Online appendix to:

# Childbirth Effects of the 2004 Indian Ocean Tsunami

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## 1 Additional robustness and specification tests

### 1.1 Alternative assignment of control and treated cohorts

We test whether the timing effects in our main results are robust to various definition of the control group by comparing pregnancies whose gestation period overlaps with the Tsunami against pregnancies beginning in other periods. The $\beta_t$ coefficient in Equations (1) and (2) in the main text compares the average birth effect for those conceived in or after the second quarter of 2004 against only those conceived in the last pre-treatment period, the first quarter of 2004. This setup effectively puts those conceived after the Tsunami into the treatment group. We now alter our control group by including those conceived after the Tsunami into the control group. In addition, we also expand the group of pregnancies that is expected to terminate before the Tsunami by including those conceived in a broader sample of periods. In order to do so, we run the following regression.

$$y_{ict} = \phi_c + \lambda_{QOC} + \lambda_{YOC} + \gamma X_{ict} + \sum_{q=2}^{4} \beta_q \mathbb{1}[QOC = q] \times \mathbb{1}[YOC = 2004] + \epsilon_{ict} \qquad \text{(A1)}$$

Here, $\mathbb{1}[QOC = q]$ indicates that individual $i$ is conceived on the $q$'th quarter in year $t$, where $q$ can range from 1 to 4. $\mathbb{1}[YOC = 2004]$ equals 1 for those conceived in 2004 and 0 otherwise. $\lambda_{QOC}$ is a collection of dummy variables for each quarter of conception within a given year. Thus, there are four dummy variables. $\lambda_{YOC}$ is a collection of year of conception dummies. Other variables are

identical to the ones that are used in Equations (1) and (2) in the main text.

Our coefficient of interest is $\beta_q$, which indicates the birth effect on those conceived in quarter $q$ in 2004 compared to periods other than the second through fourth quarters of 2004. In estimating $\beta_q$, the indicator for first quarter is excluded since those conceived on the first quarter of 2004 is not expected to be exposed to the Tsunami in utero and thus not considered part of the treatment group. Given the negative birth effects for those exposed to the Tsunami in utero at the first trimester of pregnancy, we focus our interest on $\beta_q$ when $q = 4$. We expect that $\beta_4$ to be negative for the livebirth and gestation length outcomes, and positive for the miscarriage and preterm birth outcomes.

In regressing Equation (A1), we utilize the following samples. We start out with those conceived from 1999 to 2005. Then, we re-run Equation (A1) on those conceived in 2000-2005, 2001-2005, 2002-2005, and 2003-2005 respectively, the last being our main sample. As the sample narrows down, there is a risk of losing statistical power as our observation decreases. Thus, our primary interest is to check whether the coefficients for $\beta_4$ are numerically similar across different sampling periods.

We present our results for Equation (A1) in Table A1. Overall, the results are qualitatively similar to those from our main regressions and thus corroborates the findings in the main text. The birth effects on those not conceived in the fourth quarter of 2004 are statistically zero at the 5% level. For the outcomes on gestation length and preterm birth, the birth effects for those conceived in the fourth quarter of 2004 is not significant at the 5% level. On the other hand, the same for the livebirth and miscarriage outcomes are significant at a conventional level. Livebirth, in particular, decreases by around 5-6 pp across the samples, while miscarriage increases by 4-5 pp. These patterns show two things; 1) livebirth and miscarriage results are robust to different assignment of control and treatment groups. 2) The differences in birth outcomes across cohorts is the most pronounced for livebirth and miscarriage, as suggested in the placebo results.

## 1.2 Regression on conception patterns pre- and post-Tsunami

### 1.2.1 Regression on the reduced sample

One could be concerned that mothers beginning pregnancy after the Tsunami may alter their fertility decisions, which can affect the credibility of our results. We have shown in the main text that the total number of conceptions and the type of mothers becoming pregnant are not different across the sample period. Here, we show that the results are robust even if we drop those conceived

after the Tsunami. We show this by regressing Equations (1) and (2) in the main text on pregnancies beginning in the years 2003 and 2004 only.

We report the result on our reduced sample in Table A2 and Figures A1 and A2. As with our original regression, the Tsunami effect is statistically significant only for those conceived in the fourth quarter of 2004. The coefficient values and standard errors are also largely similar throughout the regressions, indicating that leaving out those conceived after the Tsunami does not alter the results.

### 1.2.2 Pre- and post-Tsunami conceptions: DD-approach

In the main text, we show that the raw and log total conceptions in a conception period $\times$ cluster block does not change across the sample period. We show that the same results hold even if we use a DD-approach. For this exercise, we regress the following equation:

$$c_{ict} = \alpha + \phi_c + \sum_t \theta_t \mathbb{1}[t \leq 2003Q4] + \sum_t \beta_t \mathbb{1}[t \geq 2004Q2] + \sum_{k=2}^{3} \sum_t \delta_{kt} \mathbb{1}[\text{damage}_c = k] \times \mathbb{1}[t \geq 2004Q2] + \epsilon_{ict} \tag{A2}$$

Equation (A2) tests for the structural changes in total conception in a DD-approach. We use the same outcome, control variables, and sample periods used in Section 6.2 of the main text. Here, the difference is that we allow for cluster-level differences in fertility trends using the $\mathbb{1}[\text{damage}_c = k]$ variable.

The results from the above regression is reported in Table A3 and in Figure A3 and **??**. We find that both the year-quarter dummies and the differences across clusters are also indistinguishable from zero at a 5% level. The findings here are qualitatively similar to the event-study results reported in Figure 8 in the main text.

We also check for changes in the type of mothers going into pregnancy after the treatment using a DD-approach. We conduct this exercise by replacing the $c_{ict}$ variable in equation (A2) with the control variables used in the main regressions, $X_{ict}$. Results are reported in Table A4 and Figure A5. Results are qualitatively identical to the event-study results in terms of the coefficient values and the statistical insignificance of the estimates.

