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The Effect of Parental Job Loss on Child School Dropout: Evidence from the Occupied Palestinian Territories

Michele Di Maio* and Roberto Nisticò**

Abstract
This paper explores how negative economic shocks affect household schooling decisions in the context of a developing country. In particular, we study the effect of parental job loss on child school dropout using data from the Occupied Palestinian Territories (OPT). Our analysis focuses on Palestinian workers employed in Israel during the Second Intifada (2000-2006), whose job separation is arguably involuntary as determined by the intensity of the conflict. We employ an instrumental variable strategy and use individual's exposure to conflict as a plausibly exogenous source of variation in the employment status. Our results show that parental job loss increases child school dropout probability by 9 percentage points. The effect varies with the gender and the academic ability of the child, with the level of parental education, and the number of children in the household. We find evidence suggesting that the effect operates through the job loss-induced reduction in household income. We exclude alternative mechanisms such as family disruption or household relocation.

Keywords: Job loss, school dropout, conflict, Occupied Palestinian Territories, Israel.

JEL classification: H56, I20, J63.

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1 Introduction

How do negative economic shocks affect household schooling decisions? To answer this question, we focus on parental job loss, one of the most traumatic economic shocks a household can experience, and explore its effect on child school dropout. This is a particularly relevant issue in developing countries. Where markets are not perfect, even temporary negative income shocks may have an impact on household education choices. Moreover, in these contexts, decisions as that of withdrawing the child from school are more difficult to revert and, therefore, more likely to have permanent effects on the human capital accumulation process, with possibly large consequences on the child's future welfare.

Job loss has negative consequences on adults in terms of health and earnings (Farre et al., 2016, Schaller and Stevens, 2015; Sullivan and von Wachter, 2009). Effects can be dramatic also for children. Existing evidence from developed countries indicates that parental job loss has long-run adverse effects on children's level of human capital and future income (Hilger, 2016; Oreopoulos et al., 2008). Moreover, it may affect children educational outcomes also in the short-run. Children exposed to parental job loss have higher probability of grade repetition (Stevens and Shaller, 2011), lower grade-point average (Rege et al., 2011; Ruiz-Valenzuela, 2015), and lower likelihood of enrolling at the university (Coelli, 2011).

While these outcomes are well documented for advanced economies, there is a lack of evidence on the effects of parental job loss on children educational outcomes in developing countries. The reason for this lack of evidence is twofold. First, panel data are rarely available for developing countries. Second, identifying a credibly exogenous source of variation for job loss is very challenging in these contexts. For instance, plant closures and mass layoffs, often used as instrumental variables in this literature, are quite uncommon in developing countries.

In this paper we investigate the causal effect of parental job loss on child school dropout in the context of a developing country, namely the Occupied Palestinian Territories (hereafter OPT). The OPT provides a unique setting for our analysis for two main

reasons. The rotating panel structure of the Palestinian Labour Forces Survey makes it possible to look at the immediate change (i.e. between two consecutive quarters) in the employment and education status of the household head and the child, respectively. Second, Palestinian households heads living in the OPT but employed in Israel during the Second Intifada provides us with a convenient sample to study the effects of job loss.[1] Job loss for this group of workers is arguably involuntary: Palestinian workers in Israel earn a substantial wage premium relative to those employed in the OPT and their employment dynamics is largely determined by the intensity of the Israeli-Palestinian conflict.

We study a representative sample of Palestinian households living in the OPT during the Second Intifada with a child enrolled in primary or secondary education in the OPT and the household head employed in Israel. To identify the effect of parental job loss on child school dropout, we implement an instrumental variable approach and use the geographical and time variation in household head exposure to conflict as a plausibly exogenous source of variation in job loss. We proxy conflict intensity with the per-capita number of Palestinians killed by the Israeli Defence Forces (IDF) in a given quarter in the district of residence of the worker.

As for the relevance of the instrument, we argue that a higher conflict intensity increases the probability that a Palestinian worker loses the job in Israel for at least three different reasons. First, it may make more difficult for Palestinian workers to reach the workplace in Israel, possibly increasing absenteeism.[2] Second, it may increase the level of the workers' psychological distress, leading to reduced productivity. Finally, it may induce Israeli employers to fire Palestinian workers in retaliation for conflict events. Our first-stage regression results indicate that conflict intensity is a strong predictor of job loss for Palestinian workers employed in Israel.

The validity of our instrument relies on the assumption that conflict has no direct effects on child school dropout other than through parental job loss (i.e. the exclusion restriction). We argue that this assumption is supported by both anecdotal and empir-

[1] The Second Intifada was a period of intensified violence between the Israeli Defence Forces (IDF) and the Palestinians which took place between 2000 and 2006. Section 2 provides background information on the Israeli-Palestinian conflict and on the Second Intifada.

[2] Palestinian workers cannot stay overnight in Israel and have to commute daily (see Section 2.1).

ical evidence. As for the former, we note that, although with difficulties, the education system in the OPT continued to fully operate during the Second Intifada (Nicolai, 2007). In fact, enrollment rates in all grades have not declined during the conflict period and remained very high by international standards (around 92%). To complement this evidence, we run a placebo test estimating the impact of conflict intensity on school dropout for children with the household head employed in Israel and for those with the household head employed in the OPT. Intuitively, if conflict intensity has a direct effect on school dropout, observationally identical children residing in the same district and going to the same school - thus exposed to the same conflict intensity - should be affected in the same way, regardless of whether their household head is employed in Israel or in the OPT.[3] On the contrary, our results indicate that the effect of conflict on school dropout is different across the two groups even if enrollment rates are not different. Conflict intensity has no effect on children with household head employed in the OPT but it increases school dropout probability for children with household head employed in Israel. This result plausibly rules out direct effects of conflict on child school dropout, therefore providing empirical support to the exclusion restriction. However, it cannot be excluded that there might be other channels, in addition to parental job loss, through which conflict may affect children education in the OPT. For instance, Brueck et al. (2015) show that conflict impacts on high school exam scores in the West Bank by worsening school infrastructure and increasing students' psychological distress. Yet, we argue that it is unlikely that these same factors would also predict school dropout. The latter is a very different educational outcome from exam result and represents a relatively drastic decision in the context of the OPT where education is highly valued and enrollment rates are very high. Moreover, these are factors that, if anything, would affect children exposed to the same conflict intensity in the same way, independently of the place of work of their household head. These considerations suggest that the possible existence of these alternative channels would not invalidate our identification strategy.

Finally, we consider two other possible threats to our identification strategy. First,

[3]Note that Palestinians living in the OPT cannot send their children to school in Israel.

children may dropout from school to fight against the IDF rather than because of parental job loss or, similarly, conflict may be fueled by dropout students. Second, households may decide to relocate because of conflict, with household of high-skilled workers moving to districts with lower number of fatalities. We provide suggestive evidence excluding both a feedback mechanism linking school dropout to conflict intensity and any compositional effect at the geographical level associated with conflict intensity, hence strengthening confidence in our identification strategy.

Our 2SLS estimates indicate a positive and significant effect of parental job loss on child school dropout. As for the magnitude of the effect, we find that parental job loss increases child school dropout probability by 9 percentage points. This result is robust to a number of checks. These are the inclusion of: another proxy for conflict intensity, which may confound the effect of the number of fatalities; a large set of household head and household controls; non-linearities in both the control variables and the instrument; the full set of district-specific time trends to account for time-varing unobservable factors at the local level. The result is also robust to using alternative samples, an alternative instrument, and to a falsification exercise in which we use randomly generated fatalities as a proxy for conflict intensity.

Next, we explore possible heterogeneity in the effect of parental job loss on child school dropout. The effect is stronger for male children and students with lower academic ability. This suggests that that job loss may lead to child labour as a household coping strategy and that households are more likely to withdraw the child from school if the expected returns to schooling are lower. At the same time, the effect is larger for children with low educated household heads and children in larger households. This indicates that households' response to negative economic shocks may depend on how parents value education and on the per-capita resources available for education investment in the household. Importantly, these heterogeneous effects of parental job loss on child school dropout motivate why the IV effect is relatively larger in magnitude than that obtained by OLS, in line with the Local Average Treatment Effect (LATE) interpretation of our 2SLS result.

Finally, we examine possible mechanisms whereby parental job loss can affect child school dropout. We find evidence suggesting that the effect operates through the job loss-induced reduction in household income. This is not surprising considering that the Palestinian workers in Israel are mostly employed in the construction sector and thus are not from wealthy households. Consistent with this explanation, we also present some evidence that children dropping out of school are more likely to start working. Instead, we do not find evidence of alternative mechanisms, such as family disruption (i.e. parental divorce) or household residential relocation.

Our paper contributes to two strands of literature. The first is the literature on the effects of parental job loss on children educational outcomes. Most of these studies focus on the short-run effects of job loss in developed countries and look at outcomes such as grade repetition, graduation point average, and likelihood of attending college (Stevens and Shaller, 2011; Rege et al. 2011; Coelli, 2009). Only two papers examine the effect of job loss on children schooling in developing countries. Skoufias and Parker (2006) find no effect of parental job loss on child schooling during the Mexico peso crisis. Duryea et al. (2007) show that during economic crises in Brazil father job loss is correlated with a higher child school dropout probability. Differently from these studies, our analysis explicitly addresses the endogeneity issue by adopting an instrumental variable approach. Our paper is also related to the literature on the economic determinants of child schooling. Previous research has shown the importance of child characteristics (age, gender, health), parental characteristics, and school quality (Alderman et al. 2001; Handa, 2002). In particular, household income has been shown to be a key determinant of different schooling outcomes, including enrolment, test score, and attainment (Dostie and Jayaraman, 2006). Our study contributes to this line of research by investigating how education investment decisions respond to negative (even if possibly temporary) economic shocks affecting households in a developing country.

The paper proceeds as follows. Section 2 provides some background on the Israeli-Palestinian conflict and on the Palestinian school system. Section 3 describes the data. Section 4 presents the econometric model and discusses the identification strategy. In

section 5, we present our main results, the robustness checks, the heterogeneity analysis, and the possible mechanisms explaining our main result. Section 6 concludes.

2 Background

2.1 Palestinian workers in Israel and the Second Intifada

As a consequence of the dependence of the OPT economy from the Israeli one, the dynamic of the Palestinian labor market has always been influenced by the amount of job opportunities in Israel (Angrist, 1996; Kadri and MacMillen, 1998; Mansour, 2010). During the years, the number of Palestinian workers employed in Israel has responded to major political events, such as the First Palestinian Uprising (1987-1993), but also to changes in Israeli regulations of work permits and security policies. The possibility to be employed in Israel has always been subject to holding a work permit and Palestinian workers have to commute daily because regulations prohibit them from staying overnight in Israel.[4] Nonetheless, by the late 1990s, more than 25% of the Palestinian labour force was employed in Israel, accounting for one sixth of Palestinian national income (Ruppert Bulmer, 2003). Palestinian workers have traditionally mainly supplied labor services in the construction, agriculture, and tourism sectors. Yet, being employed in Israel is very attractive for Palestinian workers: *ceteris paribus*, wages in Israel are significantly higher, between 10% and 25% (International Monetary Fund, 2003; World Bank, 2004; Mansour, 2010). In September 2000, after some years of relative stability, the security situation rapidly deteriorated and the Second Intifada (the so-called al-Aqsa Intifada) started.[5] In the following months, there was a rapid increase in violent events from both side of the conflict. The Israeli Government adopted a number of security measures, including

[4]To obtain work permits for Palestinian workers, Israeli employers submit petitions to the Israeli Ministry of Industry, Trade and Labor. Work permits are issued subject to security screening of each Palestinian employee. Among the conditions to obtain the permit, there is to be married and have at least one child (Berda, 2012).

