

Original Paper

The Effect of the Israeli-Palestinian Conflict on the Palestinian labor Market and Human Capital Accumulation

Sameh Hallaq^{1*}

¹ Al-Quds Bard College for Arts and Sciences, Al-Quds University, Palestine

* Sameh Hallaq, Al-Quds Bard College for Arts and Sciences, Al-Quds University, Palestine

Received: November 7, 2021 Accepted: November 18, 2021 Online Published: November 25, 2021
doi:10.22158/ape.v4n4p111 URL: <http://dx.doi.org/10.22158/ape.v4n4p111>

Abstract

This paper summarizes recent literature that discusses the economic costs of several conflict measures, e.g., “time and geographical variation in fatalities and other conflict incidents, days under curfews, checkpoints, movement restrictions, and Palestinian substitution labor by foreigner workers on the Palestinian labor market and human capital”. Earnings and unemployment are the main labor market indicators, while human capital was assessed by educational attainment. Also, this essay sheds light on the wage differential in the Palestinian labor market due to geographical and employment sector factors as a consequence of the ongoing conflict.

Keywords

human capital, Israeli Palestinian conflict, wage differential

1. Introduction

Since the 1967 war until now, the Palestinian economy had experienced different challenges which still have an effect on the local labor market. The consequences of those challenges on the returns to human capital were of high significance. After 1980, a remarkable raise in the numbers of university and community college graduates that resulted in increasing the supply of educated labor (Angrist, 1995). In late 1987, the First Palestinian uprising (Intifada) started and lasted until 1993. A reduction in demand of Palestinian workers to Israeli markets due to the restrictions measures imposed on labor movements by the Israeli Authority. Another major feature that shaped that period was that children have lost many of school days, in addition to the high rate of school dropouts. The signing of the Oslo Accord in 1993 ended the First Intifada, which resulted in the establishment of the Palestinian Authority (PA). The Oslo Accord, the PA obtained a partial administrative and security controls on certain areas in the Palestinian territories that in return increased the demand for educated labor to work in the PA newly established

insituations .In 2000, the Second Intifada started and lasted until 2005. Accordingly the Israeli government imposed a closure on the West Bank and Gaza Strip. This period is characterized by the remarkable negative effect on Palestinian wages with a sharp increase in unemployment due to the substitution of the Palestinian laborers with foreign workers. In addition to the severe restrictions on movement of Palestinians that is force by the separation wall around the West Bank that have been built by the Israeli Authority. Finally, since 2006, the Palestinian National Authority (PNA) has experienced a declining rate of financial aid, which represents the vast majority of the Palestinian budget; in particular, a relatively high proportion of aid is given to the PNA based on political considerations rather than development matters (Sarsour et al., 2011). Since most of Nongovernmental Organizations (NGOs) finances are dependable on Western countries to secure their funds, the reduced circumstances were of negative impact on NGOs and the employability of university graduates.

The following section of this article provides an overview of the economic costs of conflict on the Palestinian labor market and the accumulation of human capital. The third part, presents a literature survey to the adverse impact of this conflict on wages structure in the Palestinian labor market in addition to some aspects of wage differentials in the labor market as a consequence of the conflict. Finally, the paper concludes in Section four.

2. The Economic Costs of the Israeli Palestinian Conflict

2.1 Political Violence and the Economic Conditions

There is a strand of literature that has attempted to investigate the relationship between economic conditions and engagement in violent political conflict. Economists assume that the opportunity cost of involvement in violence is lower for those individuals who suffer from poor economic conditions, such as low income and high unemployment, than other individuals who live in a stable environment (Freytag et al. 2011; Krueger & Laitin 2008). On the other hand, some other economists find the opposite. For example, Krueger and Malečková (2003) examined the relationship between political violence and poverty by using data from several countries, finding that it is not the poor and uneducated that primarily support terrorism. Economic status, especially educational attainment, is either positively or not related to supporting or engaging in political violence. Berrebi (2007) found similar results, noting that Palestinians engaged in suicide bombing had a higher level of education and lived under better economic conditions than other Palestinians.

Sayre (2009) used data on Palestinian suicide attacks against Israeli society during 1993-2001 to assess the degree to which economic and political conditions in the West Bank and Gaza Strip affect the frequency of the attacks. Sayre (2009) employed OLS estimation with a fixed-effects negative binomial model to account for unobserved heterogeneity between time period and districts characteristics. The main results indicated that poor labor market conditions are correlated with increases in a suicide bombing, but that the specific political event was also important. Saleh (2009) found the same conclusion: improving Palestinian economic condition (higher wages, less unemployment) will reduce

the incentive for Palestinians to engage in political violence against Israel. He also alluded to the nonmonotonic statistical link between economic conditions (unemployment and wages) and violence, suggesting that improving living conditions and increasing employment opportunities for Palestinians will not lead to elimination of attacks against Israelis—it will only reduce them.