### 1.3 Alternative assignment of the extent of damage

In the main text, we have defined a new variable 'house damage rate' which represents an intensity of treatment. In this section, we change the unit of treatment to households and use the dummy variable taking 1 if a house was damaged by the Tsunami to assign treatments. We replace $\mathbb{1}[\text{damage}_c = k]$ variable in Equation (2) in the main text with $\mathbb{1}[\text{House damaged}]$. This is an indicator variable which takes 1 if individual $i$'s house was damaged due to the Tsunami. Similar to the hypotheses on the treatment difference across clusters, we expect that those whose houses were damaged are more vulnerable to negative birth effects. Such damage would induce members of the household to be displaced or constrained in terms of financial resources, leaving them less prepared to address negative birth effects[1].

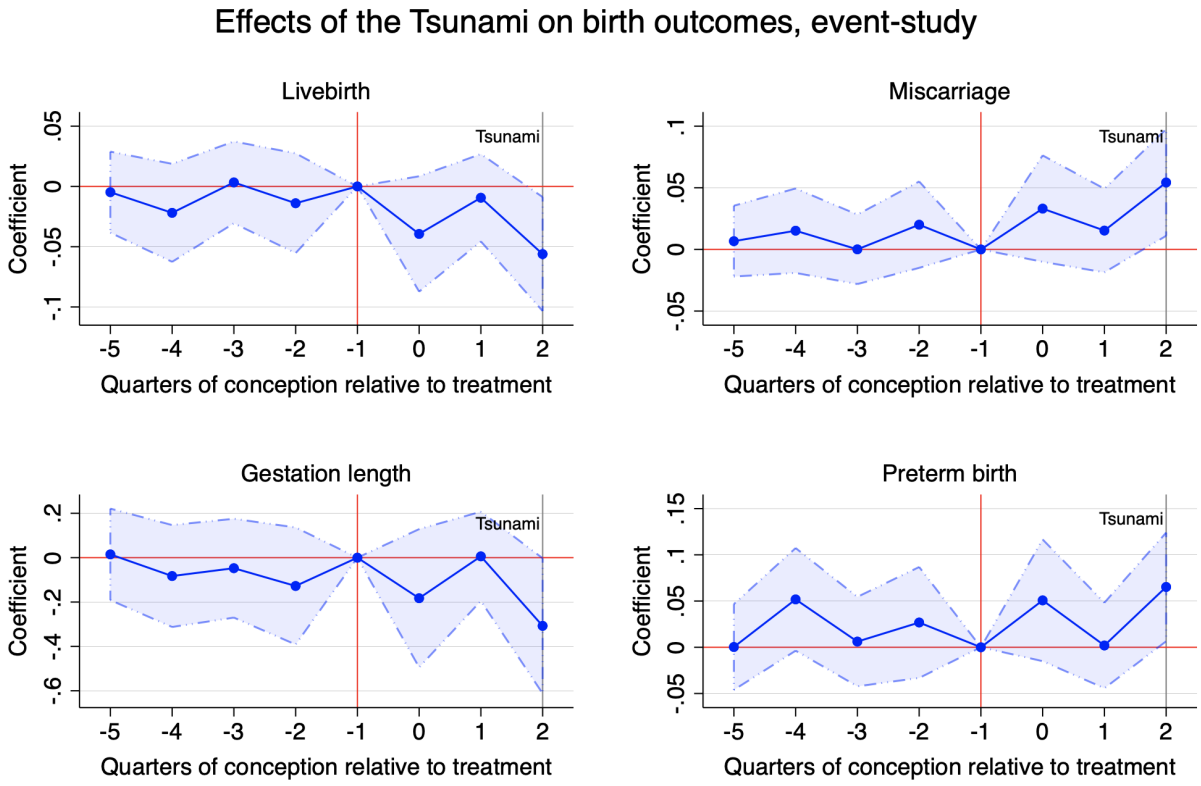
As in Figure A6 and Table A5, the results are not qualitatively different from the DD-approach results in the main text. As this is also the case when we exploit the continuous intensity of treatment as in Section 6.3 of the main text, the finding here corroborate the results found in the main text.

[1]There are four possible answers to the question asking whether their house was damaged by the tsunami: Unaffected, damaged, destroyed, and don't know. There are four respondents who replied by saying that they "don't know" whether their houses were damaged by the Tsunami. In this specification, we remove these observations.

