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Parental Leave Policy and Long-run Earnings of Mothers - Online Appendix (2022)

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IMPRESSUM

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Online Appendix (2022)

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Abstract:

Paid parental leave schemes have been shown to increase women's employment rates but to decrease their wages in case of extended leave duration. In view of these potential trade-offs, many countries are discussing the optimal design of parental leave policies. We analyze the impact of a major parental leave reform on mothers' long-term earnings. The 2007 German parental leave reform replaced a means-tested benefit with a more generous earnings-related benefit that is granted for a shorter period of time. Additionally, a "daddy quota" of two months was introduced. To identify the causal effect of this policy mix on long-run earnings of mothers, we use a difference-in-differences approach that compares labor market outcomes of mothers who gave birth just before and right after the reform and nets out seasonal effects by including the year before. Using administrative social security data, we confirm previous findings and show that the average duration of employment interruptions increased for mothers with high pre-birth earnings. Nevertheless, we find a positive long-run effect on earnings for mothers in this group. This effect cannot be explained by changes in the selection of working mothers, working hours or changes in employer stability. Descriptive evidence suggests that the stronger involvement of fathers, incentivized by the "daddy months", could have facilitated mothers' re-entry into the labor market and thereby increased earnings. For mothers with low pre-birth earnings, however, we do not find beneficial long-run effects of this parental leave reform.

Keywords: Distribution, Gender, Family, Education, Labor and employment

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Parental Leave Policy and Long-run Earnings of Mothers

Online Appendix

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Online Appendix

Table 1: Descriptive Statistics on Daily Earnings of Mothers

| Daily earnings in | | Birth quarter | | | | Total |
|-------------------|------|----------------------------|----------|----------|----------|--------|
| | | 1st 2007 | 4th 2006 | 1st 2006 | 4th 2005 | |
| | | High-income mothers | | | | |
| t - 2 | Mean | 97.92 | 99.56 | 98.95 | 100.14 | |
| t - 1 | Mean | 108.55 | 109.36 | 107.22 | 109.94 | |
| t+1 | Mean | 8.56 | 14.34 | 13.99 | 13.66 | |
| t+2 | Mean | 37.65 | 35.54 | 32.56 | 33.20 | |
| t+3 | Mean | 42.71 | 41.01 | 38.27 | 39.96 | |
| t+4 | Mean | 44.47 | 43.47 | 40.14 | 41.31 | |
| t+5 | Mean | 47.46 | 47.05 | 44.15 | 45.28 | |
| t+6 | Mean | 50.52 | 50.51 | 47.22 | 47.85 | |
| t+7 | Mean | 50.52 | 50.51 | 47.22 | 47.85 | |
| t+8 | Mean | 53.15 | 52.58 | 49.63 | 49.72 | |
| t+9 | Mean | 58.29 | 56.77 | 52.25 | 52.12 | |
| | N | 10,984 | 10,140 | 10,886 | 10,553 | 42,563 |
| | | Low-income mothers | | | | |
| t - 2 | Mean | 14.90 | 15.54 | 14.42 | 15.38 | |
| t - 1 | Mean | 18.04 | 18.45 | 16.90 | 18.42 | |
| t+1 | Mean | 2.68 | 3.16 | 2.96 | 3.12 | |
| t+2 | Mean | 8.55 | 6.81 | 6.32 | 6.40 | |
| t+3 | Mean | 10.60 | 9.30 | 8.82 | 9.09 | |
| t+4 | Mean | 13.14 | 12.00 | 10.97 | 11.44 | |
| t+5 | Mean | 14.31 | 13.54 | 11.97 | 1.22 | |
| t+6 | Mean | 15.18 | 14.55 | 13.22 | 13.69 | |
| t+7 | Mean | 16.19 | 15.60 | 13.77 | 14.88 | |
| t+8 | Mean | 16.94 | 16.39 | 14.90 | 15.80 | |
| t+9 | Mean | 19.88 | 19.17 | 15.96 | 16.98 | |
| | N | 9931 | 9987 | 9930 | 9413 | 38,631 |

Source: IEB 1976-2016; own calculations.

Table 2: Descriptive Statistics on Control Variables, Nine years after giving birth

| Variables | | Birth quarter | | | |
|--|------|---------------|----------|----------|----------|
| | | 1st 2007 | 4th 2006 | 1st 2006 | 4th 2005 |
| High-income mothers | | | | | |
| Log(Daily Earnings 10 months prior-to-birth) | Mean | 4.78 | 4.77 | 4.78 | 4.78 |
| | SD | (0.21) | (0.20) | (0.20) | (0.20) |
| Non-German | Mean | 0.09 | 0.08 | 0.08 | 0.08 |
| | SD | (0.28) | (0.27) | (0.27) | (0.27) |
| Full-time work experience (months) | Mean | 90.45 | 89.67 | 90.07 | 88.53 |
| | SD | (57.77) | (57.17) | (56.60) | (55.42) |
| Part-time work experience (months) | Mean | 35.60 | 33.69 | 35.74 | 33.57 |
| | SD | (46.70) | (45.11) | (46.57) | (45.27) |
| Unemployment experience (Share of total work life) | Mean | 0.01 | 0.01 | 0.01 | 0.01 |
| | SD | (0.03) | (0.04) | (0.04) | (0.04) |
| Age at birth | Mean | 31.97 | 31.89 | 31.81 | 31.81 |
| | SD | (3.49) | (3.54) | (3.58) | (3.52) |
| Change of employer after birth | Mean | 0.28 | 0.28 | 0.27 | 0.29 |
| | SD | (0.45) | (0.45) | (0.44) | (0.45) |
| Employment ten months prior-to-birth | | | | | |
| Full-time | Mean | 0.77 | 0.76 | 0.76 | 0.77 |
| | SD | (0.42) | (0.42) | (0.43) | (0.42) |
| Part-time | Mean | 0.23 | 0.24 | 0.24 | 0.23 |
| | SD | (0.42) | (0.42) | (0.43) | (0.42) |
| Marginal Employment | Mean | 0.00 | 0.00 | 0.00 | 0.00 |
| | SD | (0.01) | (0.01) | (0.00) | (0.01) |
| Location of the establishment (before birth) | | | | | |
| West Germany | Mean | 0.89 | 0.90 | 0.89 | 0.89 |
| | SD | (0.32) | (0.31) | (0.31) | (0.31) |
| East Germany | Mean | 0.11 | 0.10 | 0.11 | 0.11 |
| | SD | (0.32) | (0.31) | (0.31) | (0.31) |
| Educational level | | | | | |
| No A-Levels/ No VT | Mean | 0.03 | 0.02 | 0.02 | 0.02 |
| | SD | (0.14) | (0.12) | (0.13) | (0.12) |
| No A-Levels/ VT | Mean | 0.38 | 0.38 | 0.42 | 0.40 |
| | SD | (0.49) | (0.49) | (0.49) | (0.49) |
| A-Levels/ No VT | Mean | 0.01 | 0.01 | 0.01 | 0.01 |
| | SD | (0.12) | (0.12) | (0.11) | (0.11) |
| A-Levels/ VT | Mean | 0.27 | 0.27 | 0.26 | 0.27 |
| | SD | (0.44) | (0.44) | (0.44) | (0.44) |
| University of Applied Science | Mean | 0.08 | 0.08 | 0.08 | 0.09 |
| | SD | (0.28) | (0.28) | (0.27) | (0.28) |
| University Degree | Mean | 0.22 | 0.24 | 0.22 | 0.22 |
| | SD | (0.42) | (0.42) | (0.41) | (0.42) |

