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TERRORISM AND FERTILITY DECISIONS:

EVIDENCE FROM PAKISTAN

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Abstract

This study investigates the impact of exposure to terrorism on the fertility preferences and decisions of women in reproductive ages in Pakistan. It focuses on self-reported preferences and on within mother variations in reproductive behaviour, considering the length of the intervals between births and the survival chances of children to analyse how exposure to terrorism affects the urge to continue childbearing. The results suggest that the occurrence of terrorist incidents during the month of the birth of a child shortens the time interval to the following birth, but has no statistically significant effect on the survival chances of children. These findings support the claim that terrorism acts through fear and intimidation, supporting the importance of perceived risk in the fertility decisions of households in Pakistan. It is also shown that exposure to terrorism has no intensifying effect on the preference for sons.

Keywords: Development Economics, Health, Fertility, Family Planning, Son Preference, Conflict, Terrorism, Pakistan

1. Introduction

With a population of more than 220 million, Pakistan is currently the 5th most populous country in the world. The current rate of population growth, resulting from persisting high fertility and falling mortality rates, poses a major challenge to the development of the country by contributing to poorer economic outcomes (UNFPA 2020). Several studies have pointed the economic value of children, in particular sons, and the need for their contributions to the wealth of households, as the main reason behind the unchanged preference for larger families in Pakistan (Sathar et al. 2015; Zaidi and Morgan 2016). As a consequence, son preference prevails in the patriarchal society of Pakistan, leading to higher fertility for the sake of more sons (Khan and Sirageldin 1977; Sathar et al. 2015). Nonetheless, the unresponsiveness of fertility to decreased mortality remains mostly unexplained, suggesting the existence of alternative sources of uncertainty motivating the demand for larger families. In fact, in Pakistan, an additional source of uncertainty arises from the enduring violence and conflict that prevail in the country in the form of terrorism, making it the most dangerous country in the world (Saeed, Syed, and Martin 2014).

A growing body of the literature has covered the effects of conflict and violence on fertility preferences and reproductive behaviour. In developing countries, fertility decisions are rational economic decisions that balance the costs of child rearing with the contributions of children to the wealth of the household, namely in the form of old-age security (Mead Cain 1983; Bulatao 1984). In this context, risk becomes an important determinant of fertility, as the reliability of safety nets is enhanced through enlarged family sizes. As a result, when mortality rates are exogenously high, or perceived as so, the decreased chances of survival of children induce parents into seeking larger families, increasing fertility at the expense of the investment in the human capital of children

(Becker 1992; Kalemli-Ozcan 2003). Accordingly, existing evidence suggest that conflict originates strong replacement effects, increasing fertility in contexts where children are considered economically valuable (Berrebi and Ostwald 2015; Rocca and Rotondi 2019; Schindler and Brück 2011). Most studies, however, focus on prolonged and devastating conflicts and wars, which are likely to ignite several mechanisms affecting fertility. Terrorism, on the other hand, acts through fear and intimidation, and the reactions it inflicts tend to disproportionately exceed the actual damage it causes (Friedland and Merari 1985). As such, investigating how the occurrence of terrorist incidents affects the ideal family size preferences of households, allows for the assessment of the sole role played by the risk of losing a child on fertility preferences and decisions.

The aim of this work is to assess whether the exposure to terrorist incidents affects the fertility preferences and the reproductive behaviour of women in reproductive ages in Pakistan. More specifically, this study evaluates how the occurrence of a terrorist incident urges the decision to continue childbearing and whether it intensifies the demand for sons through gender-differentials in reproductive behaviour. To do so, this analysis combines data from the Pakistan Demographic and Health Survey of 2017-18 with data from the Global Terrorism Database, matching the surveyed women with the occurrence of terrorist attacks in their districts[1] of residence at the time of the birth of each of their children and at the time of their DHS interview.

To achieve its goal, this analysis adopts two distinct strategies. Logically, the first consists of evaluating how the occurrence of terrorism relates to direct measures of realized fertility and fertility preferences. These include the number of children ever born, the ideal number of sons, the

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[1] Throughout this study *districts* refer to the level 2 administrative areas of Pakistan while *provincial regions* refer to the level 1 administrative areas (Azad Jammu Kashmir, Baluchistan, Federal Capital Territory (FCT), Federally Administrated Tribal Areas (FATA), Gilgit Baltistan, Khyber Pakhtunkhwa, Punjab and Sindh).

desire for additional children and the use of modern contraception. However, being self-reported, these outcome variables are potentially subject to measurement errors that arise from social desirability and rationalization, invalidating the conclusions that could be drawn from the analysis. In addition, the possibility of endogeneity, arising from any correlation between individual characteristics and the choice of location of terrorist attacks, which might impact the estimated impacts of terrorism, requires an alternative approach. As such, the second step in this analysis is to focus on within-mother variations in reproductive behaviour, evaluating the effect of exposure to terrorism at the time of each birth on the length of the interval until the succeeding one and on the survival of the child.

Although not providing a reliable measure of the precise effect of terrorism on fertility, the results of this analysis suggest that exposure to terrorism urges the continuation of childbearing. More specifically, the occurrence of a terrorist incident during the month of the birth of a child shortens the expected time until the next birth, suggesting an increased desire for the continuation of childbearing. Conversely, the birth of a son and the number of sons previously born extend the spacing between births, revealing the adoption of gender-differential continuation of childbearing. The evidence, however, does not suggest gender-differentials to be magnified by the presence of terrorism. In addition, terrorism appears to have no significant effect on the survival of children. Nonetheless, the underreporting of deceased children in developing countries is a common practice in cases that are due to parental neglect. As such, this finding only serves as a support for the claim that terrorism acts through fear and intimidation, corroborating the importance of perceived risk in the fertility decisions of households in Pakistan.

The remainder of this work is organized as follows. Section 2. summarizes the existing literature on fertility decisions, on the effect of violence and conflict on fertility and on the consequences of son preference. Section 3. details the context of violence in Pakistan. Section 4. describes the empirical strategy employed. Section 5. presents and discusses the results of the analysis and Section 6. concludes.

2. Literature Review

In the existing literature, fertility decisions are modelled as rational economic decisions where households weigh the costs and the benefits of having an additional child (Caldwell 1976; Leibenstein 1974). As such, fertility will be high whenever the intergenerational wealth flow is directed upwards, from the younger to the older generations (Caldwell 1976). This is the case in most developing countries, where the lack of alternative security arrangements places children as the providers to the parents' old age, or any other circumstances of income shortages (Bulatao 1984; Mead Cain 1983). In result, fertility decisions are taken to attain a desired level of insurance, given the value of each child's contributions to the wealth of the household and the security needs of the parents.

In this context, risk plays a major role as a determinant of fertility. According to the old-age security theory, an increased risk of mortality rises the number of children needed to ensure a desired future income level (Mead Cain 1983). Prior research on the effect of violence and armed conflict has provided supporting evidence for this effect. Using qualitative research methods, which allow for a better understanding of the complex factors contributing to fertility decisions, Ataullahjan, Vallianatos, and Mumtaz (2021) found that, in a village marked by precarity, social exclusion, and violence in the province of Khyber Pakhtunkhwa, Pakistan, the increased

uncertainty imposed by the constant danger of premature death of a household member, acting together with the lack of state-provided security, caused safety nets to take the form of enlarged family sizes. Similarly, Pell (2017), after conducting in-depth interviews in the Palestinian West Bank, shows that women desired additional children to compensate for the increased child mortality in the territory, even if constrained by their economic situation and poverty. Schindler and Brück (2011), focusing on the effect of the Rwandan genocide in 1994 found a strong replacement effect for lost children during the conflict, Rocca and Rotondi (2019) found the Boko Haram's terrorist attacks in Nigeria to increase the number of children per household, and Torres and Urdinola (2019) show that the Colombian Armed Internal Conflict had a positive effect on fertility, partly through the women's response to higher mortality. All these studies focus on settings where reproduction responds to higher mortality levels. Indeed, Berrebi and Ostwald (2015) and Urdal and Che (2013) show that the effect of conflict varies across developed and developing countries, resulting in a positive relationship whenever children are perceived as economically valuable providers to the household.

The literature on this relationship is, however, not unanimous and evidence supporting effects in the opposite direction has also been found. Becker (1992) and Pörtner (2001) suggest that, even though a decreased probability of survival increases the number of children needed to attain a target level of future consumption, increased mortality lowers the returns on children by increasing the average number of births that are needed before a survivor. In addition, in times of conflict, extreme poverty and stress cause women to consider pregnancy unsafe, postponing motherhood (McGinn 2000). In accordance, Lindstrom and Berhanu (1999) show that, between 1974 and 1991, a period of political instability, war, famine, and economic decline in Ethiopia, families responded by limiting childbearing to avoid impoverishment, even though the value of

children as insurance had increased. Similarly, Agadjaninan and Prata (2002) provide evidence of a decline in fertility during wartime in Angola, followed, however, by a rebound in the post-war period.

Contradictions in empirical evidence arise from the combination of factors constraining fertility decisions, which vary with the type and duration of the conflict. Alternative channels through which violence and conflict affect fertility include effects on education attainments, female labor supply, marriage market and age of marriage, and access to healthcare facilities and family planning services (Islam et al. 2016; Shemyakina 2013; Buvinic et al. 2013; Verwimp and van Bavel 2005; Torres and Urdinola 2019). Evidence of the direction of each of these effects, and the consequent effect on fertility, exists in all directions, being conditional on the context in which they are studied.

It is important to notice that in some cases, the mentioned effects of conflict on children's survival chances, and consequently on fertility, differed across gender. Verwimp and van Bavel (2005) found not only that refugee women had higher fertility rates given the higher probability of death, but also that while survival changes of daughters were significantly lower for refugees compared to non-refugees, no survival differentials were found for sons. This effect has been earlier exposed by Sathar and Aziz (1987) as a corollary of son preference: in their pursuit for sons, parents deliberately neglect daughters, directing their resources towards the survival and development of sons. In addition, Kalemli-Ozcan (2003) showed that, while bearing additional children to counteract the higher probability of death, parents will optimally lower their investment in children. Therefore, in a context of strong son preference and high uncertainty regarding the survival of children, parents should prioritize sons, over daughters, directing their investment in

that direction. Maed Cain (1984) justifies this preference for sons as a product of the patriarchal society: where women are highly dependent on men, security goals must be defined in terms of surviving sons. In accordance, Ataullahjan, Vallianatos, and Mumtaz (2021) found that most interviewees understood their sons as their only hope to escape poverty.

