0.079
Information/Communication	0.016	0.017	0.014	0.014	0.016
Financial Services	0.040	0.035	0.032	0.028	0.021
Real Estate	0.006	0.005	0.005	0.004	0.006
Professional/Scientific/Technical	0.044	0.037	0.030	0.024	0.034
Administrative Activities	0.050	0.059	0.079	0.072	0.079
Education	0.046	0.061	0.034	0.037	0.031
Health/Social Services	0.043	0.050	0.027	0.034	0.030
Art/Culture/Sports	0.009	0.008	0.008	0.007	0.009
Other Service Activities	0.041	0.037	0.038	0.033	0.036
Avg # of Contracted Workers	12.922	60.787	12.465	59.224	19.385
Median # of Contracted Workers	10.000	15.000	9.000	17.000	6.000
	(10.010)	(259.665)	(9.601)	(241.072)	(112.445)
Female Employee Share	0.609	0.604	0.423	0.415	0.430
	(0.275)	(0.269)	(0.322)	(0.307)	(0.333)
Female Aged 21–35 Employee Share	0.354	0.352	0.209	0.208	0.227
	(0.227)	(0.216)	(0.215)	(0.197)	(0.237)
# of Plants	115,683	327,213	113,922	391,406	1,913,541

Notes: All statistics are measured as of the end of 2015. Columns (1) and (3) include plants in our analysis sample with clean maternity and sickness leave spells in 2015, respectively. Columns (2) and (4) include private sector plants (with at least 3 workers) with maternity and sickness leave spells in 2015, respectively, regardless of whether they meet the clean definition. Column (5) includes private sector plants (with at least 3 workers) in 2015 regardless of whether they experienced a leave. Standard deviations of non-categorical variables are reported in parentheses.

Table A3: Industry-Related Descriptive Statistics of Maternity and Sickness Leave Spells

	Maternity			Sickness		
	Clean	All (Small/Med)	All	Clean	All (Small/Med)	All
	(1)	(2)	(3)	(4)	(5)	(6)
Plant Characteristics						
Industry						
Agriculture/Forestry/Fishing	0.018	0.013	0.015	0.051	0.044	0.036
Mining	0.001	0.001	0.002	0.004	0.005	0.007
Manufacturing	0.102	0.104	0.170	0.137	0.167	0.248
Utilities: Electric/Gas	0.001	0.000	0.001	0.001	0.001	0.003
Utilities: Water/Sewage/Waste	0.002	0.001	0.003	0.004	0.005	0.011
Construction	0.011	0.009	0.015	0.032	0.045	0.060
Wholesale/Retail Trade	0.442	0.433	0.303	0.376	0.346	0.206
Transportation/Storage/Mail	0.023	0.018	0.027	0.047	0.056	0.078
Accommodation/Food	0.104	0.114	0.073	0.083	0.090	0.048
Information/Communication	0.016	0.015	0.023	0.014	0.012	0.016
Financial Services	0.040	0.042	0.036	0.031	0.033	0.021
Real Estate	0.006	0.005	0.003	0.005	0.004	0.002
Professional/Scientific/Technical	0.043	0.039	0.030	0.029	0.022	0.017
Administrative Activities	0.051	0.046	0.109	0.077	0.061	0.119
Education	0.046	0.064	0.061	0.034	0.033	0.028
Health/Social Services	0.044	0.048	0.088	0.028	0.031	0.069
Art/Culture/Sports	0.009	0.008	0.005	0.008	0.007	0.005
Other Service Activities	0.041	0.039	0.034	0.039	0.036	0.025
# of Leaves	476,620	1,160,762	2,550,083	509,004	1,619,248	4,935,921

Notes: All statistics are measured in the month of leave onset. Columns (1) and (4) include clean maternity and sickness leave spells, respectively. Columns (2) and (5) include maternity and sickness leave spells, respectively, regardless of whether they meet the clean definition from private sector plants with 3–50 workers in the 6–17 months before leave onset. Columns (3) and (6) include all maternity and sickness leave spells at private sector establishments with at least 3 workers in the 6–17 months before leave onset.

Table A4: Estimated Employment Dynamics around Leave Initiation in Occupation of Leave-Taker

	Maternity Leave				Sickness Leave			
	Change in # Employees	# of Hires	# of Separations	# Seps Excl Leave-Taker	Change in # Employees	# of Hires	# of Separations	# Seps Excl Leave-Taker
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
β_{-4}	0.0018	0.0027*	0.0009	0.0008	-0.0013	-0.0018	-0.0006	-0.0005
	(0.0019)	(0.0014)	(0.0013)	(0.0013)	(0.0020)	(0.0015)	(0.0013)	(0.0013)
β_{-3}	0.0123***	0.0121***	-0.0002	-0.0003	-0.0006	-0.0017	-0.0011	-0.0010
	(0.0019)	(0.0015)	(0.0013)	(0.0013)	(0.0020)	(0.0015)	(0.0013)	(0.0013)
β_{-2}	0.0253***	0.0236***	-0.0017	-0.0019	0.0018	-0.0003	-0.0022	-0.0020
	(0.0019)	(0.0015)	(0.0013)	(0.0013)	(0.0019)	(0.0015)	(0.0013)	(0.0013)
β_{-1}	0.0499***	0.0485***	-0.0014	-0.0018	0.0105***	0.0092***	-0.0013	-0.0012
	(0.0019)	(0.0016)	(0.0013)	(0.0013)	(0.0020)	(0.0016)	(0.0014)	(0.0014)
β_0	0.0744***	0.0776***	0.0032**	0.0025*	0.0444***	0.0483***	0.0039***	0.0030**
	(0.0019)	(0.0016)	(0.0014)	(0.0014)	(0.0020)	(0.0016)	(0.0014)	(0.0014)
β_1	0.0497***	0.0575***	0.0077***	0.0064***	0.0380***	0.0555***	0.0175***	0.0088***
	(0.0020)	(0.0016)	(0.0014)	(0.0014)	(0.0021)	(0.0016)	(0.0015)	(0.0015)
β_2	0.0208***	0.0324***	0.0116***	0.0099***	-0.0028	0.0341***	0.0369***	0.0186***
	(0.0019)	(0.0016)	(0.0014)	(0.0014)	(0.0021)	(0.0017)	(0.0016)	(0.0016)
β_3	0.0006	0.0193***	0.0187***	0.0149***	-0.0176***	0.0258***	0.0434***	0.0185***
	(0.0020)	(0.0016)	(0.0014)	(0.0014)	(0.0021)	(0.0017)	(0.0015)	(0.0015)
β_4	-0.0478***	0.0077***	0.0555***	0.0205***	-0.0209***	0.0225***	0.0435***	0.0163***
	(0.0020)	(0.0017)	(0.0015)	(0.0014)	(0.0022)	(0.0019)	(0.0015)	(0.0015)
β_5	-0.0816***	0.0051***	0.0867***	0.0240***	-0.0227***	0.0189***	0.0415***	0.0149***
	(0.0020)	(0.0017)	(0.0015)	(0.0015)	(0.0022)	(0.0018)	(0.0016)	(0.0015)
R^2	0.0592	0.2971	0.3118	0.3132	0.0595	0.2830	0.2925	0.2946
N	5,242,820	5,242,820	5,242,820	5,242,820	5,599,044	5,599,044	5,599,044	5,599,044

Notes: Each column displays estimated coefficients from separate regressions of equation 1. Coefficients in $k = -5$ are normalized to zero. Standard errors are clustered at the leave spell level and shown in parentheses. The sample includes plant-occupation groups of the leave-taker during the event window. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A5: Robustness of Employment Dynamics around Leave Initiation in Occupation of Leave-Taker