# 2 Figures and Tables

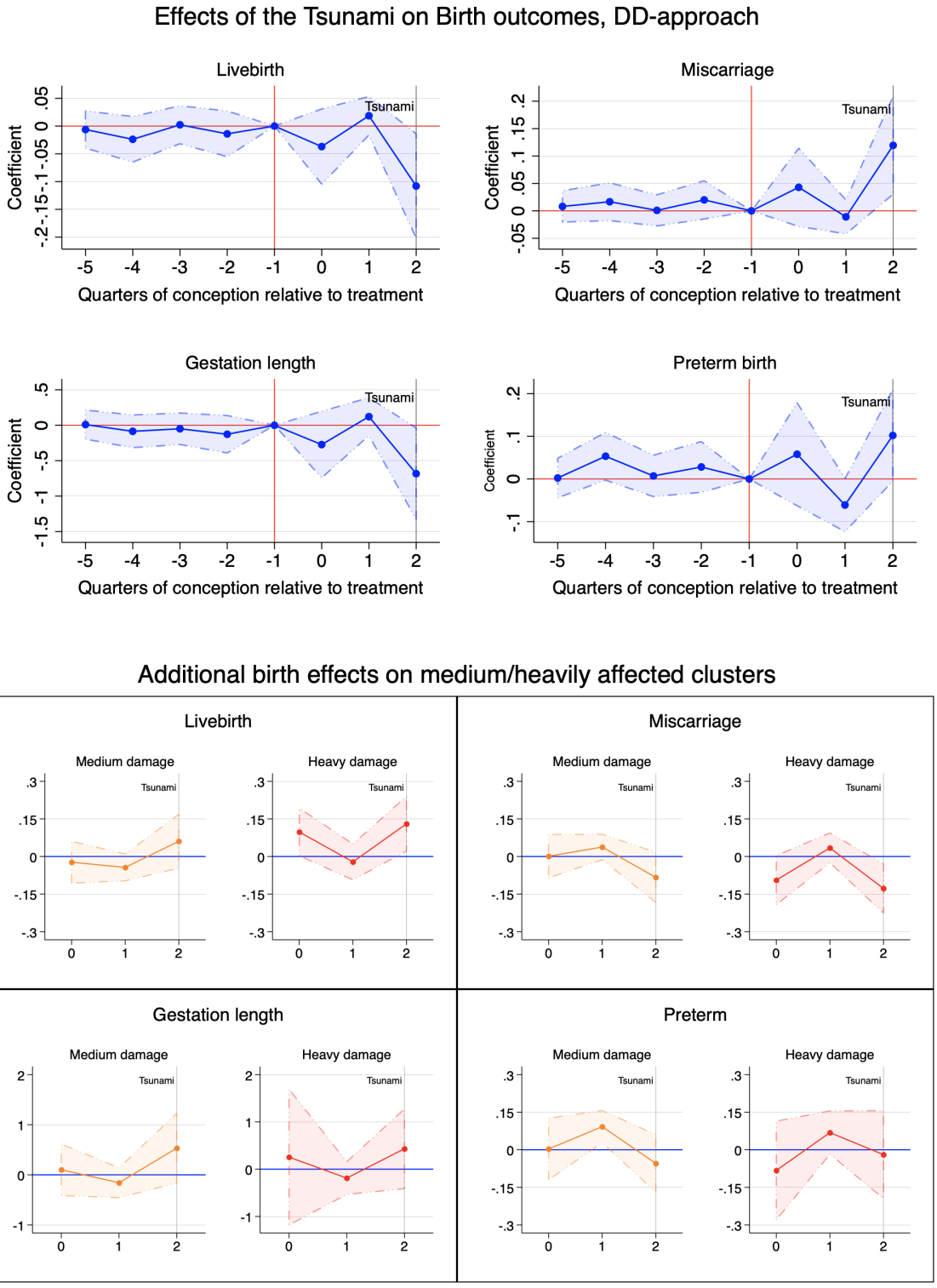
## 2.1 Figures

Figure A1: Birth effects of the Tsunami for the reduced sample, event-study



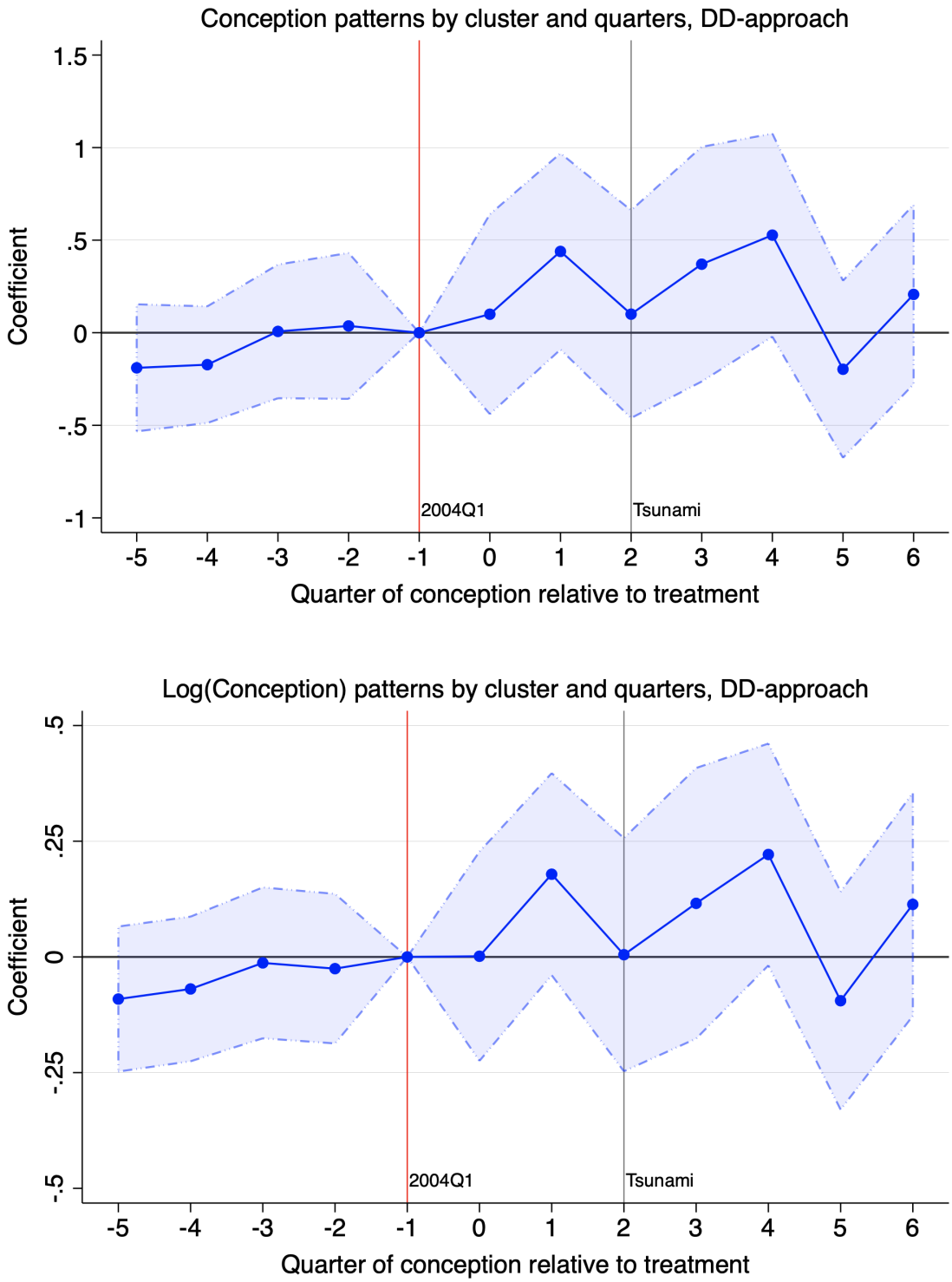

**Note**: Period 0 indicates those conceived on 2004Q2 and in the third trimester of pregnancy at the point of the Tsunami. 95% confidence interval is included, where the circle marker indicates point estimates. Regression includes controls for mother's age at birth (level and squared), years of schooling (mother and father), birth order indicators, and cluster fixed effects. Standard errors are clustered at cluster-level. Observations: 1,355, Clusters: 108