Continued on next page

| Variables | | Birth quarter | | | |
|--|------|---------------|----------|----------|----------|
| | | 1st 2007 | 4th 2006 | 1st 2006 | 4th 2005 |
| Tenure (months, 10 months prior-to-birth) | Mean | 73.95 | 70.05 | 73.83 | 69.89 |
| | SD | (50.28) | (49.68) | (50.99) | (50.27) |
| Number of children | | | | | |
| 1 | Mean | 0.55 | 0.57 | 0.56 | 0.58 |
| | SD | (0.50) | (0.50) | (0.50) | (0.49) |
| 2 | Mean | 0.40 | 0.38 | 0.39 | 0.38 |
| | SD | (0.49) | (0.49) | (0.49) | (0.49) |
| 3 | Mean | 0.05 | 0.05 | 0.04 | 0.04 |
| | SD | (0.21) | (0.21) | (0.20) | (0.20) |
| 4 | Mean | 0.00 | 0.00 | 0.00 | 0.00 |
| | SD | (0.07) | (0.05) | (0.06) | (0.06) |
| 5 | Mean | 0.00 | 0.00 | 0.00 | 0.00 |
| | SD | (0.01) | (0.02) | (0.02) | (0.00) |
| Observations | | 8,252 | 7,684 | 8,508 | 8,172 |
| Low-income mothers | | | | | |
| Log(Daily Earnings 10 months prior-to-birth) | Mean | 3.30 | 3.11 | 3.30 | 3.08 |
| | SD | (0.60) | (0.60) | (0.64) | (0.60) |
| Non-German | Mean | 0.18 | 0.18 | 0.18 | 0.17 |
| | SD | (0.38) | (0.38) | (0.38) | (0.38) |
| Full-time work experience (months) | Mean | 19.15 | 19.67 | 19.82 | 18.78 |
| | SD | (27.63) | (29.67) | (29.79) | (28.69) |
| Part-time work experience (months) | Mean | 27.31 | 26.14 | 28.30 | 27.21 |
| | SD | (33.89) | (32.69) | (33.67) | (33.47) |
| Unemployment experience (Share of total work life) | Mean | 0.04 | 0.04 | 0.04 | 0.04 |
| | SD | (0.09) | (0.09) | (0.09) | (0.09) |
| Age at birth | Mean | 26.17 | 26.14 | 26.22 | 25.85 |
| | SD | (5.16) | (5.20) | (5.30) | (5.28) |
| Change of employer after birth | Mean | 0.55 | 0.56 | 0.55 | 0.54 |
| | SD | (0.50) | (0.50) | (0.50) | (0.50) |
| Employment ten months prior-to-birth | | | | | |
| Full-time | Mean | 0.16 | 0.15 | 0.17 | 0.16 |
| | SD | (0.37) | (0.36) | (0.37) | (0.37) |
| Part-time | Mean | 0.56 | 0.56 | 0.54 | 0.53 |
| | SD | (0.50) | (0.50) | (0.50) | (0.50) |
| Marginal Employment | Mean | 0.28 | 0.29 | 0.29 | 0.31 |
| | SD | (0.45) | (0.46) | (0.45) | (0.46) |
| Location of the establishment (before birth) | | | | | |
| West Germany | Mean | 0.68 | 0.69 | 0.68 | 0.67 |
| | SD | (0.47) | (0.46) | (0.47) | (0.47) |
| East Germany | Mean | 0.32 | 0.31 | 0.32 | 0.33 |
| | SD | (0.47) | (0.46) | (0.47) | (0.47) |
| Educational level | | | | | |
| No A-Levels/ No VT | Mean | 0.09 | 0.10 | 0.10 | 0.10 |
| | SD | (0.29) | (0.31) | (0.30) | (0.30) |
| No A-Levels/ VT | Mean | 0.30 | 0.31 | 0.29 | 0.29 |
| | SD | (0.46) | (0.46) | (0.45) | (0.45) |
| A-Levels/ No VT | Mean | 0.02 | 0.01 | 0.01 | 0.01 |
| | SD | (0.13) | (0.12) | (0.12) | (0.13) |
| A-Levels/ VT | Mean | 0.15 | 0.15 | 0.15 | 0.15 |
| | SD | (0.36) | (0.36) | (0.35) | (0.34) |

