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The Long Shadow of PKK Conflict in Turkey

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Abstract

This study examines the long-term effects of the PKK conflict in Turkey, using a difference-in-differences approach to exploit variations in conflict intensity across regions and cohorts. Our findings indicate that exposure to conflict during childhood significantly reduces educational attainment and adversely affects labor market outcomes in adulthood. Specifically, affected individuals are less likely to complete primary and secondary school and are more likely to be informally employed or engaged in low-skill jobs. In addition, exposure to conflict is associated with lower skill levels and a decreased likelihood of employment in the formal and manufacturing sectors, especially for males. Furthermore, we find that parental exposure to conflict negatively impacts the health outcomes of their children, particularly their height and weight for age, although the educational impacts generally do not persist into the second generation. These results are robust to the use of alternative samples and specifications, including controlling for migration and excluding the less affected regions and the major urban centers. Our findings highlight the profound and lasting impact of conflict on human capital development, emphasizing the importance of targeted policies to support affected children.

JEL Codes: I21, I12, J24, N34
Keywords: armed conflict, human capital children, intergenerational transmission

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1 Introduction

There are currently multiple conflicts in multiple countries around the world, from Ukraine to Gaza, and Sudan to Yemen (Davies et al., 2024; Gleditsch et al., 2002). According to the World Bank's 2022 World Development Report, two-thirds to three-quarters of extremely poor people are expected to live in conflict settings by 2030, further exacerbating the vicious cycle of poverty traps precipitated by armed conflicts. Armed conflicts have devastating consequences that include loss of lives, displacement of people, destruction of physical capital, disintegration of institutions, changes in preferences and expectations, and reduced economic growth. Evidence from macro-level studies indicates that recovery is rapid after large physical shocks. City populations, physical infrastructure, literacy, and poverty levels return to their steady state in 20-25 years (Miguel and Roland, 2011; Brakman et al., 2004; Davis and Weinstein, 2002). However, despite recovery at the aggregate level, early life exposure to armed conflicts could still have long-term consequences for survivors and their descendants that are more persistent than physical impacts (Halbmeier and Schröder, 2024; Happel et al., 2024).

Among survivors, children can be especially adversely affected by armed conflicts given the age-specific aspects of human capital accumulation, health investments, and preference formation (Akbulut-Yuksel et al., 2020). Armed conflicts can interrupt the accumulation of human capital by destroying schools, missing teachers, displacement, or through changes in the composition and resources of the household. Akbulut-Yuksel (2014) finds that exposure to destruction had long-lasting significant detrimental effects on human capital formation, health, and labor market outcomes of Germans who were school-aged during WWII. Shemyakina (2011) and Akresh and de Walque (2008) provide similar evidence suggesting that children who were school-aged during the armed conflict in Tajikistan and the genocide in Rwanda attain lower levels of schooling. Similarly, Akresh et al. (2023) show that war exposure lowers educational attainment, and adversely affects the health and education of the next generation following the Biafran war in Nigeria. These impacts on the accumulation

of human capital and the destruction of physical capital in early life could have longer-term consequences for income, employment, and skill levels in adulthood, which transcends generations.

In this paper, we use data from multiple sources to provide causal evidence on the long-term consequences of the armed conflict in Turkey, between the government and the PKK (the Kurdish conflict) that began in the early 1980s, on those growing up during the conflict and their descendants. More specifically, we estimate how early life exposure to the Kurdish armed conflict affects education attainment and labor market outcomes in adulthood. Furthermore, we study how early exposure to the conflict affects the health and education outcomes of the second generation. We quantify exposure to the PKK conflict by calculating the exposure of individuals to conflict events (human fatalities and property destruction), from National Consortium for the Study of Terrorism and Responses to Terrorism (2022), at their place of residence between the ages of 7 to 19. We use migration histories to ensure that individuals are accurately matched to their location at each age. We use a generalized two-way fixed effects model that accounts for province and birth cohort fixed effects to estimate the impacts of exposure to conflict in early life on education attainment, the form of employment, wages, and labor market skills.

The results show that exposure to the PKK conflicts significantly reduces the number of years of schooling. An additional human casualty experienced during the conflict, between the ages of 7 to 19, is associated with approximately 1.88 fewer years of schooling. In addition, individuals exposed to the conflict in their formative years are also less likely to obtain primary, secondary, and higher education degrees. These effects are more pronounced for cohorts born after 1980, who were of school age during the peak of the conflict. The negative effects we find are also reflected in their labor market outcomes as adults. Using data from the Turkey LFS, 2017, we find that individuals exposed to conflict are less likely to work in the formal sector and more likely to work in the informal sector, which typically offers lower wages and less job security. Increased exposure to conflict is associated with lower

skill levels and a higher likelihood of working in the informal agricultural sector rather than the formal manufacturing sector. These effects are particularly strong among males and are also found using data from the Turkey Demographic and Health Surveys (DHS, Hacettepe University Institute of Population Studies 2019). Lastly, we find that the negative effects of the conflict persist into the second generation, especially for the height-for-age and weight-for-age of the second generation.

For robustness checks, we examine the roles of property losses compared to human losses for these outcomes and find that the long-term education and labor market effects are largely driven by human losses during the conflict. Using different data sources on PKK conflict fatalities from Kibris (2020), we find similar negative impacts on educational and labor market outcomes, which confirms the robustness of the results. Our analysis accounts for possibly different time trends across provinces by controlling for region-birth cohort fixed effects and province-specific linear time trends. The findings remain consistent even with these additional controls. Lastly, we examine whether the results are driven by the incomparability of regions where the conflict was most intense to other parts of Turkey. We demonstrate that the results are robust to excluding the wealthier and western regions of Turkey from the sample, and we find similar results when the sample is restricted to the Kurdish and OHAL regions where the conflict was most intense.

To the best of our knowledge, this paper will be the first to examine the educational and long-term impacts of childhood exposure to armed conflict in Turkey and the MENA region. As children and youth are one of the most vulnerable groups of this demographically young region, an important indicator of adulthood socioeconomic success, and more generally early life health capital calls for the attention of researchers and policymakers. Further, to the best of our knowledge, our study is one of the first papers investigating the intergenerational effects of armed conflicts, which remains to be largely unexplored in the literature (Akresh et al., 2023).

Our results may shed light on the potential legacy of early life shocks that could be

caused by active warfare and insurgency, as well as the political turmoil experienced in many countries around the world. The neoclassical growth model predicts that the effects of armed conflicts on output would be temporary and that the countries will return to their steady state in the long run Miguel and Roland (2011). However, the micro-level effects of armed conflicts on individuals can have long-lasting profound effects. Therefore, focusing on the micro-level effects of armed conflicts in addition to their macro effects is important, especially for emerging and developing countries since they have weaker institutions to provide a safety net for vulnerable youth and children under challenging conditions. Our results indicate that the impacts of human losses are much more persistent compared to the destruction of physical capital. The findings of this study fill a gap in the literature exploring the relationship between the impacts of conflicts on early life and socioeconomic outcomes in adulthood.

The remainder of the paper is organized as follows. Section 2 provides a brief history of the PKK conflict in Turkey. Section 3 describes the data used in the analysis. We discuss the empirical strategy used to estimate the effects of the PKK conflict on education and labour market outcomes across generations in Section 4. Section 5 presents the empirical results. Section 6 concludes and discusses the implications of the findings.

2 Background of the Armed Conflict in Turkey

The Kurdistan Workers' Party (PKK), formally established on October 27, 1978, by Abdullah Öcalan, originated as a Marxist and radical Kurdish nationalist group. This movement has emerged from long-standing grievances of the Kurdish population in Turkey. Initially, its primary goal was to establish an independent Kurdish state across Southeastern Turkey, Northern Iraq, and Northeastern Syria (Bilgel and Karahasan, 2017). However, in the 1990s, the PKK shifted its focus from seeking full independence to advocating for a federal structure that would grant greater autonomy to Kurds within Turkey (Kibris, 2011).

By 1984, the PKK had launched significant militant actions in the Eastern provinces of Hakkari and Siirt, marking the beginning of a prolonged conflict characterized by ambushes, bombings, and assassinations. These attacks, carried out by the PKK, were countered by extensive Turkish military operations, including airstrikes and ground assaults. As shown in Figure 1, which illustrates the total number of casualties since the PKK's first attack, the insurgency has predominantly focused on Southeastern Turkey. This region, characterized by its underdevelopment, high Kurdish population, poor economic conditions, and limited infrastructure, has facilitated the PKK's recruitment efforts and provided strategic advantages for hideouts and operations (Kibris, 2011). The rural and mountainous terrain further benefited PKK guerrillas. Initially, PKK attacks targeted rural villages and civilians accused of collaborating with the state, along with military and police installations (Kibris (2011)). By the early 1990s, the PKK expanded its tactics to include urban terrorism, intensifying the conflict (Eyrice, 2013).

[Figure 1 about here.]

This ongoing conflict has taken a heavy toll, resulting in more than 40,000 to 50,000 deaths and costing 300 to 450 billion dollars, making it one of the most devastating conflicts in Turkish history, far surpassing the combined human losses of all other conflicts involving Turkey since its founding in 1923 (Schoon, 2015; Bacik and Coskun, 2011; Mutlu, 2008). The southeastern and eastern regions of Turkey, where the conflict was most intense, have suffered from underdevelopment, displacement, and disrupted access to education and health services.

Figure 2 depicts the annual fatalities linked to PKK activities since its formation in 1984. The data shows that the conflict between PKK militants and the Turkish Army escalated throughout the 1990s, reaching a peak in the mid-1990s with over 4,000 casualties per year. This peak period was followed by a decline in the intensity of the conflict which coincides with the PKK's shift in objectives from pursuing full independence to seeking federal autonomy (Kibris, 2011). Additionally, Figure 2 highlights reductions in combatant

fatalities during specific ceasefire periods: from 1999 to 2004, following the capture and imprisonment of PKK leader Abdullah Ocalan in February 1999; in 2009, when the PKK declared a unilateral ceasefire; and from 2013 to 2015 during the Peace Process(Kibris and Cesur, 2023).

[Figure 2 about here.]