Figure A2: Birth effects of the Tsunami for the reduced sample, DD-approach



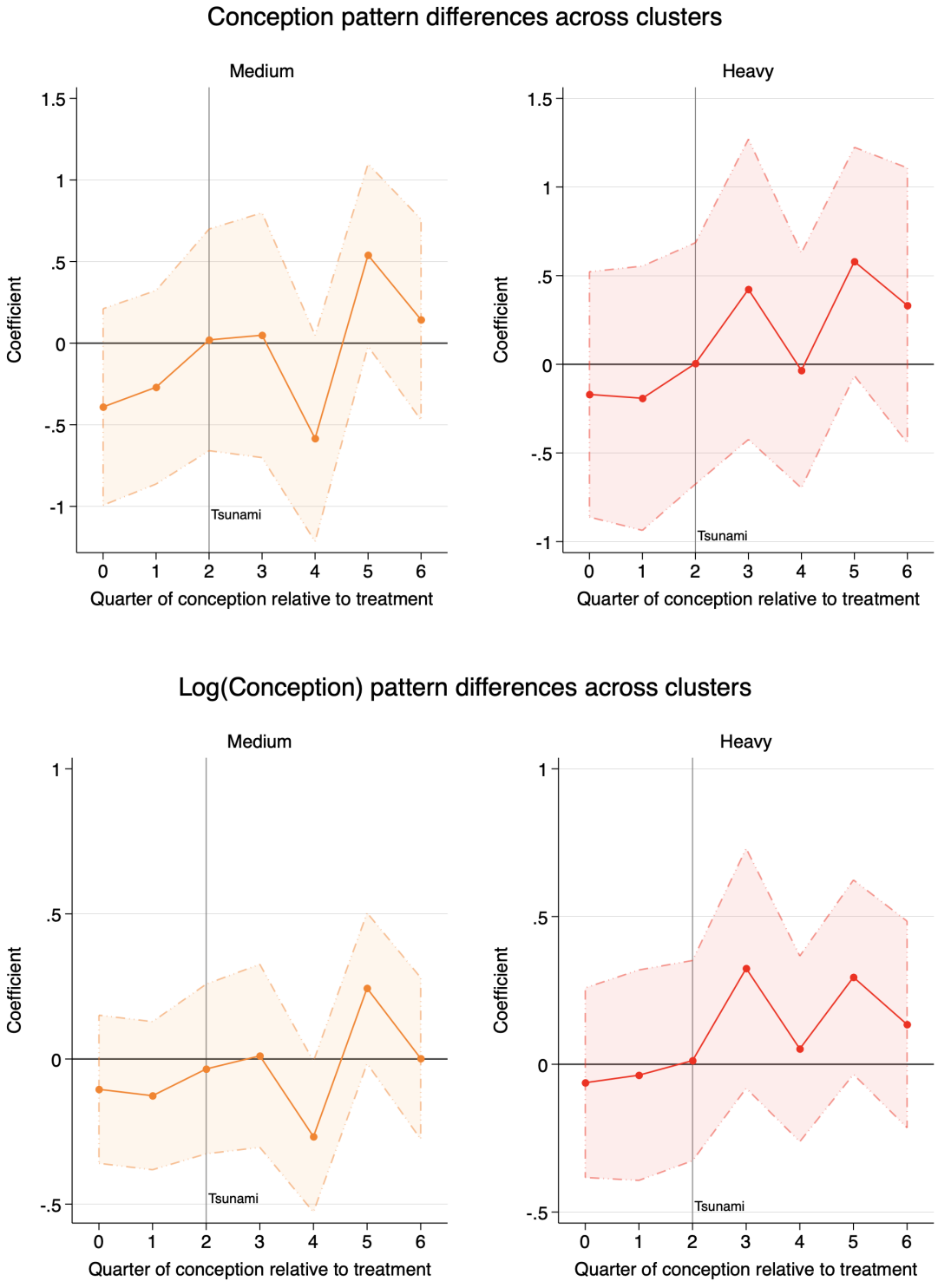

**Note**: Period 0 indicates those conceived in 2004Q2 and in the 3rd trimester of pregnancy at the point of the Tsunami, 95% confidence interval is included, where the blue, orange, and red circle markers indicate point estimates for $\beta_t$, $\delta_{2t}$, and $\delta_{3t}$, respectively. Regression includes controls for mother's age at birth (level and squared), years of schooling (mother and father), birth order indicators, and cluster fixed effects as well. Standard errors are clustered at cluster-level. Observations: 1,355, Clusters: 108

Figure A3: Timing differences in total conceptions before and after treatment, DD-approach