Miaari, Zussman, and Zussman (2014) explored the causal relationship between Israeli restrictions on Palestinian movement and involvement in political violence. The identification strategy relied on a quasi-natural experiment by using the variation in the pre- and post-Second Intifada employment rate in Israel across Palestinian localities, including the number of Palestinian fatalities in each locality as a proxy for involvement in the conflict. They found that Palestinian localities in the West Bank that suffered from severe unemployment due to the Israeli restrictions on Palestinian movement after the Second Intifada erupted in the second half of 2000 were more heavily involved in the Israeli-Palestinian conflict. In other words, during that period (2000-2005), any Israeli policy aimed at reducing Palestinian unemployment inside Israel would eventually lead to a rise in the number of Palestinian fatalities.

Cali and Miaari (2015) shed light on the relationship between the exogenous economic variables and involvement in the violent conflict. Their results indicated that the improved employment opportunities resulting from increasing trade (in particular, exports) during the late 1990s, reduced the population's incentives to engage in political violence during the Second Intifada, measured per number of fatalities caused by Israeli per locality. (Note 1)

Benmelech, Berrebi, and Klor (2010) provide evidence of the adverse economic consequences of Palestinian suicide attacks (2000-2006) inside Israel in the attacker's district of origin. During the Second Intifada, a successful attack against Israel led to increased unemployment by 5.3 percent in an average Palestinian district (relative to the average unemployment rate); it also lowered the average wage by 20 percent in the offending district. Moreover, a successful attack caused a reduction in the number of Palestinians working in Israel labor market in the two quarters following the attack. (Note 2)

2.2 The Economic Costs of the Israeli-Palestinian Conflict on the Labor Market

Palestinian employment inside Israel started after the 1967 war. Part of Israeli's leadership encouraged the integration between the Palestinian and Israeli economy to improve the quality of life for the Palestinian people. They argued that higher income and lower unemployment would reduce Palestinian resistance to the occupation. However, providing Palestinian access to Israeli territories raise some concern regarding the security (Gazit, 1995). Increasing movement restriction on Palestinian laborers reduced their ability to access to the Israeli market, and increased absent days, motivating Israeli employers to substitute them with foreigner workers. A lot of factors play a significant role in creating barriers for Palestinian movements, such as closures, checkpoints, curfews, having many localities in West Bank categorized as Area C, (Note 3) and the existence of the separation wall after 2005. Following the outbreak of the Second Intifada in September 2000, the number of Palestinians from the West Bank and Gaza Strip employed in Israel dropped sharply. This shock to the labor supply also had

a heterogeneous impact on Palestinian wages based on their educational attainment (skilled labor versus unskilled labor) and employment sector (public versus private and rural wages versus urban wages). The following papers empirically discussed the impact of the Israeli-Palestinian conflict on the labor market before and after the Second Palestinian Intifada.

One of the earliest studies discussing the impact of Israeli policies on both the Israeli and Palestinian labor markets was Angrist (1996) study, which estimated the wage premium for men working in Israel ranges from 25 percent to 35 percent for the period 1988-1991 compared to a 0 percent to 18 percent premium during the period 1981-1987. He indicated that wages paid to Palestinians working in Israel are negatively correlated with days worked by Palestinians in Israel (-14 percent for all industries). Angrist used the supply shocks in the Palestinian labor supply as an IV to estimate the effect of Israeli labor market demand for Palestinian workers. Overall, the results implied that the short-run Israeli demand for Palestinian labor is not very elastic. (Note 4)

In his following paper, Angrist (1998) investigated the effect of the repeated sharp restrictions on Palestinian access to the Israeli labor markets on the Palestinian labor market in the period 1992-1995, which was characterized by increased violent activities on both sides, as well as the establishment of PNA, which created employment opportunities for many Palestinian laborers. He found that the dependence of Israeli labor market on Palestinian labor has been reduced due to Palestinian substitution workers with guest workers, also due to the structural changes in the Israeli economy. He indicated that there are a variety of economic and social factors that limit the benefits from migrant labor such as providing them with a full range of civil rights and social benefits and substitution of capital mobility for labor mobility.

Mansour (2010) attempted to identify the Palestinian labor market's response to an increase in the supply of workers after the Second Intifada separately from the direct effects of the political instability. This distinction could be useful in evaluating border policies that are related to the Palestinian and Israeli nations. He employed quarterly variations in Labor Force Survey data by city for the period 2000-2004 to investigate the effect of labor supply (without and with the distinction between skilled and unskilled labor) on average wages and unemployment rate of low- and high-skilled workers. The labor supply covariate was instrumented by the log of the number of individuals usually working in Israel from each city. The source of endogeneity for the labor supply could be due to the change in the labor force's size in response to the closure of the borders or because workers drop out of the labor force or emigrate. The main results suggested that an increase in the supply of low- and high-skilled labor had an adverse impact on low-skilled wages, while the wages of high-skilled labor seem to respond mostly to increases in their own labor supply.