[5]There is no established ending date for the Second Intifada. However, violence between IDF and Palestinians decreased substantially after 2006. Jaeger and Paserman (2008) provide detailed description of the different periods of violence during the Second Intifada.

the limitation of the movement of Palestinians within and outside the OPT.[6] As a result of the conflict situation, the number of workers commuting to Israel dropped sharply. Moreover, the conflict reduced Palestinian wages in the OPT, Palestinian employment in Israel, and increased job separation for Arab-Israeli in Israel (Abrahams, 2015; Adnan, 2015; Cali and Miaari, 2013; Di Maio and Nandi, 2013; Miaari et al. 2012). Between 2000 and 2006, Palestinians killed 234 Israeli civilians and 226 IDF personnel in the OPT while the IDF caused more than 4,000 Palestinian fatalities, the majority of them non-combatants (B'TSELEM, 2007).

2.2 The Palestinian school system during the Second Intifada

Since the 1994 Oslo Accords, the education system in the OPT is managed by the Palestinian Ministry of Education and Higher Education (MoEHE). The academic year begins in September and ends in June. The education system is divided into two levels: primary - including elementary school and middle school - (grades 1 to 10) and secondary (grades 11 to 12). Grades 1 to 10 are compulsory, implying that all Palestinian children between 6 and 15 years old are expected to be in school. Instead, grades 11 and 12 are not mandatory. At the end of the secondary school, student take a final exam (Tawjihi General Examination) which is required to access the university (UNESCO, 2007)

The Palestinian society places a high value on education. This is reflected in enrolment and attendance rates which are high by regional and global standards reaching 98% for primary education and 85% for secondary education (PCBS, 2006; Sharek Youth Foundation, 2009). The high value placed on schooling extends also to girl education. Gender participation rates show perfect equality in education access for both primary and secondary school (50.4% and 51.7%, respectively). Gender-based participation levels are broadly equivalent in the West Bank and the Gaza Strip, where 54.5% and 52.3% of the students are female, respectively.

[6] These limitations include: a reduction in the number of work permits issued to Palestinians, a change of rules to get work permits (from a system based on age and marital status to individual permits), curfews imposed on Palestinian cities, internal and external borders closures, and the building (started in 2002) of a separation wall between Israel and the West Bank. (World Bank, 2004; United Nations, 2005).

Differently from what usually happens in conflict-affected countries, the education system in the OPT continued to fully operate during the Second Intifada (Nicolai, 2007). For instance, some school construction took place and a new Palestinian curriculum was implemented in those years (PCBS, 2006). However, as any other aspect of the Palestinian economy, also the education system has faced numerous difficulties. Schools have been damaged and occupied by the IDF. Teachers and students have been victim of violent events (World Bank, 2004; United Nations, 2005; MoEHE and UNESCO, 2005). Military-imposed mobility restrictions - such as checkpoints and physical barriers - made it more difficult to reach the schools. School days have been lost or shortened because of security reasons. At the same time, explicit and implicit costs of schooling have increased. Due to the difficult general economic situation, school fees - while far from being prohibitive - have become to be hardship for an increasing number of families (Nicolai, 2007).[7] Indirect costs of attending school - such as food, books, transportation prices - have rised as well (IMF, 2003; WFP and FAO, 2007). Yet, the aggregate number of students enrolled has not declined during the conflict period. Di Maio and Nandi (2013) show that primary attendance in the West Bank has not been affected by conflict as measured by border closures. Brueck at al. (2015) show that conflict has not affected enrollment, attendance, or drop out for high school students. In fact, between 2000 and 2006, the total number of Palestinian students in basic education in the OPT increased from 830,765 to 944,713. Education attendance increased from 95% to 98% for 6-11 years old, from 96% to 97% for 12-14 years old, and from 74% to 85% for 15-17 years old.[8]

3 Data

Labour force survey and children data Our main source of data is the Palestinian Labour Force Survey (PLFS) administered by the Palestinian Central Bureau of Statistics (PCBS). The PLFS is a quarterly representative household survey of Palestinians living

[7] Although education is officially free in the OPT, students traditionally contribute with a donation - effectively a school fee. These fees form some 50 per cent of schools' budgets and are needed to make the schools continue to operate (Nicolai, 2007)

[8] Data taken from the PCBS website http://www.pcbs.gov.ps/Portals/_Rainbow/Documents/Education-1994-2013-09E.htm.

in the OPT (West Bank and Gaza Strip) collecting data on individuals aged at least 16, which is the minimum working age in the OPT. The PLFS is a quarterly rotating panel in which households are surveyed four times over six quarters: they are surveyed for two consecutive quarters, dropped in the next two quarters, and then surveyed again for two consecutive quarters. Although the survey is not designed for longitudinal analysis, the rotating design makes it possible to match individuals across waves.

To construct our dataset, we combine the PLFS data for the Second Intifada period (2000-2006) with additional confidential information - not provided in the publicly available PLFS - on children aged 10-15 for the same period. We consider both students in compulsory and non compulsory school grades (before university), thus our final sample includes Palestinian children aged 10-17 who, at the time of the first interview, are attending school and whose household head is working in Israel.[9] The rotating panel structure of the PLFS (and of the confidential children data) allows us define our two main variables of interest (*Household job loss* and *Child school dropout*) as the employment and the education status change between two consecutive quarters for the household head and the child, respectively (see below for the formal definitions). Finally, to complement our analysis, we use information from the Child Labour Survey administered by the PCBS in 2004. While data are available only for one year, the survey provides detailed information on parental and household characteristics, including household income and the marital status of parents.

Conflict events data Data on conflict-related Palestinian fatalities during the Second Intifada are provided by the Israeli NGO B'TSELEM (B'TSELEM, 2007). The B'TSELEM dataset provides a rich set of information, such as age, gender, and place of residence of the killed, the date, place, and a description of the circumstances of the event. Data are based on a number of sources and validated by several cross-checks. For this reason, they are considered to be accurate and reliable by both the Israelis and the Pales-

[9]By censoring the sample at the age of 17 (the age at which students are assumed to be enrolled in the last year of secondary education), we are considering the most conservative sample allowing for the inclusion of both primary and secondary students. Adding to the sample also 18 years old students (which by definition are grade repeaters) strengthens our main result (see Section **??**).

tinians and have been previously used by other scholars studying the Israeli-Palestinian conflict (see for instance Amodio and Di Maio, 2017; Mansour and Reis, 2012; Jaeger and Paserman, 2008). In our analysis, we measure conflict intensity using the district-level number of Palestinians fatalities caused by the IDF per 10,000 inhabitants by quarter. We also use additional data on other military-motivated security measures implemented by the IDF, namely the external border closures. During closure days movements of workers and goods between the OPT and Israel, as well as between the West Bank and the Gaza Strip, are completely banned since all permits previously issued to residents of the OPT for purposes of work, trade, or medical treatment are invalid. Data on the yearly number of closure days of the border between Israel and the OPT are also provided by B'TSELEM.

Table 1 reports the descriptive statistics for the main variables included in the analysis. Our sample includes 9,539 Palestinian children who are attending school and have the household head employed in Israel at the time of the first interview. *Child school dropout* is a dummy taking value 1 if the child attends school in quarter t (the time of the first interview) but not in quarter $t+1$ (the time of the second interview). Dropout students are 1.3% of our sample (4% if we consider those in secondary school). This is not surprising since - as discussed in Section 2 - the education system in the OPT is characterized by an extremely high education attendance rate (as high as 95% for primary education). As for the children characteristics, the sample is balanced with respect to the gender of the child. The average age of child is 12 and the mean years of schooling 6.3. *Household head job loss* is a dummy taking value 1 if the household head is employed in Israel in quarter t (the time of the first interview) but not in quarter $t+1$ (the time of the second interview). The data show that job loss is a quite frequent event during the Second Intifada for Palestinian employed in Israel: 34% of workers loses the job in Israel between two quarters. As for household head education, 62% have completed at least primary education, 20% secondary education, and 7% tertiary education. More than 85% of Palestinian workers in Israel are employed in the private sector, 11% are self-employed and 2% employed in the public sector. As for the household characteristics, the average

household size is of 8 members, the average number of children in the household is 3, and the number of people employed in the household other than the household head is 2. *Fatalities* - our proxy for conflict intensity - is the per-capita number of Palestinian fatalities per 10,000 inhabitants by district and quarter: the mean is 0.36 and the variance 0.58. Conflict intensity is characterized by large variation across district and time as shown in the maps in Figure A.1 where districts of the OPT are classified according to the quantile they belong to in the distribution of the quarterly level number of Palestinian fatalities.

[Table 1 here]

4 Empirical analysis

4.1 Descriptive evidence

As a first step in our empirical analysis, we investigate the correlation between child school dropout and parental job loss. Our sample includes Palestinian children who are attending school in the OPT and have the household head employed in Israel at the time of the first interview. We estimate the following regression model:

$$Dropout_{ihjt} = \beta_0 + \beta_1 JobLoss_{hjt} + X'_{ihjt}\delta + W'_{hjt}\gamma + \theta_j + \lambda_t + \epsilon_{ihjt} \quad (1)$$

where $Dropout_{ihjt}$ is a dummy variable which takes value 1 if child i in household h from district j attends school in quarter t (the time of the first interview) and does not attend school in quarter $t+1$ (the time of the second interview). $JobLoss_{hjt}$ is a dummy variable which takes value 1 if the child's household head is employed in Israel in quarter t (the time of the first interview) and is not employed in Israel in quarter $t+1$ (the time of the second interview). The set of controls includes: (i) child characteristics (gender, age, and years of schooling) grouped in matrix X'_{ihjt}; (ii) household head characteristics (age, age squared, a set of dummy variables for the education level, and a set of dummies for the employment status, i.e. regular employee, irregular employee, self-employed); and household characteristics (size, number of children, and number of people employed other

than the household head) grouped in matrix W'_{hjt}; (iii) district fixed-effects grouped in vector θ_j; (iv) quarter fixed-effects grouped in vector λ_t. Finally, ϵ_{ihjt} is the error term.

Results are reported in Table 2. The baseline specification in column 1 shows that household head job loss is significantly positively correlated with child school dropout. From column 2 to 4, we progressively add to the baselines specification the set of controls for child, household head, and household characteristics, respectively. The magnitude of the coefficient remains stable across specifications and significant at least at the 5% level.

——————— [Table 2 here] ———————

4.2 Identification strategy

Our objective is to estimate the causal effect of parental job loss on child school dropout. To this end, the choice of focusing on Palestinian workers employed in Israel during the Second Intifada is a convenient one because it provides us with a sample of individuals for whom it is arguably minimal the possibility that job separation is voluntary. There are two main pieces of evidence supporting this idea. First, there is a substantial wage premium for Palestinian workers employed in Israel. The PLFS data indicate that during the Second Intifada wages of Palestinian workers employed in Israel are on average 15% higher than wages of Palestinian workers employed in the OPT, keeping constant education level, employment sector, and type of occupation. Second, job loss in Israel is associated with a significant wage drop. Our data indicate that during the Second Intifada, while the real wage of Palestinians workers employed in Israel for two consecutive quarters increases by 3% on average, Palestinians moving from a job in Israel to one in the OPT suffer a 34% real wage drop in the second quarter.