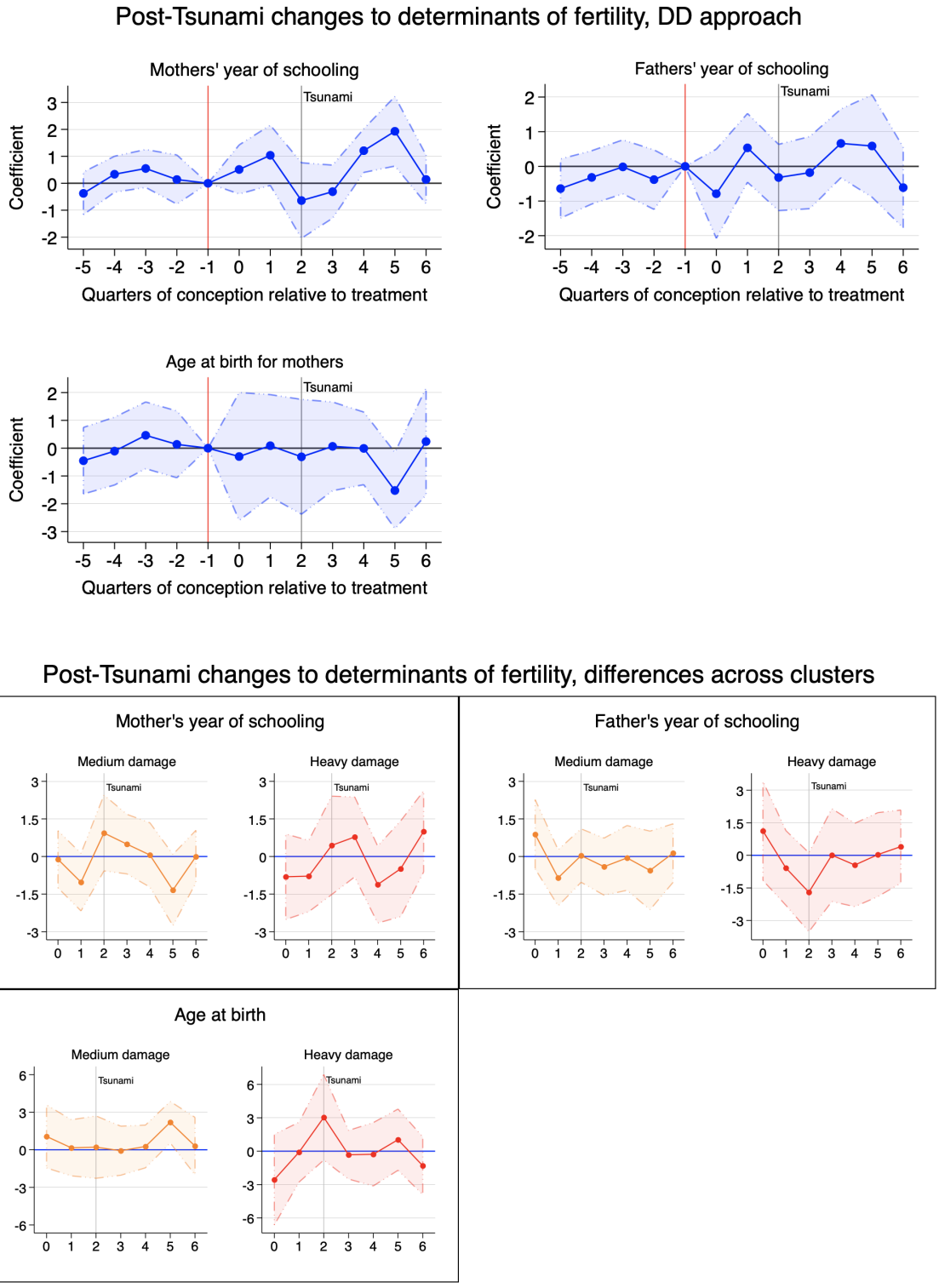

**Note**: Numbers in the x-axis indicate quarters of conception relative to the start of the treatment, which is 2004Q2. There are 108 clusters and 1,002 observations for all regressions. Point estimates and 95% confidence intervals are presented. The regression also controls for cluster fixed effects, as well as interaction between damage level and treated period time dummies. Standard errors are clustered at cluster-level.

Figure A4: Cluster-level differences total conceptions before and after treatment, DD-approach