Miaari and Sauer (2011) concluded that the impact of substituting Palestinian labor with foreigner workers is relatively stronger than the impact of temporary closures in the Palestinian market. The former tends to be permanent, with a long-run substitution effect. In order to reach the previous conclusion, they estimated the impact of foreigner workers and closure days on either monthly wages

or employment status inside Israel after controlling other individual and residential characteristics (i.e., urban, camp, or rural). The number of foreign workers (the variable of interest) was instrumented by the cumulative number of foreign worker permits issued through each quarter over the period 1999-2004. The researchers employed the IV strategy since they argued that the number of foreign workers can correlate with the error term in several aspects. The first one is related to the labor demand and other macroeconomic factors in Israel and surrounding region. For example, an increasing number of illegal entries into Israel due to voluntary movement of Palestinian laborers back into the local economy of the West Bank and Gaza Strip. Secondly, the random error may contain unobserved individual attributes that are potentially correlated with the number of incoming foreign workers to Israel. These could be relevant to productivity, motivation, geographical preference to work inside Israel (in case of no movement restriction) and the ability to communicate in Hebrew .

Cali and Miaari (2018) provided empirical evidence for the effect of mobility restrictions on the West Bank labor market. They employed a combined data set from the Labor Force Survey and Geographic Information System (GIS) data on various types of physical barriers to movement during the period 2000-2009. Their main findings suggested that barriers to mobility have a significant negative impact on the probability of being employed, wages earned, and the number of days worked per month, while the movement restrictions lead to an increase in the number of hours worked per day. These effects are substantially attributed to the checkpoints, while the other barriers have only a weak impact. The findings indicated that the labor market adjusted to several restrictions through lower wages rather than through lower employment. For example, placing one checkpoint one minute away from a locality will significantly reduce its residents' hourly wage by 5.2 percentage points and reduce their probability of being employed by 0.5 percentage points. (Note 5)

2.3 The Economic Costs of the Israeli-Palestinian Conflict on Human Capital

Over the last decades, a growing body of literature shed light on the damage to human capital due to conflict exposure. These damages include several short- and long-term outcomes affecting education, child labor, child wellbeing, and health. The following section presents a brief review of some of these studies discussing the effect of the Israeli-Palestinian conflict on human capital accumulation.

The first stream of literature discusses the short- and long-run impact of violence on a child's educational attainment. Most of these studies employ a similar identification strategy based on the plausibly exogenous variation in conflict intensity induced by combining household survey data with a measure of conflict intensity and geographic location of a community during the conflict period.

Al Kafri (2002) used the quarterly labor force household survey data collected in 2000 and 2001 (before and after start of the Second Palestinian Intifada) to see the impact of the Second Intifada on children's decision to choose schooling, work, or both. He found that the Second Intifada increased the probability of boys going to work and of girls leaving school in an attempt to help their families, especially after the increase in poverty and unemployment created by the conflict. However, this study did not control for a number of significant explanatory variables such as the market wage, household

income, and number of closure days, nor did it suggest a transmission channel that could affect a child's decision to work rather than going to school.

Di Maio and Nandi (2013) showed that from the Second Intifada until the end of 2006, the increasing number of border closure days increased the probability of child labor and reduced school attendance. They considered reductions in local wages, decreases in the household income, and the likelihood that the father was employed in Israel to be different transmission mechanisms through which closure days possibly increased child labor.

Brück, Di Maio, and Miaari (2019) estimated the “reduced form” effect of the exposure to the Israeli-Palestinian conflict during the Second Intifada (2000-2006), measured by the number of Palestinian fatalities at the school locality and high school exit exam performance. Using year and school fixed effect to control for unobserved locality and time effects, their results indicated that the increased exposure to the Israeli-Palestinian conflict reduced the probability of passing the final exam and university admission. The authors suggested changes in the quality of the school-level learning conditions and the adverse effect on the student psychological well-being as potential transmission mechanisms for explaining their results.

Di Maio and Nisticò (2019) investigated the impact of the parental job loss during the Second Palestinian Intifada on their child's school enrollment status. To account for the endogeneity, they employed the variation in the number of fatalities across Palestinians localities as the IV. The results suggested that the household head's job loss increases a child's probability of dropping out of school by 9 percent points. The effect varied with the gender, school grade, and the child's academic ability, as well as with parental education and the number of children in the household.