Son preference, most often reported in South and East Asian countries, has been shown to be an important determinant of fertility behaviours. Potential manifestations of this effect include stalled fertility transitions, elevated sex ratios, and mortality, health and education gender-specific differentials. In countries where sex-detection technologies are widely available, as is the case of China, India, and the Republic of Korea, gender preferences are often implemented through sex-selective abortions, resulting in male-biased sex ratios (Das Gupta et al. 2003; Anukriti, Bhalotra, and Tam 2020). Alternatively, in the absence of sex-selective abortions, son preference will manifest itself through higher fertility, resulting from gender-specific stopping rules, and higher mortality among girls (Bongaarts 2013; Sathar et al. 2015; Aksan 2021). Empirical evidence suggests that when sex-selective abortion is unlikely, contraception will be used for gender-differential continuation of childbearing (Zaidi and Morgan 2016; Leone, Matthews, and Dalla Zuanna 2003).

Prior research conducted in Pakistan revealed the preference for sons to be an important determinant of fertility (Khan and Sirageldin 1977). Z. Sathar et al. (2015) and Zaidi and Morgan (2016) showed that, although being prevalent in the Pakistani society, there is no evidence that son preference is leading to sex-selective abortions, leading, instead, to higher fertility for the sake of more sons. In accordance, Channon (2017) found evidence suggesting that the continuation of childbearing and the use of contraception among Pakistani women was strongly related to the sex

composition of their children. Additionally, Javed and Mughal (2020) suggest the length of birth intervals to be another potential expression of son preference, finding it to be significantly longer for women with one or two sons, compared to women with no sons, who were also more likely to bear risky pregnancies. Finally, Gangadharan and Maitra (2000) showed discrimination against daughters to cause higher child mortality rates for girls through gender-specific differentials in allocation of health and other inputs within the households.

In this work it is argued that terrorism urges the desire for children, and in particular sons. It contributes to the body of literature by providing new evidence of the effect of conflict on fertility. While most studies focus on prolonged and devastating conflicts that are likely to ignite several mechanisms affecting fertility, focusing on terrorism allows for the isolation of the role played by fear. Terrorism is a distinctive form of violence that aims at accomplishing political, religious and ideological ends through intimidation (Friedland and Merari 1985; Rocca and Rotondi 2019). As a result, the reactions originated by terrorism tend to disproportionately exceed the actual damage it causes. Even in contexts where terrorist attacks are not rare events, the probability of personally experiencing a terrorist attack constitutes only a fraction of the likelihood of being harmed or killed in a traffic accident (Friedland and Merari 1985). And yet terrorist activity is much more salient to the decision making of households, causing changes in behaviour and in the allocation of resources, having consequences to the education and health outcomes of children. As such, by focusing on the exposure to terrorist incidents this work provides evidence characterizing the role played by perceived risk on the fertility decisions of households.

3. Contextualization

Often considered the most dangerous country in the world, Pakistan is the stage of enduring violence and conflict. Responding to regional and bordering events, terrorism has been predominant in Pakistan since the 1980s, at the time being motivated by the Soviet occupation of Afghanistan (Saeed, Syed, and Martin 2014). Since then, the frequency and the intensity of the attacks have been on the rise, spreading to every region of the country. In the 1990s, terrorism, originally clustered in the regions closer to the border with Afghanistan, spread to the southern areas of the country, particularly Sindh and Punjab, in the form of sectarian violence triggered by ethnic differences among the population, which remain the main cause of the attacks happening in the region (Saeed, Syed, and Martin 2014). In addition, Baluchistan has been the stage of the nationalist Baluch movement, motivated by the fear of lost resource wealth, and Gilgit Baltistan and Jammu Azad Kashmir suffer from the attacks arising from the disputation of the territory (Saeed, Syed, and Martin 2014).

More recently, in the post-9/11, terrorism has intensified in the country in response to the involvement of Pakistan in the War on Terror. Allied to the USA, the Pakistani government has launched several military actions against the terrorist groups that it formerly supported, further triggering terrorist activity in the country (Grossman, Khalil, and Ray 2019; Saeed, Syed, and Martin 2014). In 2007, a new trigger to terrorist activity arose, when the Pakistani military launched Operation Sunrise which targeted Al-Qaeda militants and resulted in the formation of the Tehrik-i-Taliban Pakistan (TTP), currently the most active terrorist group in Pakistan (Grossman, Khalil, and Ray 2019). In the aftermath of these events, terrorism in Pakistan reached its peak in 2013, having been in decline ever since due to the on-going efforts of the Pakistani military (Vision

of Humanity n.d.). In 2019, the country registered the lowest number of terror-related deaths since 2006, however, the foundations of terrorism remain intact and the threat remains real (Afzal 2021).

4. Methodology

The aim of this study is to provide evidence of the effect of terrorism on the fertility decisions and preferences of women in reproductive ages in Pakistan. More specifically, this analysis focuses on the role of the uncertainty imposed by terrorism on the decisions of continuation of childbearing and on the demand for sons. To do so, this analysis combines data from the Pakistan Demographic and Health Survey of 2017-18 with data from the Global Terrorism Database, matching surveyed women with the occurrence of terrorist activity in their districts of residence at a specific point in time. Then, to evaluate the impact of exposure to terrorism on fertility-related outcomes, two distinct strategies are used. The initial approach assesses the relationship between exposure to terrorism and self-reported preferences and realized fertility outcomes. However, the limitations to the validity of the results obtained, arising from measurement-error and omitted-variable biases, require an alternative approach. Ergo, the impact of terrorism on the fertility decisions of Pakistani women is studied as the effect of exposure to terrorist incidents on the urge to continue childbearing, and its impact on fertility preferences, i.e. on the preference for sons, is measured through the effect of exposure to terrorist incidents on the adoption of gender-differential stopping rules.

This section details the empirical strategy of this analysis. It starts with the description of the data sources used and with the definition of exposure to terrorism. Then, it proceeds to the description of the empirical strategy used in this analysis. For that, the methodology used in the existing literature is briefly reviewed, laying the foundations for the estimation strategies used in

this analysis. Finally, the details of the estimation strategies are provided and their limitations discussed.

4.1. Data

This analysis uses data from two sources: the Pakistan Demographic and Health Survey of 2017-18 (PDHS) and the Global Terrorism Dataset (GTD). The PDHS dataset contains detailed information on the Pakistani households' characteristics, including socioeconomic conditions, family structure and fertility preferences, and the data from GTD provides detailed information on the timing and location of terrorist attacks in Pakistan since 1970. The combination of the two datasets allows, therefore, for the analysis of the effect of exposure to terrorism on the fertility preferences and decisions of the Pakistani households, as is the objective of this study.

The PDHS is a nation-wide representative survey, providing data collected in all provinces and regions of Pakistan. The survey data used covered 13,118 ever-married women, aged 15-49, who gave birth at least once. The dataset contains data for every child ever born to each interviewed woman, which amount to a total of 50,495 observations. The data provides information on the households' background characteristics (including age, education attainment, employability and wealth), on the women's pregnancy histories and use of contraception, on fertility preferences (including the desire for additional children, the ideal family size and ideal sex composition of children) and on child mortality.

The GTD collects information from news media sources on terrorist incidents worldwide since 1970, providing detailed information on the date and the location of each attack. This data was combined with the PDHS dataset, identifying the occurrence of terrorist incidents in the

district of residence of each woman at the time of her DHS interview and at the time of the birth of each of her children.

4.2. Measuring Exposure to Terrorism

To evaluate the effect of terrorism on the fertility preferences and decisions of Pakistani women, the first step in this analysis is identifying and measuring exposure to terrorism. As aforementioned, this study combines two distinct datasets to identify the exposure to terrorism of each surveyed woman. For that, exposure to terrorism is considered as the occurrence of terrorist incidents in the district of residence of each surveyed woman at a specific point in time, which varies throughout this analysis, according to its relevance to the outcome variables. In general, exposure to terrorism will be identified as the occurrence of terrorism during the month of the birth of each child. In the cases where only one observation per woman is used, the birth considered will be the most recent one, when women decide on the behaviour to adopt. The exception is the case of self-reported preferences revealed at the survey interview. In that case, exposure to terrorism will be considered at the month of the DHS interview.

To measure the exposure to terrorism of each surveyed woman, two distinct measures are considered. The first simply identifies the occurrence of terrorist incidents in the district of residence of each woman, consisting of a binary variable which equals 1 if at least one terrorist incident occurred at the relevant location and period of time, and 0 otherwise. To complement this analysis, the second measure captures variations in the intensity of the exposure to terrorism, identifying not only whether a woman experienced a terrorist incident, but also how often it happened. For that, the intensity of terrorism is measured as the log of the number of terrorist incidents occurring in the relevant district during the relevant month. The results of this analysis

will be estimated using both measures. However, the focus will be on the exposure to terrorism and the results obtained for the intensity of the exposure to terrorism will be presented in the appendix.

It is important to notice that it is likely that fertility decisions are influenced not only by the sole occurrence of terrorist incidents in the specific month of the birth of a child, but rather by the continuous threat posed by terrorism. Nevertheless, considering exposure to terrorism as the occurrence of terrorist incidents over a specific and short period of time allows for the exploitation of the spatial and temporal variations of terrorism. In addition, while it is likely that the exposure to terrorist attacks is correlated with individual characteristics, it is highly unlikely that any correlation exists between the timing of the attacks and the characteristics of the population. After all, terrorism intends to shock and surprise, and it is the unpredictability of the attacks that renders terrorists their ability to induce fear and intimidation (Berrebi and Ostwald 2015; Friedland and Merari 1985). Therefore, by exploiting temporal variations in the occurrence of terrorist incidents within each district, the correlation between individual characteristics and the exposure to terrorism should be limited.

4.3. Empirical Strategy: Capturing Differentials in Reproductive Behaviour

This study intends to capture not only the effect of terrorism on fertility decisions, but also on fertility preferences, more specifically, on the preference for sons, which is an important determinant of realized fertility in Pakistan. However, the self-reported measures of ideal number of sons and ideal sex composition of children provided by the PDHS are subject to biases, being influenced by the actual sex composition of the children a woman has and by feelings of social desirability, which undermines the validity of the estimates (Channon 2017; Jayachandran 2017).

For this reason, in the existing literature, son preference is evaluated as the adoption of a gender-differential reproductive behaviour. In the particular context of Pakistan, there is evidence that the sex composition of children affects subsequent fertility decisions, leading to gender-differential continuation of childbearing and gender-specific stopping rules (Zaidi and Morgan 2016; Channon 2017; Bongaarts 2013).

In accordance, this study focusses on capturing differentials in reproductive behaviour. More specifically, it will measure differentials in the intention to continue childbearing following the occurrence of terrorist incidents and following the birth of a son. For that, the number of children ever born, the use of a modern method of contraception and the length of the intervals between births will be considered. In addition, the survival of children will also be considered, in an attempt to capture differentials in the allocation of resources between sons and daughters and in the presence of terrorism.

In this analysis, gender differentials in the reproductive behaviour of women are captured through two alternative approaches. When the estimation strategy considers one observation for each child ever born to each surveyed woman, gender differentials will be captured through the effect of the birth of a son on subsequent behaviour. This will be the case in the study of the length of the birth-to-birth intervals and of the survival of each child. Alternatively, in the cases where only one observation per mother is used, the sex composition of children will be proxied, alternately, by the sex of the lastborn, which proxies the sex ratio at last birth (Zuanna and Leone 2001), and by the sex of the firstborn child, which provides a proxy for the sex composition of children that is expected to be absent of any possible manipulation (Anukriti, Bhalotra, and Tam 2020). As there is evidence suggesting that sex-selective abortions in Pakistan are not common,

this analysis focuses on the effect of the sex of the lastbor, and the estimates for the effect of the firstborn will be included in the appendix.