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| Variables | | Birth quarter | | | |
|---|------|---------------|----------|----------|----------|
| | | 1st 2007 | 4th 2006 | 1st 2006 | 4th 2005 |
| University of Applied Science | Mean | 0.01 | 0.01 | 0.01 | 0.01 |
| | SD | (0.10) | (0.11) | (0.10) | (0.11) |
| University Degree | Mean | 0.02 | 0.02 | 0.02 | 0.02 |
| | SD | (0.14) | (0.14) | (0.14) | (0.15) |
| No Information | Mean | 0.41 | 0.39 | 0.41 | 0.41 |
| | SD | (0.49) | (0.49) | (0.49) | (0.49) |
| Tenure (months, 10 months prior-to-birth) | Mean | 33.58 | 31.57 | 34.16 | 34.16 |
| | SD | (30.33) | (30.25) | (30.24) | (30.63) |
| Number of children | | | | | |
| 1 | Mean | 0.66 | 0.67 | 0.66 | 0.66 |
| | SD | (0.47) | (0.47) | (0.47) | (0.48) |
| 2 | Mean | 0.29 | 0.29 | 0.29 | 0.29 |
| | SD | (0.45) | (0.46) | (0.45) | (0.45) |
| 3 | Mean | 0.04 | 0.04 | 0.05 | 0.05 |
| | SD | (0.20) | (0.19) | (0.21) | (0.21) |
| 4 | Mean | 0.00 | 0.00 | 0.00 | 0.00 |
| | SD | (0.05) | (0.05) | (0.06) | (0.07) |
| 5 | Mean | 0.00 | 0.00 | 0.00 | 0.00 |
| | SD | (0.00) | (0.01) | (0.02) | (0.02) |
| Observations | | 6,228 | 6,149 | 5,811 | 5,813 |

Source: IEB 1976-2016; own calculations.

Table 3: Descriptive Statistics on Mothers' Working Hours (conditional on working)

| Working hours in | | Birth quarter | | | | N |
|----------------------------|------|---------------|----------|----------|----------|------|
| | | 1st 2007 | 4th 2006 | 1st 2006 | 4th 2005 | |
| High-income mothers | | | | | | |
| 2008 | Mean | 29.61 | 29.40 | 28.56 | 29.79 | 743 |
| | SD | (12.96) | (12.17) | (11.76) | (12.17) | |
| | N | 181 | 202 | 185 | 175 | |
| 2009 | Mean | 30.33 | 30.20 | 28.54 | 28.15 | 753 |
| | SD | (11.41) | (11.80) | (11.46) | (12.30) | |
| | N | 179 | 205 | 192 | 177 | |
| 2010 | Mean | 28.99 | 29.18 | 27.88 | 29.56 | 845 |
| | SD | (11.78) | (11.06) | (11.36) | (12.07) | |
| | N | 203 | 231 | 206 | 205 | |
| 2011 | Mean | 28.22 | 29.28 | 27.52 | 29.01 | 1008 |
| | SD | (11.92) | (11.29) | (11.88) | (11.84) | |
| | N | 269 | 246 | 254 | 239 | |
| 2012 | Mean | 27.72 | 28.64 | 28.11 | 28.38 | 947 |
| | SD | (11.22) | (12.05) | (12.91) | (12.17) | |
| | N | 249 | 234 | 224 | 240 | |
| 2013 | Mean | 28.44 | 28.16 | 27.46 | 27.96 | 980 |
| | SD | (11.59) | (11.15) | (12.32) | (11.25) | |
| | N | 261 | 245 | 241 | 233 | |
| 2014 | Mean | 28.30 | 27.94 | 28.11 | 28.29 | 1246 |
| | SD | (11.53) | (11.21) | (12.00) | (11.06) | |
| | N | 330 | 302 | 320 | 294 | |
| 2015 | Mean | 27.42 | 27.45 | 28.85 | 26.57 | 1306 |
| | SD | (11.68) | (10.75) | (12.05) | (11.10) | |
| | N | 350 | 331 | 304 | 321 | |
| 2016 | Mean | 28.98 | 28.56 | 28.63 | 28.35 | 1634 |
| | SD | (12.27) | (11.73) | (11.59) | (11.29) | |
| | N | 396 | 408 | 400 | 430 | |
| Low-income mothers | | | | | | |
| 2008 | Mean | 31.11 | 28.68 | 28.67 | 24.78 | 162 |
| | SD | (11.94) | (12.75) | (12.99) | (12.82) | |
| | N | 38 | 41 | 39 | 44 | |
| 2009 | Mean | 24.43 | 23.32 | 24.30 | 24.78 | 191 |
| | SD | (12.73) | (12.93) | (12.56) | (11.81) | |
| | N | 47 | 47 | 46 | 51 | |
| 2010 | Mean | 23.88 | 23.29 | 22.76 | 24.10 | 219 |
| | SD | (13.82) | (13.36) | (12.46) | (13.29) | |
| | N | 57 | 48 | 55 | 59 | |
| 2011 | Mean | 27.35 | 26.28 | 24.21 | 24.77 | 214 |
| | SD | (13.24) | (13.47) | (14.64) | (12.90) | |

Continued on next page

| | | Birth quarter | | | | |
|------------------|------|---------------|----------|----------|----------|-----|
| Working hours in | | 1st 2007 | 4th 2006 | 1st 2006 | 4th 2005 | N |
| | N | 51 | 50 | 61 | 52 | |
| 2012 | Mean | 23.40 | 23.66 | 21.78 | 23.54 | 226 |
| | SD | (12.84) | (12.92) | (12.04) | (14.02) | |
| | N | 57 | 59 | 64 | 46 | |
| 2013 | Mean | 20.65 | 22.29 | 21.92 | 19.59 | 234 |
| | SD | (12.25) | (13.10) | (12.79) | 11.25) | |
| | N | 43 | 72 | 60 | 59 | |
| 2014 | Mean | 21.35 | 20.22 | 20.74 | 21.05 | 254 |
| | SD | (12.33) | (11.89) | (11.37) | (11.89) | |
| | N | 54 | 78 | 62 | 60 | |
| 2015 | Mean | 23.27 | 18.88 | 21.60 | 20.10 | 257 |
| | SD | (15.38) | (11.81) | (10.88) | (11.05) | |
| | N | 52 | 72 | 63 | 70 | |
| 2016 | Mean | 21.88 | 24.53 | 21.44 | 20.95 | 286 |
| | SD | (12.11) | (23.46) | (13.00) | (13.62) | |
| | N | 59 | 75 | 66 | 86 | |

Source: RDC of the Federal Statistical Office and Statistical Offices of the Länder, Microcensus 2008-2016, own calculations.