Jürges et al. (2020) showed that an increase of household's exposure to conflicts during the Second Intifada (2000-2005) had an adverse long-term impact (7 years after ending the second Intifada) on their offspring school achievements measured by child's school Grade Point Average (GPA) during 2012/2013 academic year. Similar to Di Maio and Nisticò (2019), Jürges et al. (2020) used the same IV (locality-level variation in the conflict intensity measured by number of fatalities across locality) to account for the endogeneity. Also, they proposed noncognitive skills—such as the “big five (Note 6)” personality traits and the “internalizing” and the “externalizing” (Note 7) behavioral problem resulted from Strengths and Difficulties Questionnaire (SDQ) (Note 8)—as a channel of exposure on children's educational attainment.

Saad and Fallah (2020) use the closure of the Israeli labor market during the Second Intifada (2000-2005) to investigate the impact of a large labor market shock on the educational choices of Palestinian youth. This study employs difference in difference methodology by using the variation in the geographical distribution of commuters within the West Bank prior to the Second Intifada to compare high school dropout rates between localities with different shares of Palestinians workers who commute to Israel before and after the Second Intifada. The results show that the closure led to a significant decline in high school dropout rates in the case of male students aged 15–19 years, but not

for female students. Additionally, the findings suggest that the localities with high commuting shares experienced a decreasing gender gap in high school dropout rates compared to other localities with low commuting shares.

The second stream of literature that discusses the Palestinian-Israeli case sheds light on the cycle of violence by employing the number of fatalities on both sides. Jaeger and Paserman (2008) investigated the short-run dynamics of Israeli-Palestinian violence during the Second Intifada. Using the number of fatalities from each side as a measurement of the violence's intensity, they found that Israel reacted predictably and systematically to Palestinian violence, while Israeli violence did not lead to an increase in Palestinian violence. In their second paper (Jaeger & Paserman 2009), they indicated that the Israeli's targeted killing of Palestinian leaders led to increased violence by the Palestinians, but it did not lead to higher levels of Israeli fatalities. Jaeger et al. (2012) suggested that, in the short run, the violence from Israel reduced the Palestinian support for the moderate political party and the peace process, though this effect diminishes within three months. However, Palestinian violence plays a small role in formulating the Palestinian public opinion, except between the radical factions, but it does not induce a shift between supporting the moderate and radical factions.

3. Wage Differential in the Palestinian Labor Market

3.1 The Effect of Area C, Rural, and Nonrural Areas and Refugees Status on Wages

As a consequence of Oslo Peace Accord (1993), the PNA was established to provide a different level of control over the West Bank and Gaza strip territories. The PNA has control over both security and administration (e.g., health, education, taxation, etc.) in Area A. The control in Area B is limited to civil administration only, with no control in Area C. The latter is mostly rural and represents approximately 60 percent of the West Bank territory. Communities in Area C are living in difficult life circumstances due to the lack of major services (UNSCO, 2014) Area C is key to future Palestinian economic development. There are many direct and indirect economic benefits of eliminating the restrictions on movement and investment in Area C (Vishwanath et al., 2014), including improvements in agriculture, mineral and stone mining, quarrying, tourism, and telecommunication. The expected growth that could be generated through the lifting of restrictions on Area C would increase the potential Palestinian value-added by USD 3.4 billion. The indirect benefits would be reflected as an improvement in quality of life there since the vast majority of the Palestinian economic activities are to some extent dependent on the quality of transportation, electricity, water, and telecommunications infrastructure. Additionally, the expected substantial increase in GDP would lead to creating many employment opportunities in the West Bank (Niksic et al., 2014).

Fallah and Daoud (2015) investigated the impact of restrictions in Area C on wages of Area C workers. They employed an individual-level survey, collected on a quarterly basis by the Palestinian Central Bureau of Statistics (PCBS) during the period 2001-2008. They restricted their sample only to those who worked in Palestinian territories (Areas A, B, and C), excluding those who worked in Israel to

avoid an estimation bias that could mask urban-rural wage differential. The estimation was based on the OLS technique, controlling for other demographic- and locality-level variables. The standard error was clustered at locality level. (Note 9) To deal with the workers' unobserved characteristics (such as innate abilities), the researchers relied on the Oaxaca- Blinder (1973) (Note 10) decomposition technique, which allowed them to identify the unexplained part (residual) of the wage differential. Their results suggested that Area C workers suffer from a wage penalty (Note 11) compared to workers in Areas A and B. Moreover, by comparing average wages of Area C workers with other rural workers, they concluded that the wage difference is statistically insignificant, which indicated that the observed wage penalty for Area C workers could be attributed primarily to a rural environment effect rather than to Israeli economic restrictions that take place there. The reduction in the average wages due to the shock in labor demand in Area C was subsequently raised due to the shocks in the labor supply. The latter (commuting-labor supply) was proposed as a potential transmission mechanism since the residents in Area C are more likely to commute than their peers in other rural areas.