Finally, to evaluate the effect of the exposure to terrorism on the preference for sons, this analysis measures the differential effect of the birth of a son in the presence and in the absence of terrorism. For that, each model will include an interaction term between the birth of a son and the occurrence of terrorist incidents, which captures differences in the adoption of a gender-differential behaviour arising from the exposure to terrorism. In other words, if exposure to terrorism has an effect on the preference for sons, then the adoption of gender-differential stopping rules should differ in the presence of terrorism and the interaction term should have an estimated effect different from zero.

4.4. Estimation Strategies

To evaluate the effect of terrorism on the fertility decisions and preferences of Pakistani women, two distinct estimation strategies are used. The first looks into self-reported fertility preferences and observed fertility outcomes. The second focusses on within mother variations in reproductive behaviour, allowing for the identification of potential differentials in the continuation of childbearing. and in the allocation of resources arising from the exposure to terrorism.

4.4.1. Self-Reported Preferences and Realized Fertility Outcomes

As aforementioned, the first estimation strategy used in this analysis focusses on self-reported fertility preferences and realized decisions of the surveyed women. More specifically, it considers the number of children ever born to a woman, the ideal number of sons as a share of the ideal number of children, the desire for additional children, and the use of a modern method of

contraception and assesses their relationship with the occurrence of terrorism. This estimation strategy is depicted in the following model specification, which will be estimated for each outcome variable using the Ordinary Least Squares Estimator (OLS):

$$y_{ij} = a + \beta \, Terrorism_{ij} + \gamma \, Male_i + \delta \, Male_i \cdot Terrorism_j \tag{1}$$
$$+ \theta X'_{ij} + \lambda W'_i + \varepsilon_{ij}$$

where y_{ij} is the outcome of interest (number of children ever born, ideal share of sons, desire for additional children and use of modern contraception) and ij identify, respectively, each mother and her district of residence. $Terrorism_{ij}$ is a binary variable, which equals 1 if at least one terrorist incident occurred district j at the month of the most recent birth of woman i, or, in the case of the ideal share of sons and of the desire for additional children, at the month of her survey interview. $Male_i$ identifies the sex of the lastborn child of each woman, equalling 1 if the child is male and 0 otherwise. $Male_i \cdot Terrorism_{ij}$ is an interaction between the two. X'_i is a vector of maternal and household characteristics, including controls for the age of the mother, the age at first cohabitation, the mothers' and the fathers' years of education, rural residency, the level of wealth of the household, and, for the desire for additional children, and for the ideal share of sons and use of modern contraception, the number of living children. Finally, W'_i is a vector of binary variables that identify the district of residence of each woman i. ε_i represents the error term.

Regarding the outcomes of interest, the desire for additional children takes the form of binary variable, equalling 1 if, in her interview, a woman stated to desire additional children, and 0 otherwise. Likewise, the use of contraception is a binary variable which equals 1 if, at the time of the interview, a woman was using a modern method of contraception, and 0 otherwise. To analyse the number of children ever born, the sample is restricted to include only women who are

likely to have concluded their childbearing, considering the women who stated, in their interview, not to desire any additional children.

Although providing direct measures of the relationship between exposure to terrorist incidents and the fertility preferences and decisions of women in reproductive ages in Pakistan, this estimation strategy is likely to deliver invalid estimates. First, being self-reported, the ideal number of sons and the desire for additional children are likely to be subject to measurement errors arising from feelings of social desirability and from rationalization. In addition, it is possible that some correlation between exposure to terrorism and individual unobservable characteristics persists. This is particularly true in the case of the use of modern methods of contraception due to temporal and spatial variations in the provision of family planning services. Thus, it is possible that the proposed measure of exposure to terrorism is insufficient to address every potential source of endogeneity, requiring the adoption of an alternative estimation strategy.

4.4.2. Mother-Specific Fixed Effects Models

The second estimation strategy used in this analysis focuses on within mother variations in reproductive behaviour and in the allocation of resources. For that, the length of the intervals between each birth and the succeeding one and the survival of each child are considered. By providing one observation for each child ever born to each woman, and, consequently, several observations for each mother, focusing on these outcome variables allows for the implementation of the fixed effects estimator, controlling for the unobserved individual characteristics that could be related to the exposure to terrorism, according to the following model specification:

$$y_{ikj} = \alpha + \beta\, Terrorism_{ij} + \lambda\, Male_i + \delta\, Male_i \cdot Terorism_{ij}$$
$$+\gamma Siblings_{ik} + \phi Brothers_{ik} + \lambda \mathbf{Z'}_{ik} + \mu_k + \varepsilon_{ikj} \tag{2}$$

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where y_{ikj} refers, alternately, to the length of the interval between birth i and the succeeding birth, and to the survival of child i, and ikj identify, respectively, each child, each mother and the district of residence. $Terrorism_{ij}$, $Male_i$ and $Male_i \cdot Terrorism_{ij}$ refer, as before, to the sex of child i, to the occurrence of terrorist attacks in district j at the month of the birth of child i and to the interaction between the two. $Siblings_{ik}$ and $Brothers_{ik}$ refer, respectively, to the number of children and sons born to mother k before child i. $\mathbf{Z}'_{ik}$ is a vector of binary variables identifying the birth order of birth i. μ_i captures mother-specific fixed effects and ε_{ik} refers to the error term.

It is important to notice that the underreporting of female births is a common practice in Pakistan (Sathar et al. 2015; Channon 2017). As a result, gender-differentials in the survival chances of children will be subject to measurement biases that arise from the omission of deceased daughters. Still, being that the case, the underreporting of deceased children will be conditional on the causes of death, and missing children are likely to have died due to intentional parental neglect. As such, while being exogenous to the actions of the parents, it is likely that the deaths provoked by terrorism will be correctly reported. Therefore, although failing to provide evidence of the effect of terrorism on the gender-differentials in the allocation of resources within households, this analysis will still deliver reliable estimates of the effect of terrorism on survival chances, providing evidence supporting the importance of perceived risk in fertility decisions.

5. Results

5.1. Descriptive Statistics

Descriptive statistics of the sample are presented in Appendix A.1. It is shown that the women included in the sample belong to households from every province and region in Pakistan.

The average wealth index is 2.993, meaning that the average woman belongs to a household with a medium level of wealth – neither poor nor rich, and women from all wealth levels are represented in the sample. 51.6% of the women are from rural areas and 48.4% have an urban residency. 45.8% of women experienced terrorist activity in their district of residency at the month of their interview and the average women experienced 1.66 attacks in that same month. In addition, the average age of the women included in the sample is 33 years old, having first moved in with their husbands at age 19. The age at first cohabitation is here used as a proxy for the age at marriage. The average woman has 4 completed years of education, however 52% has no education at all. Finally, only 15.7% were employed at the time of the interview.

Relative to the fertility preferences and reproductive behaviour of the women in the sample, the average number of children ever born is 3.85, while the average number of living children is 3.56, which go up to 4.87 and 4.51, respectively, when considering only women who claimed, in their interviews, not to desire any additional children. For all women, the average ideal number of children is 4.15, and for most of them the share of wanted boys surpasses half of the ideal number of children. The survival chances of children show that 92 of each 100 children of the surveyed women were alive at the time of the interview. The average interval between births was 32 months. Finally, even though around 99% of the women in the sample had knowledge of any modern method of contraception, only 26% were, at the time of the interview, using it.

Appendix A.2. provides a comparison between the characteristics of women who were exposed to terrorist activity in their districts of residency at the time of their survey interview and those who were not. The results suggest that frequency of exposure to terrorism differs across provincial states and that it is more frequent in urban than in rural areas. The wealth of women

exposed and not exposed to terrorism is, on average, not statistically different. The average age of the women included in the sample is lower in areas more affected by terrorism, which implies a lower age at marriage and at the birth of the first child. The average number of completed years of education is lower for women exposed to terrorism and the percentage of women that have no education is larger. Female labor supply is also lower in districts with terrorist activity. Generally, both the number of ever born and living children, as well as the ideal number of children, are higher in districts with terrorism. This relationship is further illustrated in Appendix A.3., where both, the location of the attacks and the regional average of children ever born per woman are represented.

5.2. Self-Reported Preferences and Realized Fertility Outcomes

Table 1. presents the results of the analysis of self-reported preferences and realized fertility outcomes. It is shown that exposure to terrorism is strongly related with the number of children ever born to a woman. This result is significant at the 1% significance level, suggesting that, all else equal, women who experienced at least one terrorist attack at the month of the birth of their last child have, on average, more 0.57 children than women who did not experience terrorism at that time. Exposure to terrorism is also related with a higher ideal number of sons, as a share of the ideal number of children. Significant at the 10% significance level, this result suggests that the ideal share of sons of women who were exposed to terrorism during the month of their interview was, on average and all else equal, 1.29 percentage points higher. Although not in a statistically significant way, the results suggest that women who were exposed to terrorism at the time of their interview desired additional children less often, all else constant. Likewise, exposure to terrorism appears to be related with a more frequent adoption of modern contraception.

Table 1.: The Effect of Terrorism and a Male Lastborn Child on the Number of Children Ever Born, on the Ideal Share of Sons, on the Desire for Additional Children and on the Use of Modern Contraception

Variables	Children Ever Born[1]	Ideal Share of Sons[2]	Desired for Additional Children[2]	Use of Modern Contraception[1]
Male Lastborn Child (1=Male)	– 0.129 *	2.917 ***	– 6.34 7***	1.650
	(0.0578)	(0.361)	(0.912)	(1.092)
Exposure to Terrorism	0.573 ***	1.289 *	– 1.668	2.262
	(0.0756)	(0.608)	(1.723)	(1.242)
Male Lastborn Child × Exposure to Terrorism	– 0.0250	– 0.614	2.458 *	– 1.926
	(0.0860)	(0.557)	(1.420)	(1.531)
Constant	2.567 ***	0.359	89.75 ***	15.74 ***
	(0.186)	(0.419)	(3.127)	(3.285)
Maternal and Household Controls	Yes	Yes	Yes	Yes
District Specific Effects	Yes	Yes	Yes	Yes
Observations	6,179	10,137	12,585	12,585
R-Squared	0.443	0.131	0.323	0.077

Standard errors clustered according to the DHS clusters (580 clusters) are in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.
[1] Exposure to terrorism identifies the occurrence of terrorist incidents in the district of residence at the month of the birth of the last child. [2] Exposure to terrorism refers to the occurrence of terrorism attacks in the district of residence at the month of the survey interview. Maternal and household controls include the age of the mother, the age at first cohabitation, the mothers' and the fathers' years of education, rural residency, level of wealth of the household. For the desire of additional children, the use of contraception and the preferred sex composition, an additional control is included accounting for the number of living children. District specific effects refer to the inclusion of a set of binary variables identifying the district of residence. See Appendix B.

