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The Effects of Labor Supply Shocks on Labor Market Outcomes: Evidence from the Israeli-Palestinian Conflict

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Abstract

Since September 2000, as a result of mobility restrictions, the supply of Palestinian workers competing for local jobs in the West Bank has increased by about fifty percent. This paper takes advantage of this unique natural experiment to study the effects of labor supply shocks on labor market outcomes. Using quarterly information on wages and employment in each city in the West Bank, the paper analyzes the short-run adjustment of labor markets to a large inflow of workers separately from the effects of political instability. The results suggest that low-skilled wages are adversely affected by an increase in the supply of low- and high-skilled workers, while high-skilled wages are only weakly negatively related to an increase in their own supply. This is consistent with a scenario in which high skilled workers compete for low skilled jobs, pushing the low skilled into unemployment. This latter hypothesis is confirmed by analyzing the effects of changes in labor supply on unemployment.

JEL Codes: J61, J21, D74, C21

Keywords: Immigration, Labor Supply Shocks, Border Controls.

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1 Introduction

This paper studies the impact of labor supply shocks on labor market outcomes. Despite clear theoretical predictions, numerous empirical papers trying to estimate the effects of labor supply shocks on wages have yielded different, and at times, contradictory results (Borjas, 2003). In September 2000, as a consequence of the second Palestinian uprising, the borders between Israel and the West Bank were closed, preventing Palestinian workers from commuting to their jobs in Israel. The closure of the borders did not generate an immediate, one time, increase in the local labor supply because Palestinian workers expected to return to their jobs in Israel. Instead, as the political instability persisted, workers gave up their expectations of returning to work in Israel, and the local labor supply increased gradually. By 2004 the share of Palestinians commuting to work in Israel had decreased by more than fifty percent, generating a large increase in the supply of workers competing for local jobs in the West Bank.[1]

Aside from restricting mobility into Israel, the security measures imposed by Israel since September 2000 severely restricted the mobility of Palestinians *between* West Bank cities. Consequently, the once homogenous West Bank region was divided into separate local labor markets, in which the mobility of both workers and products was limited.[2] As a result, I argue and provide evidence that labor supply shocks would have been absorbed locally because most past-migrants had to compete over jobs in their original locality of residence. This allows me to take advantage of quarterly variation in local labor supply across cities and over time generated by this unique natural experiment to provide additional evidence

[1] Unlike other studies in the immigration literature, the paper studies the impact of past-commuters, who for political reasons could not travel anymore, on the wages in the source country. This analysis is relevant to current debates regarding immigration in developed countries and offers an insight into how labor markets in developing countries might respond to the return of large numbers of workers.

[2] According to weekly reports of the U.N. Office for the Coordination of Human Affairs in the occupied Territories restrictions on mobility between Palestinian cities in the West Bank were often imposed on incoming and outgoing goods, affecting the trade and transfer of products between the different regions.

on the short-run effects of large inflows of workers on labor market outcomes.[3,4]

The analysis presented in this paper relies on a skill-specific measure of local labor supply to estimate the effects of supply shocks on the wages and unemployment of each skill group. This measure calculates the share of the employed locally and the unemployed from the entire working force, which includes workers usually reporting to work in Israel. Workers who report Israel as their work location can be currently employed in Israel or unemployed but expect to return. Thus, this measure incorporates the *expectations* of Palestinian workers about their chances of returning back to Israel.[5]

The main identifying assumption is that variation in the number of workers from each city reporting Israel as their usual place of work varies over time for reasons that are uncorrelated with economic conditions at the city-level, and are determined by Israeli security measures. Of course, one could expect that the decline in economic activity due to political instability might also vary quarterly across different cities and be correlated with the quarterly measure of labor supply attenuating the causal effects of labor supply shocks on wages. To deal with this issue, I include in the regressions city-specific measures of political instability to capture any remaining differences in the demand shocks across cities, along with a time trend to capture demand shocks affecting the entire region, and city fixed effects to capture time-invariant characteristics of each city. I also provide some instrumental variable results and conduct a robustness check to confirm my findings.

The most conservative results in the paper suggest that a 10 percent increase in the supply of low-skilled workers reduces low-skilled wages by about 1 percent. Interestingly,

[3]Few papers have looked at the short-run dynamics of immigration. See, for example, Cohen-Goldner and Paserman (2006) and Friedberg and Sauer (2004).

[4]Mobility restrictions *between* cities in the West Bank allows the treatment of city-level labor markets as separate. Unlike other studies in the immigration literature, the data allows me to quantify the importance of out-migration in response to the labor supply shock (Card, 1990; Borjas, 2004).