	Change in # Employees		# of Hires		# of Separations		# Seps Excl Leave-Taker	
	Dyn DiD	CS	Dyn DiD	CS	Dyn DiD	CS	Dyn DiD	CS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Maternity Leave								
β_{-4}	0.0010	0.0005	0.0001	-0.0003	-0.0009	-0.0008	-0.0009	-0.0008
	(0.0019)	(0.0018)	(0.0014)	(0.0014)	(0.0013)	(0.0012)	(0.0013)	(0.0012)
β_{-3}	0.0107***	0.0101***	0.0071***	0.0066***	-0.0036***	-0.0035***	-0.0035***	-0.0035***
	(0.0019)	(0.0018)	(0.0015)	(0.0014)	(0.0013)	(0.0012)	(0.0013)	(0.0012)
β_{-2}	0.0228***	0.0221***	0.0160***	0.0154***	-0.0068***	-0.0067***	-0.0066***	-0.0067***
	(0.0019)	(0.0018)	(0.0015)	(0.0014)	(0.0013)	(0.0012)	(0.0013)	(0.0012)
β_{-1}	0.0459***	0.0444***	0.0380***	0.0372***	-0.0079***	-0.0072***	-0.0077***	-0.0072***
	(0.0019)	(0.0018)	(0.0015)	(0.0015)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
β_0	0.0705***	0.0700***	0.0653***	0.0651***	-0.0052***	-0.0049***	-0.0053***	-0.0051***
	(0.0020)	(0.0019)	(0.0016)	(0.0015)	(0.0014)	(0.0013)	(0.0014)	(0.0013)
β_1	0.0452***	0.0448***	0.0430***	0.0430***	-0.0023*	-0.0018	-0.0027**	-0.0024*
	(0.0020)	(0.0019)	(0.0016)	(0.0016)	(0.0014)	(0.0013)	(0.0014)	(0.0013)
β_2	0.0160***	0.0156***	0.0157***	0.0158***	-0.0003	0.0001	-0.0011	-0.0008
	(0.0020)	(0.0019)	(0.0016)	(0.0015)	(0.0014)	(0.0013)	(0.0014)	(0.0013)
β_3	-0.0044**	-0.0046**	0.0002	0.0001	0.0046***	0.0047***	0.0020	0.0020
	(0.0020)	(0.0019)	(0.0016)	(0.0016)	(0.0014)	(0.0014)	(0.0014)	(0.0013)
β_4	-0.0534***	-0.0539***	-0.0139***	-0.0143***	0.0396***	0.0396***	0.0060***	0.0060***
	(0.0020)	(0.0020)	(0.0016)	(0.0016)	(0.0014)	(0.0014)	(0.0014)	(0.0014)
β_5	-0.0878***	-0.0889***	-0.0191***	-0.0202***	0.0687***	0.0686***	0.0077***	0.0077***
	(0.0020)	(0.0021)	(0.0016)	(0.0017)	(0.0015)	(0.0015)	(0.0014)	(0.0015)
Panel B: Sickness Leave								
β_{-4}	-0.0021	-0.0020	-0.0046***	-0.0046***	-0.0025*	-0.0026**	-0.0025*	-0.0026**
	(0.0020)	(0.0019)	(0.0015)	(0.0014)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
β_{-3}	-0.0026	-0.0026	-0.0071***	-0.0070***	-0.0045***	-0.0044***	-0.0045***	-0.0044***
	(0.0020)	(0.0019)	(0.0015)	(0.0014)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
β_{-2}	-0.0015	-0.0015	-0.0090***	-0.0094***	-0.0076***	-0.0079***	-0.0075***	-0.0079***
	(0.0019)	(0.0019)	(0.0015)	(0.0015)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
β_{-1}	0.0042**	0.0023	-0.0037**	-0.0055***	-0.0079***	-0.0079***	-0.0079***	-0.0079***
	(0.0020)	(0.0019)	(0.0016)	(0.0015)	(0.0014)	(0.0013)	(0.0014)	(0.0013)
β_0	0.0402***	0.0399***	0.0350***	0.0341***	-0.0052***	-0.0058***	-0.0062***	-0.0068***
	(0.0020)	(0.0019)	(0.0016)	(0.0015)	(0.0014)	(0.0013)	(0.0014)	(0.0013)
β_1	0.0322***	0.0317***	0.0394***	0.0385***	0.0073***	0.0069***	-0.0016	-0.0020
	(0.0021)	(0.0020)	(0.0016)	(0.0016)	(0.0015)	(0.0014)	(0.0015)	(0.0014)
β_2	-0.0099***	-0.0103***	0.0158***	0.0156***	0.0257***	0.0259***	0.0071***	0.0072***
	(0.0021)	(0.0020)	(0.0016)	(0.0016)	(0.0016)	(0.0015)	(0.0016)	(0.0015)
β_3	-0.0250***	-0.0242***	0.0046***	0.0047***	0.0296***	0.0290***	0.0045***	0.0039***
	(0.0021)	(0.0020)	(0.0017)	(0.0016)	(0.0015)	(0.0014)	(0.0015)	(0.0014)
β_4	-0.0294***	-0.0292***	-0.0009	-0.0003	0.0284***	0.0290***	0.0009	0.0014
	(0.0022)	(0.0021)	(0.0018)	(0.0018)	(0.0015)	(0.0015)	(0.0015)	(0.0015)
β_5	-0.0321***	-0.0323***	-0.0076***	-0.0069***	0.0245***	0.0254***	-0.0025	-0.0015
	(0.0022)	(0.0022)	(0.0018)	(0.0018)	(0.0015)	(0.0016)	(0.0015)	(0.0016)

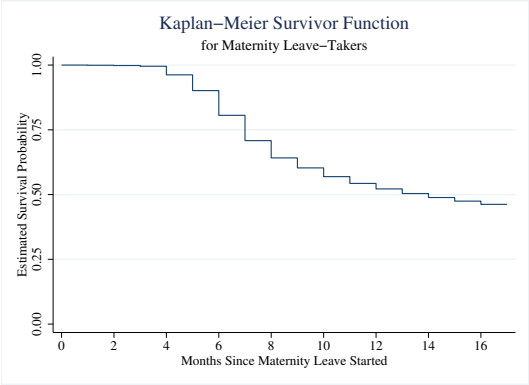
Notes: Columns (1), (3), (5), and (7) display estimated coefficients from separate regressions of equation 1 where we include non-leave-taking occupations in the same plant as the leave-taker as control units and replace plant-occupation fixed effects with plant-occupation-spell effects (dynamic difference-in-differences specification). Columns (2), (4), (6), and (8) display event-study-type estimates using the estimator of Callaway and Sant'Anna (2021) and non-leave-taking occupations in the same plant as the leave-taker serve as "never treated" control units. Coefficients in $k = -5$ are normalized to zero across the various specifications. Standard errors are clustered at the leave spell level and shown in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A6: Plant Characteristics Associated with Leave Spells by Inspection Status

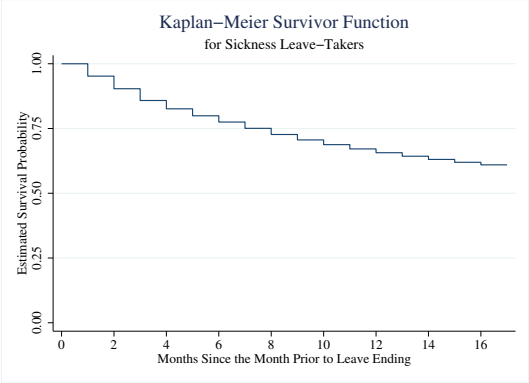
	Maternity Leave Spells				Sickness Leave Spells			
	Never Inspected (1)	Inspected, No Reg Inspection (2)	Reg Inspected, No Inf Workers (3)	Reg Inspected, Inf Workers Present (4)	Never Inspected (5)	Inspected, No Reg Inspection (6)	Reg Inspected, No Inf Workers (7)	Reg Inspected, Inf Workers Present (8)
Industry								
Agriculture/Forestry/Fishing	0.021	0.004	0.011	0.012	0.061	0.011	0.030	0.032
Mining	0.001	0.001	0.002	0.002	0.003	0.003	0.005	0.004
Manufacturing	0.093	0.118	0.123	0.119	0.123	0.165	0.167	0.162
Utilities: Electric/Gas	0.001	0.001	0.001	0.000	0.001	0.002	0.001	0.001
Utilities: Water/Sewage/Waste	0.002	0.002	0.002	0.001	0.004	0.004	0.003	0.002
Construction	0.010	0.010	0.012	0.018	0.030	0.024	0.033	0.038
Wholesale/Retail Trade	0.427	0.379	0.451	0.551	0.363	0.333	0.385	0.472
Transportation/Storage/Mail	0.024	0.025	0.024	0.015	0.051	0.046	0.041	0.028
Accommodation/Food	0.103	0.093	0.099	0.121	0.079	0.075	0.082	0.109
Information/Communication	0.017	0.019	0.014	0.010	0.015	0.015	0.013	0.010
Financial Services	0.043	0.033	0.046	0.019	0.032	0.025	0.036	0.017
Real Estate	0.007	0.009	0.005	0.003	0.005	0.007	0.004	0.003
Professional/Scientific/Technical	0.052	0.053	0.027	0.012	0.035	0.034	0.019	0.011
Administrative Activities	0.057	0.070	0.042	0.024	0.085	0.120	0.068	0.031
Education	0.046	0.057	0.048	0.036	0.033	0.040	0.038	0.031
Health/Social Services	0.042	0.058	0.053	0.031	0.026	0.035	0.035	0.023
Art/Culture/Sports	0.009	0.008	0.008	0.006	0.008	0.009	0.008	0.006
Other Service Activities	0.045	0.059	0.034	0.020	0.044	0.052	0.031	0.019
Avg # of Contracted Workers	12.182	13.941	15.803	17.100	11.574	12.806	14.776	16.433
	(9.186)	(9.870)	(10.752)	(11.196)	(8.781)	(9.303)	(10.068)	(10.599)
# of Leaves	319,281	15,901	84,218	48,193	338,310	18,889	94,221	49,438

Notes: We categorize maternity and sickness leave spells by the inspection status of the associated plant and provide plant-level characteristics associated with each spell. In columns (1) and (5), spells are associated with plants that were never inspected between 2003–2011. In columns (2) and (6), spells are associated with plants that were inspected at some point between 2003–2011 but were never inspected for possible registration violations. In columns (3) and (7), spells are associated with plants that were ever inspected for registration violations between 2003–2011, but informal workers were never found present. In columns (4) and (8), spells are associated with plants that were ever inspected for registration violations between 2003–2011, and informal workers were present.

Figure A1: Kaplan-Meier Survival Functions for Maternity and Sickness Leave-Takers



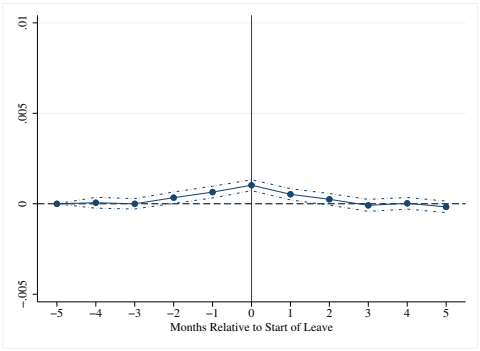
(a) Maternity Leave-Takers



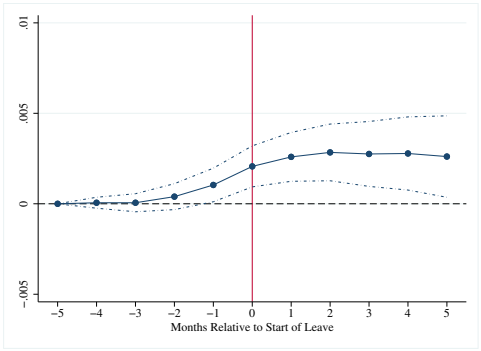
(b) Sickness Leave-Takers

Notes: The figures show Kaplan-Meier survivor functions for the maternity leave-takers and sickness leave-takers in our main estimation sample. The x-axis in Panel (a) is months since the month of maternity leave onset, and in Panel (b) is months since the month prior to sickness leave ending. Survival is defined as still being contracted with the plant.