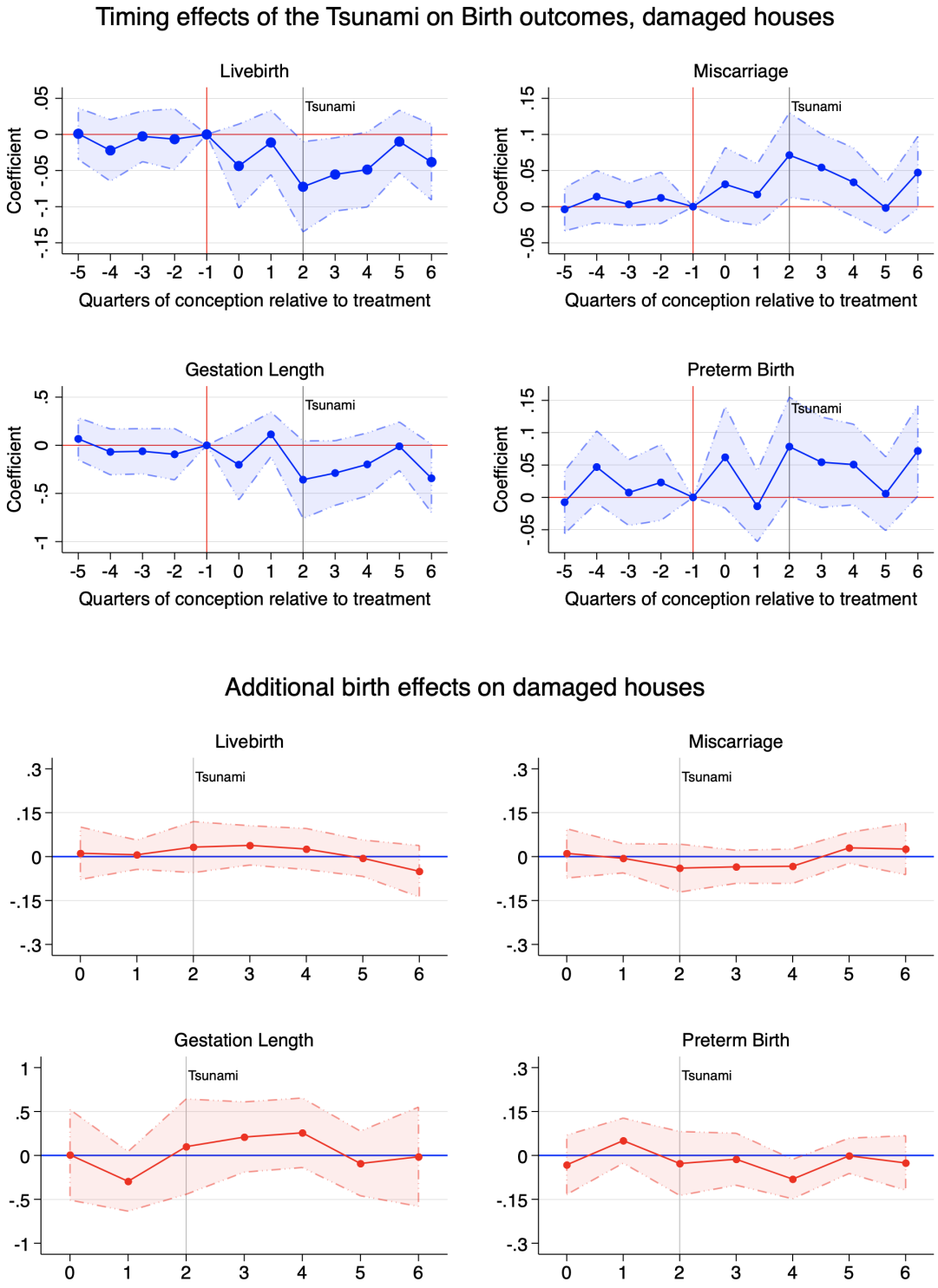

**Note**: Numbers in the x-axis indicate quarters of conception relative to the start of the treatment, which is 2004Q2. There are 108 clusters and 1,002 observations for all regressions. Point estimates and 95% confidence intervals are presented. The regression also controls for cluster fixed effects, as well as time dummies. Standard errors are clustered at cluster-level.

Figure A5: Testing for selection into fertility based on types, DD-approach




**Note**: Numbers in the x-axis indicate quarters of conception relative to the start the treatment, which is 2004Q2. There are 108 clusters and 2,159 observations for all regressions. Point estimates and 95% confidence interval are presented. The regression also controls for cluster fixed effects, as well as time dummies. Standard errors clustered at cluster-level.

Figure A6: Birth effects of the Tsunami using indicator for damaged houses




**Note**: Period 0 indicates those conceived on 2004Q2 and in the third trimester of pregnancy at the point of the Tsunami. 95% confidence interval is included, where the blue and red markers indicate point estimates for the time effect and the differential effect on those whose house was damaged by the Tsunami. Regressions include the same controls used in Section 5.2 in the main text. Standard errors are clustered at cluster-level. Observations: 2,155, Clusters: 108

Table A1: Alternate treatment effect estimates

| **Panel A.** ***Livebirth Results*** | | | | | |
|---|---|---|---|---|---|
| Conception | (1) | (2) | (3) | (4) | (5) |
| 2004q2 | -0.0376 | -0.0366 | -0.0388 | -0.0366 | -0.0353 |
| | (0.0243) | (0.0242) | (0.0250) | (0.0268) | (0.0291) |
| 2004q3 | -0.0181 | -0.0180 | -0.0228 | -0.0218 | -0.0316 |
| | (0.0182) | (0.0186) | (0.0195) | (0.0215) | (0.0237) |
| 2004q4 | -0.0603** | -0.0567** | -0.0643** | -0.0579** | -0.0538* |
| | (0.0267) | (0.0271) | (0.0278) | (0.0288) | (0.0305) |
| **Panel B.** ***Miscarriage Results*** | | | | | |
| Conception | (1) | (2) | (3) | (4) | (5) |
| 2004q2 | 0.0312 | 0.0292 | 0.0310 | 0.0318 | 0.0348 |
| | (0.0228) | (0.0229) | (0.0237) | (0.0250) | (0.0269) |
| 2004q3 | 0.0130 | 0.0127 | 0.0143 | 0.0147 | 0.0258 |
| | (0.0182) | (0.0182) | (0.0190) | (0.0207) | (0.0226) |
| 2004q4 | 0.0488* | 0.0473* | 0.0504** | 0.0445* | 0.0381 |
| | (0.0248) | (0.0250) | (0.0253) | (0.0264) | (0.0286) |
| **Panel C.** ***Gestation Length Results*** | | | | | |
| Conception | (1) | (2) | (3) | (4) | |
| 2004q2 | -0.191 | -0.182 | -0.207 | -0.211 | -0.239 |
| | (0.0144) | (0.145) | (0.150) | (0.161) | (0.169) |
| 2004q3 | -0.0257 | -0.00826 | -0.0407 | -0.0478 | -0.103 |
| | (0.106) | (0.109) | (0.114) | (0.127) | (0.133) |
| 2004q4 | -0.288* | -0.265 | -0.307* | -0.253 | -0.225 |
| | (0.163) | (0.165) | (0.170) | (0.177) | (0.190) |
| **Panel D.** ***Preterm Birth Results*** | | | | | |
| Conception | (1) | (2) | (3) | (4) | |
| 2004q2 | 0.0366 | 0.0346 | 0.0395 | 0.0406 | 0.0399 |
| | (0.0348) | (0.0356) | (0.0371) | (0.0395) | (0.0408) |
| 2004q3 | -0.0110 | -0.0107 | -0.00439 | 0.000155 | 0.0140 |
| | (0.0257) | (0.0266) | (0.0269) | (0.0283) | (0.0302) |
| 2004q4 | 0.0344 | 0.0328 | 0.0426 | 0.0384 | 0.0420 |
| | (0.0317) | (0.0323) | (0.0329) | (0.0336) | (0.0361) |
| Sample period | 99-05 | 00-05 | 01-05 | 02-05 | 03-05 |
| Obs. | 4661 | 4047 | 3416 | 2811 | 2159 |
| No. of Clusters | 108 | 108 | 108 | 108 | 108 |

$^{*}$ $p < .10$, $^{**}$ $p < .05$, $^{***}$ $p < .01$

Year-quarters in the first column indicate the period of conception. Coefficients for the quarter dummies for second through fourth quarter interacted with indicator for those conceived on 2004 are reported. There are controls for age of mother (level and squared) at birth, year of schooling of both the mother and the father, indicators for birth order, and cluster fixed effects. Standard errors are in the parentheses and are clustered at the cluster zone level.