Table 4: Descriptive Statistics on Control Variables for selective years (Microcensus)

| Variables | | | Birth half-year | | | |
|----------------------------|-------------------------|------|-----------------|-----------|-----------|-----------|
| | | | 1st 2007 | 4th 2006 | 1st 2006 | 4th 2005 |
| High-income mothers | | | | | | |
| 2008 | Age | Mean | 33.23 | 34.25 | 34.55 | 34.94 |
| | | SD | (3.44) | (4.07) | (4.34) | (4.02) |
| | Married | Mean | 0.76 | 0.80 | 0.79 | 0.78 |
| | | SD | (0.43) | (0.40) | (0.41) | (0.41) |
| | Single Mother | Mean | 0.05 | 0.07 | 0.08 | 0.07 |
| | | SD | (0.22) | (0.25) | (0.27) | (0.25) |
| | German | Mean | 0.93 | 0.93 | 0.94 | 0.93 |
| | | SD | (0.25) | (0.26) | (0.25) | (0.25) |
| | Foreigner, European | Mean | 0.02 | 0.04 | 0.03 | 0.04 |
| | | SD | (0.15) | (0.21) | (0.16) | (0.20) |
| | Foreigner, Non-European | Mean | 0.04 | 0.03 | 0.04 | 0.03 |
| | | SD | (0.21) | (0.17) | (0.19) | (0.17) |
| | Partner's age | Mean | 36.09 | 37.00 | 36.85 | 37.96 |
| | | SD | (4.53) | (5.32) | (5.35) | (6.09) |
| | Net income | Mean | 1355.64 | 1208.16 | 1419.46 | 1439.35 |
| | | SD | (1037.32) | (925.26) | (991.49) | (1348.31) |
| | Net household income | Mean | 3936.94 | 3667.98 | 3952.53 | 4046.96 |
| | | SD | (2384.09) | (2081.73) | (2017.38) | (2502.27) |
| | Fulltime | Mean | 0.49 | 0.46 | 0.42 | 0.38 |
| | | SD | (0.50) | (0.50) | (0.49) | (0.49) |
| Observations | | | 181.00 | 202.00 | 185.00 | 175.00 |
| 2009 | Age | Mean | 33.85 | 35.11 | 34.55 | 35.60 |
| | | SD | (3.59) | (4.16) | (4.04) | (4.17) |
| | Married | Mean | 0.75 | 0.80 | 0.84 | 0.81 |
| | | SD | (0.43) | (0.40) | (0.37) | (0.39) |
| | Single Mother | Mean | 0.04 | 0.10 | 0.06 | 0.08 |
| | | SD | (0.21) | (0.30) | (0.23) | (0.28) |
| | German | Mean | 0.93 | 0.91 | 0.92 | 0.92 |
| | | SD | (0.26) | (0.29) | (0.28) | (0.27) |
| | Foreigner, European | Mean | 0.02 | 0.06 | 0.04 | 0.06 |
| | | SD | (0.13) | (0.24) | (0.20) | (0.23) |
| | Foreigner, Non-European | Mean | 0.06 | 0.03 | 0.04 | 0.02 |
| | | SD | (0.23) | (0.18) | (0.20) | (0.15) |
| | Partner's age | Mean | 36.67 | 38.24 | 38.06 | 38.60 |
| | | SD | (4.46) | (5.98) | (5.48) | (4.88) |
| | Net income | Mean | 1636.57 | 1437.24 | 1504.10 | 1584.43 |
| | | SD | (1137.79) | (1056.65) | (1110.33) | (1603.86) |
| | Net household income | Mean | 4138.89 | 3777.27 | 4183.53 | 4351.90 |
| | | SD | (2072.82) | (2129.47) | (2312.92) | (2683.81) |

