Figures

Figure 1: Kindergarten attendance in West Germany



Notes: The figure shows the percentage of all children of the respective age who attend child care in West Germany. Data: Micro Census. Source: BMFSFJ (2005, p. 299).

Figure 2: Kindergarten entry months



Notes: The left figure shows the percentage of all kindergarten children who entered kindergarten in the respective month for federal state-year combinations where kindergarten start was in August; the right figure shows the respective percentages for federal state-year combinations where kindergarten start was in September. Data: DJI Kinderpanel.

Figure 3: The age-cut off rule and a child's kindergarten attendance



Notes: The figure shows actual (upper panel) and predicted (lower panel) kindergarten attendance rates by the child's age (in months) at last kindergarten start. Kindergarten attendance is measured roughly half a year after the last kindergarten start. The black lines show results from local linear regressions with bandwidth 3 on the subsamples to the left and to the right of the cut-off; the grey lines depict the 90 percent confidence interval. The sample consists of all mothers with children born between 1992 to 2000 who are older than 36 months at the time of the interview but not older than 48 months at the time of the last kindergarten start. Data: SOEP.

Figure 4: The age-cut off rule and a mother's employment rate



Notes: The figure shows actual (upper panel) and predicted (lower panel) maternal employment rates by her youngest child's age (in months) at last kindergarten start. Employment is measured roughly half a year after the last kindergarten start. The black lines show results from local linear regressions with bandwidth 3 on the subsamples to the left and to the right of the cut-off; the grey lines depict the 90 percent confidence interval. The sample consists of all mothers with children born between 1992 to 2000 who are older than 36 months at the time of the interview but not older than 48 months at the time of the last kindergarten start. Data: SOEP.

Figure 5: The age-cut off rule and a mother's working hours



Notes: The figure shows actual (upper panel) and predicted (lower panel) working hours of mothers by their youngest child's age (in months) at last kindergarten start. Working hours are measured roughly half a year after the last kindergarten start. The black lines show results from local linear regressions with bandwidth 3 on the subsamples to the left and to the right of the cut-off; the grey lines depict the 90 percent confidence interval. The sample consists of all mothers with children born between 1992 to 2000 who are older than 36 months at the time of the interview but not older than 48 months at the time of the last kindergarten start. Data: SOEP.





Notes: The figure shows the development of employment for various groups of women in West Germany for the years 1991 to 2001. Data: Micro Census.



Figure 7: Difference-in-differences effects over time using different control groups

Notes: The figure shows coefficients of the interaction of treatment group and year dummies from a difference-in-differences model, where we control for age, education and nationality. The vertical line marks the baseline year 1996. The sample consists of women living in West Germany in the years 1991 to 2001. Data: Micro Census.

Tables

	Age at last ki	Age at last kindergarten start	
	<36 months	>=36 months	t value
Mother's years of schooling	11.842	11.838	0.035
	(0.095)	(0.068)	
Mother's migration background	0.268	0.274	0.293
	(0.017)	(0.012)	
Partner's years of schooling	12.115	12.149	0.258
	(0.105)	(0.075)	
Partner's migration background	0.285	0.283	0.068
	(0.018)	(0.012)	
Partner's employment	0.919	0.914	0.397
	(0.011)	(0.008)	
Partner's net labor income (in €)	1,871.77	1,881.82	0.171
	(48.17)	(33.73)	
Child's gender (female)	0.511	0.511	0.013
	(0.020)	(0.014)	
Child's distance to oldest sibling (in months)	39.988	40.475	0.356
	(1.630)	(1.088)	
Child's number of siblings	0.880	0.929	1.216
	(0.032)	(0.023)	
Number of household members	3.992	4.083	1.847
	(0.038)	(0.029)	
Age variables			
Mother's age (in years)	32.942	34.037	4.690
	(0.185)	(0.136)	
Partner's age (in years)	35.588	36.683	4.203
	(0.208)	(0.151)	
Child's age (in months)	39.075	48.239	50.182
	(0.089)	(0.120)	

Table 1: Descriptive statistics on control variables

(0.089) (0.120) Notes: The sample consists of all mothers with children born between 1992 to 2000 who are older than 36 months at the time of the interview but not older than 48 months at the time of the last kindergarten start. The table shows means; standard deviations are given in parentheses. Data: SOEP.