The protracted nature of the conflict and the associated trauma can have significant long-term implications for children's development and their offspring. The disruption of education and health services, combined with the psychological impact of living in a conflict zone, can have detrimental effects on children's cognitive and physical development. The long-term exposure to conflict and displacement can lead to lower educational attainment, poorer health outcomes, and reduced economic opportunities in adulthood. In this paper, we provide empirical evidence on the impact of the PKK conflict on wartime children's and their offspring's socioeconomic outcomes by exploiting the variation in exposure to the conflict across different regions and age at exposure.

3 Data and Descriptive Statistics

We utilize several rich data sources to explore the impact of conflict exposure on various long-term outcomes of the affected cohorts and their children. First, we use the 2008, 2013, and 2018 waves of the Demographic and Health Surveys (DHS), which provide comprehensive data on individuals' socio-economic characteristics, including education, labor market outcomes, fertility, health outcomes such as height, weight, and other household characteristics. A key advantage of the DHS is the ability to link mothers to their children and fathers, which is crucial for analyzing the intergenerational transmission of conflict exposure. Additionally, the DHS data includes detailed migration histories for women, enabling us to accurately track their residences and match their total conflict exposure during the critical ages of 7 to 19.

Although the DHS contains information on labor market characteristics, we further enrich our analysis by incorporating the Turkish Household Labor Force Survey (LFS) for education and labor market analyses. The LFS is nationally representative and conducted annually, capturing the non-institutionalized Turkish resident population. Although the LFS has been conducted since 1988, we use the 2004-2018 waves, as they are more standardized in terms of questions. In addition to individual and household characteristics, the LFS provides detailed information on the labor market status of individuals. This cross-sectional dataset has around 500,000 observations per year and NUTS2 (26 regions) level representativeness.

To analyze the impact of conflict exposure on the education of the first generation, who have already completed their education, we focus on standard educational outcomes, including years of schooling and educational attainment levels. However, for the analysis of the second generation, as the children are still in school, we need to depart from simple educational outcomes and try to detect whether there are differences in terms of progress across children with different levels of parental conflict exposure. In particular, we create a Progress variable, which represents the correct grade-for-age, computed by dividing the years of schooling by the years since age 7. We also examine whether there are differences in the propensity to attend high school and to complete high school among children with different levels of conflict exposure experienced by their parents.

In terms of labor market outcomes, we first examine log wages and sectoral employment dummies for agriculture and manufacturing. We also differentiate between formal and informal employment. Informal workers in the LFS sample are identified based on their responses to the question 'Are you registered with the Social Security Institution?' in the survey. Specifically, those who are working but responded as unregistered with the social security institution are classified as informal workers. Another important labor market indicator we analyze is the skill levels of individuals according to the sectors they work in, based on the International Labour Organization's (ILO) International Standard Classification of Occupations (ISCO-08) system. This involves converting NACE Rev.2 codes into skill levels

ranging from 1 to 4. For instance, NACE codes from 90 to 100 correspond to skill level 1, codes from 41 to 90 to skill level 2, codes from 21 to 30 to skill level 3, and codes from 11 to 20 to skill level 4. In this 1-4 scale, 1 denotes the lowest skill level while 4 indicates the highest skill level. We include only individuals aged 25-55 to ensure that they have completed their education and to exclude those who are retired.[1]

To analyze the effect of parental exposure on the second generation, in addition to educational outcomes, we examine its impact on child health outcomes using information from DHS. More specifically, we investigate whether children's birth weight, weight, and height at the time of the survey differ among parents with varying levels of conflict exposure. It is important to note that DHS only reports these variables for children under age 5. Therefore, our sample size differs between the education and health analyses of the second generation.

We quantify the spatial and temporal variation in armed conflict by utilizing the Global Terrorism Database (GTD) (START, 2022), which documents more than 190,000 international and domestic terrorist attacks that have occurred worldwide since 1970. It provides details on various dimensions of each attack, such as the date and location of the incident, weapons used, type and target of the attack, and number of casualties. For each event, the exact date, location at the province level, perpetrator group name, number of fatalities, number of wounded, and value of property damage (in USD) are reported.

The second source of armed conflict data comes from TPCONED (Kibris, 2020), an open-source dataset on the fatal events of the armed conflict between the PKK and Turkey that took place on Turkish soil. This dataset is a collection of information from various sources, including the Turkish Ministry of Defense, Turkish General Staff, the Directorate General of Press and Information of the Turkish Prime Ministry, and various other state offices and local administrations in Turkey; the archives of the Gendarmerie Museum in Ankara; the digital and hard copy archives of five major Turkish daily newspapers; PKK publications; daily and yearly reports by the Turkish Human Rights Association; and personal contacts and

[1]Our results remain robust when we narrow the sample to include the 20-55-year-olds.

interviews with the families of the casualties. This data covers incidents between 1984 and 2018 and contains detailed information on 7,063 conflict events, with 17,308 PKK casualties and 7,514 state casualties from 1984–2018.

To quantify conflict intensity by province and year, we utilize three key indicators: the number of fatalities and injured individuals, the value of property damage (sourced from the GTD), and the number of fatalities and injured individuals from the TPCONED Database. We define conflict exposure as the total fatalities, injuries, and property damage experienced (separately for each indicator) while the individual was between ages 7 and 19. These conflict measures are normalized with the province population to ensure accuracy and comparability across different regions and time periods. We carefully match women to their place of residence using migration histories to account for possible concerns about the selection of movement, a match we can only perform for women. For men, we use childhood residence to calculate conflict exposure. For the analysis of intergenerational transmission, we exploit the effect of the mother's conflict exposure during childhood on children's outcomes, controlling for the father's socioeconomic characteristics.

4 Empirical Framework

PKK insurgencies have been predominantly concentrated in the Kurdish-majority Eastern and Southeastern regions of Turkey, which are less developed compared to other regions. Given that these regions are different from the rest of Turkey, our primary empirical strategy relies on difference-in-differences, exploiting within-province and cross-cohort variation, to identify the effects of conflict. This specification controls for differences between different provinces (within regions) of Turkey and accounts for differences across birth cohorts.[2]

We estimate Equation (1) below to study the effects of conflict exposure during childhood

[2]Recent research has highlighted that the standard difference-in-differences estimator may lead to biased results when there are heterogeneous treatment effects (e.g., Goodman-Bacon, 2021; de Chaisemartin and d'Haultfoeuille, 2020). However, this issue does not affect our study because our treatment variable is not staggered; instead, it is calculated based on cumulative conflict exposure.

on long-term education and labour market outcomes, exploiting time and spatial variation in conflict exposure. Exploring the spatial and time variations in the intensity of conflict across provinces and birth cohorts allows us to credibly isolate the effect of the conflict, independent of general differences across time and provinces. The proposed estimate of the average treatment effect is given by β in the following equation:

$$Y_{ipt} = \alpha + \beta \text{Conflict}_{ipt} + \delta_p + \gamma_t + \Omega X_{ipt} + \epsilon_{ipt} \tag{1}$$

Where Y_{ipt} is the outcome for individual i of province p born in year t. $Conflict_{ipt}$ is the childhood exposure in province p in year t, measured as the cumulative exposure between 7-19 years of age, which are typical school ages in Turkey. δ_p is province fixed effects, and π_t is the year of birth fixed effects. X_{ipt} includes a vector of controls for gender, urban/rural residence, mother and father literacy, and the survey year dummies. The standard errors, ϵ_{ipt}, are clustered by province.

After estimating the effects of the armed conflict on the first generation, we proceed to quantify how exposure to armed conflict during the formative years of mothers or fathers influences their children's outcomes. The proposed estimate of the average treatment effect for children is given by β in the following equation:

$$Y_{iptm} = \alpha + \beta \text{Mother's Exposure}_{iptm} + \delta_p + \gamma_t + \Omega X_{iptm} + \epsilon_{iptm} \tag{2}$$

Where Y_{ipt} is the outcome for children i of province p born in year t to mother m. $Conflict_{iptm}$ is the mother's childhood exposure in province p in year t, measured as the mother's cumulative exposure between 7-19 years of age, which are typical school ages in Turkey. δ_p is province fixed effects, and π_t is the mother's year of birth fixed effects. X_{iptm} includes a vector of controls for child's age dummies and gender, urban/rural residence, mother's and father's educational attainment, mother's working status, number of children, wealth index dummies and survey year indicators. The standard errors, ϵ_{iptm}, are clustered

by province.

The validity of our difference-in-differences analysis depends on the parallel trends assumption, which posits that, in the absence of conflict, the trends in outcomes would have been similar across both affected and unaffected regions. To provide evidence supporting this assumption, we focus on older cohorts who were not exposed to conflict during their formative years but lived in the same localities as the wartime children. This approach allows us to examine any potential pre-trends in outcomes prior to the onset of the PKK insurgency. Furthermore, we estimate our baseline results by incorporating both regional-birth year interactions and linear trends at the province and NUTS2 region levels. Our baseline specification remains robust under these alternative specifications, strengthening our confidence in the validity of the baseline results.

In addition, we employ an alternative estimation strategy to validate the parallel trend assumption. Specifically, we use the province's distance to the Qandil Mountains, located at the border of Turkey, Iran, and Iraq, as an instrument for provincial armed conflict exposure indicators. The Qandil Mountains served as the headquarters of the PKK due to their strategic location and challenging terrain. Aligning with the difference-in-differences specification, we instrument cumulative childhood conflict exposure with the interaction between each province's distance to the Qandil Mountains and being part of the affected cohorts.

Additionally, our analysis could be influenced by changes in the population composition of the provinces, which may independently affect the education, and labor market outcomes of the wartime children and the health and education outcomes of their offspring. Prolonged armed conflict often leads to displacement or migration, potentially impacting the outcomes we measure. To quantify childhood exposure to armed conflict, we use migration histories from DHS and carefully match each woman's residence during their formative years (ages 7-19) with the relevant armed conflict data. This approach allows us to control for the potential biases introduced by migration and displacement, ensuring a more accurate assessment of

the conflict on the estimated outcomes.

For robustness, we also exclude individuals with more than a high school education, as more educated people are more likely to migrate. Additionally, our robustness analysis focuses exclusively on regions in the Kurdish areas of Turkey, specifically within the OHAL region. This "super-region" was established under state of emergency legislation from 1994 to 2002 as part of Turkey's approach to the Kurdish–Turkish conflict. By concentrating on these areas, we aim to mitigate the impact of migration and displacement on our results, ensuring a more accurate assessment of the long-term effects of the conflict.