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| Variables | | | Birth half-year | | | |
|---------------------------|-------------------------|------|-----------------|-----------|-----------|-----------|
| | | | 1st 2007 | 4th 2006 | 1st 2006 | 4th 2005 |
| Fulltime | Mean | | 0.40 | 0.49 | 0.40 | 0.39 |
| | SD | | (0.49) | (0.50) | (0.49) | (0.49) |
| Observations | | | 179.00 | 205.00 | 192.00 | 177.00 |
| 2016 | Age | Mean | 40.11 | 40.57 | 40.80 | 41.78 |
| | | SD | (4.66) | (4.76) | (4.97) | (4.97) |
| | Married | Mean | 0.76 | 0.79 | 0.74 | 0.82 |
| | | SD | (0.43) | (0.41) | (0.55) | (0.39) |
| | Single Mother | Mean | 0.18 | 0.18 | 0.22 | 0.13 |
| | | SD | (0.39) | (0.18) | (0.41) | (0.34) |
| | German | Mean | 0.94 | 0.91 | 0.90 | 0.92 |
| | | SD | (0.24) | (0.28) | (0.30) | (0.28) |
| | Foreigner, European | Mean | 0.03 | 0.05 | 0.05 | 0.06 |
| | | SD | (0.16) | (0.22) | (0.22) | (0.23) |
| | Foreigner, Non-European | Mean | 0.04 | 0.03 | 0.05 | 0.03 |
| | | SD | (0.18) | (0.18) | (0.22) | (0.16) |
| | Partner's age | Mean | 43.18 | 43.35 | 43.98 | 44.53 |
| | | SD | (6.30) | (5.76) | (5.93) | (4.88) |
| | Net income | Mean | 2026.98 | 2002.37 | 2138.54 | 1854.03 |
| | | SD | (1559.57) | (1555.72) | (2037.86) | (1195.73) |
| | Net household income | Mean | 4773.78 | 4922.81 | 4804.37 | 5003.35 |
| | | SD | (2868.12) | (2982.95) | (3018.83) | (2871.30) |
| | Full-time | Mean | 0.35 | 0.36 | 0.34 | 0.31 |
| | | SD | (0.48) | (0.48) | (0.47) | (0.46) |
| Observations | | | 396.00 | 408.00 | 400.00 | 430.00 |
| Low-income mothers | | | | | | |
| 2008 | Age | Mean | 25.34 | 28.51 | 27.36 | 27.45 |
| | | SD | (5.38) | (7.31) | (6.03) | (6.03) |
| | Married | Mean | 0.55 | 0.63 | 0.56 | 0.57 |
| | | SD | (0.50) | (0.49) | (0.50) | (0.50) |
| | Single Mother | Mean | 0.18 | 0.29 | 0.21 | 0.30 |
| | | SD | (0.39) | (0.46) | (0.41) | (0.46) |
| | German | Mean | 0.87 | 0.80 | 0.74 | 0.84 |
| | | SD | (0.34) | (0.40) | (0.44) | (0.37) |
| | Foreigner, European | Mean | 0.03 | 0.00 | 0.08 | 0.05 |
| | | SD | (0.16) | (0.00) | (0.27) | (0.21) |
| | Foreigner, Non-European | Mean | 0.11 | 0.20 | 0.18 | 0.11 |
| | | SD | (0.31) | (0.40) | (0.39) | (0.32) |
| | Partner's age | Mean | 30.87 | 34.34 | 30.77 | 32.58 |
| | | SD | (6.83) | (8.60) | (6.55) | (6.34) |
| | Net income | Mean | 645.95 | 677.78 | 690.54 | 792.68 |
| | | SD | (559.87) | (314.69) | (451.71) | (342.11) |
| | Net household income | Mean | 1795.94 | 1982.81 | 1763.89 | 1964.47 |
| | | SD | (1061.30) | (820.17) | (574.66) | (1224.84) |
| | Full-time | Mean | 0.61 | 0.41 | 0.54 | 0.50 |

Continued on next page

| Variables | | | Birth half-year | | | |
|-----------|-------------------------|------|-----------------|----------|----------|----------|
| | | | 1st 2007 | 4th 2006 | 1st 2006 | 4th 2005 |
| | SD | | (0.50) | (0.50) | (0.50) | (0.51) |
| | Observations | | 38.00 | 41.00 | 39.00 | 44.00 |
| 2009 | Age | Mean | 26.70 | 28.25 | 29.93 | 28.67 |
| | | SD | (5.63) | (6.40) | (5.99) | (5.86) |
| | Married | Mean | 0.53 | 0.72 | 0.53 | 0.61 |
| | | SD | (0.50) | (0.45) | (0.50) | (0.49) |
| | Single Mother | Mean | 0.26 | 0.26 | 0.17 | 0.35 |
| | | SD | (0.44) | (0.44) | (0.38) | (0.48) |
| | German | Mean | 0.81 | 0.81 | 0.74 | 0.75 |
| | | SD | (0.40) | (0.40) | (0.44) | (0.44) |
| | Foreigner, European | Mean | 0.06 | 0.02 | 0.11 | 0.04 |
| | | SD | (0.25) | (0.15) | (0.31) | (0.20) |
| | Foreigner, Non-European | Mean | 0.13 | 0.17 | 0.15 | 0.22 |
| | | SD | (0.34) | (0.38) | (0.36) | (0.42) |
| | Partner's age | Mean | 31.49 | 34.49 | 34.00 | 33.06 |
| | | SD | (8.51) | (7.06) | (7.32) | (4.80) |
| | Net income | Mean | 645.56 | 663.33 | 679.38 | 864.67 |
| | | SD | (416.60) | (379.73) | (361.35) | (506.94) |
| | Net household income | Mean | 1980.00 | 1982.14 | 1861.11 | 1894.05 |
| | | SD | (2074.04) | (873.93) | (704.99) | (975.07) |

Continued on next page

| Variables | | Birth half-year | | | |
|-------------------------|------|-----------------|-----------|-----------|-----------|
| | | 1st 2007 | 4th 2006 | 1st 2006 | 4th 2005 |
| Full-time | Mean | 0.34 | 0.30 | 0.37 | 0.33 |
| | SD | (0.48) | (0.46) | (0.49) | (0.48) |
| Observations | | 47.00 | 47.00 | 46.00 | 51.00 |
| 2016 Age | Mean | 35.59 | 34.43 | 36.33 | 36.16 |
| | SD | (6.53) | (5.99) | (6.70) | (6.19) |
| Married | Mean | 0.61 | 0.71 | 0.71 | 0.65 |
| | SD | (0.49) | (0.46) | (0.46) | (0.48) |
| Single Mother | Mean | 0.31 | 0.28 | 0.27 | 0.31 |
| | SD | (0.46) | (0.45) | (0.45) | (0.46) |
| German | Mean | 0.73 | 0.69 | 0.73 | 0.73 |
| | SD | (0.45) | (0.46) | (0.45) | (0.45) |
| Foreigner, European | Mean | 0.10 | 0.19 | 0.09 | 0.15 |
| | SD | (0.30) | (0.39) | (0.29) | (0.36) |
| Foreigner, Non-European | Mean | 0.17 | 0.12 | 0.18 | 0.12 |
| | SD | (0.38) | (0.33) | (0.39) | (0.32) |
| Partner's age | Mean | 40.00 | 39.84 | 41.02 | 39.84 |
| | SD | (11.39) | (7.56) | (6.11) | (7.56) |
| Net income | Mean | 962.07 | 1032.00 | 1014.23 | 877.65 |
| | SD | (546.04) | (532.61) | (604.35) | (546.04) |
| Net household income | Mean | 2353.51 | 2606.08 | 2665.39 | 2536.47 |
| | SD | (991.12) | (1429.32) | (1118.24) | (1045.47) |
| Full-time | Mean | 0.22 | 0.28 | 0.27 | 0.26 |
| | SD | (0.42) | (0.45) | (0.49) | (0.44) |
| Observations | | 59.00 | 75.00 | 66.00 | 86.00 |