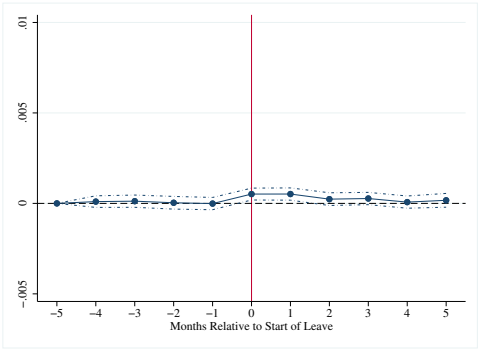
Figure A2: Temporary Employment Dynamics around Leave Initiation in Occupation of Leave-Taker



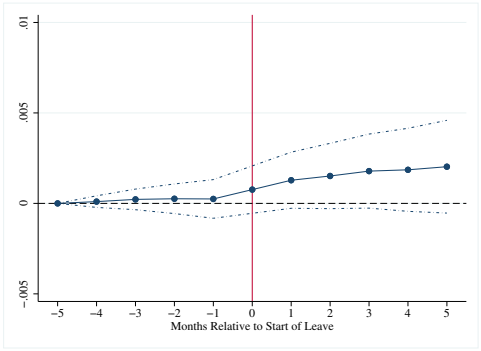
(a) Maternity: Change in Number of Temporary Employees



(b) Maternity: Number of Temporary Employees



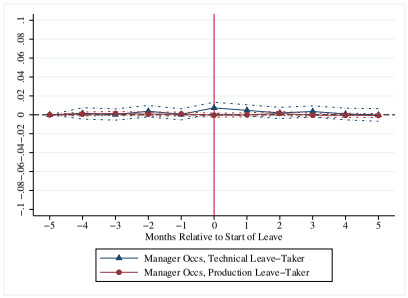
(c) Sickness: Change in Number of Temporary Employees



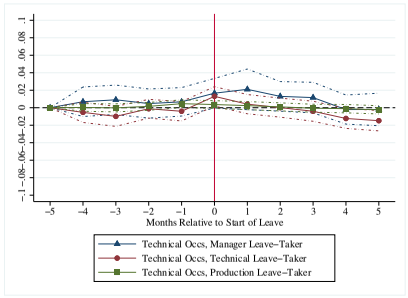
(d) Sickness: Number of Temporary Employees

Note: The panels display regression coefficients from equation 1. Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation of the leave-taker during the event window. In panels (b) and (d), we show the number of temporary employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panels (a) and (c), respectively.

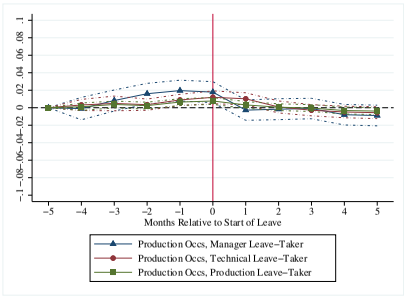
Figure A3: Employment Dynamics around Maternity Leave Initiation in Non-Leave-Taking Occupations



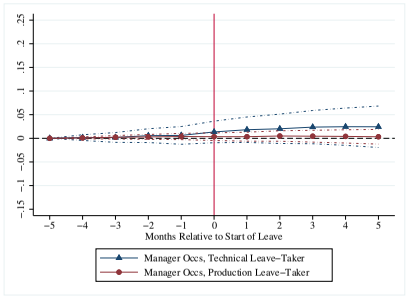
(a) Change in Number of Contracted Employees



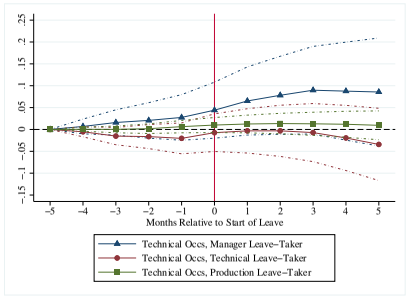
(b) Change in Number of Contracted Employees



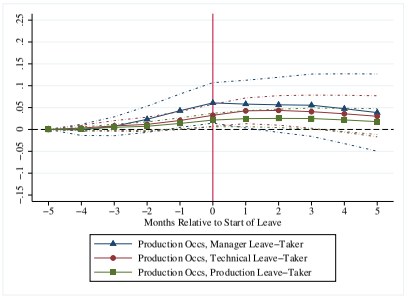
(c) Change in Number of Contracted Employees



(d) Number of Contracted Employees



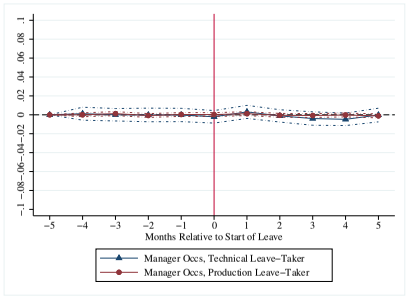
(e) Number of Contracted Employees



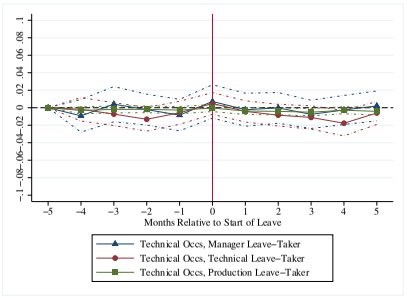
(f) Number of Contracted Employees

Note: The panels display regression coefficients from an augmented version of equation 1 estimated separately for each coarse occupation grouping (e.g., manager, technical, production) of the spillover occupations. We allow the employment dynamics (i.e., the β_k coefficients) to differ with the coarse occupation of the leave-taker (e.g., manager, technical, production). Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the non-maternity-leave-taking plant-occupation groups during the event window. In panels (d)–(f), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panels (a)–(c).

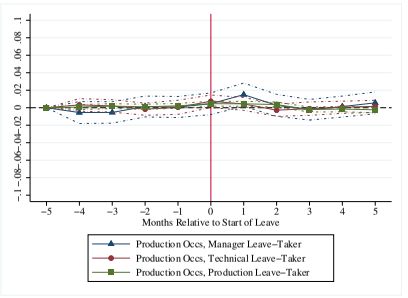
Figure A4: Employment Dynamics around Sickness Leave Initiation in Non-Leave-Taking Occupations



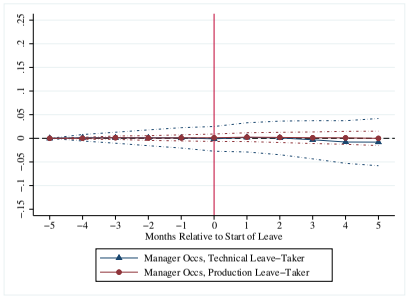
(a) Change in Number of Contracted Employees



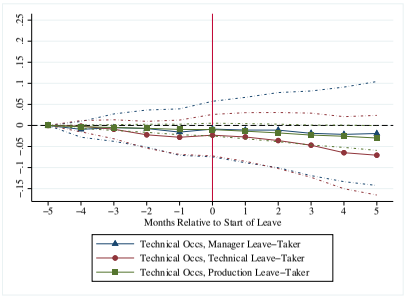
(b) Change in Number of Contracted Employees



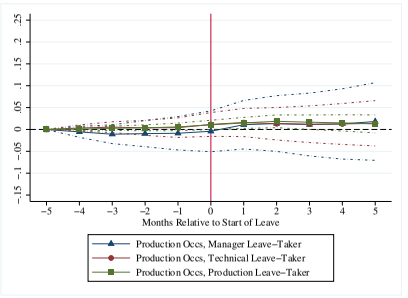
(c) Change in Number of Contracted Employees



(d) Number of Contracted Employees



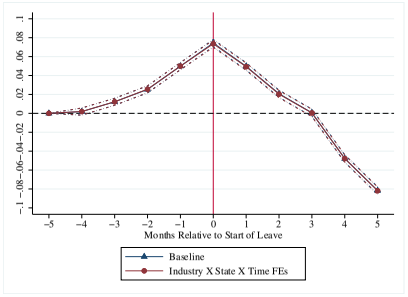
(e) Number of Contracted Employees



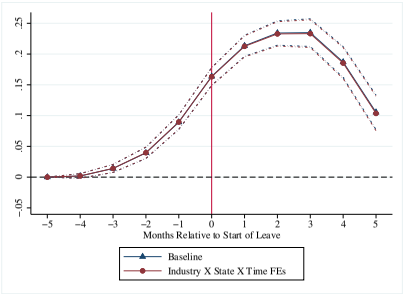
(f) Number of Contracted Employees

Note: The panels display regression coefficients from an augmented version of equation 1 estimated separately for each coarse occupation grouping (e.g., manager, technical, production) of the spillover occupations. We allow the employment dynamics (i.e., the β_k coefficients) to differ with the coarse occupation of the leave-taker (e.g., manager, technical, production). Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the non-sickness-leave-taking plant-occupation groups during the event window. In panels (d)–(f), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panels (a)–(c).

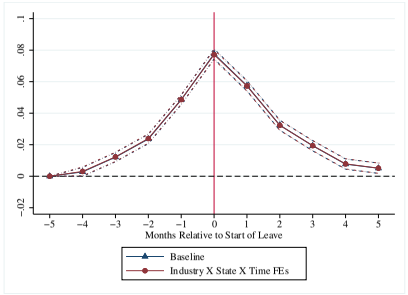
Figure A5: Employment Dynamics around Maternity Leave Initiation in Occupation of Leave-Taker with Different Calendar Time Controls



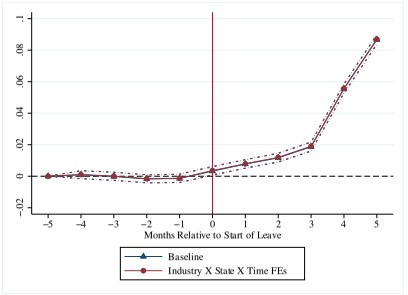
(a) Change in Number of Contracted Employees



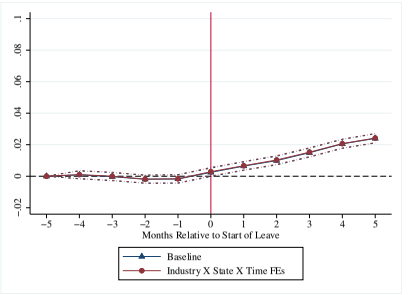
(b) Number of Contracted Employees



(c) Number of Hires



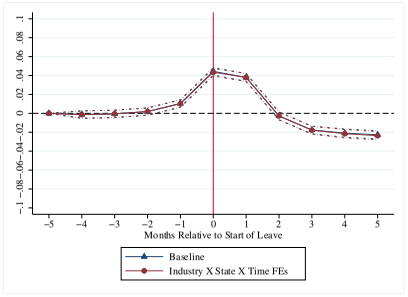
(d) Number of Separations



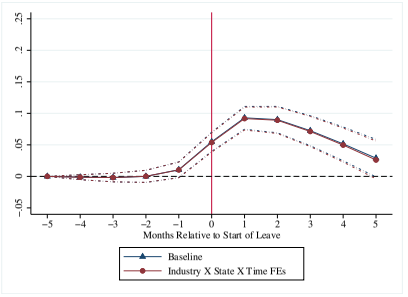
(e) Number of Separations Excluding Leave-Taker