In addition to migration and displacement, differential wartime infant and adult mortality and fertility could significantly impact the interpretation of our results. All datasets used in this project are repeated cross-sectional datasets representative of Turkey, capturing population dynamics over time. Our regressions incorporate population weights, ensuring that changes in the population are factored into the analyses. As an additional analysis, following the study by Meng et al. (2015), we tested whether the cohort size and gender composition were differentially affected by the conflict intensity in a given province. In these sample selection analyses, we generated indicators for the number of observations by birth year and province, and by birth year, gender, and province, respectively, to capture the cohort size and gender-specific cohort size in a given province over time. This helped us assess whether there were significant cohort-province differences in cohort sizes and gender composition due to exposure to armed conflict. The results of these analyses, where cohort size and gender-specific cohort size were the outcomes of interest, did not yield meaningful point estimates. This suggests that our main findings are not driven by changes in population composition, reinforcing the robustness of our results.

Conflict can also influence fertility rates and infant mortality, potentially affecting the size and characteristics of birth cohorts. To investigate this possibility, we examine fertility and child survival as potential outcomes, allowing us to understand how conflict impacts reproductive behavior and subsequent population dynamics. Additionally, we analyze the

timing and spacing of births to determine whether families are postponing or accelerating childbearing in response to conflict conditions. Our analysis of fertility patterns suggests no differential effect on the number of children, the infant mortality rates or birth spacing and gestational duration, indicating that the timing of births was likely unaffected by the conflict.

To further test the robustness of our results, we exclude the less affected regions such as Marmara, Aegean, and Mediterranean regions, which are coastal and more developed areas of Turkey, as well as the three largest cities: Istanbul, Ankara, and Izmir, from our control group. By comparing conflict-affected regions without including these major urban centers, we ensure that our findings are not influenced by the unique characteristics of large, unaffected cities. It is comforting that our results remain robust to these alternative specifications and validity tests.

5 Empirical Results

5.1 Exposure to Conflict and Education Attainment

Table 1 provides estimates from Equation (1) of the effects of the PKK conflicts, measured as human losses experienced between the ages of 7 to 19, on educational achievement, specifically years of schooling, and the probability of attaining and completing different levels of education (primary, secondary, and higher).[3] We first present results for the full sample in Panel A. In Panel B we restrict the sample to the youngest cohorts who were of school age when the PKK conflict started in 1984. The last panel presents the results controlling for parental characteristics such as mother's and father's literacy status.

[Table 1 about here.]

[3]We also explored the impacts of conflict exposure measured as the value of property damage from (START, 2022), and do not find robust evidence that property damage experienced in school-age is associated with education outcomes.

In Panel A of Table 1 we find that exposure to the PKK conflicts during an individual's formative years is strongly negatively related to adult educational attainment. An additional human casualty during the conflict is associated with approximately 1.88 fewer years of schooling. Estimates in column (1) of panel A imply that an individual experiencing the mean human loss will have about .10 lower years of schooling compared to an individual with no exposure. Furthermore, in columns (2) to (4), we find that exposure to human losses during the PKK conflicts significantly negatively impacts the likelihood of obtaining a primary school degree, a secondary school degree, and proceeding beyond secondary school.

As the PKK conflict was the most intense between 1990 and 2000 (as shown in Figure 2), we investigate whether the estimated effects are greater for the cohort most likely to have been in school during the peak of the conflict, those born after 1980. The results are in Panel B of Table 1 and show that the estimated impacts of conflict exposure are much stronger for the cohort born after 1980, who were most exposed to the conflict.[4] The coefficient for years of schooling is -2.54, indicating a reduction of approximately 2.55 years, and is significant at the 1% level. This indicates that younger cohorts experience more substantial educational setbacks due to conflict-related human loss, which is expected given that they would have been more exposed to the conflict and partly validates the research design.

Given that the PKK conflict was concentrated in regions and places that are generally poorer and less educated, one might wonder if we are not just capturing the effects of parental characteristics instead of conflict exposure. Therefore, in Panel C of Table 1, we present results controlling for parental characteristics, including literacy/educational attainment. The results continue to show the negative impacts of the conflict on education attainment, specifically years of schooling and the probability of obtaining a primary school degree. The estimated negative effects on higher levels of education, specifically secondary school and above, are now smaller once we account for parental characteristics. However, as expected, children with educated parents tend to perform better overall, even more so for having

[4]For example, the cohort in Panel B has a higher mean human loss due to the conflict, .077 vs .055 for the full sample.

educated mothers. This suggests that parental literacy partially mitigates the adverse effects of conflict on these educational outcomes.

Overall, the table shows that human loss from conflict significantly reduces educational attainment, with stronger effects observed among younger cohorts who were likely to have been more exposed. Parental literacy and education mitigate some of these negative effects, particularly for achieving higher educational levels.

Robustness Checks

Next, we explore the robustness of our findings to different identification concerns.

Region Comparability: First, as shown in Figure 1, the PKK conflict is strongly conflicted in the eastern/southeastern parts of Turkey, generally Kurdish regions, and these areas might not be comparable to areas in the west. The concern here is different time trends because any fixed effects have been taken into account. In order to address this potential concern, we dropped from the analysis Istanbul, Ankara, Izmir, Marmara, Aegean and Mediterranean regions in Panels A–C of Table 2, which allows us to focus on regions that are more comparable to the Kurdish-majority areas.

[Table 2 about here.]

The results show that the estimates are not driven by comparing exposed individuals in the eastern and southeastern parts of Turkey to non-comparable individuals who grew up or living in Istanbul, Ankara, Izmir, Marmara, Aegean and Mediterranean regions. The point estimates are in fact quite similar to the baseline results in Panel A of Table 1.

Furthermore, in panels D and E of Table 2, we restrict the sample only to individuals living in the Kurdish and OHAL regions. The OHAL regions represent areas where the conflict was most intense, where a state of emergency was declared at the height of the conflict (Aydin and Emrence, 2015).[5] Our results are very similar to the baseline estimates

[5]Note that both OHAL regions were a subset of the larger Kurdish regions.

even when the sample is restricted to individuals in the Kurdish and OHAL regions. In sum, the results we find on the impact of human losses in formative years of adult educational attainment are not driven by comparing most exposed individuals to individuals in non-comparable parts of Turkey. We find similar results when the sample is restricted to the most exposed regions, and also when we exclude wealthier regions where the conflict was less intense.

Different Time Trends: Despite the results above, there might still be concerns about differential time trends across provinces and regions that are not addressed by selecting more comparable provinces. To further assuage these concerns, we directly allow for different linear time trends across provinces and a full set of region (NUTS1) and birth-cohort fixed effects. The results are in Table 3. The results continue to show that human losses experienced in conflicts during school age negatively impact adult education outcomes. We continue to find significantly negative impacts on years of schooling and the probability of obtaining a primary school degree. The impacts on the probability of obtaining a secondary school degree, and moving beyond secondary school, are similar to the baseline estimates, but slightly noisier when we include region-by-cohort fixed effects.

[Table 3 about here.]

Alternative Data Sources: We extend our analysis using another data source on the PKK conflict from Kibris (2020), which records combatant fatalities. The results are presented in Table 4. In Panel A, we use total combatant fatalities during the ages of 7 to 19 as the measure of conflict exposure and continue to find negative impacts on years of schooling and level of educational attainment. The point estimates are somewhat larger than our baseline estimates, and this is likely due to the fact that combatant fatalities are likely capturing the most intense conflict events. We find similar results when the measure of exposure is restricted to Turkish Armed Forces fatalities or PKK fatalities. The results here indicate that the impacts we find are robust to different data sources.

[Table 4 about here.]

5.2 Exposure to Conflict and Adult Labor Market Outcomes

This section discusses estimates of the impacts of conflict exposure on labor market outcomes, particularly on the type of employment, hourly wage, skill level, and sector of employment, using data from the Turkish Household Labor Force Surveys (LFS, 2017).

[Table 5 about here.]

We begin with Table 5, which shows estimates of the impacts of conflict exposure, measured as human losses between the ages of 7 and 19, on labor market outcomes as adults. The results in panel A demonstrate that people with increased exposure to the conflict have relatively worse labor market outcomes. They are substantially less likely to work in the formal sector and more likely to work in the informal sector. Workers in the formal sector in Turkey have been found to earn more (Tansel and Acar, 2016). Although there are no differences in hourly wages, increased exposure to conflict in early childhood is associated with working in a job with significantly lower skill levels (in agreement with findings on education). In column (6), we find that early exposure to conflicts is associated with a decrease in the likelihood of working in the manufacturing sector, which is generally considered more formal than the largely informal agricultural sector (Tansel and Acar, 2016). Panels B and C of Table 5 present estimates for men and women, respectively, and show that the labor market impacts of early exposure to conflicts are largely driven by males. This is not surprising given the relatively lower levels of participation in the labor force of females in the data set (approximately 52%).

Robustness Checks

Differential Time Trends: For robustness, we account for differential time trends across provinces by controlling for region-birth cohort fixed effects (NUTS2 in Turkey) and province-

specific linear time trends in Appendix Tables A2 and A3, and find that the results remain the same.

Property Losses: Further, Appendix Tables A4, A5 explore whether the results are driven by human or property losses (including capital) during the conflict. The results show that the findings on the type of employment, formal/informal, agricultural/manufacturing, and skill levels, are largely driven by exposure to human losses (which are all consistent with our findings on the educational effects of conflict exposure). However, the results in Table A5 indicate that property losses lead to lower wages in the labor market in adulthood, which could be consistent with a reduction in physical capital stock.

Region Comparability: One might also wonder whether the results are driven by comparing provinces in regions with intense exposure to the conflict with provinces in other Turkish regions where exposure was minimal. We address these concerns in Tables 7 and 6 and restrict the sample to individuals living within the OHAL regions, where a state of emergency was declared at the height of the conflicts (Aydin and Emrence, 2015), and the Kurdish regions.[6] The results are similar to the estimated effects in Table 5, except for the noisier point estimates for employment in manufacturing and agricultural sectors.

[Table 6 about here.]

[Table 7 about here.]

Role of Education: Lastly, we ask whether the adult labor market outcomes are driven by relatively lower education levels that are associated with lower skill levels, and lower probabilities of employment in the formal and manufacturing sectors. The results are in Tables 8 and A6 for discrete and continuous measures of education attainment, respectively.