To identify a plausibly exogenous source of variation in the job loss probability of Palestinian workers employed in Israel, we use the exposure to conflict events occurred in their place of residence in the OPT. In particular, we exploit the variation across districts and over time in the per-capita number of Palestinian killed by the IDF in the worker's district of residence during the period 2000:Q3 to 2006:Q4 as an instrumental variable

for job loss. We estimate the following first-stage regression:

$$JobLoss_{hjt} = \alpha_0 + \alpha_1 Fatalities_{jt} + X'_{ihjt}\zeta + W'_{hjt}\eta + \theta_j + \lambda_t + \mu_{idjt} \quad (2)$$

where $Fatalities_{jt}$ is defined as the per-capita number of Palestinians killed by the Israeli Defence Forces (IDF) per 10,000 inhabitants in the household head's district of residence in quarter t (the time of the first interview). The coefficient α_1 thus measures the conflict-induced increase in the likelihood that a worker who is employed in Israel in quarter t is no longer employed in Israel in quarter $t+1$. As in model 1, X'_{ihjt} is a matrix including the controls for child characteristics while W'_{hjt} is a matrix including characteristics of the household head and of the household. Vector θ_j includes the set of district fixed-effects, and λ_t the set of quarter fixed-effects. Lastly, μ_{idjt} is the error term. In our robustness checks, we also include district-specific time trends to account for any district-level time varying characteristic. In all regressions, standard errors are clustered at district and type of residential location (i.e. rural, urban, refugee camp) level. This ensures a sufficiently large number of clusters (16 districts $\times$ 3 types of residential location) so that the cluster-robust estimates of the variance covariance matrix of residuals are reliable.[10]

4.2.1 Discussion of the instrument

Relevance of the instrument Our estimation strategy is based on the hypothesis that a higher exposure to conflict (as proxied by the per-capita number of Palestinian killed by the IDF in the worker's district of residence) increases the job loss probability of a Palestinian worker employed in Israel. We expect this to happen for at least three reasons. First, a higher conflict intensity makes it more difficult for Palestinian workers employed in Israel to reach their workplace.[11] For instance, the higher the conflict intensity the more likely is that the IDF puts in place security measures to control the territory. These security measures make the travel time to the job place in Israel highly uncertain,

[10] As a robustness, we also report the results when standard errors are clustered at the district level (the level at which conflict intensity is measured) and when we compute the p-values using wild bootstrapping (see Section 5).

[11] Palestinian workers employed in Israel commute daily because they are not authorized to spend the night in Israel (see Section 2.1).

increasing the likelihood of episodes of days late or absenteeism (Abrahams, 2015; Cali and Miaari, 2018; World Bank, 2004). Second, the higher the conflict intensity the higher the worker's probability of being exposed to violent events, and thus the higher the insecurity and fear feelings. Experiencing this continuous tension may cause psychological distress and reduced productivity, possibly leading to the worker's layoff (Ayer at al., 2015).[12] Finally, a higher conflict intensity in the district of residence of the Palestinian worker may be interpreted by the Israeli employer as a proxy for the probability of the worker's involvement in violent actions against the IDF. Under this scenario, a higher conflict intensity may increase the likelihood that the Israeli employers fire Palestininan workers in retaliation (Miaari et al., 2012).

To provide empirical support to our argument, we test whether conflict intensity has a different effect on the job loss probability of Palestinian workers employed in Israel or in the OPT. Results reported in Panel A of Table 3 show that the number of fatalities positively affects the probability of losing the job for workers employed in Israel but it has no effect for workers employed in the OPT - with the difference between the two coefficients being statistically significant at 1%.[13] The fact that conflict intensity differently affects observationally identical workers living in the same district depending on their place of work suggests that our instrument is relevant to explain job loss for Palestinian workers employed in Israel.

[Table 3 here]

Validity of the instrument The validity of $Fatalities_{jt}$ as an instrumental variable for $Jobloss_{hjt}$ in equation (2) relies on the assumption that conflict intensity has no

[12] Ayer at al. (2015) presents an extensive review of the literature on the psychological aspects of the Israeli-Palestinian conflict. The conclusions indicate that increased exposure to the latter may have detrimental effects on a broad range of psychological outcomes. In particular, nearly all studies looking at *functional impairment* (i.e. the inability to carry out functions related to work, education, or relationships) found that the latter was more severe for individuals more exposed to political conflict and violence.

[13] Previous research has shown that the number of fatalities has a significant and positive effect on unemployment when considering only Palestinian residing in the West Bank and not distinguishing them by place of employment (Mansour, 2010; Cali and Miaari, 2018). Our data confirm the same findings when we restricting the analysis to that same sample (results available upon request).

direct effects on child school dropout other than through the household head job loss (i.e. exclusion restriction).

There is both aggregate- and individual-level evidence supporting this assumption. To begin, it should be noted that, despite facing several difficulties, the education system in the OPT continued to fully operate during the Second Intifada: classes and final exams have taken place regularly; new school constructions have been completed; even a new Palestinian school curriculum has been implemented. Moreover, aggregate-level data for the OPT show that enrolment and attendance in primary or in secondary grades have not declined during the Second Intifada (see Section 2.2). This suggests that conflict intensity is not among the main determinants of schooling decision in the OPT. Even if conflict has possibly increased the cost of schooling (i.e. by making more difficult to physically reach the school, by increasing the cost of school material, etc.), there is no evidence that is associated with school dropout for the whole of the Palestinian student population.[14]

To provide further empirical support to the exclusion restriction, we run a test using individual-level data. We check whether, *ceteris paribus*, the impact of the number of fatalities on child school dropout differs depending on whether the household head is employed in Israel or in the OPT at the time of the first interview. In other words, we compare children going to school in the same district (and thus who are exposed to the same conflict intensity) and who are observationally identical but for the place of employment of the household head.[15] If there are direct effects of conflict intensity on child school dropout, we should observe the former to play a role on the latter no matter where the child's household head is employed.[16] Results are reported in the panel B of Table

[14]For instance, Brueck et al. (2015) shows that conflict intensity - measured as the number of Palestinian fatalities at the locality level - has no effect on enrollment, attendance, or dropout at the locality and school level for high school students in the West Bank.

[15]Student allocation in schools is decided by the MoEHE according to the place of residence of the household. The supply of schools is not an issue in the West Bank. In fact, access to education is considered to be highly equitable with respect to location (World Bank, 2007). Moreover, it is very unlikely that students attend schools that are located far from home because mobility is extremely limited (due to military-security measures imposed by the IDF). This implies that children living in the same locality are very much likely to go to the same school.

[16]Intuitively, unobservables correlated with both the number of fatalities and the children experiencing parental job loss should affect observationally identical children regardless of whether their household head is employed in Israel or in the OPT.

3. A higher number of fatalities increases the probability of school dropout for children with household head employed in Israel (column 1), while it does not affect children with household head employed in the OPT (column 2), with the difference between the coefficients being statistically significant at 5%. These results provide suggesting evidence ruling out direct effects of conflict intensity on child school dropout, therefore boosting the confidence in our identification strategy.

Although we interpret this as convincing evidence supporting the exclusion restriction, we cannot exclude that there may be ways through which conflict may affect education - and school dropout decision in particular - other than through parental job loss. For instance, Brueck et al. (2015) show that conflict intensity negatively impacted on students' performance at the high school final exam in the West Bank during the Second Intifada by worsening school infrastructure and increasing psychological distress. Hendrik et al., 2017 Yet, it is difficult to argue that these same factors would also predict school dropout, an outcome which is arguably different from exam result and it is viewed as a drastic choice in the context of the OPT where education is highly valued and enrollment rates are extremely high. Moreover, it should be noted that - if anything - those are factors that would affect all children in the same district, independently from the place of work of the household head.

There are two other possible concerns with our identification strategy. First, our identification strategy would be invalidated if children would dropout from school to fight against the IDF rather than as a consequence of parental job loss or, similarly, if conflict is fueled by dropout students.[17] This feedback mechanism seems unlikely in the context of the OPT. For instance, Di Maio and Nandi (2013) show that the district-level rate of school attendance is not correlated with the intensity of military measures (as captured by the number of closure days) implemented by the IDF. To provide additional support to this claim, we regress the district-level number of fatalities on the district-level percentage of child dropout separately for those with the household

[17] As suggested by Rodriguez and Sanchez (2012) being a dropout may increase rebellion in adolescents. In turn, this may contribute to increase the number of demonstrations, the level of violence, and, possibly, the number of the consequent conflict-related fatalities.

head employed in Israel and for those with the household head employed in the OPT, using a panel regression with district and time fixed effects. We find that these relations are never significant (see Appendix Table A.1). This indicates that is unlikely that a higher conflict intensity is the consequence of the decision of children to abandon school to fight. Importantly, this conclusion applies also to children with the household head employed in Israel. These are children living in families possibly experiencing more directly the military and security consequences of the conflict (i.e. long waiting time at the border crossings and discrimination) and thus potentially having a stronger opposition attitude towards Israel. While these results are to be taken cautiously because of data limitations, we argue that the available evidence suggest that it is unlikely that the potential threat of a feedback mechanism linking dropout to conflict intensity would invalidate our identification strategy.

Another possible concern with our identification strategy is that workers may decide to relocate in districts less exposed to the conflict. This geographical sorting might lead to biased estimates of the effect of parental job loss. If, for instance, high-skilled workers move towards districts with lower number of fatalities, then our estimates would be biased upward. Ideally, one would like to check if the household changes district of residence between t and $t+1$. The PLFS does not allow for a direct test of this possibility because it does not track households changing residential location. Yet, it should be noted that the possibility of relocation was extremely limited during the Second Intifada (see for instance, World Bank, 2007).[18] In fact, after the outbreak of the Second Intifada internal migration has been "very negligible" [PCBS (2009), p. 93] and the percentage of Palestinian who migrated declined for all age groups. Interestingly, the main motivations for internal migration during the period under analysis is marriage (PCBS, 2009). These results suggests that household relocation should not undermine our identification strategy. To provide additional evidence to this argument, we use our data to test whether the number of fatalities is associated with compositional effects at the district level. To this end, we

[18] World Bank (2007, p.1) reports that "administrative restrictions, rooted in military orders associated with the occupation of the West Bank [...] are used to restrict Palestinian access to large segments of the territories [...]. Permit policies limit the freedom of Palestinians to move home, obtain work, invest, [...] move about outside of their municipal jurisdiction."

regress the household head's level of education, averaged by district, on the district-level number of fatalities, using a panel regression with district and time fixed effects. Results (reported in Appendix Table A.2) indicate that there are no compositional effects associated with conflict intensity, thus strengthening our confidence on the validity of the number of Palestinian fatalities as an instrumental variable for job loss.