Table A2: Birth effects of the Tsunami by timing of exposure, 03-04 cohort

| | Event-study | | | | DD-approach | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Conception period | Livebirth | Miscarriage | Duration | Preterm birth | Livebirth | Miscarriage | Duration | Preterm birth |
| 2003q1 | -0.00477 | 0.00672 | 0.0148 | 0.000296 | -0.00616 | 0.00809 | 0.00933 | 0.00235 |
| | (0.0170) | (0.0145) | (0.104) | (0.0234) | (0.0169) | (0.0145) | (0.104) | (0.0234) |
| 2003q2 | -0.0219 | 0.0152 | -0.0828 | 0.0518* | -0.0239 | 0.0167 | -0.0855 | 0.0533* |
| | (0.0205) | (0.0173) | (0.116) | (0.0280) | (0.0207) | (0.0174) | (0.116) | (0.0282) |
| 2003q3 | 0.00338 | 0.0000765 | -0.0474 | 0.00614 | 0.00234 | 0.000889 | -0.0496 | 0.00715 |
| | (0.0171) | (0.0142) | (0.112) | (0.0244) | (0.0172) | (0.0143) | (0.112) | (0.0244) |
| 2003q4 | -0.0139 | 0.0201 | -0.128 | 0.0268 | -0.0140 | 0.0200 | -0.127 | 0.0282 |
| | (0.0209) | (0.0177) | (0.133) | (0.0303) | (0.0208) | (0.0176) | (0.133) | (0.0300) |
| 2004q1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | (.) | (.) | (.) | (.) | (.) | (.) | (.) | (.) |
| 2004q2 | -0.0394 | 0.0331 | -0.183 | 0.0508 | -0.0370 | 0.0430 | -0.273 | 0.0580 |
| | (0.0241) | (0.0218) | (0.157) | (0.0332) | (0.0341) | (0.0360) | (0.237) | (0.0609) |
| 2004q3 | -0.00939 | 0.0153 | 0.00607 | 0.00193 | 0.0186 | -0.0109 | 0.121 | -0.0610* |
| | (0.0183) | (0.0171) | (0.101) | (0.0233) | (0.0175) | (0.0157) | (0.135) | (0.0314) |
| 2004q4 | -0.0561** | 0.0543** | -0.307** | 0.0653** | -0.108** | 0.120*** | -0.683** | 0.102* |
| | (0.0239) | (0.0218) | (0.154) | (0.0297) | (0.0475) | (0.0449) | (0.325) | (0.0540) |
| Obs. | 1355 | 1355 | 1355 | 1355 | 1355 | 1355 | 1355 | 1355 |
| No. of Clusters | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 |
| Damage × Post | No | No | No | No | Yes | Yes | Yes | Yes |

* $p < .10$, ** $p < .05$, *** $p < .01$

Year-quarters in the first column indicate the period of conception. Coefficients for the year-quarter dummies are reported in the tables, with those for 2004Q1 normalized to 0. There are controls for age of mother (level and squared) at birth, year of schooling of both the mother and the father, indicators for birth order, cluster fixed effects. Standard errors are in the parentheses and are clustered at the cluster zone level.

Table A3: Total conceptions in cluster X year-quarter blocks

| | Event-study | | DD-approach | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Conception period | Total Conception | log (Total Conception) | Total Conception | log (Total Conception) |
| 2004q2 | -0.141 | -0.0653 | 0.100 | 0.00154 |
| | (0.179) | (0.0800) | (0.272) | (0.114) |
| 2004q3 | 0.254 | 0.100 | 0.439 | 0.179 |
| | (0.174) | (0.0805) | (0.267) | (0.110) |
| 2004q4 | 0.108 | -0.0140 | 0.100 | 0.00484 |
| | (0.192) | (0.0826) | (0.283) | (0.127) |
| 2005q1 | 0.457** | 0.167* | 0.370 | 0.116 |
| | (0.196) | (0.0853) | (0.320) | (0.147) |
| 2005q2 | 0.225 | 0.0948 | 0.527* | 0.221* |
| | (0.184) | (0.0788) | (0.277) | (0.121) |
| 2005q3 | 0.229 | 0.103 | -0.197 | -0.0946 |
| | (0.184) | (0.0827) | (0.241) | (0.119) |
| 2005q4 | 0.338* | 0.136* | 0.207 | 0.114 |
| | (0.182) | (0.0763) | (0.245) | (0.122) |
| Obs. | 1002 | 1002 | 1002 | 1002 |
| No. of Clusters | 108 | 108 | 108 | 108 |
| Damage × treated period | No | No | Yes | Yes |

* $p < .10$, ** $p < .05$, *** $p < .01$

Year-quarters in the first column indicate the period of conception. Coefficients for the year-quarter dummies since the beginning of the treatment in the second quarter of 2004 are reported in the tables. There are cluster fixed effects as well as year-quarter dummies for pre-treatment periods. Regressions in (3) and (4) also controls for the interaction between damage indicators and treated period year-quarter dummies. Standard errors are in the parentheses and are clustered at the cluster zone level.

Table A4: Selection into fertility based on types

| | Event-study | | | DD-approach | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Conception period | Mother's schooling | Father's schooling | Age at birth | Mother's schooling | Father's schooling | Age at birth |
| 2004q2 | 0.363 | -0.144 | 0.0487 | 0.513 | -0.789 | -0.300 |
| | (0.328) | (0.428) | (0.631) | (0.459) | (0.649) | (1.160) |
| 2004q3 | 0.329 | -0.0480 | 0.164 | 1.039* | 0.533 | 0.0886 |
| | (0.333) | (0.386) | (0.607) | (0.563) | (0.500) | (0.927) |
| 2004q4 | -0.0151 | -0.479 | 0.124 | -0.641 | -0.321 | -0.310 |
| | (0.375) | (0.356) | (0.631) | (0.707) | (0.482) | (1.041) |
| 2005q1 | 0.0908 | -0.418 | -0.0414 | -0.311 | -0.180 | 0.0655 |
| | (0.369) | (0.387) | (0.581) | (0.497) | (0.524) | (0.805) |
| 2005q2 | 1.051*** | 0.555 | 0.115 | 1.210*** | 0.662 | -0.00698 |
| | (0.366) | (0.368) | (0.536) | (0.408) | (0.500) | (0.659) |
| 2005q3 | 0.998*** | 0.254 | 0.0588 | 1.929*** | 0.588 | -1.522** |
| | (0.334) | (0.372) | (0.657) | (0.651) | (0.745) | (0.692) |
| 2005q4 | 0.324 | -0.456 | 0.191 | 0.143 | -0.612 | 0.239 |
| | (0.361) | (0.367) | (0.555) | (0.455) | (0.587) | (0.970) |
| Obs. | 2159 | 2159 | 2159 | 2159 | 2159 | 2159 |
| No. of Clusters | 108 | 108 | 108 | 108 | 108 | 108 |
| Damage × treated period | No | No | No | Yes | Yes | Yes |