The results in table 1. also support the existence of a preference for sons. It appears that a male lastborn child lowers the number of children borne and the likelihood that a woman will desire to continue childbearing. More specifically, the results suggest, at the 10% significance level, that women with a male last borne have 0.13 fewer children and are, at the 1% significance level, 6.35 percentage points less likely to desire additional children, on average and all else equal. Accordingly, the adoption of a modern method of contraception appears to be more likely after the birth of a male. A male offspring is also related, at the 1% significance level, with a 2.9 percentage points higher ideal share of sons, which illustrates the issue of rationalization that characterizes the measure.

Finally, the results suggest that exposure to terrorism has no effect on gender-differential behaviour in the number of children ever born nor on the adoption of modern contraception. However, it appears that the occurrence of terrorism lowers the effect of the birth of a son in the

desire for additional children. In other word, the results suggest that the likelihood of stopping childbearing after the birth of a son is 2.46 percentage points lower in the presence of terrorism.

It is important to bear in mind that these results should be interpreted with caution. In addition to the measurement errors that characterize self-reported characteristics, it is also likely that exposure to terrorism is related with unobserved characteristics that affect the outcomes analysed. Being that the case, these estimates do not provide evidence of a causal effect of exposure to terrorism on the fertility preferences and decisions of Pakistani women.

5.3. Mother-Specific Fixed Effects Models

Table 2. presents the results of the analysis of the length of birth-to-birth intervals and the survival of children. The results suggest that, at the 1% significance level, exposure to terrorism during the month of the birth of each child shortens the time interval until the next birth by 1.63 months, on average and all else equal. Conversely, at the 10% significance level, birth-to-birth intervals are, on average and all else constant, 0.66 months longer after the birth of a son, than after the birth of a daughter. Finally, exposure to terrorism appears to be related with a smaller effect of the birth of a son on the length on interval to the following birth. This means that, in the presence of terrorism, the gender-differentials in the length of the interval between births becomes smaller, suggesting an attenuated preference for sons. The evidence, however, is not sufficient to claim an effect that is statistically different from zero.

The results regarding within mother variations in the survival of each child suggests that the occurrence of terrorist incidents in the month of the birth of a child are related with 0.17 percentage points lower chances of survival. The evidence on this effect, however, is insufficient

Table 2.: Fixed Effects Estimates: The Effect of Terrorism and the Effect of the Birth of a Male Child on the Length of Birth Intervals and Children's Survival

Variables	Length of Birth Intervals	Children's Survival
Male Child (1=Male)	0.659*	– 1.055**
	(0.303)	(0.366)
Exposure to Terrorism	– 1.630***	– 0.174
	(0.398)	(0.443)
Male Child × Exposure to Terrorism	– 0.601	– 0.363
	(0.450)	(0.545)
Constant	25.63***	90.01***
	(0.256)	(0.329)
Maternal Fixed Effects	Yes	Yes
Birth Order Fixed Effects	Yes	Yes
Observations	37,377	50,495
N	11,135	13,118
R-Squared	0.047	0.010

Standard errors clustered according to the DHS clusters (580 clusters) are in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.
Exposure to terrorism identifies the occurrence of terrorist incidents in the district of residence at the month of the birth of each child. See Appendix C.

to prove that it is statistically different from zero. In addition, the results suggest, at a 1% significant level, the survival chances of boys are, on average and all else equal, 1.05 percentage points lower than the survival chances of girls. However, as mentioned before, the underreporting of the birth of daughters, and consequently their deaths, is common in Pakistan, and therefore, this result does not provide evidence of gender-differentials in the allocation of resources within the household. As such, the lower survival chances of boys captured in this analysis is likely to be due to biological factors, that are exogenous to the actions of the parents.

The results obtained in this analysis suggest that exposure to terrorism urges the continuation of childbearing, resulting in shorter intervals between births. However, there is no evidence that exposure to terrorism affects gender-differentials in birth-to-birth intervals, suggesting that experiencing a terrorist incident has no effect on the preference for sons. In addition, this analysis reveals that terrorism has no statistically significant effect on the survival of children, supporting the claim that terrorism acts through fear and intimidation and corroborating the importance of perceived risk on the fertility decisions of households in Pakistan.

6. Conclusions and Discussion

The aim of this study was to provide evidence of the role played by the uncertainty imposed by terrorism on the fertility preferences and decisions of women in reproductive ages in Pakistan. For that, this analysis investigated how the exposure to terrorist incidents affected self-reported preferences and the reproductive behaviour of the surveyed women. Focusing on within mother variations on the length of the intervals between births and on the survival of each child, this study captured differentials in the continuation of childbearing arising from the exposure to terrorism.

The results obtained reveal that there is a stronger urge to continue childbearing in the presence of terrorism, in despite of the lack of evidence supporting an effect of terrorism on the survival of children. More specifically, it is shown that while the occurrence of terrorism during the month of the birth of a child shortens the length of the time interval to the succeeding birth, precipitating the continuation of childbearing, it has no statistically significant effect on the survival of children. These findings support the importance of perceived risk – in this context, the fear of losing a child – to the fertility decisions of households in Pakistan, who seek larger families to enhance the reliability of their safety nets, given the flaws in state provided security. It is, however, also found that terrorism has no effect on the preference for sons.

Nevertheless, the adopted measure of exposure to terrorism raised some limitations to this analysis, as it is likely that fertility decisions are influenced by the continuous threat posed by terrorism, rather than by the sole occurrence of terrorist incidents in the month of the birth of a child. As such, future research should take advantage of the unpredictability of past (and future) surges in terrorist activity, capturing differences in the general context of violence in Pakistan, to better evaluate and measure the impact of terrorism on fertility and on the decisions of households.

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Appendix A: Descriptive Statistics

Appendix A.1.: Descriptive Statistics

	Mean	Std. Dev.	Min.	Max.	N
Household Characteristics					
Wealth Index	2.993	1.415	1	5	13,118
Poorest	.195	.396	0	1	13,118
Poorer	.215	.411	0	1	13,118
Middle	.197	.398	0	1	13,118
Richer	.189	.391	0	1	13,118
Richest	.205	.403	0	1	13,118
Region					
Azad Jammu And Kashmir	.111	.314	0	1	13,118
Baluchistan	.113	.317	0	1	13,118
Federal Capital Territory	.074	.262	0	1	13,118
Federally Administered Tribal Areas	.069	.253	0	1	13,118
Gilgit Baltistan	.068	.252	0	1	13,118
Khyber Pakhtunkhwa	.158	.365	0	1	13,118
Punjab	.224	.417	0	1	13,118
Sindh	.182	.386	0	1	13,118
Residency					
Rural	.516	.500	0	1	13,118
Urban	.484	.500	0	1	13,118
Exposure to Terrorism (at the Month of the Interview)	.458	.498	0	1	13,118
Number of Terrorist Attacks at the Month of the Interview	1.655	.056	0	13	13,118
Maternal Characteristics					
Age	33.343	7.973	15	49	13,118
Age at First Cohabitation	19.009	4.015	10	39	13,118
Education (Years)	4.286	5.187	0	16	13,118
No Education	.520	.499	0	1	13,118
Primary	.138	.345	0	1	13,118
Secondary	.203	.402	0	1	13,118
Higher	.139	.346	0	1	13,118
Husband's Years of Education	6.934	5.271	0	16	12,602
Employment (Currently Working)	.157	.364	0	1	13,118
Outcome Variables					
Number of Children Ever Born	3.849	2.283	1	15	13,118
Number of Children Ever Born (if no More Children Wanted)	4.868	2.168	1	15	6,203
Number of Living Children	3.557	2.090	0	14	13,118
Number of Living Children (if no More Children Wanted)	4.508	1.942	0	14	6,203
Survival Chances of Children	.924	.265	0	1	50,495
Ideal Number of Children	4.154	1.979	0	22	12,043
Ideal Share of Sons[1]	.571	.001	0	1	10,527
Ideal Number of Sons	2.180	1.520	0	20	12,042
Knowledge of Any Modern Method of Contraception	.989	.106	0	1	13,118
Use of Any Modern Method of Contraception	.263	.441	0	1	13,118
Average Interval Between Births	32.307	14.387	4.5	202	10,925

[1] The variable for the ideal share of sons corresponds to the ideal number of sons as a share of the ideal number of children.

Appendix A.2.: Descriptive Statistics by Terrorist Activity

	Full Sample	Exposed to Terrorism	Not Exposed to Terrorism	Difference in Means
Sample Size	13,118	6,007	7,111	—
Household Characteristics				
Wealth Index	2.99 (.012)	3.005 (.018)	2.982 (.017)	.024 (.025)
Poorest	.195 (.396)	.198 (.399)	.192 (.394)	.006 (.007)
Poorer	.215 (.411)	.213 (.410)	.217 (.412)	− .004 (.007)
Middle	.197 (.398)	.180 (.385)	.210 (.408)	− .030 (.007)
Richer	.189 (.391)	.200 (.400)	.179 (.384)	.021 (.007)
Richest	.205 (.403)	.208 (.406)	.202 (.401)	.006 (.007)
Region				
Azad Jammu And Kashmir	.111 (.314)	.004 (.067)	.201 (.401)	− 0.196*** (0.005)
Baluchistan	.113 (.317)	.241 (.428)	.005 (.074)	0.235*** (0.005)
Federal Capital Territory	.074 (.262)	.074 (.262)	.074 (.262)	− 3.03e^{-05} (0.005)
Federally Administered Tribal Areas	.069 (.253)	.151 (.358)	0 (0)	0.151*** (0.004)
Gilgit Baltistan	.068 (.252)	0 (0)	.126 (.331)	− 0.126*** (0.004)
Khyber Pakhtunkhwa	.158 (.365)	.193 (.395)	.13 (.336)	0.0633*** (0.006)
Punjab	.224 (.417)	.092 (.290)	.335 (.472)	− 0.243*** (0.007)
Sindh	.182 (.386)	.245 (.430)	.129 (.335)	0.116*** (0.007)
Residency				
Rural	.516 (.500)	.459 (.498)	.564 (.496)	− 0.106*** (0.009)
Urban	.484 (.500)	.541 (.498)	.436 (.496)	0.106*** (0.009)
Maternal Characteristics				
Age	33.343 (7.973)	32.968 (8.04)	33.661 (7.902)	− 0.693*** (0.140)
Age at First Cohabitation	19.009 (4.015)	18.759 (3.999)	19.221 (4.017)	− 0.462*** (0.070)
Education (Years)	4.286 (5.187)	3.653 (5.003)	4.82 (5.279)	− 1.166*** (0.090)
No Education	.52 (.5)	.59 (.492)	.461 (.498)	0.129*** (0.009)
Primary	.138 (.345)	.119 (.324)	.154 (.361)	− 0.0345*** (0.006)
Secondary	.203 (.402)	.169 (.375)	.232 (.422)	− 0.0630*** (0.007)
Higher	.139 (.346)	.122 (.327)	.154 (.361)	− 0.0317*** (0.006)
Husband's Years of Education	6.934 (5.271)	6.598 (5.421)	7.219 (5.124)	− 0.621*** (.094)
Employment (Currently Working)	.157 (.364)	.123 (.328)	.186 (.389)	− 0.0630*** (0.006)
Outcome Variables				
Number of Children Ever Born	3.849 (2.283)	3.889 (2.342)	3.816 (2.232)	0.0729* (0.0400)
Number of Children Ever Born (if No More Children Wanted)	4.868 (2.168)	4.994 (2.291)	4.781 (2.073)	0.213*** (0.0559)
Number of Living Children	3.557 (2.09)	3.624 (2.174)	3.501 (2.014)	0.123*** (0.0366)
Number of Living Children (if No More Children Wanted)	4.508 (1.942)	4.662 (2.086)	4.401 (1.827)	0.260*** (0.0500)
Survival Chances of Children	.924 (.265)	.932 (.252)	.917 (.275)	0.0144*** (0.00236)
Ideal Number of Children	4.154 (1.979)	4.419 (2.154)	3.937 (1.795)	0.482*** (0.0360)
Ideal Share of Sons[1]	.571 (.001)	.577 (.146)	.568 (.139)	0.0095*** (0.003)
Ideal Number of Sons	2.180 (1.520)	2.346 (1.672)	2.046 (1.370)	0.300*** (0.028)
Knowledge of Any Modern Method of Contraception	.989 (.106)	.988 (.111)	.990 (.101)	− 0.002 (.002)
Use of Any Modern Method of Contraception	.263 (.441)	.243 (.429)	.281 (.449)	− 0.0373*** (0.00771)
Average Interval Between Births	32.307 (14.386)	32.379 (15.06)	32.247 (13.797)	0.132 (0.276)