[6]The OHAL regions are defined as the following NUTS2 regions: TRB1, TRB2, TRC1, TRC2, TRC3. The Kurdish-majority regions, are defined as the following NUTS2 regions: TRA1, TRA2, TRB1, TRB2, TRC1, TRC2, TRC3.

We find that while education is generally associated with better labor market outcomes (formal and non-agricultural employment) and higher skill levels, educational attainment alone cannot explain the labor market outcomes of individuals exposed to conflicts in early adulthood. This implies that the labor market consequences of conflict exposure could be driven by changes in attitudes or expectations about adult employment, as has been found for housing preferences for individuals who lived in intensely bombed cities during World War II (Happel et al., 2024).

[Table 8 about here.]

In general, the results in Table 5 are robust and indicate that early exposure to human losses during conflict is associated with a higher likelihood of working in the informal agricultural sector and associated with a lower skill level. These results are largely found for males, and property losses in childhood conflicts lead to lower adult wages.

5.2.1 Labour Force Evidence from the DHS

We further explore the labor market impacts of conflict exposure in early adulthood using data from the Turkey DHS (Hacettepe University Institute of Population Studies, 2019), and the results are shown in Table 9. Estimates support the results of the Labor Force Surveys on the negative labor market impacts of exposure to conflict. In Panel A, we find that individuals exposed to conflict during school age are less likely to be working and looking for work, suggesting a greater detachment from the labor market. In column (3), we use the wealth index from the DHS to show that early exposure to the conflict is also associated with a decreased probability of being in the rich/richer categories.

[Table 9 about here.]

Panel B of Table 9 includes parental controls, specifically literacy. We do not find that literate parents, a measure of education, cannot explain the findings. This is consistent

with the finding in the previous section that education alone does not explain the negative outcomes in the labor market due to exposure to the PKK conflict.

5.3 Second Generation Impacts

In this section, we delve deeper into the impacts of exposure to the PKK conflicts on the health and education of children whose parents grew up at the height of the conflict. By meticulously linking individuals to their parents in DHS, 2019, we have a comprehensive measure of exposure: specifically, the exposure of parents to the conflict during their formative years, between the ages of 7 to 19. The strength of our analysis lies in our unique ability to directly connect the second generation to their parents' conflict exposure, thereby illuminating the enduring, long-term effects of such conflicts. The results are presented in Tables 10 for health outcomes and Table 11 for educational outcomes.[7]

[Table 10 about here.]

Table 10 examines the intergenerational effects of the conflict on the health outcome of children, specifically looking at the number of non-surviving births, birth weight, height for age and weight for age z-scores. The results in Panel A indicate that while there are no statistically significant effects on the number of non-surviving births and birth weights, the children of those exposed to the conflict tend to be shorter and weigh less for their ages. This indicates that parental exposure to the conflict has negative effects on the health of their children. Examining the results in Panels B and C, which split the sample by sex, we find that the effects are largely driven by the negative impacts on females who lose the most from the conflict exposure of their parents. Lastly, Panel D of Table 10 shows that most of the health impacts can be explained by parental characteristics because all health impacts become small and insignificant once parental characteristics are taken into account.

[Table 11 about here.]

[7] We examine health outcomes because a lot of the children of parents exposed to the conflicts are still in school.

In addition, the results in Table 11 show that educational impacts do not generally persist into the second generation. There is some evidence that males whose parents were more exposed to the conflict are also less likely to complete high school, but we do not find robust educational impacts in all other cases. However, this result needs to be interpreted cautiously because a lot of the children of exposed parents are still of school age, and we would need a long-term follow-up to draw conclusive results.

6 Conclusion

This study provides robust empirical evidence on the long-term consequences of childhood exposure to armed conflict, specifically the PKK conflict in Turkey. Our analysis reveals significant adverse effects on both educational attainment and labor market outcomes for individuals exposed to conflict during their early years. The results persist in the health outcomes of the second generation. We show that conflict exposure significantly decreases the number of years of schooling and the likelihood of achieving primary, secondary, and higher education degrees. These effects are more pronounced for cohorts who were of school age during the height of the PKK conflict. Furthermore, individuals exposed to conflict are more likely to work in the informal sector, in jobs with lower skill levels, and are less likely to be employed in the formal manufacturing sector. These labour market impacts are particularly significant for males. Our findings are robust to controlling for differential time trends across provinces, using alternative data sources, and restricting the sample to the most impacted Kurdish regions. These confirm that the negative impacts on education and labor market outcomes are not artifacts of data selection or regional biases.

Our study fills a critical gap in the literature by offering causal evidence on the micro-level effects of armed conflict in Turkey and contributes to the broader understanding of how early-life shocks can shape socioeconomic outcomes. These findings are important because addressing the needs of children and youth in conflict zones remains an urgent priority for

researchers and policymakers alike. Such policies are essential not only for improving the lives of children growing up in conflicts and their future generations, who are also adversely impacted by warfare. Addressing the needs of these children is a vital step toward fostering long-term stability and peace. Our results highlight the persistent and long-lasting effects of early-life exposure to conflict on human capital development. The results emphasize the need for targeted policies and interventions to support children affected by armed conflicts. Providing access to education and stable employment opportunities is crucial to mitigate the long-term impacts of conflict and foster economic resilience in affected regions.

In conclusion, this paper provides evidence on the long-term impact of the PKK conflict in Turkey. Our findings suggest that exposure to conflict during early childhood has significant negative effects on educational attainment and labor market outcomes. Future work may further examine the intergenerational impacts of conflicts, especially as the children of the cohort born after the 1980's move into adulthood.

References

Akbulut-Yuksel, M., "Children of War: The Long-Run Effects of Large-Scale Physical Destruction and Warfare on Children," *Journal of Human Resources*, 2014.

Akbulut-Yuksel, Mevlude, Dozie Okoye, and Mutlu Yuksel, "Social Changes in Impressionable Years and Adult Political Attitudes: Evidence from Jewish Expulsions in Nazi Germany," *Economic Inquiry*, 2020, *58* (1), 184–208.

Akresh, R. and D. de Walque, "Armed Conflict and Schooling: Evidence from the 1994 Rwandan Genocide," *IZA Discussion Paper*, 2008.

Akresh, Richard, Sonia Bhalotra, Marinella Leone, and Una Osili, "First- and Second-Generation Impacts of the Biafran War," *Journal of Human Resources*, 2023, *58* (2), 452–486.

Aydin, Aysegul and Cem Emrence, *Zones of Rebellion: Kurdish Insurgents and the Turkish State*, Ithaca and London: Cornell University Press, 2015.

Bacik, G. and B. B. Coskun, "The PKK Problem: Explaining Turkey's Failure to Develop a Political Solution," *Studies in Conflict and Terrorism*, 2011, *34* (3), 248–265.

Bilgel, Firat and Burhan Can Karahasan, "The Economic Costs of Separatist Terrorism in Turkey," *Journal of Conflict Resolution*, 2017, *61* (2), 457–479.

Brakman, S., H. Garretsen, and M. Schramm, "The Strategic Bombing of German Cities during World War II and Its Impact on City Growth," *Journal of Economic Geography*, 2004.

Davies, Shawn, Garoun Engström, Therese Pettersson, and Magnus Öberg, "Organized Violence 1989-2023, and The Prevalence of Organized Crime Groups," *Journal of Peace Research*, 2024, *61* (4).

Davis, D. and D. Weinstein, "Bones, Bombs, and Break Points: The Geography of Economic Activity," *American Economic Review*, 2002.

Eyrice, Idris, "Roots and Causes That Created the PKK Terrorist Organization." PhD dissertation, Naval Postgraduate School, Monterey, California 2013.

Gleditsch, Nils Petter, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg, and Håvard Strand, "Armed Conflict 1946-2001: A New Dataset," *Journal of Peace Research*, 2002, *39* (5).

Hacettepe University Institute of Population Studies, "1998-2018 Turkey Demographic and Health Survey [Data File]," 2019. Available at https://dhsprogram.com/Countries/Country-Main.cfm?ctry_id=58&c=Turkey&Country=Turkey&cn=&r=2.

Halbmeier, C. and C. Schröder, "The Long-term Implications of Destruction During the Second World War on Private Wealth in Germany," *Journal of Economic Growth*, 2024.

Happel, Jonas, Yigitcan Karabulut, Larissa Schäfer, and Şelale Tüzel, "Shattered Housing," *Journal of Financial Economics*, 2024, *156*, 103835.

Kibris, Arzu, "Funerals and Elections: The Effects of Terrorism on Voting Behavior in Turkey," *Journal of Conflict Resolution*, 2011, *55* (2), 220–247.

_ , "TPCONED: the Turkish State-PKK Conflict Event Dataset," Technical Report, University of Warwick, Department of Politics and International Studies (PAIS) 2020.

_ **and Resul Cesur**, "War Foster Cooperation or Parochialism? Evidence from a Natural Experiment among Turkish Conscripts," Working Paper 30674, National Bureau of Economic Research 2023.

Meng, Xin, Nancy Qian, and Pierre Yared, "The Institutional Causes of China's Great Famine, 1959–1961," *The Review of Economic Studies*, 2015, *82* (4), 1568–1611.

Miguel, E. and G. Roland, "The Long-Run Impact of Bombing Vietnam," *Journal of Development Economics*, 2011.

Mutlu, Servet, "Türkiye'nin güvenliği: Ayrılıkçı PKK Terörünün Ekonomik Maliyeti," *The security of Turkey: Economic cost of separatist PKK terrorism*, 2008.

National Consortium for the Study of Terrorism and Responses to Terrorism, "Global Terrorism Database 1970 - 2020 [data file]," 2022.

of Statistics of Prime Ministry of Turkey, State Institute, "Turkey Household Labour Force Survey (HLFS) 2017," Dataset downloaded from https://catalog.ihsn.org/catalog/8474#metadata-data_access on Jan 15, 2023 2017.

Schoon, Eric, "The Paradox of Legitimacy: Resilience, Successes, and the Multiple Identities of the Kurdistan Workers' Party in Turkey," *Social Problems*, 2015, *62* (2), 266–285.

Shemyakina, O., "The Effect of Armed Conflict on Accumulation of Schooling: Results from Tajikistan," *Journal of Development Economics*, 2011.

Tansel, Aysit and Elif Oznur Acar, "The Formal/Informal Employment Earnings Gap: Evidence from Turkey," in "Inequality After the 20th Century: Papers from the Sixth ECINEQ Meeting," Vol. 24 Emerald Group Publishing Limited 2016, pp. 123–156.