Note: The panels display regression coefficients from equation 1 with either calendar time fixed effects (baseline) or industry-state-specific time fixed effects. Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation of the maternity leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

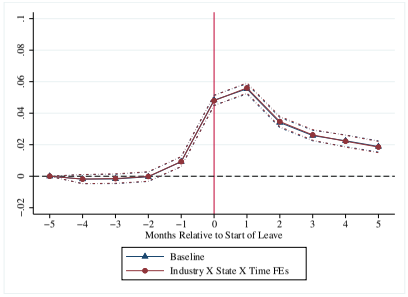
Figure A6: Employment Dynamics around Sickness Leave Initiation in Occupation of Leave-Taker with Different Calendar Time Controls



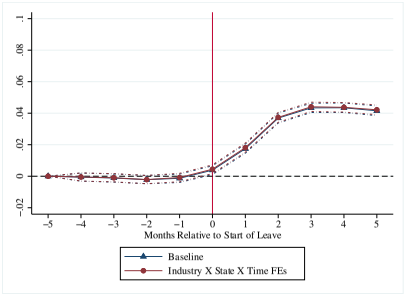
(a) Change in Number of Contracted Employees



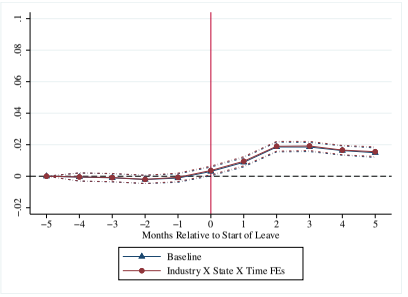
(b) Number of Contracted Employees



(c) Number of Hires



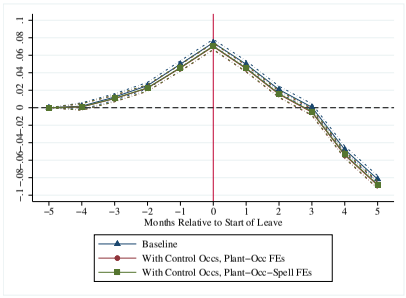
(d) Number of Separations



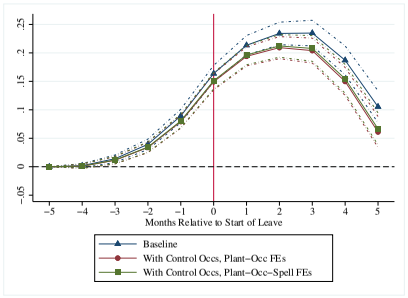
(e) Number of Separations Excluding Leave-Taker

Note: The panels display regression coefficients from equation 1 with either calendar time fixed effects (baseline) or industry-state-specific time fixed effects. Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation of the sickness leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

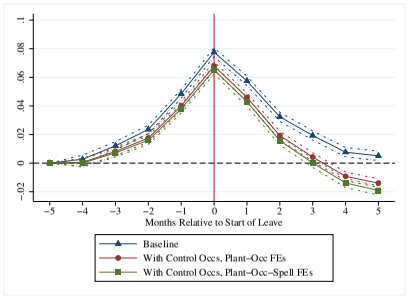
Figure A7: Employment Dynamics around Maternity Leave Initiation in Occupation of Leave-Taker Including Control Groups



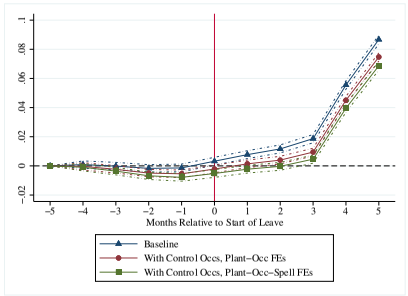
(a) Change in Number of Contracted Employees



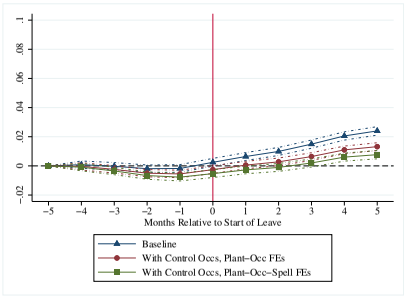
(b) Number of Contracted Employees



(c) Number of Hires



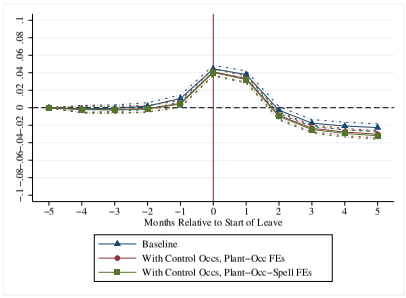
(d) Number of Separations



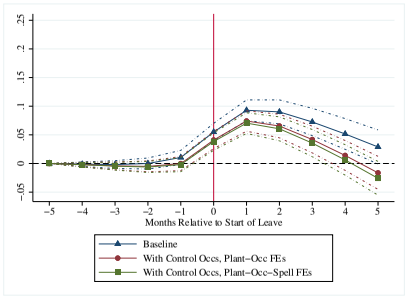
(e) Number of Separations Excluding Leave-Taker

Note: The panels display regression coefficients from modified versions of equation 1, where non-leave-taking occupations in the same plant as the leave-taker are included as control groups. Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes occupation groups in the same plant as the maternity leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

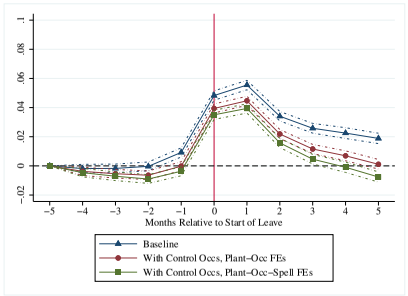
Figure A8: Employment Dynamics around Sickness Leave Initiation in Occupation of Leave-Taker Including Control Groups



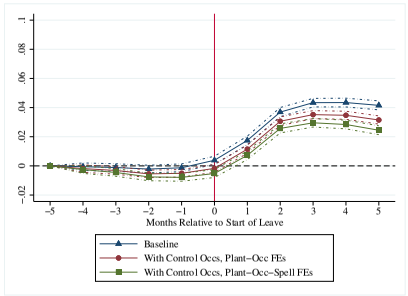
(a) Change in Number of Contracted Employees



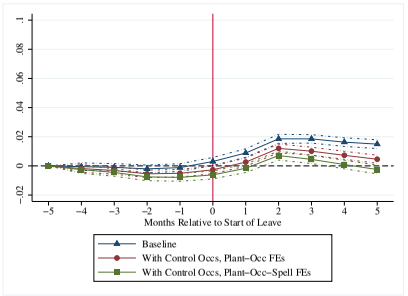
(b) Number of Contracted Employees



(c) Number of Hires



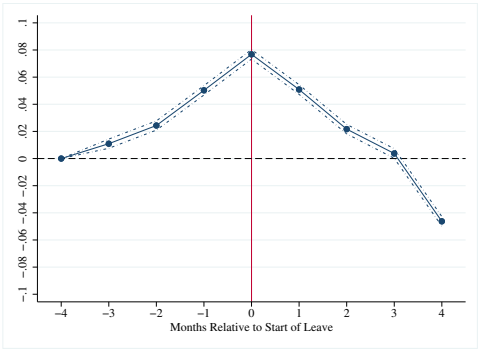
(d) Number of Separations



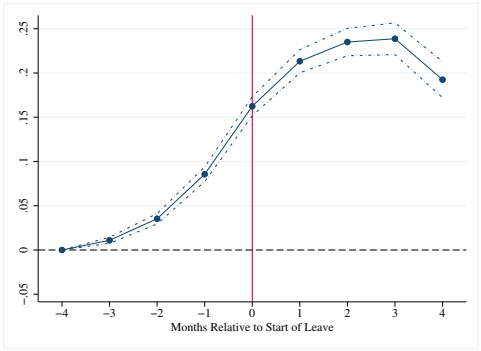
(e) Number of Separations Excluding Leave-Taker

Note: The panels display regression coefficients from modified versions of equation 1, where non-leave-taking occupations in the same plant as the leave-taker are included as control groups. Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes occupation groups in the same plant as the sickness leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

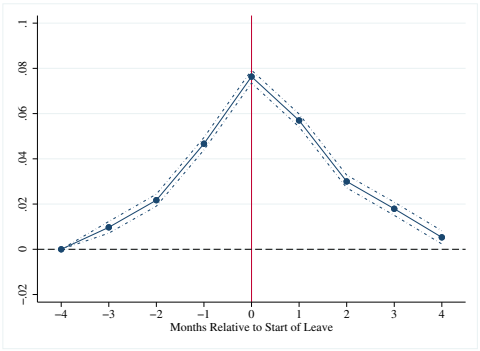
Figure A9: Employment Dynamics around Maternity Leave Initiation in Occupation of Leave-Taker with 4-Month Event Window



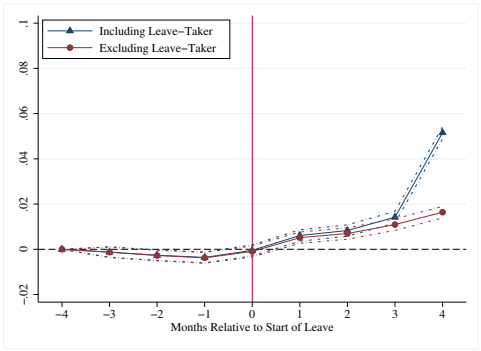
(a) Change in Number of Contracted Employees