With regards to the differential wages between rural and nonrural areas, Daoud and Fallah (2016) used quarterly survey data for the period 1999-2012 and showed that employment in agriculture reduced the wages for both rural and nonrural workers. Also, consistent with other previous studies, they indicated that the Israeli labor market provides a wage premium of 60 percent to 70 percent for nonrural workers and 40 percent to 50 percent for rural workers compared to the local market. In addition to using the standard OLS estimation, they adjusted the unpaid wage selectivity bias (for those who are employed in agriculture) by controlling for parents' type of industry. In particular, whether workers' and their parents' type of industry is the same. Also, they employed Heckman's (1979) two-stage estimation to correct the industry self-selection bias. The main results show that the coefficient for the agriculture industry lower wages for workers in this sector by 34 percent to 37 percent for nonrural and rural areas, respectively.

Hallaq (2020) indicated to the existence of wage differential in the Palestinian labor Market based on their refugees status. This wage gap has an opposite direction in the West Bank and Gaza strip. In the West Bank, Palestinian non-refugees enjoy a wage premium, and the wage gap has a more influence low-skilled workers and those in the private sector. In Gaza, the wage gap favored refugee workers, and has more substantial impact among unskilled workers.

3.2 Employment Sector and Wage Differentials

Public employment accounts for 21.6 percent of total employment in Palestine. This percentage varies significantly between the West Bank and Gaza Strip (PCBS 2016). (Note 12) Salaries represent the vast majority of the PNA's overall budget. (Note 13) Unlike other countries, where taxes are the major source of financing public salaries, the PNA relies heavily on international aid to finance its expenditures (Sarsour et al., 2011). This section presents wages differentials between the public and private sector and the public sector's impact of public sector on private employment.

Miaari (2020) utilized the Palestinian Labor Force Survey conducted between 1998 and 2006 to

measure the wage differential between public and private employment in the West Bank and Gaza Strip. The wage differential was decomposed into the human capital effect and an unexplained effect using Oaxaca-Blinder techniques. The results suggested that before the Second Intifada period, the public sector experienced wage penalties, but this penalty disappeared and then reversed over time. There was a wage differential during the post-Second Intifada period to the favor of public sector due to the high demand for employment in public sector. At the same time, there was an increase in the Palestinian labor supply due to the sharp decrease in a number of Palestinians working in the Israeli labor market competing with a low demand for employees in the local private sector. All these factors lead to a rapid decrease in private sector wages. Moreover, the wage gap was attributed to the returns to skills composition in the public sector (unexplained effect), rather than a change in the skills composition of public sector workers (human capital effect).

Fallah (2021) explained how a local labor market responded to the changes in public employment in an aid-based economy. Expanding public employment was vital to limiting the negative demand shocks during Second Intifada. The OLS estimation demonstrated that, in the short run, increasing public employment by 100 jobs increases private employment by 71 jobs. The endogeneity led to biasing the OLS estimation since the PNA utilizes public jobs to curb rising local unemployment and as a response to population change. Fallah (2021) employed a district's share of public employment to redistribute the overall increases in public employment across districts. (Note 14) The findings showed that public employment has a positive impact on both tradable and nontradable sectors, but favoring the latter. Fallah (2021) proposed three mechanism channels to explain his main result. First, the expansion of public employment has a positive effect on the number of local entrepreneurs (employers and self-employed). Second, the expansion of public employment has no significant negative impact on private wages; since the PNA has to absorb the excess labor supply, it neutralizes the effect of the public wage premium on private wages. (Note 15) The empirical findings demonstrated that a district's change in private employment is independent of change in public wages. Finally, the paper indicated the minor role of the tax effect on the private sector. Unlike other countries where increasing taxes to create additional public jobs may decrease labor demand in private employment, the vast majority of the public salaries in the West Bank are funded by international grants.

4. Conclusion

The Palestinian economy is extremely unstable due to the ongoing Israeli-Palestinian conflict. This conflict has a short-and long-run adverse impact on the Palestinian labor market and the accumulation of human capital as well. Accordingly, People living in the occupied Palestinian territories are facing different challenges affecting their choice to invest in education. First, investment in human capital is less risky than physical capital, since it is less likely to be confiscated or demolished by the Israeli Authority. Second, working inside Israeli markets provides better wages and requires little or no educational attainment compared to local markets. Third, there is a remarkable increase in the

unemployment rate among university graduates in the last decades (Alkafri, 2011). Finally, the private returns to education in Palestine are still less than the ones obtained in other countries (Note 16). Thus, investment in human capital seems a good solution to decrease the dependency on the Israeli labor market. Also, education can lead to creating structural changes in the Palestinian economy in particular with the recent trends in remote working environments that can overcome the restriction on movement imposed by the Israeli government.