Figure 1: PKK Conflict in Turkey

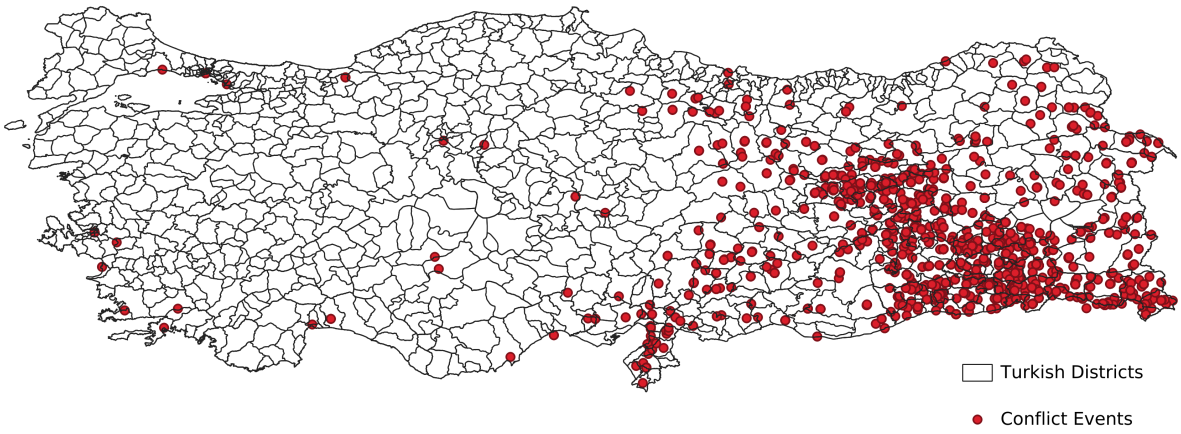
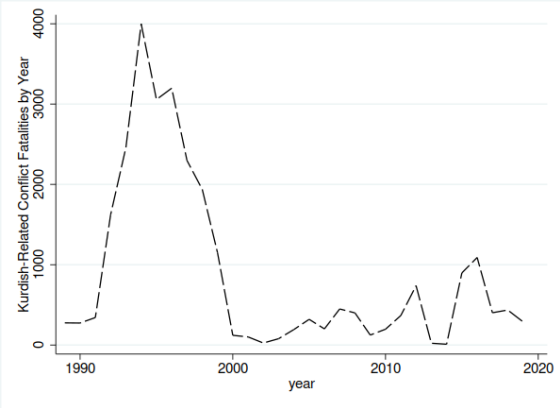
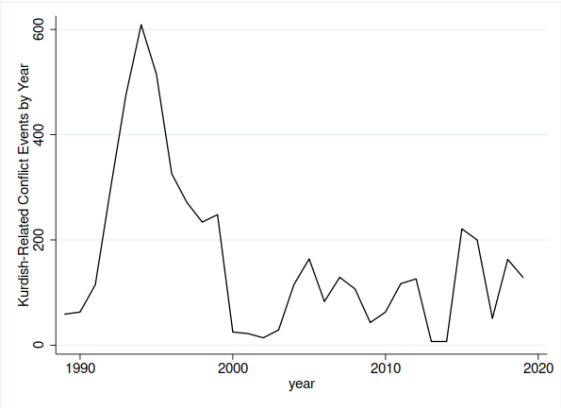


Figure 2: PKK Conflict Data



(a) Number of PKK-related Fatalities



(b) Number of Conflict-Incidences

Table 1: Effect of Conflict on Educational Attainment

	Years of Schooling	Primary School Degree	Secondary School Degree	Higher than Secondary
	(1)	(2)	(3)	(4)
	Panel A: Full Sample			
Human Loss	-1.8801***	-0.1484***	-0.1140***	-0.0757**
	(0.3578)	(0.0447)	(0.0337)	(0.0377)
Adjusted R-squared	0.234	0.196	0.201	0.101
Observations	18339	18341	18341	18341
Mean Dependent Variable	6.489	0.857	0.373	0.168
Mean Human Loss	0.055	0.055	0.055	0.055
	Panel B: Cohort Born after 1978			
Human Loss	-2.5477***	-0.2542***	-0.1633***	-0.0966**
	(0.4119)	(0.0369)	(0.0334)	(0.0471)
Adjusted R-squared	0.218	0.179	0.208	0.095
Observations	6795	6796	6796	6796
Mean Dependent Variable	7.760	0.898	0.531	0.224
Mean Human Loss	0.077	0.077	0.077	0.077
	Panel C: Parental Controls			
Human Loss	-1.1578***	-0.1198***	-0.0436	-0.0245
	(0.2890)	(0.0437)	(0.0338)	(0.0389)
Father is Literate	1.4659***	0.1186***	0.1300***	0.0674***
	(0.1142)	(0.0133)	(0.0150)	(0.0100)
Mother is Literate	2.9883***	0.0970***	0.2947***	0.2179***
	(0.1821)	(0.0075)	(0.0163)	(0.0152)
Adjusted R-squared	0.361	0.241	0.298	0.176
Observations	18183	18185	18185	18185
Mean Dependent Variable	6.508	0.858	0.374	0.169
Mean Human Loss	0.055	0.055	0.055	0.055

Notes: Table shows the effect of exposure to conflicts, measured as human loss from (START, 2022), on educational outcomes from the Hacettepe University Institute of Population Studies (2019). Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with the province, birth year fixed effects, survey year indicators and urban dummy. Parental controls include the mother and father's literacy/educational attainment.

Table 2: Conflict and Education: Robustness to Specific Regions and Provinces

	Years of Schooling	Primary School Degree	Secondary School Degree	Higher than Secondary
	(1)	(2)	(3)	(4)
	Panel A: Drop Istanbul			
Human Loss	-1.8224***	-0.1104***	-0.1300***	-0.0990***
	(0.4188)	(0.0333)	(0.0343)	(0.0349)
Adjusted R-squared	0.269	0.219	0.229	0.117
Observations	16813	16815	16815	16815
	Panel B: Drop Istanbul, Ankara and Izmir			
Human Loss	-1.5397***	-0.1130***	-0.1098***	-0.0732**
	(0.3641)	(0.0367)	(0.0281)	(0.0310)
Adjusted R-squared	0.256	0.223	0.216	0.108
Observations	15466	15468	15468	15468
	Panel C: Drop Marmara and Aegean Regions			
Human Loss	-1.7758***	-0.1154***	-0.1307***	-0.0913***
	(0.3982)	(0.0308)	(0.0335)	(0.0294)
Adjusted R-squared	0.32	0.264	0.28	0.129
Observations	11694	11695	11695	11695
	Panel D: Restrict to Kurdish Regions			
Human Loss	-1.8986***	-0.1422***	-0.1252***	-0.0926***
	(0.4396)	(0.0324)	(0.0368)	(0.0308)
Adjusted R-squared	0.335	0.286	0.294	0.134
Observations	8,658	8,658	8658	8658
	Panel E: Restrict to OHAL Regions			
Human Loss	-1.8834***	-0.1468***	-0.1199***	-0.0902***
	(0.4529)	(0.0336)	(0.0377)	(0.0312)
Adjusted R-squared	**0.331**	0.291	0.293	0.134
Observations	7681	7681	7681	7681

Notes: Table shows the effects of exposure to conflicts, measured as human losses from (START, 2022), on educational outcomes from the Hacettepe University Institute of Population Studies (2019), excluding wealthier provinces and regions, and exclusively focusing on Kurdish and OHAL regions (Aydin and Emrence, 2015). Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with province, birth year fixed effects, survey year indicators and urban dummy. The Kurdish-majority regions, defined as the following NUTS2 regions: TRA1, TRA2, TRB1, TRB2, TRC1, TRC2, TRC3. The OHAL regions are defined as the following NUTS2 regions: TRB1, TRB2, TRC1, TRC2, TRC3.

Table 3: Conflict and Education Controlling for Differential Trends

	Years of Schooling	Primary School Degree	Secondary School Degree	Higher than Secondary
	(1)	(2)	(3)	(4)
	Panel A: Controlling for Linear Province Time Trends			
Human Loss	-1.8816***	-0.1891***	-0.0913**	-0.0676
	(0.3601)	(0.0386)	(0.0367)	(0.0416)
Adjusted R-squared	0.240	0.221	0.207	0.106
Observations	18,339	18,341	18341	18341
Mean Dependent Variable	0.844	0.844	0.314	0.120
Mean Human Loss	0.057	0.057	0.057	0.057
	Panel B: Controlling for Region-Birth Cohort Fixed Effects			
Human Loss	-2.0641***	-0.2062***	-0.0925	-0.0588
	(0.5200)	(0.0536)	(0.0769)	(0.0583)
Adjusted R-squared	0.243	0.252	0.195	0.121
Observations	13,129	13,131	13131	13131
Mean Dependent Variable	0.844	0.844	0.314	0.120
Mean Human Loss	0.057	0.057	0.057	0.057

Notes:Table shows the effect of conflicts, measured as human losses from START, 2022, on education outcomes from the Hacettepe University Institute of Population Studies (2019). Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with the province, birth year fixed effects, survey year indicators and urban dummy. Estimates control for differential trends across cohorts at the nuts1 level (nuts1xcohort trends), and different linear trends across provinces.

Table 4: Conflict and Education Using Alternate Data

	Years of Schooling	**Primary School Degree**	**Secondary School Degree**	**Higher than Secondary**
	(1)	(2)	(3)	(4)
			Panel A: All Fatalities	
Total Fatalities	-2.9595**	-0.1596***	-0.2656***	-0.1071
	(1.2784)	(0.0539)	(0.0778)	(0.0870)
Adjusted R-squared	0.234	0.149	0.179	0.092
Observations	3392	3394	3394	3394
			Panel B: TSF Fatalities	
TSF Fatalities	-6.6085***	-0.3488**	-0.6269***	-0.168
	(1.6777)	(0.1699)	(0.1132)	(0.1455)
Adjusted R-squared	0.234	0.149	0.179	0.091
Observations	3392	3394	3394	3394
			Panel C: PKK Fatalities	
PKK Fatalities	-4.4984*	-0.2461**	-0.3886**	-0.1944
	(2.4640)	(0.0987)	(0.1509)	(0.1691)
Adjusted R-squared	0.234	0.149	0.179	0.092
Observations	3392	3394	3394	3394

Notes: Table shows the effect of conflicts, measured as fatalities from Kibris (2020), on education attainment from the Hacettepe University Institute of Population Studies (2019). Panel B measures conflict intensity as fatalities of members of the Turkish Armed Forces (TSF), and Panel C as fatalities for members of the PKK. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with the province, birth year fixed effects, and survey year indicators. Each column also controls for gender and urban dummies.