(b) Number of Contracted Employees



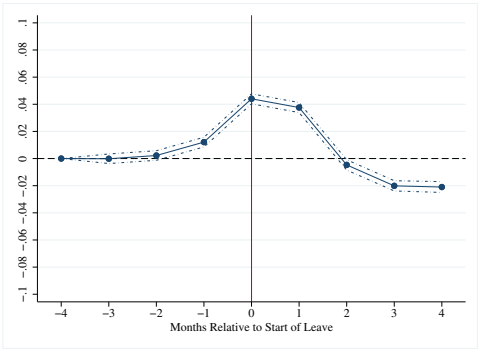
(c) Number of Hires



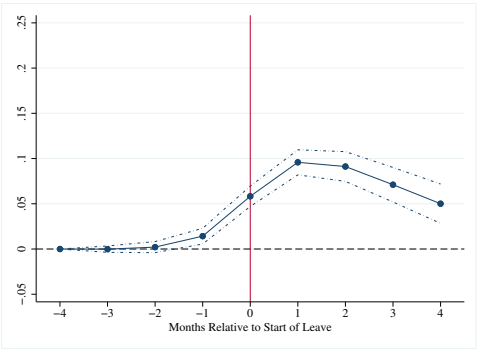
(d) Number of Separations

Note: The panels display regression coefficients from equation 1 where the event window has been decreased to four months before and after the month of maternity leave onset. Coefficients in $k = -4$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation group of the maternity leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-3, \ldots, 4\}$ relative to four months prior to leave onset, obtained by computing $\sum_{k=-4}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

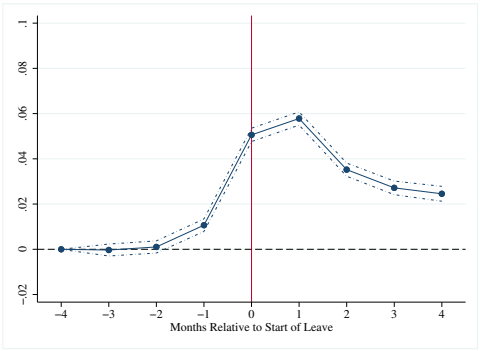
Figure A10: Employment Dynamics around Sickness Leave Initiation in Occupation of Leave-Taker with 4-Month Event Window



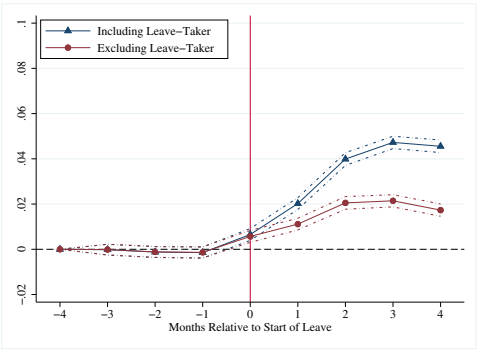
(a) Change in Number of Contracted Employees



(b) Number of Contracted Employees



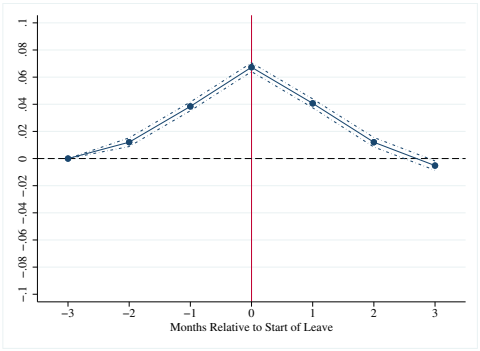
(c) Number of Hires



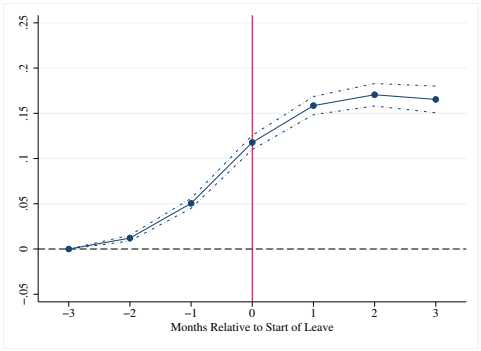
(d) Number of Separations

Note: The panels display regression coefficients from equation 1 where the event window has been decreased to four months before and after the month of sickness leave onset. Coefficients in $k = -4$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation group of the sickness leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-3, \ldots, 4\}$ relative to four months prior to leave onset, obtained by computing $\sum_{k=-4}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

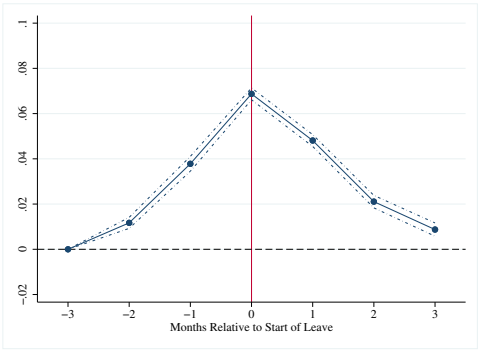
Figure A11: Employment Dynamics around Maternity Leave Initiation in Occupation of Leave-Taker with 3-Month Event Window



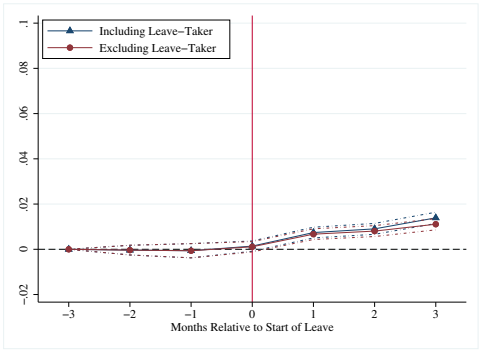
(a) Change in Number of Contracted Employees



(b) Number of Contracted Employees



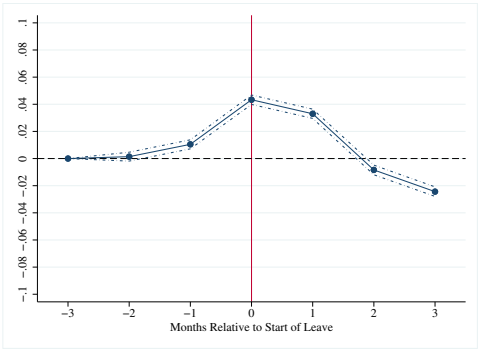
(c) Number of Hires



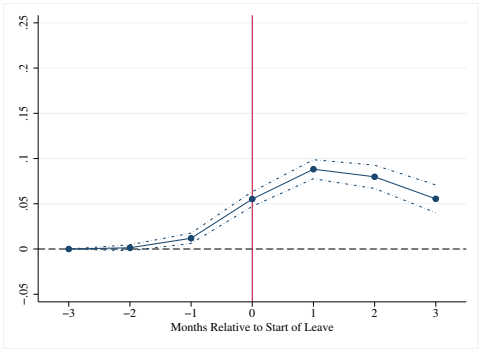
(d) Number of Separations

Note: The panels display regression coefficients from equation 1 where the event window has been decreased to three months before and after the month of maternity leave onset. Coefficients in $k = -3$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation group of the maternity leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-2, \ldots, 3\}$ relative to three months prior to leave onset, obtained by computing $\sum_{k=-3}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

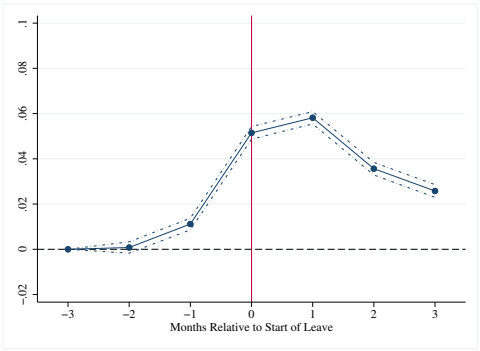
Figure A12: Employment Dynamics around Sickness Leave Initiation in Occupation of Leave-Taker with 3-Month Event Window



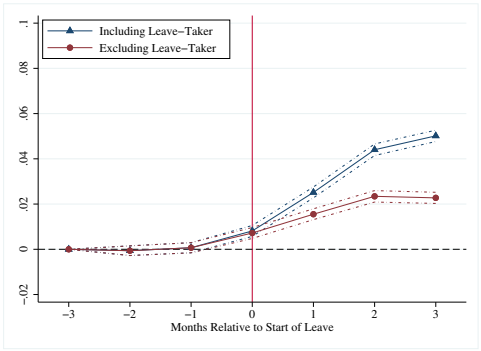
(a) Change in Number of Contracted Employees



(b) Number of Contracted Employees



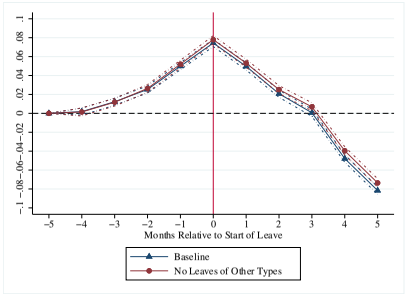
(c) Number of Hires



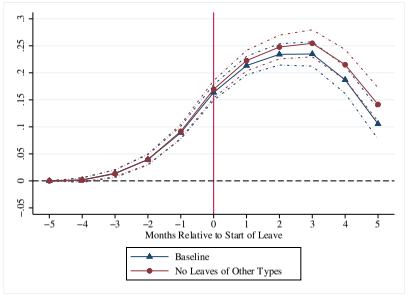
(d) Number of Separations

Note: The panels display regression coefficients from equation 1 where the event window has been decreased to three months before and after the month of sickness leave onset. Coefficients in $k = -3$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation group of the sickness leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-2, \ldots, 3\}$ relative to three months prior to leave onset, obtained by computing $\sum_{k=-3}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

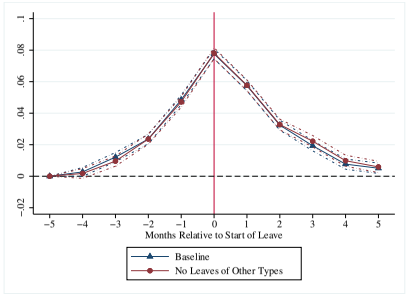
Figure A13: Employment Dynamics around Maternity Leave Initiation in Occupation of Leave-Taker Using a More Stringent Clean-Spell Definition



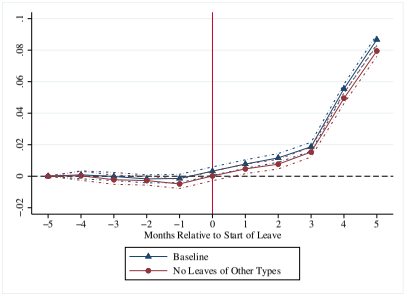
(a) Change in Number of Contracted Employees