References

- Algan, Y., Cahuc, P., & Zylberberg, A. (2002). Public employment and labour market performance. *Economic Policy*, 17(34), 7-66. <https://doi.org/10.1111/1468-0327.00083>
- Al Kafri, S., & others. (2002). *Impact of Israeli measures on Palestinian child labor and schooling*. Almalaurea working papers no 30. Bologna, Italy. Almalaurea.
- Alkafri, S., & others. (2011). *Transition from High Education to the Labour Market: Unemployment within Graduates from the Gender Perspective In the Palestinian Territory*. <https://doi.org/10.31899/pgy2.1077>
- Angrist, J. D. (1995). The economic returns to schooling in the West Bank and Gaza Strip. *The American Economic Review*, 1065-1087.
- Angrist, J. D. (1996). Short-run demand for Palestinian labor. *Journal of Labor Economics*, 14(3), 425-453. <https://doi.org/10.1086/209817>
- Angrist, J. D. (1998). *The Palestinian labor market between the Gulf War and Autonomy*. Cambridge, MA: MIT Department of Economics.
- Barlett, C. P., & Anderson, C. A. (2012). Direct and indirect relations between the Big 5 personality traits and aggressive and violent behavior. *Personality and Individual Differences*, 52(8), 870-875. <https://doi.org/10.1016/j.paid.2012.01.029>
- Benmelech, E., Berrebi, C., & Klor, E. F. (2010). The economic cost of harboring terrorism. *Journal of Conflict Resolution*, 54(2), 331-353. <https://doi.org/10.1177/0022002709355922>
- Berrebi, C. (2007). Evidence about the link between education, poverty and terrorism among Palestinians. *Peace Economics, Peace Science and Public Policy*, 13(1), 18-53. <https://doi.org/10.2202/1554-8597.1101>
- Brück, T., Di Maio, M., & Miaari, S. H. (2019). Learning the hard way: The effect of violent conflict on student academic achievement. *Journal of the European Economic Association*, 17(5), 1502-1537. <https://doi.org/10.1093/jeea/jvy051>
- Cali, M., & Miaari, S. H. (2015). Trade, employment and conflict: Evidence from the Second Intifada. *Households in Conflict Network Working Paper*, (186).
- Cali, M., & Miaari, S. H. (2018). The labor market impact of mobility restrictions: Evidence from the West Bank. *Labour Economics*, 51, 136-151. <https://doi.org/10.1016/j.labeco.2017.12.005>
- Daoud, Y., & Fallah, B. (2016). The differential impact of employment in agriculture on wages for rural

- and non-rural Palestine. *IZA Journal of Labor & Development*, 5(1), 1-19.
<https://doi.org/10.1186/s40175-016-0063-9>
- Di Maio, M., & Nandi, T. K. (2013). The effect of the Israeli--Palestinian conflict on child labor and school attendance in the West Bank. *Journal of Development Economics*, 100(1), 107-116.
<https://doi.org/10.1016/j.jdeveco.2012.08.007>
- Di Maio, M., & Nisticò, R. (2019). The effect of parental job loss on child school dropout: Evidence from the Occupied Palestinian Territories. *Journal of Development Economics*, 141, 102375.
<https://doi.org/10.1016/j.jdeveco.2019.102375>
- Fallah, B., & Daoud, Y. (2015). Wage differentials and economic restrictions: Evidence from the Occupied Palestinian Territories. *The Economics of Peace and Security Journal*, 10(1).
<https://doi.org/10.15355/epsj.10.1.13>
- Fallah, B. (2021). The effect of public sector on private jobs: Evidence from the occupied West Bank. *Economic Systems*, 100785. <https://doi.org/10.1016/j.ecosys.2020.100785>
- Foster, C. J. E., Garber, J., & Durlak, J. A. (2008). Current and past maternal depression, maternal interaction behaviors, and children's externalizing and internalizing symptoms. *Journal of Abnormal Child Psychology*, 36(4), 527-537. <https://doi.org/10.1007/s10802-007-9197-1>
- Freytag, A., Krüger, J. J., Meierrieks, D., & Schneider, F. (2011). The origins of terrorism: Cross-country estimates of socio-economic determinants of terrorism. *European Journal of Political Economy*, 27, S5-S16. <https://doi.org/10.1016/j.ejpoleco.2011.06.009>
- Gazit, S. (1995). *The carrot and the stick: Israel's policy in Judaea and Samaria, 1967-1968*. Washington, DC: Bnai Brith Books.
- Hallaq, S. (2020). Wage Differential between Palestinian Non-refugees and Palestinian Refugees in the West Bank and Gaza. *International Journal of Development and Conflict*, 10(2), 145-181.
<https://doi.org/10.2139/ssrn.3503112>
- Harmon, C., Oosterbeek, H., & Walker, I. (2000). *The returns to education: A review of evidence, issues and deficiencies in the literature* (Issue 5). Centre for the Economics of Education, London School of Economics and Political Science.
- Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica: Journal of the econometric society*, 153-161. <https://doi.org/10.2307/1912352>
- Jaeger, D. A., Klor, E. F., Miaari, S. H., & Paserman, M. D. (2012). The struggle for Palestinian hearts and minds: Violence and public opinion in the Second Intifada. *Journal of Public Economics*, 96(3-4), 354-368. <https://doi.org/10.1016/j.jpubeco.2011.12.001>
- Jaeger, D. A., & Paserman, M. D. (2008). The cycle of violence? An empirical analysis of fatalities in the Palestinian-Israeli conflict. *American Economic Review*, 98(4), 1591-1604.
<https://doi.org/10.1257/aer.98.4.1591>
- Jaeger, D. A., Paserman, M. D., & others. (2009). The shape of things to come? On the dynamics of suicide attacks and targeted killings. *Quarterly Journal of Political Science*, 4(4), 315-342.