5 Results

5.1 First stage

Table 4 column 1 reports the results for the first-stage regression (equation 2). The estimated effect of $Fatalities_{jt}$ on $JobLoss_{hjt}$ is positive and highly significant.[19] This implies that a Palestinian worker employed in Israel who is exposed to a higher conflict intensity - as measured by the per-capita number of fatalities occurred in the district of residence - faces a higher job loss probability. As for the magnitude, one additional fatality in 10,000 inhabitants leads to an increase in the worker's probability of job loss by 5.3 percentage points.[20]

As a robustness check, we estimate the first-stage regression (equation 2) including as an additional control the (per capita district-level) fatalities occurred in the quarter after the first interview and those occurred in the quarter before that. Results shown in Table 4 column 2 indicate that the effect of fatalities occurred in the quarter after the interview is small and not significant while the effect of current quarter fatalities (those at the time of the first interview, i.e. our proxy for conflict intensity) is only slightly reduced and remains significant at 5%. These results are reassuring as for our main finding since including the fatalities in the next quarter after the first interview (when the status change for both the household head and the child - if any - has already

[19] Note that the coefficient for the number of fatalities is larger than that reported in Table 3 for Palestinian workers employed in Israel (column 1). The reason is the more restrictive definition of the job loss status used there: to allow for the comparison between the two groups in Table 3 (those employed in Israel and those employed in the OPT at the time of the first interview), the job loss status does not apply to workers who lose the job in Israel but get re-employed in the OPT in the next quarter.

[20] Given that the mean of our dependent variable is 0.341, one additional fatality in 10,000 inhabitants leads to an average increase in the probability of job separation by 15.5 percent [(0.053/0.341)=0.155].

occurred) makes this specification a sort of placebo test. Column 3 shows that the effect of current quarter fatalities is also robust to controlling for previous quarter fatalities. Interestingly, this latter result together with the fact that the errors are clustered at the district level suggest that the possibility of serial correlation is not a concern for our analysis.

Next, we implement a falsification exercise to test whether 'randomly generated' values for the number of fatalities produce point-estimates close to the 'true' one. If this was the case, the null hypothesis that the coefficient of $Fatalities_{jt}$ is equal to zero would be erroneously rejected. As shown in Figure A.2, the point-estimates generated in the falsification test are normally distributed with mean zero.[21] This indicates that there is no correlation between the number of fatalities and household head job loss when the former are randomly assigned.

Finally, as an additional robustness check, we estimate the first-stage regression computing the standard errors via bootstrapping (Cameron et al., 2008). The level of significance of the estimates is unaffected (results available upon request).

[Table 4 here]

5.2 Second stage

Table 5 presents our main results. The coefficients reported in the first row are the second-stage estimates of the effect of household head job loss on child's school dropout probability. Column 1 reports the specification which includes only the fixed effects. In columns 2-4, we progressively add a number of additional control variables for child, household head, and household characteristics. These estimates document a positive and significant effect of household head job loss on child school dropout, which remains fairly

[21] Figure A.2 depicts the probability density function of the coefficients of $Fatalities_{jt}$ obtained by estimating the first-stage regression with the 'random' fatalities as independent variable and iterating 10,000 times. The vertical line indicates our 'true' point-estimate (0.053), which is reported in column (1) of Table 4. 'Random' fatalities are generated in the following way. For each iteration, we take the 'true' number of quarterly fatalities occurred during the Second Intifada and we randomly re-assign them to the district-quarter pairs. This implies that in each artificially (randomly) generated Second Intifada the total number of fatalities is equal to the real one but its district-quarter distribution is instead random.

stable across different model specifications. In particular, looking at the more demanding specification (column 4), we find that parental job loss increases a child's probability of dropping out of school by 9 percentage points.[22]

It is worth noting that the 2SLS estimates are larger than the OLS estimates reported in Table 2. In our analysis, the compliers are the children whose household head gets separated from the job in Israel because of the conflict. The always-takers are those children who would have been exposed to parental job loss even in the absence of conflict (some household head may have decided to voluntarily leave the job, some others may have incurred in job separation for reasons other than the conflict). The estimated coefficient of β_1 is higher for the compliers: this is the group for which job loss can be particularly traumatic as it comes as unanticipated and involuntary, and it is more likely to be permanent. It follows that the coefficient we identify with our instrument can be interpreted as a Local Average Treatment Effect (LATE).

——————— [Table 5 here] ———————

Robustness checks As a first robustness check, we re-estimate our model using different samples. First, we consider only those in mandatory grades, i.e. which have not completed grade 10, irrespective of the age. Second, we add to our main sample also those aged 18 and 19, to be sure to include also students that are in the last year of secondary school but have repeated one or more grades. In both case, our 2SLS estimates do not change in magnitude and become significant at 1% (results available upon request).

Next, we account for other conflict-related events which may represent confounding factors in our analysis and can be used as alternative proxies for conflict intensity. As

[22]Note that, while the effect of household head job loss on child school dropout is highly significant and the magnitude large, the absolute number of affected children is small due to the low dropout rate (1.3% for the whole sample, 4% for students in secondary school, see Table 1). This may suggest a limited economic relevance for our results. Yet, two elements suggest that this is not the case. First, our analysis employs the most restrictive definition of dropout, i.e. that occurring between two consecutive quarters. In fact, this is a choice imposed by the nature of our main dataset. While the semi-panel structure of our data allows us to precisely identify immediate effects, it limits the possibility to look for - probably larger - retarded and longer-run ones. Second, as discussed in Section 2, education attendance in the OPT is very high. In this sense, the OPT is a tough test for studying the effect of household job loss on child school dropout and our results should thus be interpreted as indicating the potentially important role of the former even when the latter is a rare event and preference for education is very strong.

discussed in Section 2, the IDF has used several different security-motivated military measures during the Second Intifada. One of the most important of such measures is the closure of borders between Israel and the OPT. During closure days, Palestinian workers employed in Israel are not allowed to leave the OPT and thus cannot reach their workplace, potentially increasing the probability of job loss. Since the number of closure days varies only at the country level (IDF's decision to close the borders affects all the OPT districts at the same time) its effect is already controlled for in our main regression by the time fixed effects. Yet, it is possible that the effect of closures depends on how far is the place of residence of the worker from the Israeli border. For this reason, we augment our main regression by including the number of closure days interacted with the distance between the capital of the worker's district of residence and the closer entry point in Israel. The estimated coefficient for this variable is negative - suggesting that the effect of closure days on the probability of job loss is smaller for workers living farer from the borders - but it is never significant. As shown in Table 6 column 2 (column 1 reports our baseline result), the magnitude of $Fatalities_{jt}$ is unchanged.

Third, we check that our results are robust to the inclusion of a number of additional covariates. In particular, we include: 1) the full set of household head occupation dummies;[23] 2) the full set of household head industry of employment dummies;[24] and 3) the number of other children in the household attending school. In Table 6 column 3-5, we add each of these variables to the main specification. Finally, in column 6 we include district-specific time trends. Results show that the coefficient of $Fatalities_{jt}$ is remarkably robust and always significant at 5%.[25]

[Table 6 here]

Fourth, we check that our results are robust to non-linearities in both the control

[23] These are: a) legislators, senior officials, and managers; b) professionals, technical, associate and clerks; c) service, shop and market workers; d) skilled agricultural and fishery workers; e) craft and related trade workers; f) plant and machine operators and assemblers; g) elementary occupations.

[24] These are: a) agriculture; b) manufacturing; c) construction; d) commerce, hotels, and restaurants; e) transport, storage, and communication; f) services.

[25] As discussed in Section 4.2, as a robustness check to account for the small number of cluster, we also compute the p-values using wild bootstrapping. The effect remains significant at 10% (results available upon request).

variables and in the instrument. Non-linearities in the controls are addressed by including the quadratic terms of all continuous control variables and all the two-way interactions between the dummy control variables. Results reported in Table A.3 column 1 indicate that the effect of household head job loss slightly increases with respect to the baseline. We also consider the possibility of non-linearities in the instrument used in the first-stage regression. To test for this, we include the quadratic term of $Fatalities_{jt}$ as additional instrument in equation 2. Also in this case, the results are virtually unchanged (see column (2) Table A.3).

Finally, we redo all our analysis using as an alternative instrument the predicted probability of household head job loss obtained from a probit model of $JobLoss_{hjt}$ on $Fatalities_{jt}$ and all controls. This is expected to increase the precision of the estimated coefficient of interest, given that the variable to be instrumented is a dummy. All our results are unchanged when using this alternative instrumental variable (detailed results are reported in Table A.4).

5.3 Heterogeneity

5.3.1 Child characteristics

The effect of parental job loss on child school dropout is heterogeneous as for the gender and the academic performance of the child. The reduced form estimates are reported in Table 7. Column 1 and 2 show the results when we look separately at boys and girl: the effect of household head job loss is significant for the former group but not for the latter, and the difference between the two is significantly different from zero at 5%. These results are in line with the fact that - as discussed in Section 2 - households in the OPT value very much girl education (MoEHE, 2006; Nicolai, 2007). These results are also consistent with the fact that child labour - a possible household strategy to cope with a negative economic shock - is an option only for boys in the context of the OPT (Di Maio and Nandi, 2013). We elaborate more on this point in Section 5.4 where we discuss the possible mechanisms behind our main result.

Next, we explore whether the effect of parental job loss on child school dropout

depends on the previous academic performance of the child. Results in columns 3 and 4 show that the effect of job loss on school dropout is high and significant for children who repeated at least one grade while it is not significant for those who never repeated a grade, with the difference between the two coefficients being significantly different from zero at 1%. This indicates that household head job loss is more likely to induce the household to withdraw the child from school if his/her academic performance is low, i.e. the expected returns to schooling are lower.

Finally, we do not find evidence of a differential effect for children in compulsory grades versus those who have completed compulsory education (results available upon request).[26] This indicates that parental job loss does increase school dropout also for younger children, i.e. those for whom dropout is likely to be more harmful because it leads to a early interruption of the process of human capital accumulation.

——————— [Table 7 here] ———————

5.3.2 Household characteristics

The effect of parental job loss on child school dropout also varies with the level of parental education, and the number of children in the household. Reduced form results are reported in Table 8. Column 1 and 2 show the results when we split the sample according to level of education of the household head. Our results indicate that the effect of parental job loss is significant for children whose household head has at most primary education while there is no effect for children whose household head has secondary or higher education, with the difference between the two coefficients being statistically different from zero at 1%. This suggests that the household's response to negative economic shocks may depend on how parents value education. At the same time, this result is in line with numerous previous studies showing that parental schooling is positively associated with better education outcomes for the child (Orazem and King, 2008).

Our results also show that the effect of parental job loss also varies depending on the composition of the household. Using as threshold the average household number of

[26] As described in Section 2, education in the OPT is mandatory until grade 10. Grades 11 and 12 are non-mandatory but required to access university

children in the OPT (3 children), columns 3 and 4 show that the effect of parental job loss is significant only for large households while it is not significant for smaller ones, with the difference between the two being significantly different from zero at 5%.

——————— [Table 8 here] ———————

5.4 Mechanisms

Our results document a large and significant effect of household head job loss on child school dropout. Yet, there are different potential explanations for this effect. We focus on three main mechanisms, all related to the possible effects of parental job loss on household characteristics: 1) reduction in household income; 2) family distress, e.g. parental divorce; and 3) household residential relocation.

5.4.1 Household income

Household income is a key determinant of the household decision concerning investment in education. Previous research has shown that higher household income is associated with better child education outcomes, including enrollment, test score, and attainment (Behrman and Knowles, 1999; Dostie and Jayaraman, 2006). In the case of the Palestinian workers employed in Israel, providing a precise measure of household income is very challenging. The PLFS does not report the household income and thus the latter needs to be constructed from individual wages. This implies a large number of missing values due to the large number of households with members who are self-employed and do not declare a wage. Moreover, less than one-third of the individuals who are employee report the wage in two consecutive quarters, significantly reducing the sample and making the estimation very imprecise.