[1] The variable for the ideal share of sons corresponds to the ideal number of sons as a share of the ideal number of children.

Standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. This table refers to exposure to terrorism as the occurrence of terrorist activity at the district of residence of each individual at the month of their interview.

Appendix A.3.: Average Number of Children Ever Born (By Province/Region)
and Terrorist Incidents
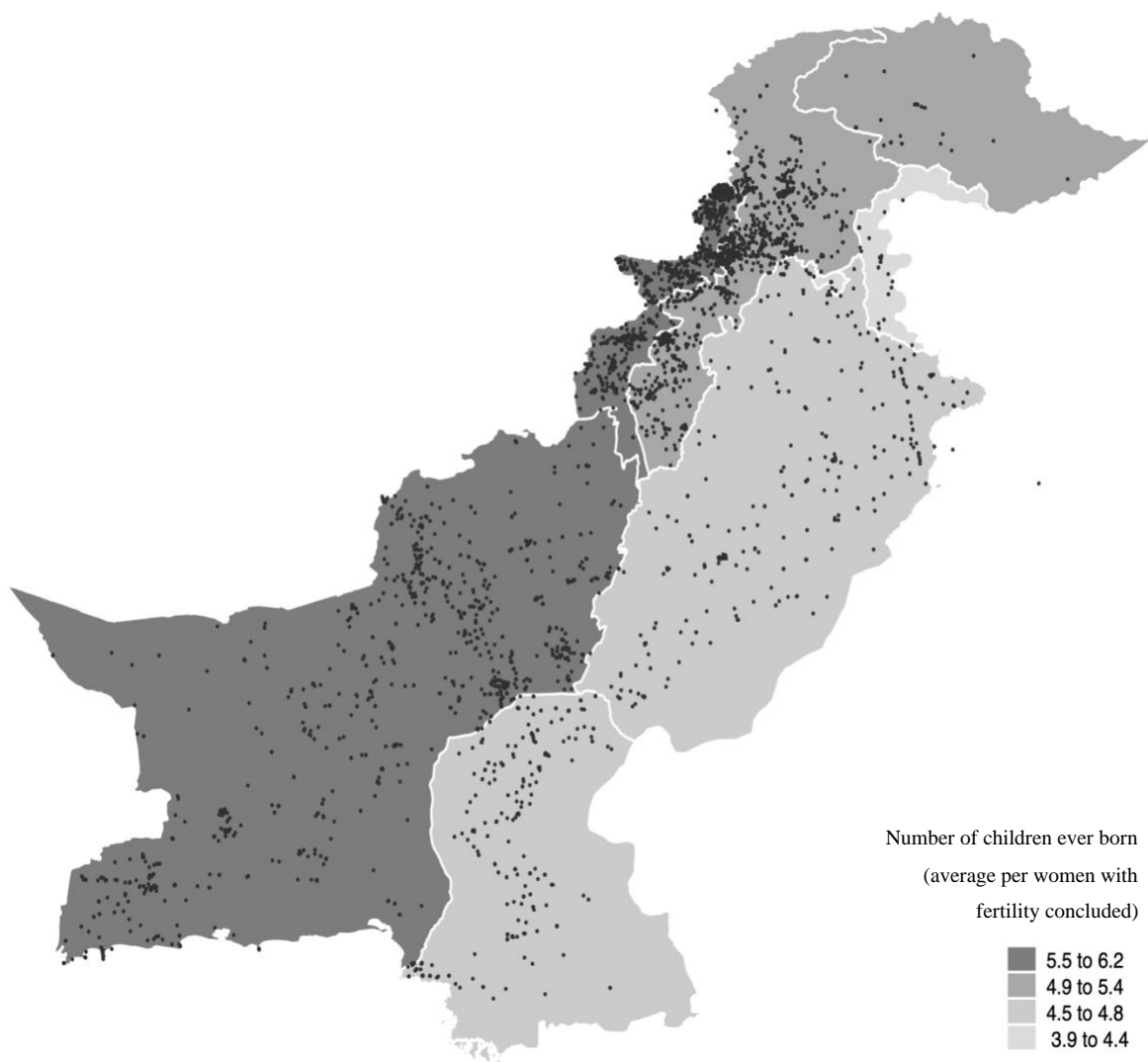
Sources: Pakistan Demographic and Health Survey 2017-18,Global Terrorism Database and International Steering Committee
for Global Mapping.

Appendix B: Self-Reported Preferences and Realized Fertility Behaviour

Appendix B.1.1.: The Number of Children Ever Born Per Woman
(Results for the Effects of the Sex of the Lastborn Child, the Exposure to Terrorism and the Intensity of Terrorism)

Variables	Exposure to Terrorism			Intensity of Exposure to Terrorism		
	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)
Male Lastborn Child (1=Yes)	-0.277*** (0.0689)	-0.147* (0.0582)	-0.129* (0.0578)	-0.236*** (0.0643)	-0.140** (0.0523)	-0.124* (0.0520)
Exposure to Terrorism	0.241* (0.106)	0.570*** (0.0745)	0.573*** (0.0756)	—	—	—
Male Lastborn × Exposure to Terrorism	0.111 (0.112)	0.0165 (0.0876)	-0.0250 (0.0860)	—	—	—
Intensity of Exposure to Terrorism	—	—	—	0.233*** (0.0658)	0.316*** (0.0426)	0.428*** (0.0462)
Male Lastborn × Intensity of Terrorism	—	—	—	0.0167 (0.0619)	0.00604 (0.0447)	-0.0115 (0.0435)
Maternal and Household Characteristics						
Woman's Age	—	0.147*** (0.00395)	0.146*** (0.00380)	—	0.146*** (0.00391)	0.147*** (0.00381)
Age at First Cohabitation	—	-0.162*** (0.00597)	-0.159*** (0.00602)	—	-0.161*** (0.00601)	-0.160*** (0.00603)
Woman's Education	—	-0.0571*** (0.00611)	-0.0480*** (0.00600)	—	-0.0549*** (0.00602)	-0.0466*** (0.00590)
Husband's Education	—	-0.00563 (0.00586)	-0.00773 (0.00579)	—	-0.00542 (0.00584)	-0.00690 (0.00575)
Woman's Employment (1=Employed)	—	-0.0364 (0.0611)	-0.0833 (0.0581)	—	-0.0241 (0.0611)	-0.0947 (0.0580)
Poorest	—	0.508*** (0.0940)	0.338*** (0.0970)	—	0.510*** (0.0937)	0.351*** (0.0962)
Poorer	—	0.227** (0.0722)	0.144 (0.0744)	—	0.214** (0.0711)	0.138 (0.0737)
Richer	—	-0.326*** (0.0665)	-0.296*** (0.0656)	—	-0.320*** (0.0659)	-0.298*** (0.0646)
Richest	—	-0.589*** (0.0755)	-0.528*** (0.0766)	—	-0.580*** (0.0748)	-0.531*** (0.0765)
Rural Residency	—	0.137* (0.0650)	0.146* (0.0614)	—	0.167* (0.0652)	0.153* (0.0611)
Constant	4.889*** (0.0652)	2.643*** (0.174)	2.567*** (0.186)	4.835*** (0.0620)	2.657*** (0.170)	2.546*** (0.183)
District Specific Effects	No	No	Yes	No	No	Yes
Observations	6,203	6,188	6,179	6,203	6,188	6,179
R-Squared	0.008	0.424	0.443	0.014	0.426	0.447

Standard errors clustered according to the DHS clusters (580 clusters) are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.
Exposure to terrorism identifies the occurrence of terrorist incidents in the district of residence at the month of the birth of each child. Intensity to terrorism refer to the intensity of exposure to terrorism, taking the log form of the number of attacks occurring in the district of residence at the month of the birth of the last child. District specific effects refer to the inclusion of a set of binary variables identifying the district of residence.