[5]In fact, according to this measure, the largest increase in the local labor supply occurred in late 2001, well after the actual closure of the borders in 2000, and continued to vary over time as workers adjusted their expectations.

an increase of 10 percent in the supply of high-skilled workers also reduces low-skilled wages by about 1.5-2 percent. This suggests that high-skilled workers who could not commute to Israel anymore competed for low-skilled jobs, pushing the low skilled into unemployment. This hypothesis is confirmed by estimating the effect of labor supply on low-skilled unemployment rates. I find that an increase in the number of low- and high-skilled workers who report Israel as their usual work location reduces the unemployment rate among the low skilled. As for the high-skilled workers, the results suggest that an increase in their own labor supply decreases their wages slightly, but these effects are not as precisely estimated. An increase in the low-skilled labor supply has no effect on high-skilled wages. The wage results are consistent with the effects on the unemployment rates of high-skilled workers. Differences in the effects across skill groups also suggest that the estimates are not picking up demand related factors or direct effects of the political instability which, as previous research has shown, have impacted all workers (Miaari and Sauer, 2006).

The second section of the paper outlines the most notable events in the Palestinian-Israeli conflict since 1967 and their economic relations. The third section discusses the data. The identification strategy and the results are presented in the fourth section. I conclude and discuss the results in the fifth section.

2 Background

After the Israeli occupation of the West Bank of the Jordan River and the Gaza Strip in 1967, a large proportion of Palestinian workers commuted to Israel on a daily basis, mainly to supply labor services in the construction, manufacturing, and agriculture industries. By 1982, 48 percent of the men aged 18-64 in Gaza and 36 percent in the West Bank were

employed in Israel (Angrist, 1996). During the late 1980s and early 1990s, the flow of Palestinian labor to Israel fluctuated in response to major political events such as the first Palestinian uprising (1987-1993), the Gulf War (1991), the Oslo agreement (1993), and also as a consequence of new Israeli policies that aimed to reduce the dependency on Palestinian unskilled labor. The most noted policy was to allow foreign non-Palestinian workers to enter the Israeli labor market. According to the Israeli Central Bureau of Statistics (2004), during 1995-2004 about 60 percent of foreign non-Palestinian workers were allocated in the same industries that traditionally hosted Palestinian workers.

In September 2000, the violence between Israel and the Palestinians reached a peak when as a response to the visit of Ariel Sharon to the Haram al-Sharif/Temple Mount the second Palestinian uprising (the al-Aqsa Intifada) started. Palestinian movement to Israel was severely limited, and the number of workers commuting to Israel dropped sharply. The political instability since September 2000 has differed in intensity and character between cities in the West Bank, between the West Bank and Gaza, and over time. For a more detailed description of the different periods of violence during 2000-2004, see Jaeger and Paserman (2008). Figure 1 depicts the share of Palestinians *employed* in the Israeli business sector for the 1990-2005 period. The focus of this paper is on the short-run effects of the increase in the Palestinian domestic labor supply after September 2000.[6,7]

Along with changes in the border policies toward foreign non-Palestinian workers (which aimed to lower the demand for Palestinian labor), Israel responded to Palestinian attacks and local disruptions by enacting a number of policies that affected Palestinian mobility in

[6]The 1993-1997 period is also characterized by a reduction in the number of Palestinians commuting to Israel that might have had an effect on domestic wages and employment. It is not analyzed in this paper because the disruptions to the supply of labor were temporary so that workers expected to return to the Israeli market and thus not creating a permanent supply shock in the Palestinian market.

[7]Notice in Figure 1 that the share of *employed* Palestinians in Israel declines sharply in September of 2000, as the borders closed. However, the sharp increase in the local labor supply, depicted in Figures 2a and 2b, did not occur until the third quarter of 2001. This reflects the difference between actual employment and the adjustment of expectations about work location.

the West Bank and the Gaza Strip and into Israel. These policies included: a reduction in the number of work permits issued to Palestinians, a change of group permits (based on age and marital status) to individual permits, curfews imposed on Palestinian cities, external and internal closures, and, finally, in 2002 Israel began to build a separation barrier.[8]

Several studies have considered the Israeli-Palestinian labor markets. Angrist (1996) used quarterly time-series on person-days under curfew in the West Bank and Gaza as an exogenous supply shock to identify the effects on wages paid to Palestinians *employed in Israel*. His analysis utilized data from 1981-1991. This study, in contrast, is primarily interested in the response of Palestinian wages in the local labor market, uses a different data set, and employs a different identification strategy.