Table 5: Effect of Conflict on Adult Labor Market Outcomes

	Employment Type				Employment in	
	Formal	Informal	Log Wage	Skill Level	Agriculture	Manufacturing
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Full Sample					
Human Loss	-0.1912***	0.0785**	0.0414	-0.3513***	0.0321	-0.0654***
	(0.0356)	(0.0341)	(0.0460)	(0.1061)	(0.0285)	(0.0209)
Female	-0.3606***	-0.1088**	-0.0157	-0.6696***	-0.0011	-0.0825***
	(0.0267)	(0.0465)	(0.0438)	(0.0423)	(0.0267)	(0.0127)
Adjusted R-squared	0.156	0.042	0.214	0.070	0.054	0.054
Observations	672,599	1,230,317	274,595	672,599	1,230,317	1,230,317
Mean Outcome	0.553	0.244	7.072	2.062	0.174	0.062
Mean Human Loss	0.064	0.064	0.064	0.064	0.064	0.064
	Panel B: Males Only					
Human Loss	-0.1923***	0.1181***	0.0514	-0.3890***	-0.0013	-0.1068***
	(0.0410)	(0.0311)	(0.0499)	(0.0963)	(0.0224)	(0.0325)
Adjusted R-squared	0.084	0.037	0.237	0.031	0.033	0.042
Observations	478,710	594,590	220,256	478,710	594,590	594,590
Mean Outcome	0.651	0.281	7.071	2.230	0.177	0.104
Mean Human Loss	0.063	0.063	0.063	0.063	0.063	0.063
	Panel C: Females Only					
Human Loss	-0.0287	0.0596	-0.119	-0.1221	0.0742*	-0.0280**
	(0.0800)	(0.0415)	(0.0978)	(0.1996)	(0.0386)	(0.0130)
Adjusted R-squared	0.096	0.092	0.197	0.055	0.098	0.013
Observations	193,889	635,727	54,339	193,889	635,727	635,727
Mean Outcome	0.313	0.209	7.077	1.647	0.172	0.024
Mean Human Loss	0.066	0.066	0.066	0.066	0.066	0.066

Notes:Table shows the effect of conflicts, measured as human losses from START, 2022, on labour market outcomes. Standard errors clustered by nuts-2 are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with nuts-2, birth year fixed effects, and survey year indicators.

Table 6: Conflict and Labor Market Outcomes: Kurdish Regions Only

	Employment Type				Employment in	
	Formal	Informal	Log Wage	Skill Level	Agriculture	Manufacturing
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Full Sample					
Human Loss	-0.1456***	0.0557*	-0.0618	-0.2823**	0.0050	-0.0566
	(0.0236)	(0.0284)	(0.0633)	(0.1071)	(0.0241)	(0.0335)
Adjusted R-squared	0.078	0.102	0.247	0.075	0.069	0.063
Observations	265,739	538,630	110,865	265,739	538,630	538,630
Mean Outcome	0.479	0.257	7.053	1.962	0.160	0.042
Mean Human Loss	0.139	0.139	0.139	0.139	0.139	0.139
	Panel B: Males Only					
Human Loss	-0.1450***	0.0932***	-0.0597	-0.3340**	-0.0121	-0.1053
	(0.0316)	(0.0176)	(0.0651)	(0.1176)	(0.0127)	(0.0631)
Adjusted R-squared	0.052	0.024	0.251	0.038	0.047	0.062
Observations	201,319	261,079	93,256	201,319	261,079	261,079
Mean Outcome	0.545	0.351	7.035	2.106	0.180	0.074
Mean Human Loss	0.135	0.135	0.135	0.135	0.135	0.135
	Panel C: Females Only					
Human Loss	-0.001	0.0247	-0.2728*	0.1115	0.027	-0.0122
	(0.0882)	(0.0455)	(0.1240)	(0.1583)	(0.0427)	(0.0081)
Adjusted R-squared	0.132	0.092	0.252	0.085	0.101	0.008
Observations	64,420	277,551	17,609	64,420	277,551	277,551
Mean Outcome	0.275	0.168	7.148	1.509	0.142	0.012
Mean Human Loss	0.143	0.143	0.143	0.143	0.143	0.143

Notes: Table shows the effect of conflicts, measured as human losses from START, 2022, on labour market outcomes. The sample is restricted to provinces within the Kurdish-majority regions, defined as the following NUTS2 regions: TRA1, TRA2, TRB1, TRB2, TRC1, TRC2, TRC3. Standard errors clustered by nuts-2 are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with nuts-2, birth year fixed effects, survey year indicators and urban dummy.

Table 7: Conflict and Labor Market Outcomes: OHAL Region Only

	Employment Type				Employment in	
	Formal	Informal	Log Wage	Skill Level	Agriculture	Manufacturing
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Full Sample					
Human Loss	-0.1611***	0.0557	-0.1044	-0.3781***	-0.0006	-0.0720
	(0.0248)	(0.0265)	(0.0574)	(0.0733)	(0.0197)	(0.0344)
Adjusted R-squared	0.0590	0.1140	0.2490	0.0610	0.0390	0.0690
Observations	181,075	396,951	83,730	181,075	396,951	396,951
Mean Outcome	0.494	0.231	7.019	2.076	0.120	0.047
Mean Human Loss	0.166	0.166	0.166	0.166	0.166	0.166
	Panel B: Males Only					
Human Loss	-0.1648***	0.1057***	-0.1046	-0.4369***	-0.0068	-0.1366*
	(0.0340)	(0.0126)	(0.0552)	(0.0745)	(0.0054)	(0.0628)
Adjusted R-squared	0.0490	0.0200	0.2530	0.0350	0.0250	0.0650
Observations	143,209	191,189	70,570	143,209	191,189	191,189
Mean Outcome	0.539	0.345	6.997	2.193	0.146	0.086
Mean Human Loss	0.161	0.161	0.161	0.161	0.161	0.161
	Panel C: Females Only					
Human Loss	-0.0224	0.0100	-0.2568	0.1055	0.0103	-0.0127
	(0.0842)	(0.0432)	(0.1648)	(0.2001)	(0.0386)	(0.0100)
Adjusted R-squared	0.1280	0.0560	0.2620	0.0700	0.0590	0.0100
Observations	37,866	205,762	13,160	37,866	205,762	205,762
Mean Outcome	0.325	0.124	7.133	1.632	0.096	0.011
Mean Human Loss	0.170	0.170	0.170	0.170	0.170	0.170

Notes: Table shows the effect of conflicts, measured as human losses from START, 2022, on labour market outcomes. The sample is restricted to provinces within the OHAL region, where a state of emergency was declared (Aydin and Emrence, 2015). The OHAL regions are defined as the following NUTS2 regions: TRB1, TRB2, TRC1, TRC2, TRC3. Standard errors clustered by nuts-2 are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with nuts-2, birth year fixed effects, survey year indicators and urban dummy.

Table 8: Conflict and Labor Market Outcomes Controlling for Education

	Employment Type				Employment in	
	Formal	Informal	Log Wage	Skill Level	Agriculture	Manufacturing
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Full Sample					
Human Loss	-0.1616***	0.0525	-0.0115	-0.3087**	0.0099	-0.0652***
	(0.0341)	(0.0338)	(0.0355)	(0.1065)	(0.0284)	(0.0211)
Primary	0.2128***	-0.1222***	0.2144***	0.2446***	-0.1234***	0.0090**
	(0.0163)	(0.0119)	(0.0137)	(0.0368)	(0.0158)	(0.0040)
Secondary	0.1653***	-0.0905***	0.2254***	0.1077***	-0.0649***	-0.001
	(0.0071)	(0.0066)	(0.0167)	(0.0200)	(0.0081)	(0.0031)
Tertiary	0.2303***	-0.1161***	0.5255***	0.1645***	-0.0543***	-0.0515***
	(0.0147)	(0.0101)	(0.0128)	(0.0291)	(0.0043)	(0.0052)
Adjusted R-squared	0.342	0.098	0.501	0.078	0.100	0.058
Observations	672,599	1,230,317	274,595	672,599	1,230,317	1,230,317
	Panel B: Males Only					
Human Loss	-0.1663***	0.1009***	-0.0058	-0.3483***	-0.0156	-0.1040***
	(0.0412)	(0.0307)	(0.0421)	(0.0952)	(0.0231)	(0.0319)
Primary	0.1871***	-0.1278***	0.1832***	0.1757***	-0.1126***	0.0072
	(0.0184)	(0.0111)	(0.0125)	(0.0375)	(0.0141)	(0.0057)
Secondary	0.1362***	-0.1024***	0.2004***	0.0766***	-0.0635***	0.0001
	(0.0085)	(0.0054)	(0.0172)	(0.0219)	(0.0069)	(0.0049)
Tertiary	0.1697***	-0.1398***	0.4900***	0.2487***	-0.0681***	-0.0702***
	(0.0206)	(0.0148)	(0.0128)	(0.0236)	(0.0044)	(0.0074)
Adjusted R-squared	0.216	0.113	0.493	0.035	0.087	0.047
Observations	478,710	594,590	220,256	478,710	594,590	594,590
	Panel C: Females Only					
Human Loss	-0.0365	0.0303	-0.0005	-0.0927	0.0449	-0.0278*
	(0.0353)	(0.0404)	(0.0916)	(0.1700)	(0.0360)	(0.0131)
Primary	0.2147***	-0.1232***	0.4248***	0.4768***	-0.1446***	0.0090***
	(0.0282)	(0.0216)	(0.0532)	(0.0606)	(0.0219)	(0.0021)
Secondary	0.3901***	-0.0732***	0.5027***	0.2827***	-0.0662***	-0.0026
	(0.0192)	(0.0143)	(0.0384)	(0.0607)	(0.0162)	(0.0027)
Tertiary	0.2808***	-0.0551***	0.5164***	0.0841	-0.0241**	-0.0109***
	(0.0372)	(0.0108)	(0.0234)	(0.0487)	(0.0086)	(0.0034)
Adjusted R-squared	0.608	0.128	0.613	0.112	0.139	0.013
Observations	193,889	635,727	54,339	193,889	635,727	635,727

Notes: Table shows the effect of conflicts, measured as human losses from START, 2022, on labour market outcomes controlling for different levels of educational attainment. The excluded education category is those with no primary school degree. Standard errors clustered by nuts-2 are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with nuts-2, birth year fixed effects, survey year indicators and urban dummy.