Table 9 presents the reduced form results of the effect of conflict intensity - as proxied by $Fatalities_{jt}$ - on household income for our sample of Palestinian workers employed in Israel. To overcome the data limitation, we measure household income using different alternative proxies. In column 1, we minimize the noise in the household income variable by proxing it with a dummy taking value 1 if the household suffers an income loss, i.e.

household income declines between quarter t (the time of the first interview) and quarter $t+1$ (the time of the second interview), and zero otherwise. Results show that conflict intensity increases households' probability of suffering an income loss, though the effect is not significant at conventional levels. In column 2, we perform the same analysis using a household income loss variable constructed by imputing the missing values for wages.[27] The effect of conflict on the household income loss probability is positive and significant at 5%. The magnitude of the coefficient indicates that one additional fatality in 10,000 inhabitants is associated with a 5.3 percentage point increase in the household's probability of suffering an income loss between two consecutive quarters (i.e. between the first and the second interview). Finally, in column 3, we proxy household income loss using the (log) value of the reduction in the (actual and imputed) wages of the household members. Results indicate that one additional fatality in 10,000 inhabitants reduces household income by 16%. Interestingly, the effect of fatalities on household income is instead very small and not significant when we consider workers employed in the OPT (results available upon request). The evidence of a conflict-induced drop in household income only for Palestinian workers employed in Israel suggests that - for the very same group - changes in household income could be a potential mechanism whereby household head job loss increases child school dropout.

[Table 9 here]

To provide additional support to this argument, we split the sample according to the number of employed members in the household other than the household head at the time of the first interview. The reduced form estimates reported in Table 10 indicate that household head job loss increases child school dropout only if the number of employed members in the household other than the household head is equal or less than 2 (i.e. the

[27] The methodology to impute missing wages for Palestinian workers employed in Israel in quarter t (at the time of the first interview) is the following. As for the wage level at quarter t, we assign the worker the average wage level of Palestinian workers employed in Israel in the same industry, in the same quarter, and with the same level of education. As for the wage level at quarter $t+1$ (the time of the second interview), the imputation depends on the employment status. If the worker is employed in Israel, we impute the same wage level as in previous quarter. If the worker is re-employed in the OPT, we impute the average wage level of Palestinian workers employed in the OPT in the same industry, in the same quarter, and with the same level of education. Finally, if the worker is unemployed, we impute a zero wage.

average value for this variable in our sample), with the difference between the coefficients for the two samples being statistically different from zero at 10%. One possible interpretation of this result is that - as long as the number of employed household members is taken as a proxy for household income - the effect of job loss is significant only for households with lower income, i.e. those for whom a negative economic shock is expected to be more binding. While the composition of the two sub-samples might be endogenous, this result contributes to suggest a role of household income drop in explaining the effect of household head job loss on child school dropout. Moreover, we note that the income mechanisms is coherent with the results (discussed in Section 5.3.2) showing that parental job loss has a stronger effect in households with more children and where the education level of the household head is lower.

[Table 10 here]

Interestingly, the household income drop mechanism would also provide an explanation for why the effect of parental job loss is stronger for boys than for girls (see Section 5.3 and Table 7). One of the possible coping strategies for a household affected by a negative economic shock is to withdraw the child from school and make him/her generating additional income. Yet, in the context of the OPT, child labour is not an option for girls (Di Maio and Nandi, 2013). Our data indicate that more than 40% of boys who drop out of school start working, and the percentage increases to 47% for those aged 15 or above (i.e. after mandatory school is completed). Instead, less than 1% of girls who dropout of school start working. This evidence is also in line with the survey results reported in Sharek Youth Foundation (2009). Among the motivations for school dropout for male students, the economic ones are the most important: 38% of males report they dropped out of school because they had to support their household and 24% because they could no longer afford school. Instead, only 18% of females mention economic-related reasons (including school cost) for school dropout. The most significant motivation for female students is marriage (46%).

Taken together, this evidence indicates that household income loss is a possible mechanism behind the effect of parental job loss on child school dropout and that its impact

is heterogeneous as for the gender of the child. In particular, the fact that Palestinian households are unlikely to resort to female work to generate additional income implies that - in line with the results in Table 7 - any given negative economic shock is more likely to increase the probability of school dropout for boys than for girls.

5.4.2 Other possible mechanisms

There are other possible mechanisms through which household head job loss may affect a child school dropout probability. Among the most important mechanisms related to the household environment, there are: family disruption (e.g. parental divorce) and residential relocation of the household (Stevens and Shaller, 2011). To investigate these mechanisms, we make use of a series of variables from the PLFS for the period 2000-2006 and from the Child Labour Force Survey 2004 (PCBS, 2004).

Family disruption Household head job loss can affect child school dropout by increasing family distress, possibly leading to family disruption, i.e. parental divorce. Charles and Stephens (2004) find an increase in the probability of divorce following layoffs, and numerous studies document the detrimental effect of divorce on children' academic achievement (Stevens and Shaller, 2011). Reduced form results reported in Table A.5 show that conflict intensity does not increase the probability of divorce for Palestinians employed in Israel. To corroborate this result, we also look at the data from the 2004 Child Labour Force Survey which provides very detailed information on household structure. Again, we find that child school dropout is not correlated with the rate of parental divorce (results available upon request). While we cannot control for other possible intra-household effects, such as increases in stress and violence that may be associated with parental job loss, the available evidence induce us to exclude family disruption as a potential mechanism explaining the effect of household head job loss on child school dropout.

Residential relocation As a consequence of household head job loss, the household may decide to relocate. Relocation can be a very exhausting experience and is often associated with increased psychological distress for all household members (McLanahan,

1983; Stevens and Shaller, 2011). In particular, this may create difficulties to the child's learning process, increasing the probability of grade repetition, and ultimately that the child dropouts from school. However, while residential relocation may be an important mechanism in other contexts, this is not the case in the OPT during the Second Intifada. In fact, the whole period of the Second Intifada has been characterised by extremely low internal and external mobility (see also the evidence discussed in Section 4.2.1). Mobility across cities in the OPT was severely limited through different measures such as checkpoints and internal closures (Mansour, 2010; Cali and Miaari, 2018; Abrahams, 2015). Moreover, the conflict situation induced Israel to severely limit the international mobility of Palestinian households. Taken together, this evidence suggests that - at least in the case of the OPT - residential relocation is not a likely mechanism through which household head job loss affects child school dropout.

6 Conclusions

In this paper, we have studied the effect of a negative household-level economic shock, namely the job loss faced by the household head, on child school dropout. To identify the effect of job loss, we focused on Palestinian household heads employed in Israel during the Second Intifada (2000-2006) and implemented an instrumental variable strategy using worker's exposure to conflict as a source of exogenous variation in job loss. The size of the effect is large: household head job loss increases child school dropout probability by 9 percentage points. The effect varies with the gender and the academic performance of the student, with the educational level of the household head, and with the number of children in the household. We have also explored different possible mechanisms whereby household head job loss can affect the school dropout decision. Our results indicate that the household income drop associated with the job loss is likely to be the main motivation behind the household decision to withdraw the child from school.

Our paper contributes to a better understanding of the effects of idiosyncratic negative economic shocks on education investment choices at the household level. In partic-

ular, we have documented that the household head job loss has an immediate negative impact by increasing a child's school dropout probability. This result has important policy implications because school dropout is a difficult to revert outcome, especially in developing countries. Our results suggest that, where markets are imperfect and risk-mitigation policies are not effective, even possibly temporary and short-term negative economic shocks may be a serious obstacle to the process of human capital accumulation and thus have dramatic long-run effects on economic development.

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Tables

Table 1: SUMMARY STATISTICS

Variable	Obs	Mean	Std. Dev.	Min	Max
Child school dropout	9539	0.013	0.115	0	1
Household head job loss	9539	0.341	0.474	0	1
Fatalities	9539	0.358	0.579	0	5
Child gender (male)	9539	0.515	0.500	0	1
Child age	9539	12.718	2.231	10	17
Child years of schooling	9539	6.392	2.211	0	12
Household head age	9539	42.029	6.247	23	75
Household head education: primary	9539	0.623	0.485	0	1
Household head education: secondary	9539	0.208	0.406	0	1
Household head education: tertiary	9539	0.071	0.257	0	1
Household head employment status: self-employed	9539	0.117	0.322	0	1
Household head employment status: employee (government)	9539	0.022	0.147	0	1
Household head employment status: regular employee (private sector)	9539	0.753	0.431	0	1
Household head employment status: irregular employee (private sector)	9539	0.108	0.310	0	1
Household size	9539	6.650	2.380	3	20
Number of children in the household	9539	3.310	1.282	1	9
Number of household members employed other than the household head	9539	1.583	0.947	1	8

Notes - The sample includes all Palestinian children aged 10-17 who at quarter t (the time of the first interview) are enrolled in school and have the household head employed in Israel. *Child school dropout* is a dummy variable which takes value 1 if a child is attending school in quarter t (the time of the first interview) and is not attending school in quarter $t+1$ (the time of the second interview). *Household head job loss* is a dummy variable which takes value 1 if the child's household head is employed in Israel in quarter t and is not employed in Israel in quarter $t+1$. *Fatalities* measures the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants by quarter. (Sources: Labour Force Survey - PCBS; B'TLESEM.)

Table 2: OLS RESULTS

	Child school dropout			
	(1)	(2)	(3)	(4)
Household head job loss	0.009***	0.008***	0.008**	0.007**
	(0.003)	(0.003)	(0.003)	(0.003)
Child gender (male)		0.003	0.003	0.003
		(0.002)	(0.002)	(0.002)
Child age		0.009***	0.009***	0.009***
		(0.001)	(0.002)	(0.002)
Child years of schooling		-0.005***	-0.004***	-0.004**
		(0.002)	(0.002)	(0.002)
Household-specific controls	No	No	No	Yes
Household head-specific controls	No	No	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes
Observations	9539	9539	9539	9539
Mean of dependent variable			0.013	

Note: OLS regression results. The sample includes all Palestinian children aged 10-17 who at quarter t (the time of the first interview) are enrolled in school and have the household head employed in Israel. *Child school dropout* is a dummy variable which takes value 1 if a child is attending school in quarter t (the time of the first interview) and is not attending school in quarter $t+1$ (the time of the second interview). *Household head job loss* is a dummy variable which takes value 1 if the child's household head is employed in Israel in quarter t and is not employed in Israel in quarter $t+1$. *Household head-specific controls* include household head age, age squared, a set of dummies for the level of education, and a set of dummies for the employment status. *Household-specific controls* include household size, number of children in the household, number of members employed in the household other than the household head, and type of residential location dummies (rural, urban, refugee camp). Standard errors in parentheses are clustered at the district and type of residential location level. (Sources: Labour Force Survey - PCBS; B'TSELEM.)

*, **, *** Significant at the 10%, 5%, 1% level, respectively.