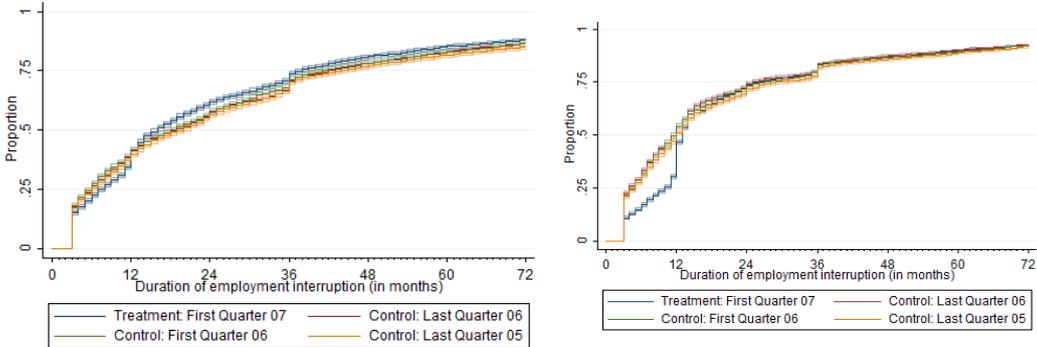
Source: RDC of the Federal Statistical Office and Statistical Offices of the Länder, Microcensus 2008-2016, own calculations.

Table 5: Effects of the parental leave reform on working hours

| Working hours | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|
| | b/se | b/se | b/se | b/se | b/se | b/se | b/se | b/se | b/se |
| University (vs. no VT) | 1.12 (2.12) | 4.35* (1.96) | 5.24** (1.97) | 3.71 (2.06) | 4.39* (2.15) | 6.80*** (1.62) | 7.76*** (1.57) | 5.58*** (1.41) | -7.80*** (1.55) |
| Birth 1st half (vs. 2nd half) | -0.18 (2.69) | 0.44 (2.35) | -1.96 (2.29) | -1.92 (2.54) | -2.68 (2.40) | 1.23 (2.12) | -0.85 (1.98) | -0.54 (1.82) | 0.66 (2.14) |
| University * Birth 1st half (vs. 2nd half) | -0.95 (2.95) | 0.16 (2.65) | 0.59 (2.56) | 0.46 (2.75) | 2.47 (2.63) | -1.68 (2.33) | 0.24 (2.16) | 2.48 (2.01) | -0.43 (2.27) |
| Birth 06/07 (vs. 05/06) | -3.46 (2.51) | -2.06 (2.22) | -2.61 (2.41) | 0.11 (2.46) | -1.65 (2.46) | 0.70 (2.03) | -0.51 (1.84) | -1.84 (1.80) | 3.39 (2.02) |
| University* Birth 06/07 (vs. 05/06) | -0.95 (2.95) | 0.16 (2.65) | 0.59 (2.56) | 0.46 (2.75) | 2.47 (2.63) | -1.68 (2.33) | 0.24 (2.16) | 2.48 (2.01) | -0.43 (2.27) |
| Treatment | 5.53 (3.76) | 0.18 (3.33) | 3.18 (3.36) | 2.79 (3.60) | 2.95 (3.24) | -2.63 (3.11) | 2.66 (2.85) | 4.32 (3.03) | -3.63 (2.99) |
| University * Treatment | -4.12 (4.16) | -0.77 (3.72) | -1.81 (3.72) | -2.07 (3.91) | -4.22 (3.56) | -3.00 (3.41) | -2.13 (3.10) | -6.21* (3.25) | 3.50 (3.19) |
| Age | 0.17 (0.82) | -1.95* (0.79) | -1.03 (0.83) | 0.44 (0.74) | 0.82 (0.74) | 0.41 (0.63) | -0.37 (0.59) | -0.82 (0.68) | -0.95 (0.65) |
| Age squared | 0.00 (0.01) | 0.03* (0.01) | 0.01 (0.01) | -0.01 (0.01) | -0.01 (0.01) | -0.01 (0.01) | 0.00 (0.01) | 0.01 (0.01) | 0.01 (0.01) |
| Number of Children (ref: 1 child) | | | | | | | | | |
| 2 | 0.91 (1.27) | -0.27 (0.93) | -1.11 (0.76) | -2.73*** (0.73) | -5.36*** (0.73) | -4.17*** (0.71) | -3.62*** (0.62) | -2.66*** (0.64) | -3.83*** (0.62) |
| 3 | 0.12 (8.18) | -1.69 (4.44) | 0.03 (3.25) | -2.23 (1.88) | -5.46*** (2.04) | -6.69** (1.40) | -7.01*** (1.15) | -5.95*** (1.04) | -6.33*** (0.89) |
| 4 | | | | | | | -6.67 (7.42) | -1.53 (3.15) | -9.73*** (2.04) |
| East Germany | 4.06*** (0.94) | 5.32*** (0.89) | 5.63*** (0.88) | 5.49*** (0.76) | 6.69*** (0.78) | 8.48*** (0.76) | 7.49*** (0.65) | 6.11*** (0.70) | 6.56*** (0.64) |
| Nationality (ref: German) | | | | | | | | | |
| Non German, EU-Citizen | -1.68 (2.34) | -6.19** (2.06) | 2.34 (1.99) | -2.40 (1.56) | 2.27 (1.96) | 0.92 (1.86) | 2.87* (1.49) | -0.65 (1.50) | 0.11 (1.31) |
| Non German, Non-EU-Citizen | -3.71* (2.04) | -1.53 (1.65) | -3.83* (1.65) | -3.43* (1.68) | -3.23* (1.39) | -1.70 (1.43) | 1.39 (1.31) | -1.74 (1.35) | 0.40 (1.48) |
| Marital status (ref: single) | | | | | | | | | |
| married | -2.44* (1.03) | -1.38 (1.00) | -1.42 (0.92) | -1.40 (0.87) | -2.24* (0.87) | -1.56 (0.86) | -2.51*** (0.71) | -2.28** (0.77) | -0.25 (0.70) |
| divorced | -12.62*** (3.80) | 1.31 (2.39) | 2.36 (2.49) | 1.37 (1.92) | -1.87 (1.44) | -1.56 (1.46) | -2.39 (1.32) | 1.10 (1.44) | 2.73* (1.11) |
| Public sector | 0.66 (0.90) | 0.81 (0.84) | 1.12 (0.78) | 0.39 (0.72) | -0.10 (0.73) | -0.22 (0.67) | 1.00 (0.58) | 1.27* (0.58) | 0.10 (0.53) |
| Region (ref: City) | | | | | | | | | |
| Urban Region | -0.73 (0.94) | -2.26* (0.88) | -0.54 (0.80) | -1.82* (0.76) | -2.47** (0.78) | 0.03 (0.79) | -0.45 (0.67) | -0.15 (0.67) | -0.53 (0.62) |
| Rural region | 1.05 (1.35) | -0.65 (1.24) | 0.47 (1.19) | -0.42 (1.14) | -1.62 (0.97) | -1.36 (0.83) | -1.07 (0.70) | 0.37 (0.73) | -0.55 (0.69) |
| Constant | 27.85* (12.67) | 57.72*** (12.77) | 43.09** (13.96) | 21.52 (12.95) | 15.28 (13.11) | 15.73 (11.49) | 31.03** (10.64) | 38.45** (12.83) | 43.19*** (12.61) |
| R-squared | 0.06 | 0.11 | 0.10 | 0.10 | 0.17 | 0.18 | 0.19 | 0.16 | 0.14 |
| N | 905 | 944 | 1064 | 1222 | 1173 | 1214 | 1500 | 1563 | 1920 |