Table 2: First-stage estimates

	Kindergarten attendance at the time of the interview							
	Full sample	Full sample	West	East	Year<=1998	Year>1998	1991-1995	
Above cut-off age at last kindergarten start	0.178***	0.176***	0.195***	0.077	0.223***	0.165***	0.020	
	(0.032)	(0.030)	(0.034)	(0.056)	(0.072)	(0.034)	(0.049)	
Year controls	No	Yes	Yes	Yes	Yes	Yes	Yes	
Federal state controls	No	Yes	Yes	Yes	Yes	Yes	Yes	
Individual level controls	No	Yes	Yes	Yes	Yes	Yes	Yes	
Ν	1,936	1,936	1,617	319	411	1,525	943	
\mathbb{R}^2	0.148	0.285	0.301	0.220	0.358	0.253	0.317	

Notes: The table shows first-stage estimates; standard errors are clustered at the individual mother level and given in parentheses. The sample for Columns (1) through (6) consists of all mothers with children born between 1992 and 2000 who are older than 36 months at the time of the interview but not older than 48 months at the time of the last kindergarten start. The sample for Column (7) consists of all mothers with children born between 1986 and 1991 who are older than 36 months at the time of the interview but not older than 48 months at the time of the last kindergarten start. In column (I), we only control for the youngest child's age (in months). As controls in columns (2) through (7) are included mother's age, years of schooling, migration background, employment status, and net labor income, the size of the household, the youngest child's age (in months) and gender, number of siblings, and distance (in months) to his or her oldest sibling; as well as state and year dummies. *** 1% level of significance, ** 5% level of significance, * 10% level of significance. Data: SOEP.

Table 3: Reduced-form and 2SLS estimates on employment

		Employment (yes/no)						
		2SLS				2SLS		
	Reduced form	First stage	Second stage	Reduced form	First stage	Second stage		
Above cut-off age at last kindergarten start	0.064*	0.178***		0.065*	0.176***			
	(0.036)	(0.032)		(0.035)	(0.030)			
Child care			0.360*			0.366*		
			(0.201)			(0.201)		
Year controls	No	No	No	Yes	Yes	Yes		
Federal state controls	No	No	No	Yes	Yes	Yes		
Individual level controls	No	No	No	Yes	Yes	Yes		
First stage F-test								
Robust F stat	tistic	3	0.909		3	5.633		
Prob	> F	(0.000		(0.000		
Ν	1,936		1,936	1,936		1,936		
R ²	0.011	(0.051	0.124	(0.130		

Notes: The table shows reduced-form and 2SLS estimates; standard errors are clustered at the individual mother level and given in parentheses. The sample consists of all mothers with children born between 1992 and 2000 who are older than 36 months at the time of the interview but not older than 48 months at the time of the last kindergarten start. In columns (1) through (3), we only control for the youngest child's age (in months). As controls in columns (4) through (6) are included mother's age, years of schooling, migration background, employment status, and net labor income; the size of the household; the youngest child's age and gender, number of siblings, and distance (in months) to his or her oldest sibling; as well as state and year dummies.

*** 1% level of significance, ** 5% level of significance, * 10% level of significance. Data: SOEP.

Table 4: Reduced-form and 2SLS estimates on weekly working hours

	Weekly working hours						
	2SLS					2SLS	
	Reduced form	First stage	Second stage	Reduced form	First stage	Second stage	
Above cut-off age at last kindergarten start	2.608**	0.175***		2.464**	0.172***		
	(1.078)	(0.033)		(1.047)	(0.030)		
Child care			14.872**			14.320**	
			(6.019)			(6.081)	
Year controls	No	No	No	Yes	Yes	Yes	
Federal state controls	No	No	No	Yes	Yes	Yes	
Individual level controls	No	No	No	Yes	Yes	Yes	
First stage F-test							
Robust F statistic		2	9.372		3	3.288	
Prob > F		(0.000		(0.000	
Ν	1,903	1	,903	1,903	1	,903	
\mathbb{R}^2	0.007	(0.030	0.200	().172	

Notes: The table shows reduced-form and 2SLS estimates; standard errors are clustered at the individual mother level and given in parentheses. The sample consists of all mothers with children born between 1992 and 2000 who are older than 36 months at the time of the interview but not older than 48 months at the time of the last kindergarten start. In columns (1) through (3), we only control for the youngest child's age (in months). As controls in columns (4) through (6) are included mother's age, years of schooling, migration background, employment status, and net labor income; the size of the household; the youngest child's age and gender, number of siblings, and distance (in months) to his or her oldest sibling; as well as state and year dummies.