- <https://doi.org/10.1561/100.00009013>
- Jürges, H., Stella, L., Hallaq, S., & Schwarz, A. (2020). Cohort at risk: long-term consequences of conflict for child school achievement. *Journal of Population Economics*, 1-43. <https://doi.org/10.1007/s00148-020-00790-6>
- Krueger, A. B., & Laitin, D. D. (2008). Kto kogo?: A cross-country study of the origins and targets of terrorism. *Terrorism, Economic Development, and Political Openness*, 161. <https://doi.org/10.1017/CBO9780511754388.006>
- Krueger, A. B., & Malečková, J. (2003). Education, poverty and terrorism: Is there a causal connection? *Journal of Economic Perspectives*, 17(4), 119-144. <https://doi.org/10.1257/089533003772034925>
- Mansour, H. (2010). The effects of labor supply shocks on labor market outcomes: Evidence from the Israeli--Palestinian conflict. *Labour Economics*, 17(6), 930-939. <https://doi.org/10.1016/j.labeco.2010.04.001>
- Miaari, S. H. (2020). An analysis of the public--private wage differential in the Palestinian labour market. *Defence and Peace Economics*, 31(3), 289-314. <https://doi.org/10.1080/10242694.2018.1473137>
- Miaari, S. H., & Sauer, R. M. (2011). The labor market costs of conflict: closures, foreign workers, and Palestinian employment and earnings. *Review of Economics of the Household*, 9(1), 129-148. <https://doi.org/10.1007/s11150-009-9081-6>
- Miaari, S., Zussman, A., & Zussman, N. (2014). Employment restrictions and political violence in the Israeli--Palestinian conflict. *Journal of Economic Behavior & Organization*, 101, 24-44. <https://doi.org/10.1016/j.jebo.2014.02.002>
- Niksic, O., Eddin, N. N., & Cali, M. (2014). *Area C and the Future of the Palestinian Economy*. World Bank Publications. <https://doi.org/10.1596/978-1-4648-0193-8>
- Oaxaca, R. (1973). Male-female wage differentials in urban labor markets. *International Economic Review*, 693-709. <https://doi.org/10.2307/2525981>
- PCBS (Palestinian Central Bureau of Statistics). (2016). "Press Release on the Results of the Labour Force Survey in Palestine." Technical report. Ramallah, Palestine: Palestinian Central Bureau of Statistics.
- PMOF (Palestinian Ministry of Finance). (2016). "Citizens Budget, 2016." Technical Report. Ramallah: Palestinian Ministry of Finance.
- Saad, A. F., & Fallah, B. (2020). How educational choices respond to large labor market shocks: Evidence from a natural experiment. *Labour Economics*, 66, 101901. <https://doi.org/10.1016/j.labeco.2020.101901>
- Saleh, B. (2009). An econometric analysis of Palestinian attacks: an examination of deprivation theory and choice of attacks. *European Journal of Social Sciences*, 7(4), 17-29.
- Sarsour, S., Naser, R., & Atallah, M. (2011). The Economic And Social Effects Of Foreign Aid In Palestine. *Palestine Monetary Authority, Research and Monetary Policy Department*.