Appendix B.1.2.: The Number of Children Ever Born Per Woman

(Results for the Effects of the Sex of the Firstborn Child, the Exposure to Terrorism and the Intensity of Terrorism)

Variables	Exposure to Terrorism			Intensity of Exposure to Terrorism		
	OLS (7)	OLS (8)	OLS (9)	OLS (10)	OLS (11)	OLS (12)
Male Firstborn Child (1=Yes)	-0.266*** (0.0701)	-0.229*** (0.0555)	-0.250*** (0.0552)	-0.281*** (0.0623)	-0.252*** (0.0489)	-0.268*** (0.0484)
Exposure to Terrorism	0.332** (0.102)	0.614*** (0.0698)	0.588*** (0.0726)	—	—	—
Male Firstborn × Exposure to Terrorism	-0.0571 (0.110)	-0.0690 (0.0850)	-0.0499 (0.0838)	—	—	—
Intensity of Exposure to Terrorism	—	—	—	0.238*** (0.0584)	0.312*** (0.0356)	0.413*** (0.0425)
Male Firstborn × Intensity of Terrorism	—	—	—	0.00225 (0.0569)	0.00791 (0.0428)	0.0122 (0.0414)
Maternal and Household Characteristics						
Woman's Age	—	0.146*** (0.00394)	0.146*** (0.00380)	—	0.145*** (0.00391)	0.147*** (0.00382)
Age at First Cohabitation	—	-0.161*** (0.00597)	-0.159*** (0.00601)	—	-0.160*** (0.00601)	-0.160*** (0.00602)
Woman's Education	—	-0.0580*** (0.00607)	-0.0489*** (0.00597)	—	-0.0558*** (0.00600)	-0.0474*** (0.00587)
Husband's Education	—	-0.00581 (0.00587)	-0.00804 (0.00579)	—	-0.00564 (0.00584)	-0.00721 (0.00575)
Woman's Employment (1=Employed)	—	-0.0330 (0.0609)	-0.0801 (0.0580)	—	-0.0218 (0.0609)	-0.0923 (0.0578)
Poorest	—	0.507*** (0.0934)	0.332*** (0.0967)	—	0.508*** (0.0933)	0.345*** (0.0960)
Poorer	—	0.231** (0.0718)	0.147* (0.0742)	—	0.217** (0.0708)	0.140 (0.0736)
Richer	—	-0.321*** (0.0660)	-0.291*** (0.0652)	—	-0.315*** (0.0655)	-0.292*** (0.0642)
Richest	—	-0.584*** (0.0748)	-0.522*** (0.0760)	—	-0.574*** (0.0742)	-0.526*** (0.0760)
Rural Residency	—	0.147* (0.0651)	0.156* (0.0617)	—	0.176** (0.0653)	0.162** (0.0614)
Constant	4.877*** (0.0653)	2.684*** (0.170)	2.631*** (0.181)	4.855*** (0.0610)	2.718*** (0.168)	2.624*** (0.180)
District Specific Effects	No	No	Yes	No	No	Yes
Observations	6,203	6,188	6,179	6,203	6,188	6,179
R-Squared	0.009	0.426	0.446	0.016	0.428	0.450

Standard errors clustered according to the DHS clusters (580 clusters) are in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Exposure to terrorism identifies the occurrence of terrorist incidents in the district of residence at the month of the birth of each child. Intensity to terrorism refer to the intensity of exposure to terrorism, taking the log form of the number of attacks occurring in the district of residence at the month of the birth of the last child. District specific effects refer to the inclusion of a set of binary variables identifying the district of residence.

Appendix B.2.1.: The Ideal Share of Sons

(Results for the Effects of the Sex of the Lastborn Child, the Exposure to Terrorism and the Intensity of Terrorism)

Variables	Exposure to Terrorism			Intensity of Exposure to Terrorism		
	OLS (7)	OLS (8)	OLS (9)	OLS (10)	OLS (11)	OLS (12)
Male Lastborn Child (1=Yes)	2.917***	2.974***	2.917***	2.805***	2.894***	2.784***
	(0.361)	(0.356)	(0.361)	(0.336)	(0.332)	(0.323)
Exposure to Terrorism	1.289*	1.314*	1.289*	—	—	—
	(0.608)	(0.600)	(0.608)			
Male Lastborn × Exposure to Terrorism	-0.614	-0.693	-0.614	—	—	—
	(0.557)	(0.553)	(0.557)			
Intensity of Exposure to Terrorism	—	—	—	2.375***	2.117***	-0.253
				(0.561)	(0.536)	(0.792)
Male Lastborn × Intensity of Terrorism	—	—	—	-0.290	-0.394	-0.311
				(0.400)	(0.392)	(0.345)
Maternal and Household Characteristics						
Number of Living Children		0.0199	-0.112		-0.0343	-0.111
		(0.103)	(0.0939)		(0.102)	(0.0938)
Woman's Age	—	0.00333	0.0437	—	0.0179	0.0437
		(0.0261)	(0.0247)		(0.0258)	(0.0247)
Age at First Cohabitation	—	-0.0719	-0.0214	—	-0.0753	-0.0200
		(0.0480)	(0.0438)		(0.0483)	(0.0438)
Woman's Education	—	-0.163***	-0.0937*	—	-0.124**	-0.0934*
		(0.0399)	(0.0375)		(0.0402)	(0.0375)
Husband's Education	—	-0.00623	-0.0781*	—	-0.0176	-0.0780*
		(0.0435)	(0.0342)		(0.0425)	(0.0342)
Woman's Employment (1=Employed)	—	-1.514***	-0.201	—	-1.243**	-0.202
		(0.453)	(0.391)		(0.429)	(0.391)
Poorest	—	3.201***	2.240***	—	2.890***	2.246***
		(0.807)	(0.581)		(0.755)	(0.581)
Poorer	—	1.662***	1.237**	—	1.473**	1.238**
		(0.488)	(0.433)		(0.483)	(0.433)
Richer	—	-0.485	-0.178	—	-0.476	-0.182
		(0.472)	(0.448)		(0.472)	(0.448)
Richest	—	-0.177	0.181	—	-0.148	0.185
		(0.555)	(0.529)		(0.559)	(0.529)
Rural Residency	—	0.686	0.359	—	1.024	0.350
		(0.605)	(0.419)		(0.599)	(0.418)
Constant	55.21***	56.23***	53.41***	54.45***	55.17***	53.42***
	(0.334)	(1.260)	(1.038)	(0.329)	(1.257)	(1.040)
District Specific Effects	No	No	Yes	No	No	Yes
Observations	10,527	10,148	10,137	10,527	10,148	10,137
R-Squared	0.010	0.037	0.131	0.023	0.045	0.131

Standard errors clustered according to the DHS clusters (580 clusters) are in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.
Exposure to terrorism identifies the occurrence of terrorist incidents in the district of residence at the month of the birth of each child. Intensity to terrorism refer to the intensity of exposure to terrorism, taking the log form of the number of attacks occurring in the district of residence at the month of the birth of the last child. District specific effects refer to the inclusion of a set of binary variables identifying the district of residence.

Appendix B.2.2.: The Ideal Share of Sons

(Results for the Effects of the Sex of the Firstborn Child, the Exposure to Terrorism and the Intensity of Terrorism)

Variables	Exposure to Terrorism			Intensity of Exposure to Terrorism		
	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)
Male Firstborn Child (1=Yes)	4.209***	4.191***	4.151***	4.328***	4.257***	4.273***
	(0.374)	(0.383)	(0.383)	(0.349)	(0.356)	(0.355)
Exposure to Terrorism	1.734**	1.803**	0.279	—	—	—
	(0.663)	(0.636)	(0.698)			
Male Firstborn × Exposure to Terrorism	-1.568**	-1.754**	-1.645**	—	—	—
	(0.580)	(0.586)	(0.576)			
Intensity of Exposure to Terrorism	—	—	—	2.985***	2.685***	0.407
				(0.631)	(0.600)	(0.814)
Male Firstborn × Intensity of Terrorism	—	—	—	-1.486***	-1.532***	-1.519***
				(0.435)	(0.439)	(0.418)
Maternal and Household Characteristics						
Number of Living Children	—	0.0775	-0.0494	—	0.0195	-0.0527
		(0.103)	(0.0936)		(0.103)	(0.0937)
Woman's Age	—	-0.00519	0.0340	—	0.0108	0.0353
		(0.0260)	(0.0247)		(0.0258)	(0.0247)
Age at First Cohabitation	—	-0.0628	-0.0106	—	-0.0683	-0.0111
		(0.0486)	(0.0445)		(0.0489)	(0.0445)
Woman's Education	—	-0.156***	-0.0882*	—	-0.117**	-0.0885*
		(0.0403)	(0.0380)		(0.0406)	(0.0380)
Husband's Education	—	-0.00408	-0.0742*	—	-0.0144	-0.0736*
		(0.0437)	(0.0342)		(0.0427)	(0.0342)
Woman's Employment (1=Employed)	—	-1.601***	-0.289	—	-1.319**	-0.281
		(0.451)	(0.386)		(0.427)	(0.386)
Poorest	—	3.233***	2.298***	—	2.933***	2.311***
		(0.810)	(0.587)		(0.758)	(0.586)
Poorer	—	1.675***	1.262**	—	1.489**	1.268**
		(0.487)	(0.432)		(0.481)	(0.433)
Richer	—	-0.508	-0.207	—	-0.478	-0.188
		(0.467)	(0.441)		(0.466)	(0.440)
Richest	—	-0.168	0.184	—	-0.139	0.198
		(0.555)	(0.531)		(0.560)	(0.530)
Rural Residency	—	0.571	0.256	—	0.908	0.243
		(0.604)	(0.418)		(0.599)	(0.416)
Constant	54.57***	55.56***	52.73***	53.68***	54.41***	52.64***
	(0.333)	(1.260)	(1.039)	(0.338)	(1.253)	(1.036)
District Specific Effects	No	No	Yes	No	No	Yes
Observations	10,527	10,148	10,137	10,527	10,148	10,137
R-Squared	0.017	0.043	0.137	0.031	0.052	0.138

Standard errors clustered according to the DHS clusters (580 clusters) are in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.
Exposure to terrorism identifies the occurrence of terrorist incidents in the district of residence at the month of the birth of each child. Intensity to terrorism refer to the intensity of exposure to terrorism, taking the log form of the number of attacks occurring in the district of residence at the month of the birth of the last child. District specific effects refer to the inclusion of a set of binary variables identifying the district of residence.

Appendix B.3.1.: The Desire for Additional Children
(Results for the Effects of the Sex of the Lastborn Child, the Exposure to Terrorism and the Intensity of Terrorism)

Variables	Exposure to Terrorism			Intensity of Exposure to Terrorism		
	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)
Male Lastborn Child (1=Yes)	-6.122***	-6.573***	-6.347***	-5.569***	-6.298***	-6.111***
	(1.040)	(0.922)	(0.912)	(0.980)	(0.863)	(0.857)
Exposure to Terrorism	5.473***	4.869***	-1.668	—	—	—
	(1.608)	(1.450)	(1.723)			
Male Lastborn × Exposure to Terrorism	2.035	2.614	2.458*	—	—	—
	(1.615)	(1.409)	(1.420)			
Intensity of Exposure to Terrorism	—	—	—		6.096***	5.707***
					(1.055)	(0.966)
Male Lastborn × Intensity of Terrorism	—	—	—		0.611	1.550
					(1.003)	(0.916)
Maternal and Household Characteristics						
Number of Living Children	—	-6.814***	-7.097***	—	-6.982***	-7.098***
		(0.258)	(0.255)		(0.253)	(0.255)
Woman's Age	—	-1.848***	-1.741***	—	-1.803***	-1.741***
		(0.0610)	(0.0608)		(0.0610)	(0.0607)
Age at First Cohabitation	—	1.451***	1.475***	—	1.431***	1.473***
		(0.108)	(0.108)		(0.107)	(0.108)
Woman's Education	—	-0.720***	-0.444***	—	-0.615***	-0.443***
		(0.107)	(0.102)		(0.107)	(0.102)
Husband's Education	—	0.207	0.0296	—	0.149	0.0299
		(0.114)	(0.0936)		(0.109)	(0.0934)
Woman's Employment (1=Employed)	—	-0.527	-0.168	—	0.267	-0.158
		(1.071)	(1.092)		(1.070)	(1.093)
Poorest	—	5.367**	1.595	—	4.344**	1.596
		(1.699)	(1.541)		(1.638)	(1.543)
Poorer	—	2.305	-0.303	—	1.538	-0.305
		(1.381)	(1.243)		(1.342)	(1.243)
Richer	—	0.0885	1.575	—	0.377	1.557
		(1.285)	(1.268)		(1.270)	(1.270)
Richest	—	-3.283*	-1.020	—	-2.847*	-1.060
		(1.420)	(1.376)		(1.378)	(1.383)
Rural Residency	—	1.247	2.192*	—	1.787	2.171*
		(1.310)	(1.097)		(1.264)	(1.103)
Constant	34.88***	94.75***	89.75***	33.79***	92.86***	89.68***
	(0.985)	(2.833)	(3.127)	(0.919)	(2.827)	(3.120)
District Specific Effects	No	No	Yes	No	No	Yes
Observations	13,118	12,602	12,585	13,118	12,602	12,585
R-Squared	0.008	0.300	0.323	0.014	0.307	0.323