Table 9: Conflict and Labour Market Outcomes: Evidence from the DHS

	Working	**Looking for Job**	**Rich/Richer**
	(1)	(2)	(3)
	Panel A: Full Sample		
Human Loss	-0.0698***	-0.1044**	-0.1431***
	(0.0234)	(0.0489)	(0.0414)
Urban	-0.0200*	0.0404***	0.3670***
	(0.0103)	(0.0134)	(0.0213)
Adjusted R-squared	0.675	0.086	0.262
Observations	13625	8720	18341
Mean Dependent Variable	0.427	0.309	0.392
Mean Human Loss	0.055	0.055	0.055
	Panel B: Full Sample with Parental Controls		
Human Loss	-0.0616**	-0.1176**	-0.0932***
	(0.0249)	(0.0460)	(0.0350)
Father is Literate	0.0111	0.0214	0.1249***
	(0.0077)	(0.0136)	(0.0105)
Mother is Literate	0.0380***	0.0609***	0.2070***
	(0.0057)	(0.0111)	(0.0063)
Adjusted R-squared	0.678	0.091	0.315
Observations	13496	8622	18185
Mean Dependent Variable	0.428	0.308	0.393
Mean Human Loss	0.055	0.055	0.055

Notes: Table shows the effect of exposure to conflicts, measured as human loss from (START, 2022), on labor market outcomes from the Hacettepe University Institute of Population Studies (2019). Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with the province, birth year fixed effects, survey year indicators and urban dummy. Parental controls include the mother and father's literacy and urban dummy.

Table 10: Conflict and Health: Second Generation

	Non-Surviving Births	Birth Weight	Height-for-age z-score	Weight-for-age z-score
	(1)	(2)	(3)	(4)
	Panel A: Full Sample			
Human Loss	-0.0334	-45.9562	-0.0866**	-0.1074***
	(0.0282)	(71.9481)	(0.0388)	(0.0395)
Adjusted R-squared	0.109	0.041	0.832	0.699
Observations	39834	8785	7648	7992
Mean Dependent Variable	0.095	3173.284	-0.001	-0.001
Mean Human Loss	0.088	0.088	0.088	0.088
	Panel B: Males Only			
Human Loss	-0.0828**	39.3153	-0.0182	-0.0945
	(0.0384)	(108.8072)	(0.0484)	(0.0682)
Adjusted R-squared	0.112	0.054	0.841	0.725
Observations	20972	4536	3956	4103
Mean Dependent Variable	0.087	3232.759	0.068	0.091
Mean Human Loss	0.085	0.085	0.085	0.085
	Panel C: Females Only			
Human Loss	0.0166	-127.1468**	-0.1513***	-0.1088***
	(0.0321)	(63.5065)	(0.0483)	(0.0247)
Adjusted R-squared	0.115	0.049	0.828	0.676
Observations	18862	4249	3692	3889
Mean Dependent Variable	0.103	3108.992	-0.075	-0.098
Mean Human Loss	0.092	0.092	0.092	0.092
	Panel D: Full Sample with Parental Controls			
Human Loss	-0.0290	-54.5590	-0.0230	-0.0147
	(0.0362)	(88.7597)	(0.0448)	(0.0318)
Adjusted R-squared	0.153	0.054	0.842	0.739
Observations	26531	6214	5423	5658
Mean Dependent Variable	0.092	3172.643	-0.004	-0.006
Mean Human Loss	0.084	0.084	0.084	0.084

Notes: Table shows the effects of exposure to conflicts, measured as human losses from (START, 2022) for the mother's generation on health and birth outcomes of the second generation from the Hacettepe University Institute of Population Studies (2019). Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with the province, mother's birth year and child's age fixed effects, urban dummy and survey year indicators. Parental controls include the mother's and father's educational attainment dummies, the mother's wealth index, employment status and the number of living children.

Table 11: Conflict and Education: Second Generation

	Progress	Primary	Secondary	High School	More than
			Degree	Completed	High School
	(1)	(2)	(3)	(4)	(5))
	Panel A: Full Sample				
Human Loss	-0.0140	0.0844**	0.0141	-0.0488	0.0782
	(0.0321)	(0.0345)	(0.0781)	(0.1224)	(0.0980)
Adjusted R-squared	0.708	0.081	0.186	0.135	0.18
Observations	19700	5023	3734	3658	3734
Mean Dependent Variable	1.128	0.967	0.752	0.494	0.175
Mean Human Loss	0.071	0.024	0.024	0.024	0.024
	Panel B: Male Children Only				
Human Loss	0.0272	0.0616	-0.0552	-0.6122***	0.0204
	(0.0388)	(0.0457)	(0.1692)	(0.1816)	(0.2658)
Adjusted R-squared	0.723	0.105	0.315	0.348	0.304
Observations	6914	1736	1359	1319	1359
Mean Dependent Variable	1.118	0.983	0.786	0.512	0.172
Mean Human Loss	0.073	0.018	0.018	0.018	0.018
	Panel C: Female Children Only				
Human Loss	-0.0665	0.2179	0.0891	0.1289	0.3987
	(0.0485)	(0.2122)	(0.3057)	(0.4182)	(0.3602)
Adjusted R-squared	0.708	0.326	0.555	0.526	0.501
Observations	6287	1139	740	734	740
Mean Dependent Variable	1.151	0.932	0.692	0.549	0.219
Mean Human Loss	0.068	0.024	0.024	0.024	0.024
	Panel D: Full Sample with Parental Controls				
Human Loss	-0.0173	0.1145	-0.0471	-0.3559*	0.1049
	(0.0255)	(0.0855)	(0.1365)	(0.2103)	(0.2609)
Adjusted R-squared	0.713	0.158	0.364	0.353	0.326
Observations	13,201	2875	2099	2053	2099
Mean Dependent Variable	1.134	0.965	0.753	0.525	0.189
Mean Human Loss	0.071	0.020	0.020	0.020	0.020

Notes: Table shows the effects of exposure to conflicts, measured as human losses from (START, 2022) for the mother's generation on educational outcomes of the second generation from the Hacettepe University Institute of Population Studies (2019). Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with the province, mother's birth year and child's age fixed effects, and survey year indicators. Each column also controls for the urban dummy. Parental controls include the mother's and father's educational attainment dummies, the mother's wealth index and employment status.

Appendices

Table A1: Effect of Conflict on Education from the LFS

	Years of Schooling	Primary School Degree	Secondary School Degree	Higher than Secondary
	(1)	(2)	(3)	(4)
	Panel A: Full Sample			
Human Loss	-0.3355*	-0.1127***	-0.1159***	-0.0146**
	(0.1775)	(0.0312)	(0.0276)	(0.0061)
Female	-3.0084***	-0.2605***	-0.1776***	-0.0643***
	(0.2116)	(0.0095)	(0.0077)	(0.0028)
Adjusted R-squared	0.208	0.147	0.095	0.032
Observations	1,230,317	1,230,317	1,230,317	1,230,317
Mean Outcome	6.737	0.377	0.269	0.114
Mean Human Loss	0.064	0.064	0.064	0.064
	Panel B: Males			
Human Loss	0.1836	-0.0919***	-0.0944***	0.0301*
	(0.3388)	(0.0211)	(0.0191)	(0.0145)
Adjusted R-squared	0.071	0.070	0.050	0.016
Observations	594,590	594,590	594,590	594,590
Mean Outcome	8.214	0.508	0.360	0.150
Mean Human Loss	0.063	0.063	0.063	0.063
	Panel C: Females			
Human Loss	-0.7487*	-0.1312**	-0.1352***	-0.0593***
	(0.3471)	(0.0514)	(0.0421)	(0.0153)
Adjusted R-squared	0.192	0.092	0.068	0.032
Observations	635,727	635,727	635,727	635,727
Mean Outcome	5.356	0.254	0.184	0.081
Mean Human Loss	0.066	0.066	0.066	0.066

Notes: Standard errors clustered by nuts-2 are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with nuts-2 and birth year fixed effects, and survey year indicators.

Table A2: Conflict and Adult Labor Market Outcomes Controlling for Differential Trends

	Employment Type				Employment in	
	Formal	Informal	Log Wage	Skill Level	Agriculture	Manufacturing
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Full Sample					
Human Loss	-0.1549***	0.0379***	-0.0813**	-0.3975***	-0.0124	-0.0767***
	(0.0166)	(0.0110)	(0.0307)	(0.0312)	(0.0120)	(0.0236)
Female	-0.3603***	-0.1087**	-0.0165	-0.6700***	-0.0011	-0.0825***
	(0.0267)	(0.0466)	(0.0434)	(0.0418)	(0.0267)	(0.0128)
Adjusted R-squared	0.159	0.046	0.220	0.073	0.057	0.056
Observations	672,599	1,230,317	274,595	672,599	1,230,317	1,230,317
	Panel B: Males Only					
Human Loss	-0.1541***	0.0865***	-0.0850**	-0.4550***	-0.0170	-0.1464***
	(0.0252)	(0.0105)	(0.0326)	(0.0392)	(0.0140)	(0.0431)
Adjusted R-squared	0.089	0.042	0.245	0.034	0.037	0.045
Observations	478,710	594,590	220,256	478,710	594,590	594,590
	Panel C: Females Only					
Human Loss	-0.0671	-0.0033	-0.3217***	0.0457	-0.0031	-0.0129*
	(0.0463)	(0.0103)	(0.0363)	(0.0829)	(0.0106)	(0.0067)
Adjusted R-squared	0.104	0.098	0.217	0.060	0.103	0.015
Observations	193,889	635,727	54,339	193,889	635,727	635,727

Notes:Table shows the effect of conflicts, measured as human losses from START, 2022, on labour market outcomes. Standard errors clustered by nuts-2 are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with nuts-2, birth year fixed effects, and survey year indicators. Estimates control for differential time trends across cohorts at the nuts1 level (nuts1xcohort trends).