Table 3: MAIN IDENTIFICATION RESULTS

	Sample	
	Household head employed in Israel (1)	Household head employed in the OPT (2)
PANEL A	Household head job loss	
Fatalities	0.021**	-0.001
	(0.009)	(0.004)
PANEL B	Child school dropout	
Fatalities	0.005**	0.001
	(0.002)	(0.001)
All controls	Yes	Yes
Quarter FE	Yes	Yes
District FE	Yes	Yes
Observations	9539	42691

Note - OLS regression results. The sample includes all Palestinian children aged 10-17 who at quarter t (the time of the first interview) are enrolled in school and have the household head employed in Israel. The dependent variable is *Child school dropout* in the upper panel and *Household head job loss* in the lower panel, respectively. *Child school dropout* is a dummy variable which takes value 1 if a child is attending school in quarter t (the time of the first interview) and is not attending school in quarter t+1 (the time of the second interview). *Household head job loss* is a dummy variable which takes value 1 if the child's household head is employed in quarter t and is not employed in quarter $t+1$. The main explanatory variable, *Fatalities*, measures the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants by quarter, and serves as instrumental variable. *All controls* include: 1) child-specific controls: gender, age, and years of schooling; 2) household head-specific controls: age, age squared, a set of dummies for the level of education, and a set of dummies for the employment status; 3) household-specific controls: size, number of children, number of members employed other than the household head, and type of residential location (rural, urban, refugee camp). Standard errors in parentheses are clustered at the district and type of residential location level. (Sources: Labour Force Survey - PCBS; B'TSELEM.)

*, **, *** Significant at the 10%, 5%, 1% level, respectively.

Table 4: FIRST STAGE: Timing of the effect of Fatalities

	Household head job loss		
	(1)	(2)	(3)
Fatalities: current quarter	0.053***	0.049**	0.047**
	(0.015)	(0.018)	(0.019)
Fatalities: next quarter		0.010	
		(0.018)	
Fatalities: previous quarter			0.019
			(0.021)
All controls	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes
District FE	Yes	Yes	Yes
Observations	9539	9539	9539
Mean of dependent variable		0.341	

Note - OLS regression results. The sample includes all Palestinian children aged 10-17 who at quarter t (the time of the first interview) are enrolled in school and have the household head employed in Israel. The dependent variable, *Household head job loss*, is a dummy variable which takes value 1 if the child's household head is employed in Israel in quarter t and is not employed in Israel in quarter $t+1$. *Fatalities: current quarter* is the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants in the quarter of the first interview. *Fatalities: next quarter* is the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants in the quarter after that of the first interview. *Fatalities: previous quarter* is the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants in the quarter before that of the first interview. *All controls* include: 1) child-specific controls: gender, age, and years of schooling; 2) household head-specific controls: age, age squared, a set of dummies for the level of education, and a set of dummies for the employment status; 3) household-specific controls: size, number of children, number of members employed other than the household head, and type of residential location (rural, urban, refugee camp). Standard errors in parentheses are clustered at the district and type of residential location level. (Sources: Labour Force Survey - PCBS; B'TSELEM.)

*, **, *** Significant at the 10%, 5%, 1% level, respectively.

Table 5: 2SLS RESULTS

	Child school dropout			
	(1)	(2)	(3)	(4)
Household head job loss	0.103**	0.094**	0.093*	0.092**
	(0.052)	(0.048)	(0.048)	(0.046)
Child gender (male)		0.003	0.003	0.003
		(0.002)	(0.002)	(0.002)
Child age		0.008***	0.009***	0.008***
		(0.001)	(0.002)	(0.002)
Child years of schooling		-0.004**	-0.004**	-0.004**
		(0.001)	(0.001)	(0.002)
Household-specific controls	No	No	No	Yes
Household head-specific controls	No	No	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes
Observations	9539	9539	9539	9539
Cragg-Donald Wald F statistic	25.79	25.12	24.92	24.39
Kleibergen-Paap Wald rk F statistic	13.09	13.17	12.10	12.45
Anderson-Rubin Wald test p-val	0.018	0.032	0.026	0.027
Mean of dependent variable			0.013	

Note - 2SLS regression results. The sample includes all Palestinian children aged 10-17 who at quarter t (the time of the first interview) are enrolled in school and have the household head employed in Israel. The dependent variable is *Child school dropout*, a dummy variable which takes value 1 if a child is attending school in quarter t (the time of the first interview) and is not attending school in quarter $t+1$ (the time of the second interview). The main explanatory variable, *Household head job loss*, is a dummy variable which takes value 1 if the child's household head is employed in Israel in quarter t and is not employed in Israel in quarter $t+1$. The instrumental variable used in first-stage regression, *Fatalities*, measures the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants by quarter. *Household head-specific controls* include: age, age squared, a set of dummies for the level of education, and a set of dummies for the employment status. *Household-specific controls* include: size, number of children, number of members employed other than the household head, and type of residential location (rural, urban, refugee camp). Standard errors in parentheses are clustered at the district and type of residential location level. (Sources: Labour Force Survey - PCBS; B'TSELEM.)

*, **, *** Significant at the 10%, 5%, 1% level, respectively.

Table 6: ROBUSTNESS 2SLS RESULTS: Including additional controls

	Child school dropout					
	(1)	(2)	(3)	(4)	(5)	(6)
Household head job loss	0.092**	0.094**	0.094**	0.096**	0.101**	0.104**
	(0.046)	(0.045)	(0.044)	(0.047)	(0.052)	(0.052)
District-specific time trends	No	No	No	No	No	Yes
Household head occupation dummies	No	No	No	No	Yes	Yes
Household head job industry dummies	No	No	No	Yes	Yes	Yes
No. siblings in school other than i	No	No	Yes	Yes	Yes	Yes
No. closure days*district distance from Israel	No	Yes	Yes	Yes	Yes	Yes
All controls	Yes	Yes	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	No
Observations	9539	9539	9539	9539	9539	9539
Cragg-Donald Wald F statistic	24.92	24.97	24.64	23.54	21.71	20.98
Kleibergen-Paap Wald rk F statistic	12.45	11.77	11.77	10.46	9.96	10.37
Anderson-Rubin Wald test p-val	0.026	0.023	0.021	0.022	0.025	0.025
Mean of dependent variable	0.013					

Note - 2SLS regression results. The sample includes all Palestinian children aged 10-17 who at quarter t (the time of the first interview) are enrolled in school and have the household head employed in Israel. The dependent variable is *Child school dropout*, a dummy variable which takes value 1 if a child is attending school in quarter t (the time of the first interview) and is not attending school in quarter $t+1$ (the time of the second interview). The main explanatory variable, *Household head job loss*, is a dummy variable which takes value 1 if the child's household head is employed in Israel in quarter t and is not employed in Israel in quarter $t+1$. The instrumental variable used in first-stage regression, *Fatalities*, measures the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants by quarter. *Household head occupation dummies* include: a) legislators, senior officials, and managers; b) professionals, technical, associate and clerks; c) service, shop and market workers; d) skilled agricultural and fishery workers; e) craft and related trade workers; f) plant and machine operators and assemblers; g) elementary occupations. *Household head job industry dummies* include: a) agriculture; b) manufacturing; c) construction; d) commerce, hotels, and restaurants; e) transport, storage, and communication; f) services. *All controls* include: 1) child-specific controls: gender, age, and years of schooling; 2) household head-specific controls: age, age squared, a set of dummies for the level of education, and a set of dummies for the employment status; 3) household-specific controls: size, number of children, number of members employed other than the household head, and type of residential location (rural, urban, refugee camp). Standard errors in parentheses are clustered at the district and type of residential location level. (Sources: Labour Force Survey - PCBS; B'TSELEM.)

*, **, *** Significant at the 10%, 5%, 1% level, respectively.

Table 7: HETEROGENEITY RESULTS: By child's characteristics

	Child school dropout			
	Gender		Grade repeated	
	Male	Female	Yes	No
	(1)	(2)	(3)	(4)
Fatalities	0.010***	-0.001	0.016***	0.001
	(0.004)	(0.002)	(0.006)	(0.002)
All controls	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes
Observations	4909	4630	2751	6788

Note - OLS regression (reduced-form) results. The sample includes all Palestinian children aged 10-17 who at quarter t (the time of the first interview) are enrolled in school and have the household head employed in Israel. The dependent variable is *Child school dropout*, a dummy variable which takes value 1 if a child is attending school in quarter t (the time of the first interview) and not attending school in quarter $t+1$ (the time of the second interview). The main explanatory variable, *Fatalities*, measures the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants by quarter. *All controls* include: 1) child-specific controls: gender, age, and years of schooling; 2) household head-specific controls: age, age squared, a set of dummies for the level of education, and a set of dummies for the employment status; 3) household-specific controls: size, number of children, number of members employed other than the household head, and type of residential location (rural, urban, refugee camp). Standard errors in parentheses are clustered at the district and type of residential location level. (Sources: Labour Force Survey - PCBS; B'TSELEM.)

*, **, *** Significant at the 10%, 5%, 1% level, respectively.

Table 8: HETEROGENEITY RESULTS: By household's characteristics

	Child school dropout			
	Household head education		No. children in the household	
	Primary	Secondary or higher	<= 3	> 3
	(1)	(2)	(3)	(4)
Fatalities	0.008**	-0.001	0.000	0.010**
	(0.003)	(0.003)	(0.003)	(0.004)
All controls	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes
Observations	6874	2665	5350	4189

Note - OLS regression (reduced-form) results. The sample includes all Palestinian children aged 10-17 who at quarter t (the time of the first interview) are enrolled in school and have the household head employed in Israel. The dependent variable is *Child school dropout*, a dummy variable which takes value 1 if a child is attending school in quarter t (the time of the first interview) and is not attending school in quarter $t+1$ (the time of the second interview). The main explanatory variable, *Fatalities*, measures the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants by quarter. *All controls* include: 1) child-specific controls: gender, age, and years of schooling; 2) household head-specific controls: age, age squared, a set of dummies for the level of education, and a set of dummies for the employment status; 3) household-specific controls: size, number of children, number of members employed other than the household head, and type of residential location (rural, urban, refugee camp). Standard errors in parentheses are clustered at the district and type of residential location level. (Sources: Labour Force Survey - PCBS; B'TSELEM.)

*, **, *** Significant at the 10%, 5%, 1% level, respectively.

Table 9: MECHANISMS RESULTS: Household income

	Household income loss indicator	Household income loss indicator (imputed wages)	Household (log) income loss (imputed wages)
	(1)	(2)	(3)
Fatalities	0.035	0.053***	0.158***
	(0.045)	(0.017)	(0.045)
All controls	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes
District FE	Yes	Yes	Yes
Observations	3198	8353	8353
Mean of dependent variable	0.578	0.520	1.793

Note - OLS regression (reduced-form) results. The sample includes all Palestinian children aged 10-17 who at quarter t (the time of the first interview) are enrolled in school and have the household head employed in Israel. *Household income loss indicator* is a dummy variable which takes value 1 if a child's household income declined from quarter t (time of the first interview) to quarter $t+1$ (time of the second interview). *Household income loss indicator (imputed wages)* is defined in the same way but income is computed considering imputed wages for missing values. Wages are imputed in the following way. As for the wage level at the time of the first interview, we assign the worker the average wage level of Palestinian workers employed in Israel in the same industry, in the same quarter, and with the same level of education. As for the wage level at the time of the second interview, the imputation depends on the employment status. If he/she is employed in Israel, we impute the same wage level as in previous quarter. If he/she is re-employed in the OPT, we impute the average wage level of Palestinian workers employed in the OPT in the same industry, in the same quarter, and with the same level of education. Finally, if he/she is unemployed, we impute a zero wage. *Household income (log) loss (imputed wages)* measures the difference in the household income (computed considering imputed wages) between quarter t and quarter $t+1$: it is then multiplied by -1 so as higher values capture higher income loss, and expressed in log terms. The main explanatory variable, *Fatalities*, measures the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants by quarter, and serves as instrumental variable. *All controls* include: 1) child-specific controls: gender, age, and years of schooling; 2) household head-specific controls: age, age squared, a set of dummies for the level of education, and a set of dummies for the employment status; 3) household-specific controls: size, number of children, number of members employed other than the household head, and type of residential location (rural, urban, refugee camp). Standard errors in parentheses are clustered at the district and type of residential location level. (Sources: Labour Force Survey - PCBS; B'TSELEM.)