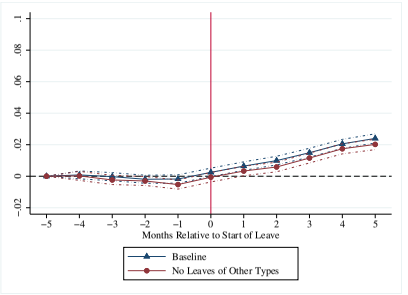
(b) Number of Contracted Employees



(c) Number of Hires



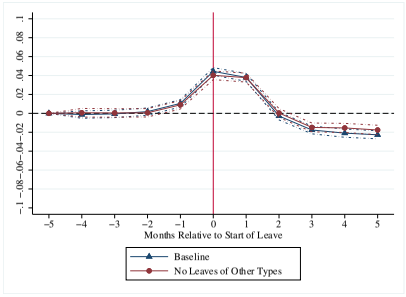
(d) Number of Separations



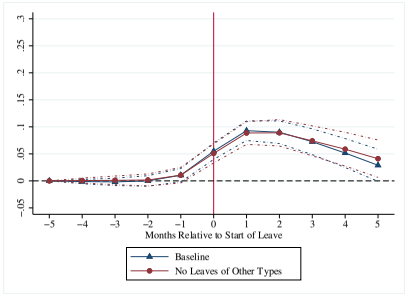
(e) Number of Separations Excluding Leave-Taker

Note: The panels display regression coefficients from equation 1 using maternity leave spells where the event window centered on the month of initiation does not intersect the event window of another maternity or sickness leave spell at that plant. This is a more stringent clean-spell definition compared to our baseline analysis, which included spells where the event window centered on the month of initiation does not intersect the event window of another maternity leave spell at that plant. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation of the maternity leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

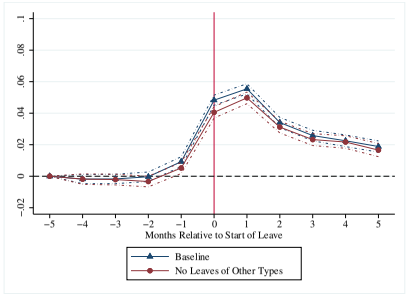
Figure A14: Employment Dynamics around Sickness Leave Initiation in Occupation of Leave-Taker Using a More Stringent Clean-Spell Definition



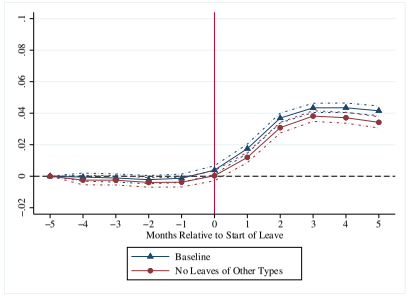
(a) Change in Number of Contracted Employees



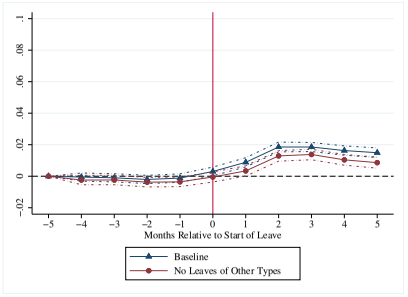
(b) Number of Contracted Employees



(c) Number of Hires



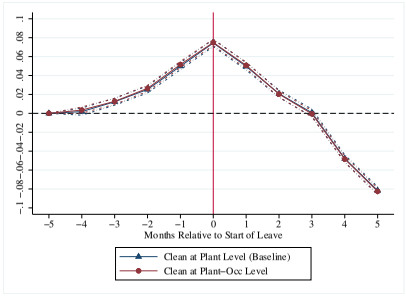
(d) Number of Separations



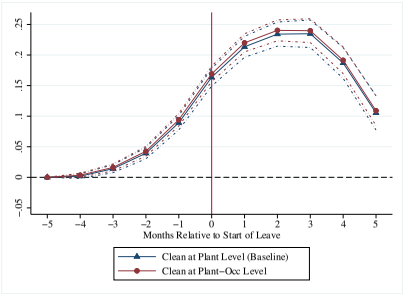
(e) Number of Separations Excluding Leave-Taker

Note: The panels display regression coefficients from equation 1 using sickness leave spells where the event window centered on the month of initiation does not intersect the event window of another sickness or maternity leave spell at that plant. This is a more stringent clean-spell definition compared to our baseline analysis, which included spells where the event window centered on the month of initiation does not intersect the event window of another sickness leave spell at that plant. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation of the sickness leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

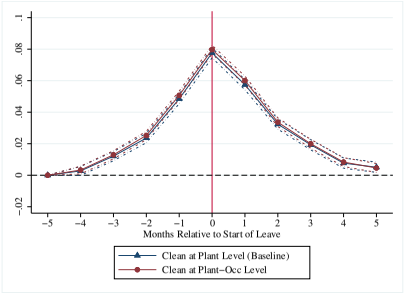
Figure A15: Employment Dynamics around Maternity Leave Initiation in Occupation of Leave-Taker Using a Relaxed Clean-Spell Definition



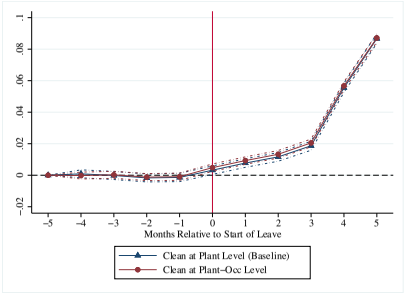
(a) Change in Number of Contracted Employees



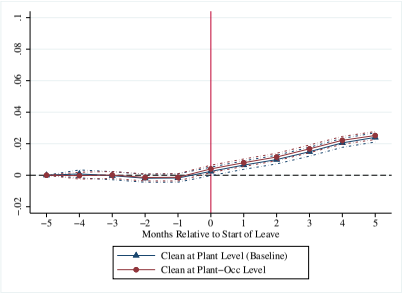
(b) Number of Contracted Employees



(c) Number of Hires



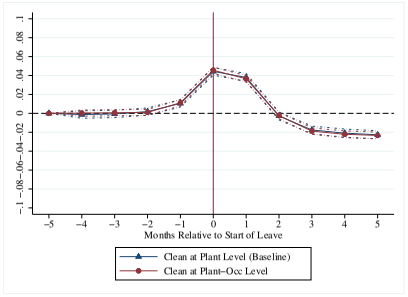
(d) Number of Separations



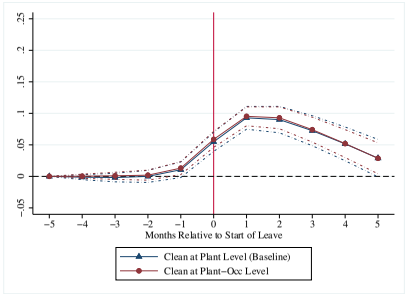
(e) Number of Separations Excluding Leave-Taker

Note: The panels display regression coefficients from equation 1 using leave spells where the event window centered on the month of initiation does not intersect the event window of another maternity leave spell at that plant-occupation. This is a relaxation of the clean-spell definition used in our baseline analysis, which is restricted to spells where the event window centered on the month of initiation does not intersect the event window of another maternity leave spell at that plant. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation of the maternity leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

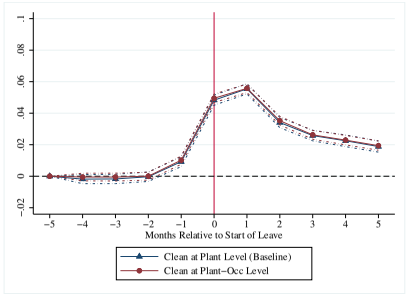
Figure A16: Employment Dynamics around Sickness Leave Initiation in Occupation of Leave-Taker Using a Relaxed Clean-Spell Definition



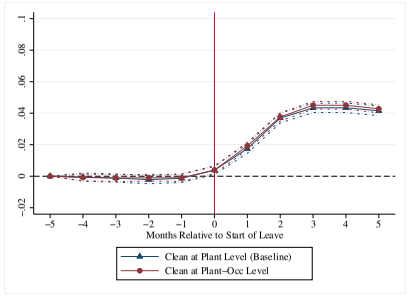
(a) Change in Number of Contracted Employees



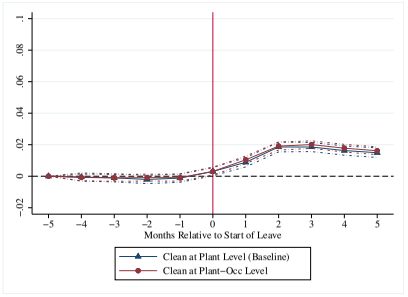
(b) Number of Contracted Employees



(c) Number of Hires



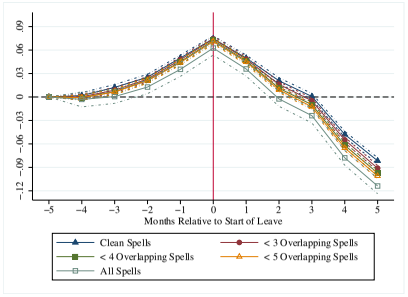
(d) Number of Separations



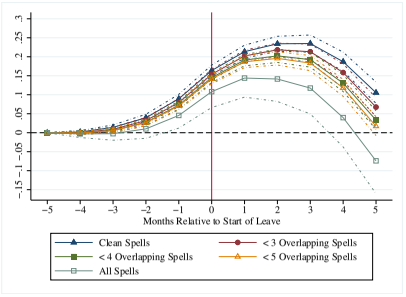
(e) Number of Separations Excluding Leave-Taker

Note: The panels display regression coefficients from equation 1 using leave spells where the event window centered on the month of initiation does not intersect the event window of another sickness leave spell at that plant-occupation. This is a relaxation of the clean-spell definition used in our baseline analysis, which is restricted to spells where the event window centered on the month of initiation does not intersect the event window of another sickness leave spell at that plant. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation of the sickness leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

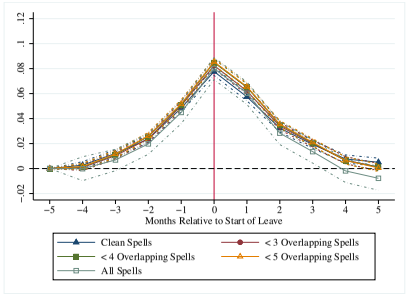
Figure A17: Employment Dynamics around Maternity Leave Initiation in Occupation of Leave-Taker Not Imposing Clean Leave Definition