*** 1% level of significance, ** 5% level of significance, * 10% level of significance. Data: SOEP.

Table 5: Reduced-form	and 2SLS estimates:	Placebo treatment test
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		Employment yes/no (t-1)			Weekly working hours (t-1)		
		2SLS				2SLS	
	Reduced form	First stage	Second stage	Reduced form	First stage	Second stage	
Above cut-off age at last kindergarten start	0.011	0.183***		-0.308	0.175***		
-	(0.035)	(0.030)		(0.976)	(0.030)		
Child care			0.060			-1.754	
			(0.188)			(5.535)	
Year controls	Yes	Yes	Yes	Yes	Yes	Yes	
Federal state controls	Yes	Yes	Yes	Yes	Yes	Yes	
Individual-level controls	Yes	Yes	Yes	Yes	Yes	Yes	
First-stage F-test							
Robust F statistic		3	57.661		3	34.227	
Prob > F			0.000			0.000	
Ν	1,911		1,911	1,887		1,887	
\mathbb{R}^2	0.125		0.133	0.215	1	0.206	

Notes: The table shows reduced-form and 2SLS placebo estimates where we use employment (yes/no) and weekly working hours in the previous year as our outcome variable; standard errors are clustered at the individual mother level and given in parentheses. The sample consists of all mothers with children born between 1992 and 2000 who are older than 36 months at the time of the interview but not older than 48 months at the time of the last kindergarten start. As controls are included mother's age, years of schooling, migration background, employment status, and net labor income; the size of the household; the youngest child's age and gender, number of siblings, and distance (in months) to his or her oldest sibling; as well as state and year dummies.

*** 1% level of significance, ** 5% level of significance, * 10% level of significance. Data: SOEP.

	Employed (yes=1, no=0)					
Control group: Women with	10-11 year old kids		no kids (age 29-36)		no kids (a	ge 18-60)
Treatment group (yes=1, no=0)	-0.182***	-0.209***	-0.404***	-0.376***	-0.222***	-0.287***
	(0.010)	(0.011)	(0.008)	(0.008)	(0.007)	(0.007)
After treatment (2001=1, 1996=0)	0.059***	0.053***	0.028***	0.021***	0.044***	0.040***
	(0.010)	(0.010)	(0.005)	(0.005)	(0.003)	(0.003)
After treatment * Treatment group	0.051***	0.050***	0.082***	0.082***	0.065***	0.072***
	(0.014)	(0.013)	(0.011)	(0.011)	(0.010)	(0.010)
Individual control variables	No	Yes	No	Yes	No	Yes
Ν	19,844	19,844	25,796	25,796	108,642	108,642
\mathbb{R}^2	0.035	0.073	0.173	0.205	0.020	0.102

Table 6: Difference-in-differences estimations using various control groups

Notes: The table shows difference-in-differences estimates; robust standard errors in parentheses. The year 1996 constitutes the baseline year, while the year 2001 is the post-treatment year. As controls in Columns 2, 4, and 6 we included the woman's age, highest school degree, and nationality. The sample consists of females living in West Germany. *** 1% level of significance, ** 5% level of significance, * 10% level of significance. Data: Micro Census.

	Employed (yes=1, no=0)						
Control group: Women with	10-11 year old kids		no kids (age 29-36)		no kids (age 18-60)		
	(1)	(2)	(3)	(4)	(5)	(6)	
Treatment (yes=1, no=0)	-0.158***	-0.210***	-0.412***	-0.392***	-0.226***	-0.309***	
	(0.010)	(0.011)	(0.008)	(0.008)	(0.007)	(0.007)	
After treatment (1995=1, 1991=0)	0.015	0.001	-0.006	-0.018***	-0.009***	-0.002	
	(0.011)	(0.011)	(0.007)	(0.007)	(0.003)	(0.003)	
After treatment * Treatment	-0.023	-0.018	-0.003	0.002	0.001	-0.011	
	(0.014)	(0.014)	(0.011)	(0.011)	(0.010)	(0.010)	
Individual control variables	No	Yes	No	Yes	No	Yes	
Ν	19,126	19,126	21,879	21,879	96,956	96,956	
\mathbb{R}^2	0.028	0.051	0.188	0.206	0.023	0.110	

Table 7: Placebo difference-in-differences estimations in pre-treatment periods

Notes: The table shows placebo difference-in-differences estimates in pre-treatment periods; robust standard errors in parentheses. The year 1991 constitutes the baseline year, while the year 1995 is the placebo post-treatment year. As controls in Columns 2, 4, and 6, we included the woman's age, highest school degree, and nationality. The sample consists of females living in West Germany.*** 1% level of significance, ** 5% level of significance, * 10% level of significance. Data: Micro Census.