Standard errors clustered according to the DHS clusters (580 clusters) are in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.
Exposure to terrorism identifies the occurrence of terrorist incidents in the district of residence at the month of the birth of each child. Intensity to terrorism refer to the intensity of exposure to terrorism, taking the log form of the number of attacks occurring in the district of residence at the month of the birth of the last child. District specific effects refer to the inclusion of a set of binary variables identifying the district of residence.

Appendix B.3.2.: The Desire for Additional Children

(Results for the Effects of the Sex of the Firstborn Child, the Exposure to Terrorism and the Intensity of Terrorism)

Variables	Exposure to Terrorism			Intensity of Exposure to Terrorism		
	OLS (7)	OLS (8)	OLS (9)	OLS (10)	OLS (11)	OLS (12)
Male Firstborn Child (1=Yes)	-2.076	-3.876***	-3.959***	-2.513*	-4.102***	-4.285***
	(1.139)	(0.963)	(0.957)	(1.065)	(0.890)	(0.887)
Exposure to Terrorism	7.117***	6.282***	-0.213	—	—	—
	(1.593)	(1.415)	(1.765)			
Male Firstborn × Exposure to Terrorism	-0.943	0.117	-0.0196	—	—	—
	(1.789)	(1.479)	(1.457)			
Intensity of Exposure to Terrorism	—	—	—	6.454***	6.327***	-1.947
				(1.070)	(0.944)	(2.092)
Male Firstborn × Intensity of Terrorism	—	—	—	-0.0143	0.448	0.535
				(1.165)	(0.971)	(0.960)
Maternal and Household Characteristics						
Number of Living Children	—	-6.852***	-7.143***	—	-7.018***	-7.141***
		(0.261)	(0.257)		(0.255)	(0.257)
Woman's Age	—	-1.846***	-1.737***	—	-1.801***	-1.737***
		(0.0614)	(0.0610)		(0.0613)	(0.0608)
Age at First Cohabitation	—	1.446***	1.467***	—	1.429***	1.467***
		(0.108)	(0.107)		(0.107)	(0.107)
Woman's Education	—	-0.731***	-0.454***	—	-0.626***	-0.452***
		(0.107)	(0.101)		(0.107)	(0.101)
Husband's Education	—	0.207	0.0282	—	0.149	0.0290
		(0.114)	(0.0936)		(0.109)	(0.0935)
Woman's Employment (1=Employed)	—	-0.380	-0.0408	—	0.399	-0.0413
		(1.068)	(1.088)		(1.065)	(1.087)
Poorest	—	5.356**	1.570	—	4.323**	1.560
		(1.707)	(1.551)		(1.646)	(1.553)
Poorer	—	2.335	-0.274	—	1.565	-0.278
		(1.384)	(1.250)		(1.346)	(1.249)
Richer	—	0.138	1.627	—	0.425	1.604
		(1.288)	(1.270)		(1.272)	(1.270)
Richest	—	-3.219*	-0.937	—	-2.783*	-0.990
		(1.420)	(1.375)		(1.378)	(1.383)
Rural Residency	—	1.415	2.344*	—	1.946	2.319*
		(1.316)	(1.102)		(1.271)	(1.108)
Constant	32.68***	93.31***	88.51***	32.13***	91.66***	88.68***
	(0.991)	(2.783)	(3.094)	(0.922)	(2.778)	(3.092)
District Specific Effects	No	No	Yes	No	No	Yes
Observations	13,118	12,602	12,585	13,118	12,602	12,585
R-Squared	0.006	0.299	0.321	0.012	0.305	0.321

Standard errors clustered according to the DHS clusters (580 clusters) are in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Exposure to terrorism identifies the occurrence of terrorist incidents in the district of residence at the month of the birth of each child. Intensity to terrorism refer to the intensity of exposure to terrorism, taking the log form of the number of attacks occurring in the district of residence at the month of the birth of the last child. District specific effects refer to the inclusion of a set of binary variables identifying the district of residence.

(Results for the Effects of the Sex of the Lastborn Child, the Exposure to Terrorism and the Intensity of Terrorism)

Variables	Exposure to Terrorism			Intensity of Exposure to Terrorism		
	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)
Male Lastborn Child (1=Yes)	1.691 (1.062)	1.839 (1.085)	1.650 (1.092)	1.153 (0.978)	1.217 (0.991)	1.085 (0.995)
Exposure to Terrorism	-1.795 (1.251)	-1.631 (1.205)	2.262 (1.242)	—	—	—
Male Lastborn × Exposure to Terrorism	-1.802 (1.537)	-2.000 (1.539)	-1.926 (1.531)	—	—	—
Intensity of Exposure to Terrorism	—	—	—	-1.765** (0.606)	-1.651** (0.556)	2.194** (0.675)
Male Lastborn × Intensity of Terrorism	—	—	—	-0.437 (0.723)	-0.469 (0.708)	-0.498 (0.714)
Maternal and Household Characteristics						
Number of Living Children	—	4.576*** (0.285)	4.598*** (0.284)	—	4.632*** (0.285)	4.532*** (0.286)
Woman's Age	—	-0.227** (0.0712)	-0.210** (0.0703)	—	-0.244*** (0.0716)	-0.185** (0.0708)
Age at First Cohabitation	—	-0.210 (0.130)	-0.190 (0.125)	—	-0.203 (0.130)	-0.212 (0.126)
Woman's Education	—	1.007*** (0.119)	0.888*** (0.119)	—	0.978*** (0.119)	0.889*** (0.119)
Husband's Education	—	-0.120 (0.102)	-0.0757 (0.0978)	—	-0.113 (0.101)	-0.0789 (0.0976)
Woman's Employment (1=Employed)	—	4.558*** (1.244)	2.987* (1.224)	—	4.355*** (1.239)	2.937* (1.224)
Poorest	—	-12.67*** (1.492)	-12.43*** (1.541)	—	-12.54*** (1.486)	-12.46*** (1.542)
Poorer	—	-4.987*** (1.300)	-4.256*** (1.250)	—	-4.868*** (1.295)	-4.296*** (1.249)
Richer	—	1.997 (1.380)	1.155 (1.382)	—	2.020 (1.379)	1.105 (1.383)
Richest	—	4.050* (1.568)	2.286 (1.599)	—	4.063** (1.568)	2.334 (1.599)
Rural Residency	—	0.763 (1.235)	-0.320 (1.157)	—	0.527 (1.228)	-0.296 (1.159)
Constant	26.81*** (0.913)	20.42*** (2.837)	15.74*** (3.285)	27.33*** (0.843)	21.33*** (2.794)	15.84*** (3.257)
District Specific Effects	No	No	Yes	No	No	Yes
Observations	13,118	12,602	12,585	13,118	12,602	12,585
R-Squared	0.001	0.060	0.077	0.002	0.061	0.078

Standard errors clustered according to the DHS clusters (580 clusters) are in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.
Exposure to terrorism identifies the occurrence of terrorist incidents in the district of residence at the month of the birth of each child. Intensity to terrorism refer to the intensity of exposure to terrorism, taking the log form of the number of attacks occurring in the district of residence at the month of the birth of the last child. District specific effects refer to the inclusion of a set of binary variables identifying the district of residence.

Appendix B.4.2: Use of Modern Method of Contraception
(Results for the Effects of the Sex of the Firstborn Child, the Exposure to Terrorism and the Intensity of Terrorism)

Variables	Exposure to Terrorism			Intensity of Exposure to Terrorism		
	OLS (7)	OLS (8)	OLS (9)	OLS (10)	OLS (11)	OLS (12)
Male Firstborn Child (1=Yes)	3.499**	4.677***	4.699***	3.194**	4.326***	4.327***
	(1.102)	(1.121)	(1.118)	(1.016)	(1.022)	(1.018)
Exposure to Terrorism	-1.552	-1.490	2.426	—	—	—
	(1.272)	(1.227)	(1.277)			
Male Firstborn × Exposure to Terrorism	-2.227	-2.259	-2.205	—	—	—
	(1.488)	(1.504)	(1.483)			
Intensity of Exposure to Terrorism	—	—	—	-1.443*	-1.370*	2.405***
				(0.610)	(0.554)	(0.677)
Male Firstborn × Intensity of Terrorism	—	—	—	-1.047	-1.003	-0.874
				(0.702)	(0.704)	(0.696)
Maternal and Household Characteristics						
Number of Living Children	—	4.644***	4.671***	—	4.698***	4.604***
		(0.285)	(0.285)		(0.286)	(0.286)
Woman's Age	—	-0.238***	-0.222**	—	-0.254***	-0.197**
		(0.0710)	(0.0701)		(0.0714)	(0.0706)
Age at First Cohabitation	—	-0.195	-0.173	—	-0.190	-0.197
		(0.130)	(0.125)		(0.130)	(0.126)
Woman's Education	—	1.017***	0.896***	—	0.988***	0.898***
		(0.119)	(0.119)		(0.118)	(0.119)
Husband's Education	—	-0.122	-0.0776	—	-0.114	-0.0795
		(0.102)	(0.0976)		(0.101)	(0.0974)
Woman's Employment (1=Employed)	—	4.565***	2.984*	—	4.355***	2.925*
		(1.235)	(1.217)		(1.232)	(1.218)
Poorest	—	-12.65***	-12.41***	—	-12.51***	-12.43***
		(1.492)	(1.542)		(1.486)	(1.542)
Poorer	—	-5.024***	-4.280***	—	-4.902***	-4.318***
		(1.297)	(1.249)		(1.292)	(1.247)
Richer	—	1.969	1.122	—	2.006	1.085
		(1.382)	(1.382)		(1.379)	(1.383)
Richest	—	4.047*	2.278	—	4.063**	2.329
		(1.572)	(1.603)		(1.571)	(1.602)
Rural Residency	—	0.714	-0.358	—	0.481	-0.332
		(1.236)	(1.157)		(1.229)	(1.158)
Constant	25.85***	18.78***	14.02***	26.25***	19.57***	14.03***
	(0.945)	(2.828)	(3.273)	(0.870)	(2.790)	(3.263)
District Specific Effects	No	No	Yes	No	No	Yes
Observations	13,118	12,602	12,585	13,118	12,602	12,585
R-Squared	0.002	0.062	0.079	0.003	0.063	0.080

Standard errors clustered according to the DHS clusters (580 clusters) are in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.
Exposure to terrorism identifies the occurrence of terrorist incidents in the district of residence at the month of the birth of each child. Intensity to terrorism refer to the intensity of exposure to terrorism, taking the log form of the number of attacks occurring in the district of residence at the month of the birth of the last child. District specific effects refer to the inclusion of a set of binary variables identifying the district of residence.