*, **, *** Significant at the 10%, 5%, 1% level, respectively.

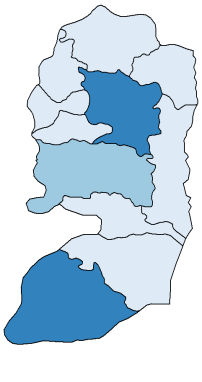
Table 10: MECHANISMS RESULTS: Additional evidence

	Child school dropout	
	No. employed members other than household head <= 2	No. employed members other than household head > 2
	(1)	(2)
Fatalities	0.006**	-0.009
	(0.002)	(0.009)
All controls	Yes	Yes
Quarter FE	Yes	Yes
District FE	Yes	Yes
Observations	8195	1344

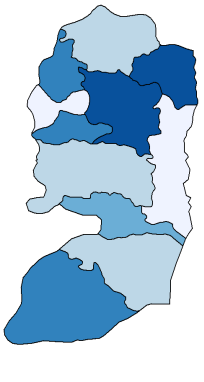
Note - OLS regression (reduced-form) results. The sample includes all Palestinian children aged 10-17 who at quarter t (the time of the first interview) are enrolled in school and have the household head employed in Israel. The dependent variable is *Child school dropout*, a dummy variable which takes value 1 if a child is attending school in quarter t (the time of the first interview) and is not attending school in quarter $t+1$ (the time of the second interview). The main explanatory variable, *Fatalities*, measures the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants by quarter, and serves as instrumental variable. *All controls* include: 1) child-specific controls: gender, age, and years of schooling; 2) household head-specific controls: age, age squared, a set of dummies for the level of education, and a set of dummies for the employment status; 3) household-specific controls: size, number of children, number of members employed other than the household head, and type of residential location (rural, urban, refugee camp). Standard errors in parentheses are clustered at the district and type of residential location level.(Sources: Labour Force Survey - PCBS; B'TSELEM.)
*, **, *** Significant at the 10%, 5%, 1% level, respectively.

Appendix A: Figures and tables not shown in the text

Figure A.1: Conflict intensity in the Occupied Palestinian Territories (OPT) by district and quarter, 2000:Q3-2006:Q4



(a) 2000:Q3



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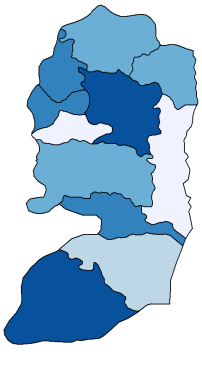
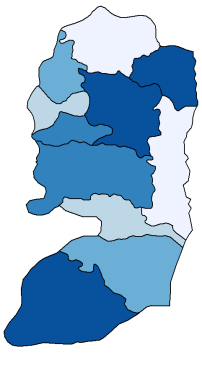
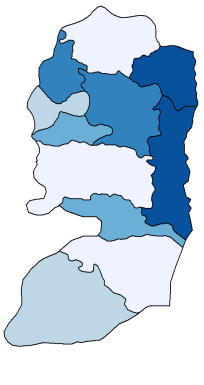