Table A3: Conflict and Labor Market Outcomes Controlling for Linear Time Trends

	Employment Type				Employment in	
	Formal	Informal	Log Wage	Skill Level	Agriculture	Manufacturing
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Full Sample					
Human Loss	-0.0869***	0.0177	0.0412	-0.1669*	0.0067	-0.0148*
	(0.0277)	(0.0247)	(0.0628)	(0.0865)	(0.0169)	(0.0073)
Female	-0.3597***	-0.1090**	-0.0014	-0.6818***	0.0034	-0.0888***
	(0.0299)	(0.0488)	(0.0422)	(0.0472)	(0.0268)	(0.0141)
Adjusted R-squared	0.145	0.041	0.218	0.064	0.050	0.057
Observations	595,971	1,067,931	255,119	595,971	1,067,931	1,067,931
	Panel B: Males Only					
Human Loss	-0.0733**	0.0606***	0.0453	-0.1988*	0.0136	-0.0292**
	(0.0248)	(0.0176)	(0.0626)	(0.0925)	(0.0157)	(0.0130)
Adjusted R-squared	0.084	0.041	0.243	0.026	0.027	0.042
Observations	425,125	514,561	203,396	425,125	514,561	514,561
	Panel C: Females Only					
Human Loss	0.0469	-0.0059	0.1799	0.1180	0.0073	-0.0048
	(0.0713)	(0.0228)	(0.1373)	(0.1039)	(0.0213)	(0.0051)
Adjusted R-squared	0.079	0.092	0.194	0.049	0.096	0.014
Observations	170,846	553,370	51,723	170,846	553,370	553,370

Notes: Table shows the effect of conflicts, measured as human losses from START, 2022, on labour market outcomes. Standard errors clustered by nuts-2 are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with nuts-2, birth year fixed effects, and survey year indicators. Estimates control for linear time trends at the province level (nuts 2).

Table A4: Conflict, Property Loss, and Labor Market Outcomes

	Employment Type				Employment in	
	Formal	**Informal**	**Log Wage**	**Skill Level**	**Agriculture**	**Manufacturing**
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Full Sample					
Property Loss	-0.1666***	0.0676*	-0.0468	-0.3751***	0.0199	-0.0514**
	(0.0454)	(0.0316)	(0.0285)	(0.1029)	(0.0147)	(0.0186)
Adjusted R-squared	0.147	0.043	0.250	0.069	0.053	0.054
Observations	756,440	1,452,776	311,837	756,440	1,452,776	1,452,776
Mean Outcome	0.541	0.239	7.026	2.071	0.165	0.061
Mean Property Loss	0.043	0.043	0.043	0.043	0.043	0.043
	Panel B: Males Only					
Property Loss	-0.1756***	0.1176**	-0.0399	-0.4372***	0.0097	-0.0917**
	(0.0503)	(0.0496)	(0.0264)	(0.1071)	(0.0152)	(0.0321)
Adjusted R-squared	0.101	0.033	0.272	0.031	0.034	0.042
Observations	534,112	694,783	246,790	534,112	694,783	694,783
Mean Outcome	0.631	0.283	7.030	2.240	0.168	0.103
Mean Property Loss	0.040	0.040	0.040	0.040	0.040	0.040
	Panel C: Females Only					
Property Loss	-0.0558	0.0227	-0.0465	-0.0913	0.0305	-0.0141*
	(0.1039)	(0.0182)	(0.0620)	(0.1654)	(0.0197)	(0.0070)
Adjusted R-squared	0.090	0.087	0.240	0.055	0.092	0.013
Observations	222,328	757,993	65,047	222,328	757,993	757,993
Mean Outcome	0.322	0.199	7.012	1.665	0.162	0.023
Mean Property Loss	0.046	0.046	0.046	0.046	0.046	0.046

Notes: Table shows the effect of conflicts, measured as the value of property loss from START, 2022, on labour market outcomes. Standard errors clustered by nuts-2 are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with nuts-2, birth year fixed effects, and survey year indicators.

Table A5: Conflict, Human and Property Loss, and Labor Market Outcomes

	Employment Type				Employment in	
	Formal	**Informal**	**Log Wage**	**Skill Level**	**Agriculture**	**Manufacturing**
	(1)	(2)	(3)	(4)	(5)	(6)
Human Loss	-0.1627**	0.0662	0.1733**	-0.1878	0.0421	-0.0623*
	(0.0632)	(0.0605)	(0.0683)	(0.1781)	(0.0542)	(0.0347)
Property Loss	-0.0001	0.0000	-0.0003**	-0.0004	0.0000	0.0000
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)
Female	-0.3606***	-0.1088**	-0.0157	-0.6698***	-0.0011	-0.0825***
	(0.0267)	(0.0465)	(0.0438)	(0.0423)	(0.0267)	(0.0127)
Adjusted R-squared	0.156	0.042	0.214	0.070	0.054	0.054
Observations	672,599	1,230,317	274,595	672,599	1,230,317	1,230,317
Mean Outcome	0.541	0.239	7.026	2.071	0.165	0.061
Mean Human Loss	0.067	0.067	0.067	0.067	0.067	0.067
Mean Property Loss	0.043	0.043	0.043	0.043	0.043	0.043

Notes: Table shows the effect of conflicts, measured as human losses and the value of property loss from START, 2022, on labour market outcomes. Standard errors clustered by nuts-2 are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with nuts-2, birth year fixed effects, and survey year indicators.

Table A6: Conflict and Labor Market Outcomes Controlling for Education (Continuous)

	Employment Type				Employment in	
	Formal	Informal	Log Wage	Skill Level	Agriculture	Manufacturing
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Full Sample					
Human Loss	-0.1734***	0.0709**	0.0016	-0.3419***	0.0257	-0.0658***
	(0.0407)	(0.0323)	(0.0341)	(0.1127)	(0.0276)	(0.0209)
Years of Schooling	0.0480***	-0.0226***	0.0773***	0.0254***	-0.0189***	-0.0014***
	(0.0016)	(0.0020)	(0.0025)	(0.0047)	(0.0026)	(0.0005)
Adjusted R-squared	0.341	0.089	0.490	0.076	0.096	0.055
Observations	672,599	1,230,317	274,595	672,599	1,230,317	1,230,317
	Panel B: Males Only					
Human Loss	-0.1921***	0.1234***	0.0101	-0.3890***	0.0023	-0.1064***
	(0.0500)	(0.0323)	(0.0424)	(0.0987)	(0.0227)	(0.0319)
Years of Schooling	0.0422***	-0.0287***	0.0692***	0.0123**	-0.0197***	-0.0023**
	(0.0026)	(0.0014)	(0.0020)	(0.0051)	(0.0021)	(0.0008)
Adjusted R-squared	0.222	0.108	0.479	0.032	0.081	0.043
Observations	478,710	594,590	220,256	478,710	594,590	594,590
	Panel C: Females Only					
Human Loss	-0.0727	0.0454	-0.0693	-0.1628	0.0596	-0.0277*
	(0.0435)	(0.0394)	(0.1245)	(0.1842)	(0.0361)	(0.0130)
Years of Schooling	0.0613***	-0.0190***	0.1147***	0.0567***	-0.0195***	0.0004**
	(0.0013)	(0.0036)	(0.0057)	(0.0046)	(0.0036)	(0.0002)
Adjusted R-squared	0.547	0.128	0.600	0.107	0.139	0.013
Observations	193,889	635,727	54,339	193,889	635,727	635,727

Notes: Table shows the effect of conflicts, measured as human losses from START, 2022, on labour market outcomes controlling for individual's years of schooling. Standard errors clustered by nuts-2 are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with nuts-2, birth year fixed effects, and survey year indicators.

Table A7: Conflict and Labor Market Outcomes Dropping the Most Educated

	Employment Type				Employment in	
	Formal	Informal	Log Wage	Skill Level	Agriculture	Manufacturing
	(1)	(2)	(3)	(4)	(5)	(6)
Human Loss	-0.2626***	0.0814**	-0.1707***	-0.3702**	0.0305	-0.0671**
	(0.0553)	(0.0327)	(0.0402)	(0.1344)	(0.0274)	(0.0225)
Adjusted R-squared	0.193	0.051	0.222	0.079	0.058	0.060
Observations	560,305	1,089,636	193,895	560,305	1,089,636	1,089,636
Mean Outcome	0.474	0.270	6.843	2.044	0.194	0.065
Mean Human Loss	0.065	0.065	0.065	0.065	0.065	0.065

Notes: Table shows the effect of conflicts, measured as human losses from START, 2022, on labour market outcomes excluding individuals with more than secondary education. Standard errors clustered by nuts-2 are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with nuts-2, birth year fixed effects, and survey year indicators.

Table A8: Conflict and Health: Second Generation: Controlling Differential Trends

	Non-Surviving Births	Birth Weight	Height-for-age z-score	Weight-for-age z-score
	(1)	(2)	(3)	(4)
	Panel A: Controlling for Linear Province Trends			
Human Loss	0.0018	-43.8960	-0.0885**	-0.1086**
	(0.0280)	(72.6620)	(0.0391)	(0.0419)
Female	0.0026	-131.2495***	-0.0851***	-0.1406***
	(0.0041)	(18.7182)	(0.0122)	(0.0137)
Adjusted R-squared	0.115	0.046	0.833	0.701
Observations	39834	8785	7648	7992
Mean Dependent Variable	0.092	3172.643	-0.004	-0.006
Mean Human Loss	0.084	0.084	0.084	0.084
	Panel B: Controlling for Region-Birth Cohort Fixed Effect			
Human Loss	0.0404	-48.0990	-0.0922**	-0.1098**
	(0.0422)	(74.4248)	(0.0402)	(0.0430)
Female	0.0023	-129.6447***	-0.0845***	-0.1391***
	(0.0040)	(18.5937)	(0.0118)	(0.0138)
Adjusted R-squared	0.151	0.052	0.834	0.703
Observations	39,834	8,785	7,648	7,992
Mean Dependent Variable	0.092	3172.643	-0.004	-0.006
Mean Human Loss	0.084	0.084	0.084	0.084

Notes: Table shows the effects of exposure to conflicts, measured as human losses from (START, 2022) for the mother's generation on health and birth outcomes of the second generation from the Hacettepe University Institute of Population Studies (2019). Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (*=.10, **=.05, ***=.01). Each column is from a separate regression with the province, mother's birth year and child's age fixed effects, urban dummy and survey year indicators.