Appendix C: Mother-Specific Fixed Effects Models

Appendix C.1.: The Length of Birth Intervals
(Results for the Effects of the Sex of Each Child and the Exposure to Terrorism)

Variables	POLS (1)	POLS (2)	FE (1)	FE (2)
Male Child (1=Yes)	0.862***	0.847***	0.286	0.659*
	(0.250)	(0.250)	(0.265)	(0.303)
Exposure to Terrorism	0.232	0.210	-1.682***	-1.630***
	(0.335)	(0.334)	(0.397)	(0.398)
Male Child × Exposure to Terrorism	-0.620	-0.603	-0.496	-0.601
	(0.401)	(0.401)	(0.450)	(0.450)
Maternal and Household Characteristics				
Number of Son Previously Born	—	0.579***	—	0.664**
		(0.144)		(0.248)
Number of Children Previously Born	—	-1.697***		0.0320
		(0.0947)		(0.132)
Woman's Age	0.235***	0.234***	—	—
	(0.0180)	(0.0180)		
Age at First Cohabitation	-0.316***	-0.313***	—	—
	(0.0320)	(0.0320)		
Woman's Education	0.218***	0.220***	—	—
	(0.0325)	(0.0324)		
Husband's Education	0.0720**	0.0719**	—	—
	(0.0244)	(0.0243)		
Woman's Employment (1=Employed)	0.428	0.444	—	—
	(0.313)	(0.312)		
Poorest	0.199	0.187	—	—
	(0.376)	(0.376)		
Poorer	-0.104	-0.102	—	—
	(0.328)	(0.327)		
Richer	0.498	0.504	—	—
	(0.329)	(0.328)		
Richest	2.276***	2.284***	—	—
	(0.434)	(0.432)		
Rural Residency	-0.301	-0.297	—	—
	(0.279)	(0.280)		
Constant	25.23***	25.22***	25.82***	25.63***
	(0.935)	(0.935)	(0.238)	(0.256)
Birth Order Specific Effects	Yes	Yes	Yes	Yes
District Specific Effects	Yes	Yes	—	—
Observations	35,873	35,873	37,377	37,377
N	—	—	11,135	11,135
R-Squared	0.028	0.028	0.047	0.047

Standard errors clustered according to the DHS clusters (580 clusters) are in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Exposure to terrorism identifies the occurrence of terrorist incidents in the district of residence at the month of the birth of each child. Birth-order specific effects refer to the inclusion of a set of binary variables identifying the order of the birth of each child. District specific effects refer to the inclusion of a set of binary variables identifying the district of residence.

Appendix C.2.: The Length of Birth Intervals
(Results for the Effects of the Sex of Each Child and the Intensity of Terrorism)

	POLS		FE	
Variables	**(1)**	**(2)**	**(1)**	**(2)**
Male Child (1=Yes)	0.771**	0.758**	0.188	0.561
	(0.234)	(0.234)	(0.254)	(0.294)
Intensity of Exposure to Terrorism	0.0667	0.0513	-1.469***	-1.440***
	(0.176)	(0.176)	(0.256)	(0.258)
Male Child × Intensity of Terrorism	-0.217	-0.207	-0.0978	-0.163
	(0.189)	(0.189)	(0.242)	(0.242)
Maternal and Household Characteristics				
Number of Son Previously Born	—	0.579***	—	0.666**
		(0.144)		(0.249)
Number of Children Previously Born	—	-1.700***	—	0.0692
		(0.0952)		(0.134)
Woman's Age	0.235***	0.233***	—	—
	(0.0183)	(0.0183)		
Age at First Cohabitation	-0.316***	-0.313***	—	—
	(0.0320)	(0.0320)		
Woman's Education	0.218***	0.220***	—	—
	(0.0325)	(0.0324)		
Husband's Education	0.0721**	0.0721**	—	—
	(0.0244)	(0.0243)		
Woman's Employment (1=Employed)	0.429	0.445	—	—
	(0.313)	(0.312)		
Poorest	0.201	0.189	—	—
	(0.376)	(0.376)		
Poorer	-0.102	-0.100	—	—
	(0.329)	(0.328)		
Richer	0.498	0.505	—	—
	(0.330)	(0.328)		
Richest	2.279***	2.286***	—	—
	(0.433)	(0.431)		
Rural Residency	-0.302	-0.297	—	—
	(0.279)	(0.280)		
Constant	25.27***	25.27***	25.87***	25.69***
	(0.939)	(0.939)	(0.230)	(0.249)
Birth Order Specific Effects	Yes	Yes	Yes	Yes
District Specific Effects	Yes	Yes	—	—
Observations	35,873	35,873	37,377	37,377
N	—	—	11,135	11,135
R-Squared	0.028	0.028	0.047	0.048

Standard errors clustered according to the DHS clusters (580 clusters) are in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Intensity to terrorism refer to the intensity of exposure to terrorism, taking the log form of the number of attacks occurring in the district of residence at the month of the birth of the last child. Birth-order specific effects refer to the inclusion of a set of binary variables identifying the order of the birth of each child. District specific effects refer to the inclusion of a set of binary variables identifying the district of residence.

Appendix D.1.: Children's Survival

(Results for the Effects of the Sex of Each Child and the Exposure to Terrorism)

Variables	POLS		FE	
	(1)	(2)	(1)	(2)
Male Child (1=Yes)	-0.946**	-0.944**	-1.175***	-1.055**
	(0.306)	(0.306)	(0.332)	(0.366)
Exposure to Terrorism	0.561	0.567	-0.188	-0.174
	(0.366)	(0.366)	(0.443)	(0.443)
Male Child × Exposure to Terrorism	-0.578	-0.583	-0.332	-0.363
	(0.477)	(0.477)	(0.547)	(0.545)
Maternal and Household Characteristics				
Number of Son Previously Born	—	-0.112	—	0.210
		(0.190)		(0.320)
Number of Children Previously Born	—	1.348***	—	1.023***
		(0.130)		(0.170)
Woman's Age	-0.136***	-0.136***	—	—
	(0.0240)	(0.0240)		
Age at First Cohabitation	0.283***	0.283***	—	—
	(0.0408)	(0.0407)		
Woman's Education	0.184***	0.184***	—	—
	(0.0400)	(0.0400)		
Husband's Education	0.0547	0.0548	—	—
	(0.0372)	(0.0372)		
Woman's Employment (1=Employed)	-1.883***	-1.885***	—	—
	(0.452)	(0.453)		
Poorest	-1.515**	-1.513**	—	—
	(0.577)	(0.577)		
Poorer	-0.293	-0.293	—	—
	(0.458)	(0.458)		
Richer	1.364**	1.363**	—	—
	(0.477)	(0.477)		
Richest	2.225***	2.224***	—	—
	(0.530)	(0.530)		
Rural Residency	0.0246	0.0237	—	—
	(0.368)	(0.368)		
Constant	89.73***	89.74***	90.07***	90.01***
	(1.110)	(1.110)	(0.318)	(0.329)
Birth Order Specific Effects	Yes	Yes	Yes	Yes
District Specific Effects	Yes	Yes	—	—
Observations	48,458	48,458	50,495	50,495
N	—	—	13,118	13,118
R-Squared	0.017	0.017	0.010	0.010

Standard errors clustered according to the DHS clusters (580 clusters) are in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Exposure to terrorism identifies the occurrence of terrorist incidents in the district of residence at the month of the birth of each child. Birth-order specific effects refer to the inclusion of a set of binary variables identifying the order of the birth of each child. District specific effects refer to the inclusion of a set of binary variables identifying the district of residence.

Appendix D.2.: Children's Survival

(Results for the Effects of the Sex of Each Child and the Intensity of Terrorism)

Variables	POLS		FE	
	(1)	(2)	(3)	(4)
Male Child (1=Yes)	-1.082***	-1.081***	-1.293***	-1.182***
	(0.286)	(0.286)	(0.314)	(0.350)
Intensity of Exposure to Terrorism	0.535**	0.538**	-0.209	-0.204
	(0.201)	(0.201)	(0.264)	(0.263)
Male Child × Intensity of Terrorism	-0.128	-0.131	0.00933	-0.00535
	(0.219)	(0.219)	(0.254)	(0.253)
Maternal and Household Characteristics				
Number of Son Previously Born	—	-0.121	—	0.200
		(0.190)		(0.320)
Number of Children Previously Born	—	1.162***	—	1.031***
		(0.110)		(0.170)
Woman's Age	-0.113***	-0.113***	—	—
	(0.0255)	(0.0255)		
Age at First Cohabitation	0.258***	0.257***	—	—
	(0.0426)	(0.0425)		
Woman's Education	0.208***	0.208***	—	—
	(0.0399)	(0.0399)		
Husband's Education	0.0580	0.0582	—	—
	(0.0378)	(0.0378)		
Woman's Employment (1=Employed)	-2.199***	-2.202***	—	—
	(0.455)	(0.455)		
Poorest	-1.436*	-1.432*	—	—
	(0.594)	(0.594)		
Poorer	-0.323	-0.322	—	—
	(0.449)	(0.448)		
Richer	1.364**	1.363**	—	—
	(0.477)	(0.477)		
Richest	2.042***	2.041***	—	—
	(0.525)	(0.525)		
Rural Residency	0.0979	0.0975	—	—
	(0.394)	(0.394)		
Constant	89.05***	89.05***	90.11***	90.06***
	(1.219)	(1.218)	(0.307)	(0.317)
Birth Order Specific Effects	Yes	Yes	Yes	Yes
District Specific Effects	Yes	Yes	—	—
Observations	48,524	48,524	50,495	50,495
N	—	—	13,118	13,118
R-Squared	0.014	0.014	0.010	0.010

Standard errors clustered according to the DHS clusters (580 clusters) are in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.
Intensity to terrorism refer to the intensity of exposure to terrorism, taking the log form of the number of attacks occurring in the district of residence at the month of the birth of the last child. Birth-order specific effects refer to the inclusion of a set of binary variables identifying the order of the birth of each child. District specific effects refer to the inclusion of a set of binary variables identifying the district of residence.