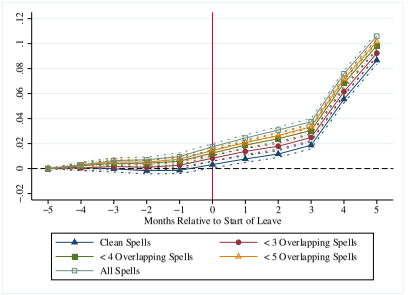
(a) Change in Number of Contracted Employees



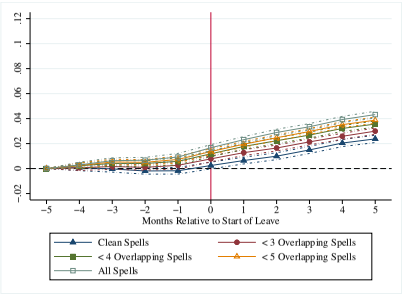
(b) Number of Contracted Employees



(c) Number of Hires



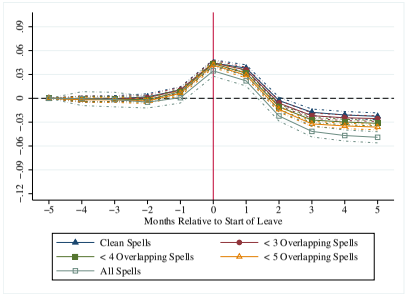
(d) Number of Separations



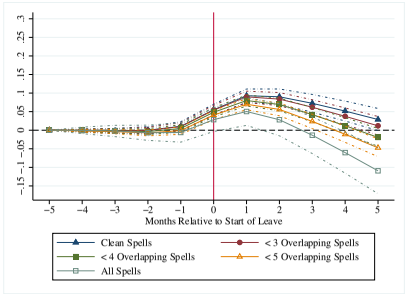
(e) Number of Separations Excluding Leave-Taker

Note: The panels display regression coefficients from equation 1 where we include maternity leave spells regardless of whether their event windows overlap as long as all other sample selection criteria are met. Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation group of the maternity leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

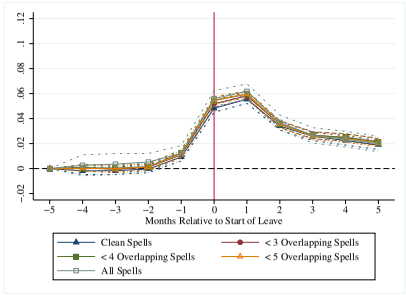
Figure A18: Employment Dynamics around Sickness Leave Initiation in Occupation of Leave-Taker Not Imposing Clean Leave Definition



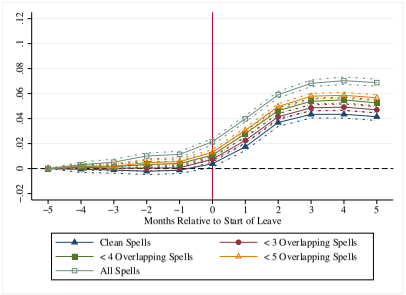
(a) Change in Number of Contracted Employees



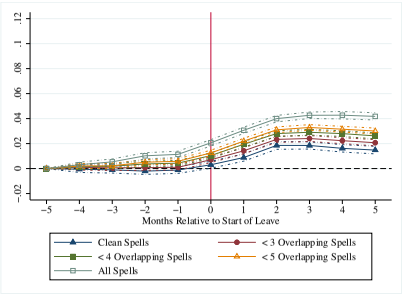
(b) Number of Contracted Employees



(c) Number of Hires



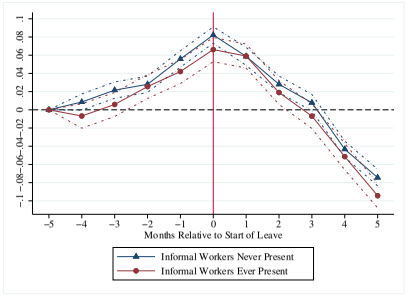
(d) Number of Separations



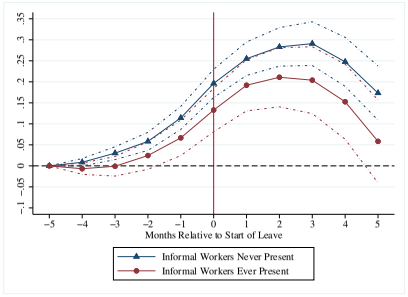
(e) Number of Separations Excluding Leave-Taker

Note: The panels display regression coefficients from equation 1 where we include sickness leave spells regardless of whether their event windows overlap as long as all other sample selection criteria are met. Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation group of the sickness leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

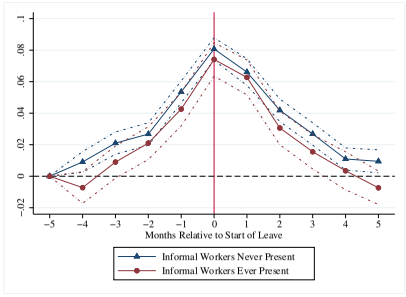
Figure A19: Heterogeneity in Employment Dynamics around Maternity Leave Initiation in Occupation of Leave-Taker by Inspection Status from 2003–2011



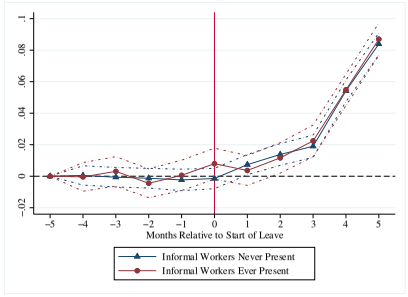
(a) Change in Number of Contracted Employees



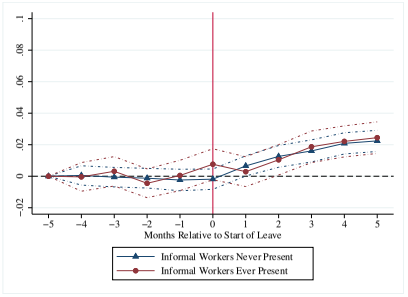
(b) Number of Contracted Employees



(c) Number of Hires



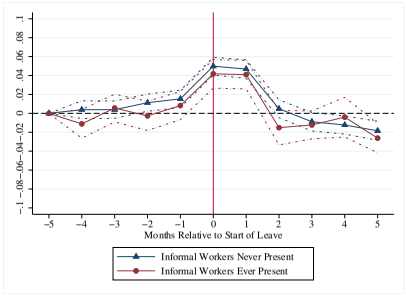
(d) Number of Separations



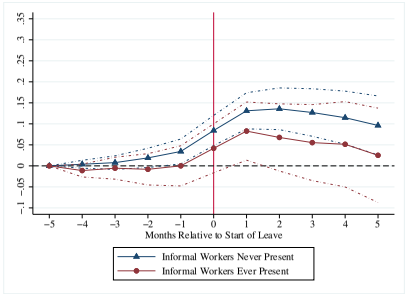
(e) Number of Separations Excluding Leave-Taker

Note: The panels display regression coefficients from an augmented version of equation 1, where we allow the employment dynamics (i.e., the β_k coefficients) to differ with the plant's inspection status. Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation group of the maternity leave-taker during the event window and only plants that ever had their employee registration inspected between 2003–2011. In panel (b), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

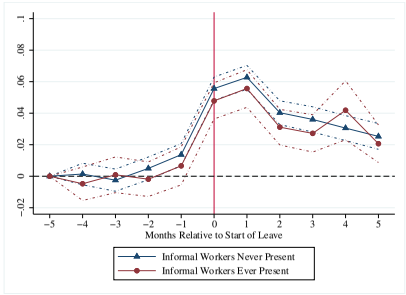
Figure A20: Heterogeneity in Employment Dynamics around Sickness Leave Initiation in Occupation of Leave-Taker by Inspection Status from 2003–2011



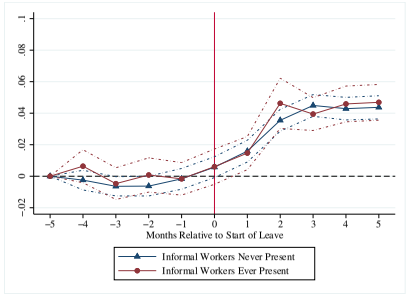
(a) Change in Number of Contracted Employees



(b) Number of Contracted Employees



(c) Number of Hires

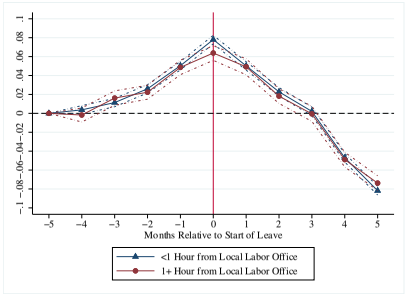


(d) Number of Separations

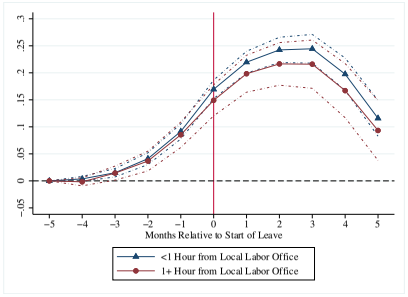
(e) Number of Separations Excluding Leave-Taker

Note: The panels display regression coefficients from an augmented version of equation 1, where we allow the employment dynamics (i.e., the β_k coefficients) to differ with the plant's inspection status. Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation group of the sickness leave-taker during the event window and only plants that ever had their employee registration inspected between 2003–2011. In panel (b), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

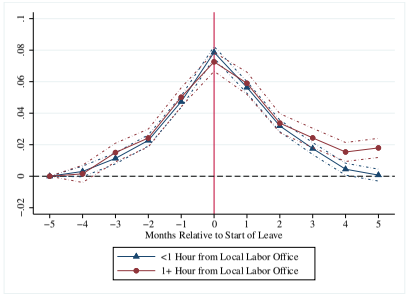
Figure A21: Heterogeneity in Employment Dynamics around Maternity Leave Initiation in Occupation of Leave-Taker by Driving Distance to Nearest Labor Enforcement Office