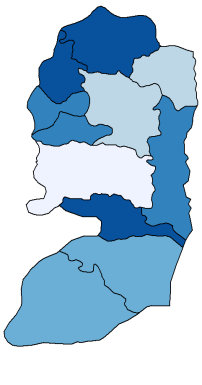
(c) 2001:Q1



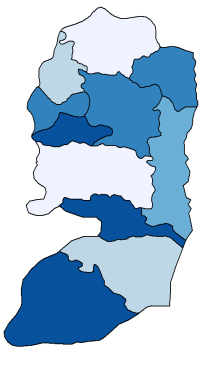
(d) 2001:Q2



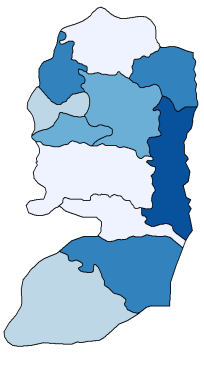
(e) 2001:Q3



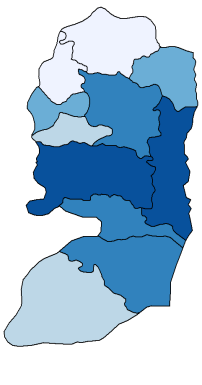
(f) 2001:Q4



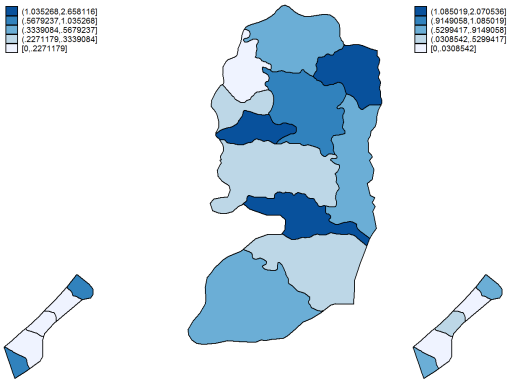
(g) 2002:Q1



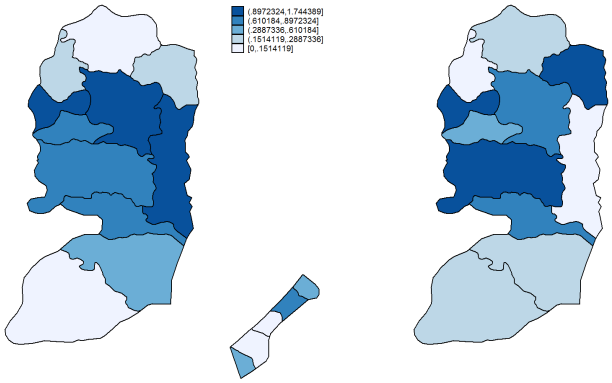
(h) 2002:Q2



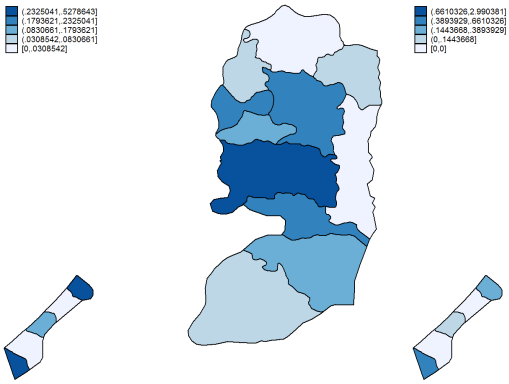
(i) 2002:Q3



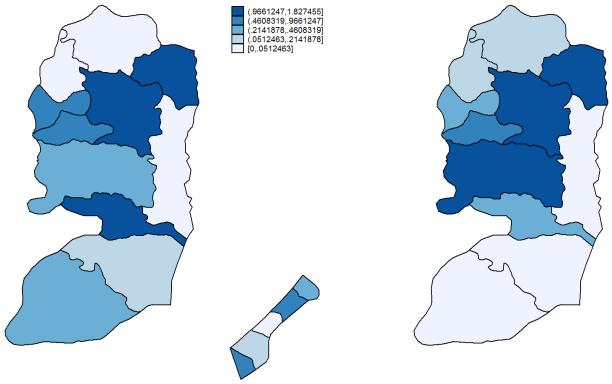
(j) 2002:Q4



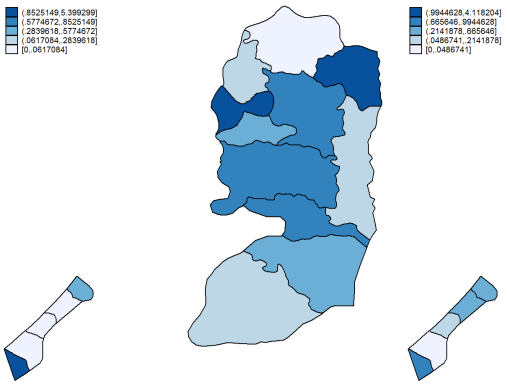
(k) 2003:Q1 (l) 2003:Q2



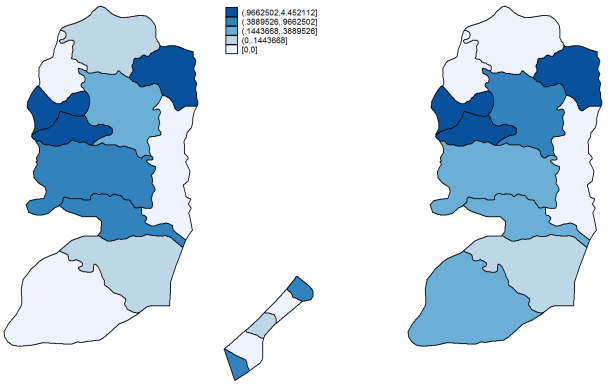
(m) 2003:Q3



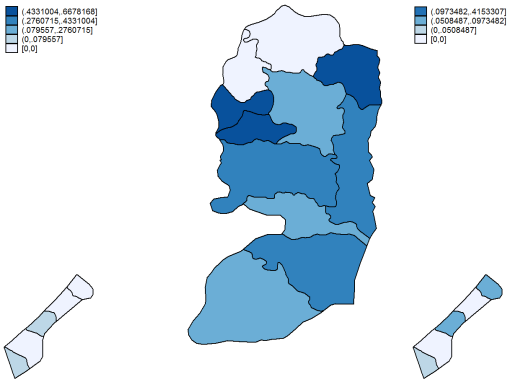
(n) 2003:Q4 (o) 2004:Q1



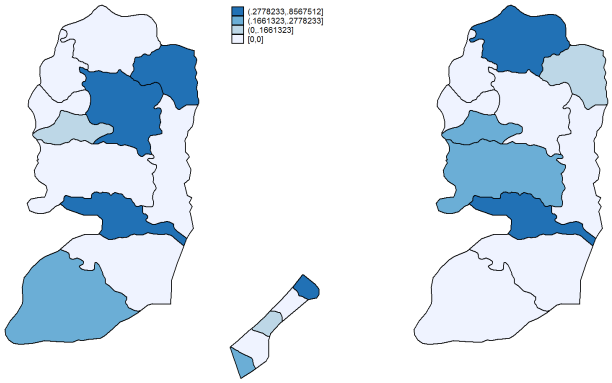
(p) 2004:Q2



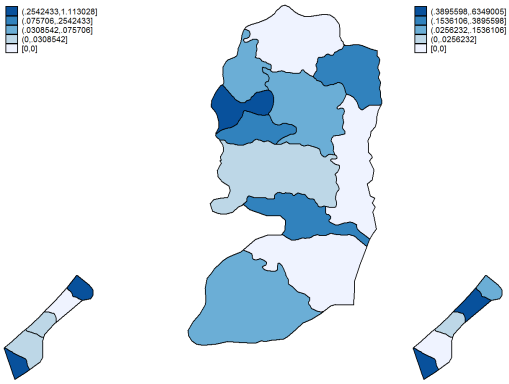
(q) 2004:Q3 (r) 2004:Q4



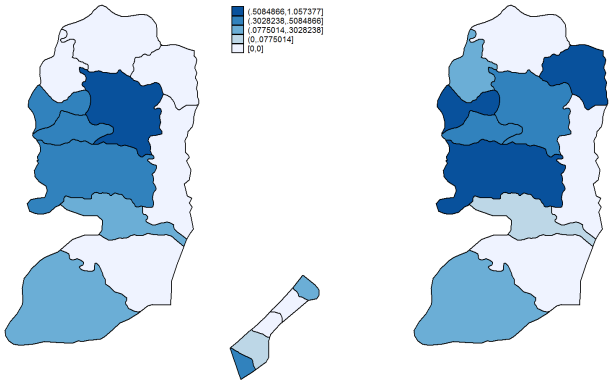
(s) 2005:Q1



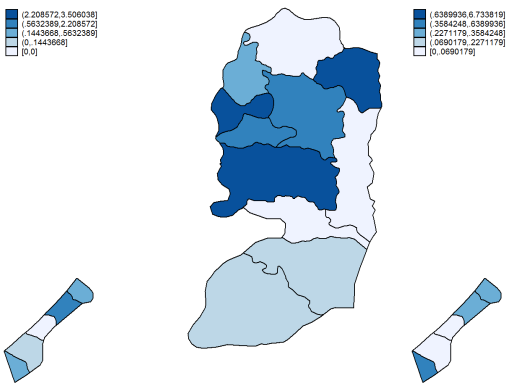
(t) 2005:Q2 (u) 2005:Q3



(v) 2005:Q4

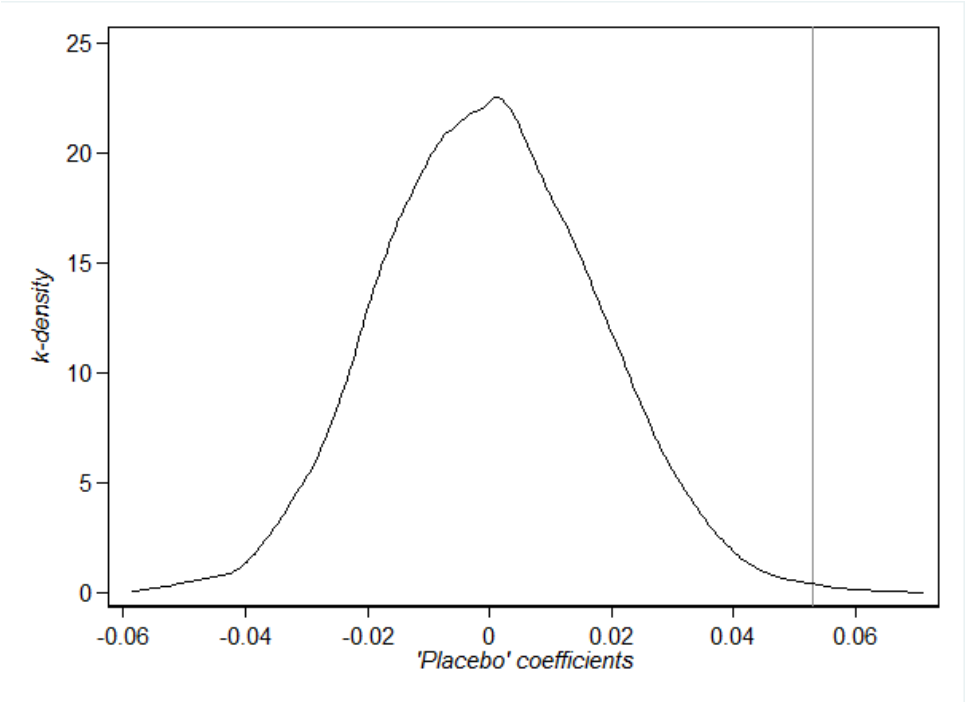


(w) 2006:Q1 (x) 2006:Q2



(y) 2006:Q3 (z) 2006:Q4

Figure A.2: FALSIFICATION TEST



Notes - The figure depicts the probability density function of the coefficients of $Fatalities_{jt}$ obtained by estimating the first-stage regression with the placebo fatalities as independent variable, and iterating 10,000 times. The vertical line indicates our true point-estimate (0.053), which is reported in column (1) of Table 4.

Table A.1: FURTHER IDENTIFICATION RESULTS: Feedback mechanisms

	District-level number of fatalities	
	(1)	(2)
Dropout rate (students with father employed in Israel)	2.754	
	(1.696)	
Dropout rate (students with father employed in OPT)		1.123
		(1.317)
Quarter FE	Yes	Yes
District FE	Yes	Yes
Observations	357	357

Note - Panel fixed-effects regression results. The dependent variable, *District-level number of fatalities*, is the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants by quarter in the district of residence of the student. *Dropout rate (students with father employed in Israel /OPT)* is the district-level dropout rate for computed among students with father employed in Israel and the OPT, respectively. Standard errors are clustered at district × type of residential location level. (Sources: Labour Force Survey - PCBS; B'TSELEM.)

*, **, *** Significant at the 10%, 5%, 1% level, respectively.

Table A.2: FURTHER IDENTIFICATION RESULTS: Compositional effects of Fatalities

	District-level average household head education	
	(1)	(2)
Fatalities	-0.034	-0.032
	(0.053)	(0.053)
District-level unemployment rate		-0.002
		(0.013)
Quarter FE	Yes	Yes
District FE	Yes	Yes
Observations	400	400

Note - Panel fixed-effects regression results. The dependent variable, *District-level average household head education*, is the district-level average household head's education level as measured by the years of schooling. *Fatalities* measures the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants by quarter. *District-level unemployment rate* is the district-level unemployment rate for workers 15-65 years old. Standard errors are clustered at the district level. (Sources: Labour Force Survey - PCBS; B'TSELEM.)

*, **, *** Significant at the 10%, 5%, 1% level, respectively.

Table A.3: ROBUSTNESS 2SLS RESULTS: Exploring non linearities

	Child school dropout	
	(1)	(2)
Household head job loss	0.099*	0.081*
	(0.050)	(0.041)
Nonlinearities in IV used in first-stage regression	No	Yes
Nonlinearities in all controls	Yes	No
All controls	Yes	Yes
Quarter FE	Yes	Yes
District FE	Yes	Yes
Observations	9539	9539
Cragg-Donald Wald F statistic	23.27	13.96
Kleibergen-Paap Wald rk F statistic	12.70	6.09
Anderson-Rubin Wald test p-val	0.032	0.072
Mean of dependent variable	0.013	

Note - 2SLS regression results. The sample includes all Palestinian children aged 10-17 who at quarter t (the time of the first interview) are enrolled in school and have the household head employed in Israel. The dependent variable is *Child school dropout*, a dummy variable which takes value 1 if a child is attending school in quarter t (the time of the first interview) and is not attending school in quarter $t+1$ (the time of the second interview). The main explanatory variable, *Household head job loss*, is a dummy variable which takes value 1 if the child's household head is employed in Israel in quarter t and is not employed in Israel in quarter $t+1$. The instrumental variable used in first-stage regression, *Fatalities*, measures the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants by quarter. *All controls* include: 1) child-specific controls: gender, age, and years of schooling; 2) household head-specific controls: age, age squared, a set of dummies for the level of education, and a set of dummies for the employment status; 3) household-specific controls: size, number of children, number of members employed other than the household head, and type of residential location (rural, urban, refugee camp). *Nonlinearities in all controls* are addressed by including the quadratic terms of all continuous control variables and all the two-way interactions between the dummy control variables. *Nonlinearities in IV used in first-stage regression* are addressed by including the quadratic term of *Fatalities* as additional instrument in first-stage regression. Standard errors in parentheses are clustered at the district and type of residential location level. (Sources: Labour Force Survey - PCBS; BTSELEM.)
*, **, *** Significant at the 10%, 5%, 1% level, respectively.

Table A.4: ROBUSTNESS 2SLS RESULTS: Using alternative IV

	Child school dropout			
	(1)	(2)	(3)	(4)
Household head job loss	0.064**	0.054*	0.053**	0.051**
	(0.030)	(0.031)	(0.025)	(0.024)
Child gender (male)		0.003*	0.003*	0.003
		(0.002)	(0.002)	(0.002)
Child age		0.009***	0.009***	0.009***
		(0.001)	(0.001)	(0.001)
Child years of schooling		-0.004***	-0.004***	-0.004***
		(0.001)	(0.001)	(0.002)
Household-specific controls	No	No	No	Yes
Household head-specific controls	No	No	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes
Observations	9538	9538	9538	9538
Cragg-Donald Wald F statistic	41.97	40.3	53.2	49.44
Kleibergen-Paap Wald rk F statistic	13.56	14.13	19.31	17.77
Anderson-Rubin Wald test p-val	0.023	0.06	0.043	0.031
Mean of dependent variable			0.013	

Note - 2SLS regression results. The sample includes all Palestinian children aged 10-17 who at quarter t (the time of the first interview) are enrolled in school and have the household head employed in Israel. The dependent variable is *Child school dropout*, a dummy variable which takes value 1 if a child is attending school in quarter t (the time of the first interview) and is not attending school in quarter $t+1$ (the time of the second interview). The main explanatory variable, *Household head job loss*, is a dummy variable which takes value 1 if the child's household head is employed in Israel in quarter t and is not employed in Israel in quarter $t+1$. The instrumental variable used in first-stage regression is the predicted household head job loss obtained from a probit model of *Household head job loss* on *Fatalities* and all controls, where *Fatalities* measures the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants by quarter. *Household head-specific controls* include: age, age squared, a set of dummies for the level of education, and a set of dummies for the employment status. *Household-specific controls* include: size, number of children, number of members employed other than the household head; and type of residential location (rural, urban, refugee camp). Standard errors in parentheses are clustered at the district and type of residential location level. (Sources: Labour Force Survey - PCBS; BTSELEM.)

*, **, *** Significant at the 10%, 5%, 1% level, respectively.

Table A.5: MECHANISMS RESULTS: Parental divorce

	Parental divorce (1)
Fatalities	-0.001
	(0.002)
All controls	Yes
Quarter FE	Yes
District FE	Yes
Observations	9502
Mean of dependent variable	0.003

Note - OLS regression (reduced-form) results. The dependent variable, *Parental divorce*, is a dummy variable which takes value 1 if the household head face a divorce from quarter t (the time of the first interview) to quarter $t+1$ (the time of the second interview). The main explanatory variable, *Fatalities*, measures the district-level number of Palestinians killed by the Israeli Defence Forces per 10,000 inhabitants by quarter, and serves as instrumental variable. *All controls* include: 1) child-specific controls: gender, age, and years of schooling; 2) household head-specific controls: age, age squared, a set of dummies for the level of education, and a set of dummies for the employment status; 3) household-specific controls: size, number of children, number of members employed other than the household head, and type of residential location (rural, urban, refugee camp). Standard errors in parentheses are clustered at the district and type of residential location level. (Sources: Labour Force Survey - PCBS; BTSELEM.)

*, **, *** Significant at the 10%, 5%, 1% level, respectively.