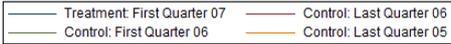
Source: RDC of the Federal Statistical Office and Statistical Offices of the Länder, Microcensus 2008-2016; own calculations. Treatment dummy equals 1 if the first child is born in the first half of 2007. VT: Vocational Training. Significance levels: * p < 0.05, ** p < 0.01, *** p < 0.001. Robust standard errors in parentheses.

Figure 1: Effects of the parental leave reform on the duration of employment interruptions in West Germany



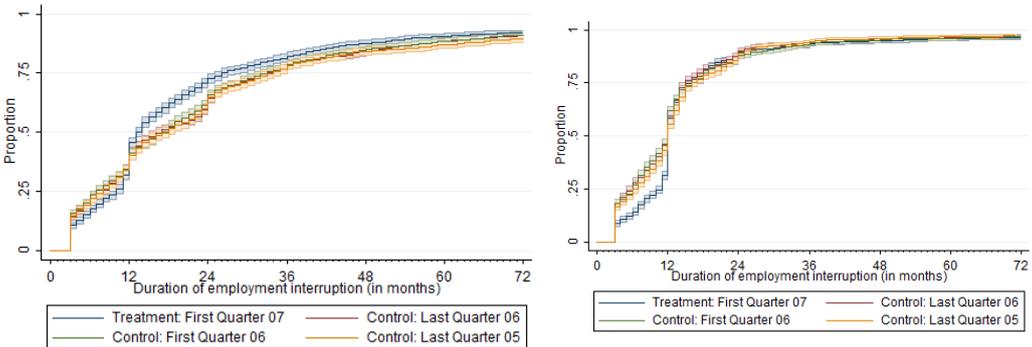
(a) Low-income mothers

(b) High-income mothers



Source: IEB 1976-2016; own calculations.

Figure 2: Effects of the parental leave reform on the duration of employment interruptions in East Germany



(a) Low-income mothers

(b) High-income mothers



Source: IEB 1976-2016; own calculations.

Table 6: Descriptive Statistics on Daily Earnings of Mothers, Medium-income mothers

| | | Birth quarter | | | | |
|------------------------------|------|---------------|----------|----------|----------|--------|
| Daily earnings in | | 1st 2007 | 4th 2006 | 1st 2006 | 4th 2005 | Total |
| Medium-income mothers | | | | | | |
| t-2 | Mean | 56.83 | 57.40 | 57.40 | 57.97 | |
| t-1 | Mean | 56.33 | 57.21 | 57.53 | 57.91 | |
| t+1 | Mean | 5.50 | 5.16 | 4.93 | 4.96 | |
| t+2 | Mean | 15.51 | 12.65 | 12.56 | 12.70 | |
| t+3 | Mean | 18.87 | 17.92 | 16.70 | 17.05 | |
| t+4 | Mean | 21.87 | 21.26 | 20.40 | 21.12 | |
| t+5 | Mean | 22.53 | 22.13 | 21.28 | 21.43 | |
| t+6 | Mean | 23.91 | 23.67 | 23.00 | 23.27 | |
| t+7 | Mean | 25.69 | 25.54 | 24.57 | 24.77 | |
| t+8 | Mean | 26.93 | 27.03 | 25.78 | 21.32 | |
| t+9 | Mean | 430.05 | 30.04 | 27.51 | 27.66 | |
| N | | 20,928 | 21,975 | 20,602 | 21,828 | 85,333 |

Source: IEB 1976-2016; own calculations.