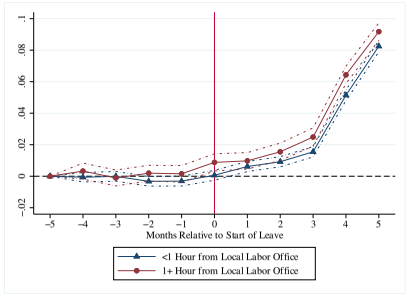
(a) Change in Number of Contracted Employees



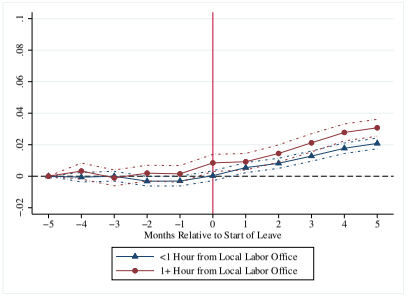
(b) Number of Contracted Employees



(c) Number of Hires



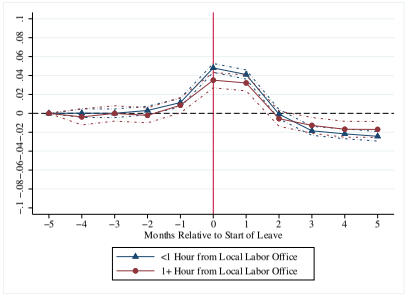
(d) Number of Separations



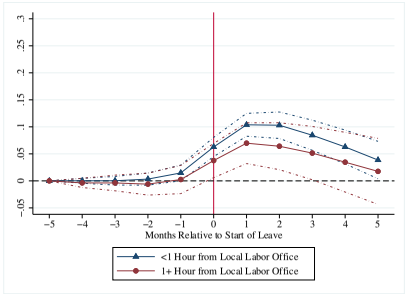
(e) Number of Separations Excluding Leave-Taker

Note: The panels display regression coefficients from an augmented version of equation 1. We allow the employment dynamics (i.e., the β_k coefficients) to differ by whether the plant is located within one hour of the nearest local labor enforcement office. Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation group of the maternity leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

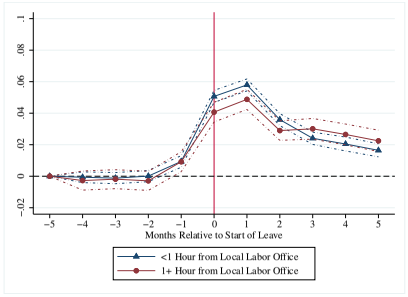
Figure A22: Heterogeneity in Employment Dynamics around Sickness Leave Initiation in Occupation of Leave-Taker by Driving Distance to Nearest Labor Enforcement Office



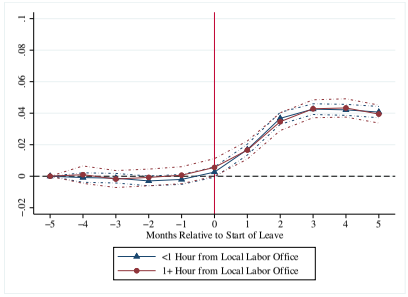
(a) Change in Number of Contracted Employees



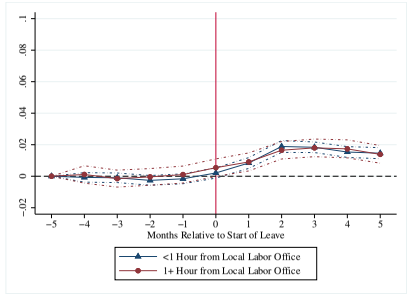
(b) Number of Contracted Employees



(c) Number of Hires



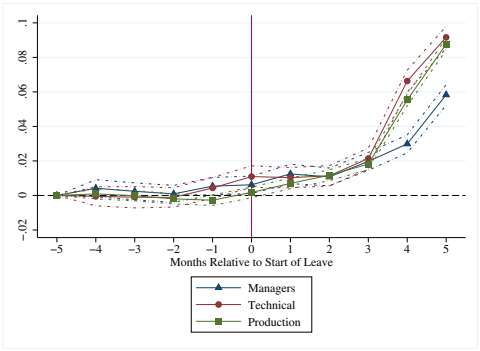
(d) Number of Separations



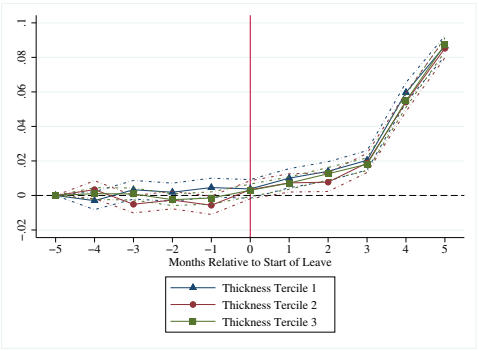
(e) Number of Separations Excluding Leave-Taker

Note: The panels display regression coefficients from an augmented version of equation 1. We allow the employment dynamics (i.e., the β_k coefficients) to differ by whether the plant is located within one hour of the nearest local labor enforcement office. Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation group of the sickness leave-taker during the event window. In panel (b), we show the number of contracted employees in event month $i \in \{-4, \ldots, 5\}$ relative to five months prior to leave onset, obtained by computing $\sum_{k=-5}^{i} \hat{\beta}_k$, using the β_k estimates from panel (a).

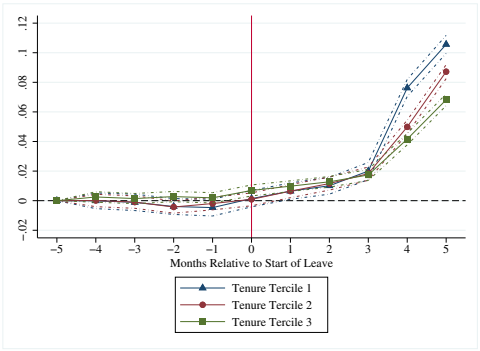
Figure A23: Heterogeneity in Separations (Including Leave-Taker) around Maternity Leave Initiation in Occupation of Leave-Taker



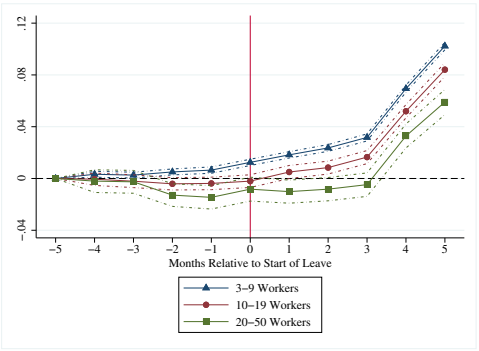
(a) By Occupation



(b) By Local Labor Market Thickness



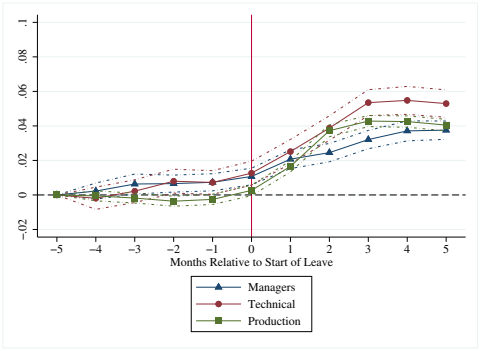
(c) By Leave-Taker Tenure



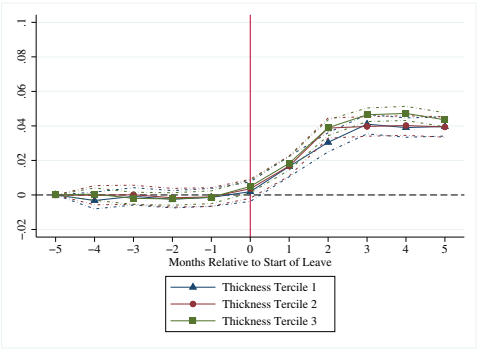
(d) By Plant Size

Note: The panels display regression coefficients from an augmented version of equation 1 where the employment dynamics (i.e., the β_k coefficients) differ by various dimensions of heterogeneity. Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation of the maternity leave-taker during the event window.

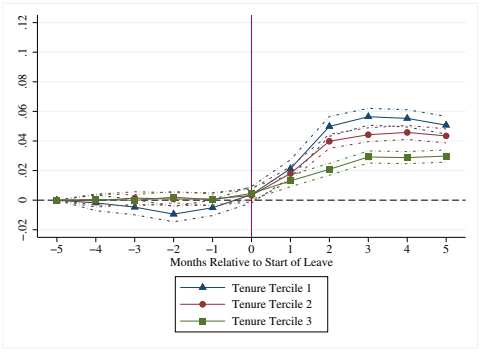
Figure A24: Heterogeneity in Separations (Including Leave-Taker) around Sickness Leave Initiation in Occupation of Leave-Taker



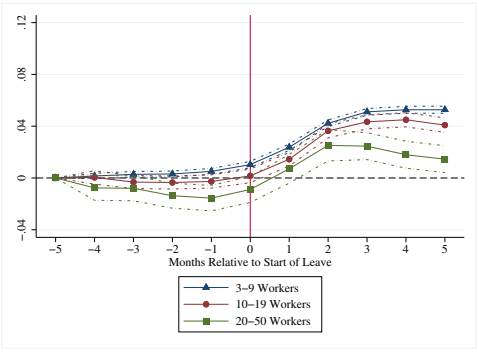
(a) By Occupation



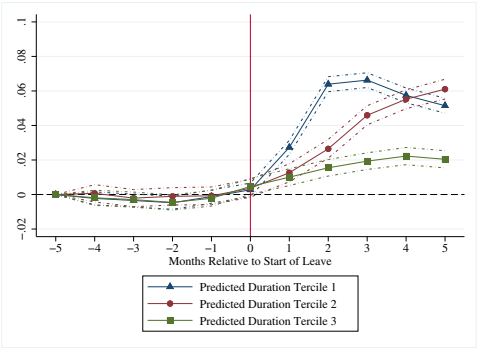
(b) By Local Labor Market Thickness



(c) By Leave-Taker Tenure



(d) By Plant Size



(e) By Predicted Leave Duration

Note: The panels display regression coefficients from an augmented version of equation 1 where the employment dynamics (i.e., the β_k coefficients) differ by various dimensions of heterogeneity. Coefficients in $k = -5$ are normalized to zero. The dashed lines denote 95% confidence intervals based on standard errors clustered at the leave spell level. The sample includes the plant-occupation of the sickness leave-taker during the event window.