- Sayre, E. A. (2009). Labor market conditions, political events, and Palestinian suicide bombings. *Peace Economics, Peace Science and Public Policy*, 15(1), 1-26. <https://doi.org/10.2202/1554-8597.1134>
- UNSCO. (Office of the United Nations Special Coordinator for the Middle East Peace Process). (2014). *Report to the Ad Hoc Liaison Committee New York*. Technical Report, September 22. New York: Office of the United Nations Special Coordinator for the Middle East Peace Process. Available at: https://unsco.unmissions.org/sites/default/files/un_ahlc_report_sept_2014.pdf
- Vishwanath, T., B. Blankespoor, F. Calandra, N. Krishnan, M. Mahadevan, and M. Y. (2014). *Seeing believes: Poverty in the Palestinian territories*. Technical report. Washington, DC: World Bank Group.

Notes

Note 1. Cali and Miaari (2015) main estimation suggests that an increase of USD 10 million in Palestinian exports of a sector employing 10 percent of the locality's private employment reduces subsequent conflict-related fatalities in that locality by between 2.1 percent and 2.8 percent.

Note 2. In all specifications, Benmelech, Berrebi, and Klor (2010) controlled the demographic characteristics accounted for, including average years of education, percentage of population living in a refugee camp, average age, proportion of males in the local population, and proportion of married population. Also, a West Bank dummy was included to control for regional unobservable characteristics that are constant over time, as well as year fixed effects. The error term was clustered at the regional level, capturing nonsystematic determinants of the district's changes in economic conditions. The identification strategy does not focus on levels, but rather changes of all variables used in the analysis, thus effectively controlling for districts' fixed characteristics that may jointly affect economic conditions and the occurrence of suicide attacks.

Note 3. Area C consists of approximately 60 percent of the West Bank area where the Palestinian Authority does not have any control there (security or civil). Communities in Area C are at higher risk of adverse life circumstances due to the lack of primary services (Vishwanath et al., 2014).

Note 4. Angrist (1996) employed administrative data obtained by Israeli Army records on days under a curfew imposed in the Palestinian territories, combined with control variables on civil disturbances as IVs. The following covariates were treated as endogenous variables: days worked in Israel; days worked in the comparison region, wages in the comparison region, and total earning in the comparison region.

Note 5. For example, in 2007, Cali and Miaari (2018) estimated that the effects of reducing employment opportunities and wages were translated into a reduction in the West Bank GDP of around USD 229 million or 6 percent. Most of these losses are due to lower wages.

Note 6. The 'big five traits' covers the following characteristics: openness, conscientiousness, extraversion, agreeableness, and neuroticism. These are widely used to gauge psychological well-being of children. (see Barlett & Anderson 2012)

Note 7. Psychologists differentiate between two types of children's behaviors and disorders based on their reactions to stressors. The externalizing behavior includes symptoms of aggression and delinquency while the internalizing problems measures symptoms of depression, anxiety, somatic complaints, and social withdrawal (Foster et al., 2008).

Note 8. The Strengths and Difficulties Questionnaire (SDQ) is a brief behavioral screening questionnaire about 3-16-year olds. There are currently three self-reported versions of the SDQ in the following categories: children, parents, and teachers. For a detailed description of the SDQ, see <http://www.sdqinfo.com/>.

Note 9. One potential problem of main OLS estimation is that its residuals might be spatially correlated, biasing the standard error of the estimates downward. Therefore, the standard was clustered at the locality level, assuming that the error terms are correlated within geographic clusters but uncollected across them.

Note 10. The decomposition technique consists of separating the wage equation for those working in Area C and other wages in Areas A and B. These separations then consist three elements: 1) the wage differences related to endowment effect capture the explained part of the model and are attributed to differences in workers' characteristics; 2) the wage differential that is attributed to the difference in the estimated coefficient; and 3) the interaction between the endowment and coefficient effect. The second and third terms together constitute the unexplained part (residual) of the wage differential.

Note 11. The main estimation shows lower wages for Area C workers by about 8 percent relative to workers in Areas A and B. This penalty reduces to approximately half after controlling for workers' demographic characteristics and locality variables, but is still significant.

Note 12. Public employment represents 36.4 percent and 15.4 percent of total employment in the Gaza Strip and in the West Bank, respectively (PCBS 2016).

Note 13. Salaries represent 55 percent of total governmental expenditures (PMOF 2016).

Note 14. The IV estimates' results are consistent with the OLS estimation, though the magnitude of the effect is smaller (52 jobs rather than 71).

Note 15. Algan, Cahuc, and Zylberberg (2002) suggests that the higher public wages would increase returns to seeking public employment, attracting workers out of the private sector.

Note 16. Average returns to schooling from the OLS are around 6 percent internationally but over 9 percent from these alternative methods. The UK experiences a higher return on investment in human capital; the comparison is between 7 percent and 9 percent from the OLS to a range of 11 percent to 15 percent from the IV/experimental methods (Harmon et al., 2000).