Figure 3: Effects of the parental leave reform on the duration of employment interruptions for Medium-income mothers

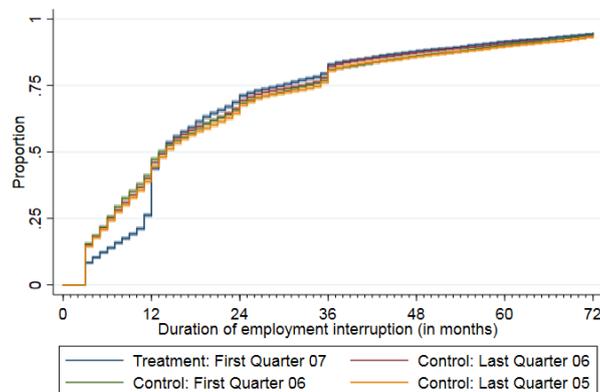


Table 7: Effects of the parental leave reform on daily earnings, nine years after birth

| Daily Earnings | β | se | β | se |
|---|--------------------|--------|---------------------|---------|
| | low-income mothers | | high-income mothers | |
| FirstQuarter | -0.19 | (0.37) | -0.50 | (0.49) |
| Reform | 2.19*** | (0.38) | 6.28*** | (0.53) |
| FirstQuarter \times Reform | 0.70 | (0.53) | 2.17*** | (0.73) |
| Previous wage | 2.55*** | (0.50) | 67.45*** | (1.22) |
| Foreign | -1.97*** | (0.40) | 9.06*** | (0.71) |
| Full-time experience | 0.08*** | (0.01) | -0.03* | (0.02) |
| Full-time experience squared | 0.00*** | (0.00) | 0.00*** | (0.00) |
| Part-time experience | 0.02 | (0.01) | -0.09 | (0.01) |
| Part-time experience squared | 0.00 | (0.00) | 0.00 | (0.00) |
| Unemployment work experience | -12.76*** | (1.61) | -5.65 | (4.91) |
| Age at birth | 0.20*** | (0.04) | 1.02*** | (0.08) |
| Change of employer after birth | -1.88*** | (0.28) | -7.37*** | (0.42) |
| Employment pre-birth (ref: Full-time) | | | | |
| Part-time | 9.31*** | (0.65) | 21.73*** | (0.64) |
| Marginal Employment | 8.96 | (0.62) | 33.49 | (26.11) |
| East Germany | 8.13*** | (0.34) | 20.38*** | (0.61) |
| Educational level (ref: No A-Levels/ No VT) | | | | |
| No A-Levels/ VT | 2.58*** | (0.47) | -2.53 | (1.37) |
| A-Levels/No VT | 2.77* | (1.19) | 1.47 | (2.16) |
| A-Levels/ VT | 3.10*** | (0.57) | -2.16* | (1.39) |
| University of Applied Science | 4.44** | (1.47) | -0.59 | (1.52) |
| University Degree | 11.63*** | (1.38) | 3.42 | (1.49) |
| No Information | 3.75*** | (0.62) | 11.36 | (10.01) |
| Tenure | -0.01** | (0.01) | -0.02*** | (0.01) |
| Firm size (ref: < 50) | | | | |
| 50-100 | 6.46*** | (0.03) | 16.00*** | (0.79) |
| 101-200 | 6.33*** | (1.04) | 18.37*** | (0.73) |
| 201-500 | 7.95*** | (0.97) | 21.69*** | (0.66) |
| >500 | 15.45*** | (1.00) | 27.13*** | (0.57) |
| Missing | -24.49 | (0.54) | -66.17*** | (0.53) |
| Constant | 16.12*** | (2.16) | -282.55*** | (5.85) |
| R-squared | 0.23 | | 0.55 | |
| N | 35,808 | | 40,762 | |

Source: IEB 1976-2016; Besides firm size all variables refer to the employment spell 10 months prior to birth. Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Robust standard errors in parentheses.

Table 8: Effects of the parental leave reform on mothers' earnings with alternative specifications of the earnings variable

| | Daily earnings in Euro, without imputed wages | | Annual earnings in Euro | | Daily earnings in logs, sample excluding non-working mothers | |
|-----|--|--------------------|-------------------------|---------------------------|--|---------------------|
| | low-income | high-income | low-income | high-income | low-income | high-income |
| t-2 | -0.31 (0.34) | -0.868 (0.470) | -157.672 (96.518) | 199.510 (140.991) | -0.025 (0.016) | -0.013* (0.006) |
| t-1 | 0.15 (0.29) | 0.325 (0.399) | -52.686 (53.843) | -58.211 (72.185) | -0.003 (0.013) | 0.010* (0.004) |
| t+1 | -0.56** (0.21) | -1.459* (0.600) | -236.857*** (63.688) | -1153.743*** (176.027) | 0.036 (0.036) | 0.067 (0.041) |
| t+2 | 1.37*** (0.31) | 1.749** (0.674) | 440.298*** (109.290) | 625.325** (238.441) | 0.054* (0.025) | 0.099*** (0.018) |
| t+3 | 0.91* (0.36) | 1.825** (0.700) | 275.102* (127.439) | 726.495** (245.319) | 0.029 (0.024) | 0.066*** (0.017) |
| t+4 | 0.85* (0.39) | 1.607* (0.686) | 235.314 (139.146) | 565.280* (242.006) | 0.012 (0.021) | 0.047** (0.016) |
| t+5 | 0.20 (0.42) | 1.129 (0.691) | 136.880 (149.751) | 557.263* (245.593) | -0.024 (0.021) | 0.038* (0.016) |
| t+6 | 0.10 (0.45) | 1.360 (0.697) | 48.638 (158.306) | 416.006 (248.283) | -0.013 (0.021) | 0.046** (0.014) |
| t+7 | 0.79 (0.47) | 1.437* (0.681) | 199.394 (165.855) | 599.010* (242.849) | 0.022 (0.021) | 0.033* (0.013) |
| t+8 | 0.77 (0.49) | 1.346 (0.694) | 352.134* (173.852) | 750.150** (247.464) | 0.004 (0.020) | 0.020 (0.013) |
| t+9 | 0.70 (0.53) | 1.921** (0.733) | 212.258 (187.348) | 966.456*** (260.426) | 0.014 (0.020) | 0.026* (0.013) |
| N | 35.81 | 37.655 | 37.337 | 40.726 | | |

Source: IEB 1976-2016; own calculations. Significance levels: * p< 0.05, ** p<0.01, *** p< 0.001.