* $p < .10$, ** $p < .05$, *** $p < .01$

Year-quarters in the first column indicate the period of conception. Coefficients for the year-quarter dummies since the beginning of the treatment in the second quarter of 2004 are reported in the tables. There are cluster fixed effects as well as year-quarter dummies for pre-treatment periods. Regressions in (4) through (6) also controls for the interaction between damage indicators and treated period year-quarter dummies. Standard errors are in the parentheses and are clustered at the cluster zone level.

Table A5: Timing effects of the Tsunami on birth outcomes, alternate treatment assignment

| | 𝟙[House damaged] | | | | House damage rate | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Conception period | Livebirth | Miscarriage | Duration | Preterm birth | Livebirth | Miscarriage | Duration | Preterm birth |
| 2003q1 | 0.000975 | -0.00362 | 0.0670 | -0.00741 | 0.00142 | -0.00413 | 0.0728 | -0.00910 |
| | (0.0179) | (0.0151) | (0.110) | (0.0245) | (0.0176) | (0.0150) | (0.109) | (0.0242) |
| 2003q2 | -0.0221 | 0.0139 | -0.0684 | 0.0470* | -0.0224 | 0.0142 | -0.0683 | 0.0469* |
| | (0.0215) | (0.0183) | (0.120) | (0.0281) | (0.0214) | (0.0182) | (0.120) | (0.0281) |
| 2003q3 | -0.00262 | 0.00320 | -0.0621 | 0.00748 | -0.00279 | 0.00301 | -0.0578 | 0.00651 |
| | (0.0177) | (0.0149) | (0.118) | (0.0257) | (0.0175) | (0.0147) | (0.117) | (0.0254) |
| 2003q4 | -0.00653 | 0.0122 | -0.0935 | 0.0231 | -0.00564 | 0.0110 | -0.0812 | 0.0205 |
| | (0.0212) | (0.0179) | (0.134) | (0.0296) | (0.0210) | (0.0177) | (0.133) | (0.0294) |
| 2004q1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | (.) | (.) | (.) | (.) | (.) | (.) | (.) | (.) |
| 2004q2 | -0.0437 | 0.0310 | -0.202 | 0.0620 | -0.0637* | 0.0612* | -0.309 | 0.0943* |
| | (0.0293) | (0.0256) | (0.184) | (0.0396) | (0.0367) | (0.0348) | (0.209) | (0.0503) |
| 2004q3 | -0.0111 | 0.0169 | 0.113 | -0.0138 | -0.00315 | 0.00419 | 0.0682 | -0.000883 |
| | (0.0224) | (0.0215) | (0.117) | (0.0275) | (0.0288) | (0.0273) | (0.147) | (0.0334) |
| 2004q4 | -0.0724** | 0.0713** | -0.357* | 0.0784** | -0.0898** | 0.0946** | -0.480* | 0.0997** |
| | (0.0315) | (0.0296) | (0.203) | (0.0386) | (0.0386) | (0.0365) | (0.249) | (0.0465) |
| 2005q1 | -0.0554** | 0.0542** | -0.288* | 0.0544 | -0.0562* | 0.0405 | -0.240 | 0.0661 |
| | (0.0256) | (0.0235) | (0.169) | (0.0353) | (0.0335) | (0.0283) | (0.191) | (0.0405) |
| 2005q2 | -0.0487* | 0.0338 | -0.198 | 0.0508 | -0.0817** | 0.0481 | -0.226 | 0.0660* |
| | (0.0262) | (0.0240) | (0.165) | (0.0315) | (0.0335) | (0.0296) | (0.189) | (0.0355) |
| 2005q3 | -0.00987 | -0.00173 | -0.0101 | 0.00570 | -0.0229 | 0.00964 | -0.115 | 0.0252 |
| | (0.0219) | (0.0176) | (0.127) | (0.0288) | (0.0311) | (0.0238) | (0.187) | (0.0378) |
| 2005q4 | -0.0382 | 0.0472* | -0.343* | 0.0718** | -0.0489 | 0.0658 | -0.544** | 0.123** |
| | (0.0265) | (0.0252) | (0.179) | (0.0352) | (0.0410) | (0.0398) | (0.264) | (0.0487) |
| Obs. | 2155 | 2155 | 2155 | 2155 | 2159 | 2159 | 2159 | 2159 |
| No. of Clusters | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 |
| 𝟙[House damaged] × Post | Yes | Yes | Yes | Yes | No | No | No | No |
| House damage rate × Post | No | No | No | No | Yes | Yes | Yes | Yes |

* $p < .10$, ** $p < .05$, *** $p < .01$

Year-quarters in the first column indicate the period of conception. Coefficients for the year-quarter dummies are reported in the tables, with those for 2004Q1 normalized to 0. Columns (1)-(4) report estimates from regressions where the indicator of individual houses being damaged to the Tsunami is used to differentiated cross-scetional treatment assignment. Columns (5) - (8) report the results of the regression where the proportion of houses damaged per cluster is used to differentiate treatment intensity at a cross-sectional level. There are controls for age of mother (level and squared) at birth, year of schooling of both the mother and the father, indicators for birth order, cluster fixed effects. Standard errors are in the parentheses and are clustered at the cluster zone level.