More recent studies have attempted to estimate the cost of the political conflict on the labor market (Aranki, 2004; Friedberg and Sauer, 2004). Specifically, Miaari and Sauer (2006) used data from the 1999-2004 period to estimate the effects of foreign workers in Israel and temporary closures on Palestinian employment rates in Israel and their monthly earnings. Accordingly, their estimates included the effect of moving from better-paid jobs in Israel to lower-paid ones at home. The current study, however, primarily focuses on estimating the effects of the increase in the Palestinian labor supply on wages and employment *in the West Bank*. Rather than estimating the reduced form effects of the Israeli policies (e.g. foreign workers, closures) on labor market outcomes, I attempt to identify the response of the labor market to an increase in the supply of workers separately from the direct effects of the political instability.

[8] Internal closures restrict mobility within the West Bank (mainly though permanent and temporary checkpoints), the external ones imply a complete closure of the borders with Israel.

3 Data

3.1 Overview

Most of the recent literature regarding the Palestinian labor market treats the West Bank and the Gaza Strip regions separately (Friedberg and Sauer, 2004; Aranki, 2004).[9] This separation is necessary because the two regions are geographically distant with no mobility of workers between them and have different economic characteristics. In this paper I focus on the labor market in the West Bank, excluding East Jerusalem and Gaza from the analysis. I exclude East Jerusalem because Israeli restrictions on Palestinian mobility do not apply on the residents of East Jerusalem. Gaza is excluded because I cannot apply my identification strategy there. The restriction on the mobility of Gazan residents started before September 2000 with no variation in the labor supply between smaller regions of Gaza.

The data on Palestinian workers comes from the Palestinian Labor Force Survey (PLFS) for the years 1997-2004. Daily wages are reported only for 2000-2004; hence, it will be the main sample used for the analysis. The 2000-2004 sample includes all men aged 18-65 in the West Bank and excludes self employed and unpaid family workers. The sample has 81,464 observations at the individual level, and provides a wide range of demographic and labor status information. Individuals also report their main workplace location (e.g. Israel, the West Bank, or none), and, on average, about 90 percent of the employed workers in the sample report their daily wages. Real daily wages are in 1996 prices and are deflated using the consumer price index on a quarterly basis. Women are excluded from the analysis because their labor force participation rates are small (around the 10-11 percent) and do

[9] The West Bank constitutes about two thirds of the Palestinian population. For a more detailed comparison between the labor market in Gaza and in the West Bank see Kleiman (1992).

not change over the sample period.[10,11]

As a measure of political instability I use data on the number of Palestinians killed by Israeli army forces. The data on fatalities were gathered by B'Tselem and are considered reliable both by the Israelis and Palestinians. The data is on a monthly basis by city in the West Bank. The dates and duration of curfews starting in June 2002 (when Israel re-occupied most of the Palestinian cities) were gathered by the Palestinian Red Crescent.

3.2 Descriptive Statistics

Table 1 reports some of the main characteristics of the Palestinian labor market over the period 1997-2004 for men, aged 18-65, for three sub-samples: workers employed in the West Bank, individuals who usually work in Israel, and unemployed individuals who did not report a work location. The fraction of employed men in the West bank remained relatively stable, around 43 percent on average, while the unemployment rate increased dramatically, from 5 percent in 2000 to 19 percent in 2004.[12,13]

Historically, the supply of Palestinian workers to Israel was never stable; from time

[10] In 1995, the Palestinian Central Bureau of Statistics (PCBS) was established, and the first labor force survey was conducted in the third quarter of 1995. Previous studies on the Palestinian labor market used the Territories Labor Force Survey (TLFS). This survey was conducted by local enumerators employed by the Israeli Civil Administration in the Occupied Territories.

[11] The PLFS data set is especially attractive because it was collected by Palestinian enumerators. Hence, measurement errors due to misreporting, especially for variables related to working in Israel, are expected to decrease. Despite periods of severe restrictions on mobility, the survey was conducted with very few interruptions, mainly because local enumerators were employed in different cities so that restrictions on mobility between cities in the West Bank did not affect the collection of the data. This said, the sample size collected during 2002-2004 is slightly smaller in size than previous years. I adjust for these differences by weighting the sample to represent the entire population in the West Bank.

[12] The labor force participation rate (not reported in Table 1) increased slightly from 18 to 24 percent between 2000 and 2004.

[13] The sample size is smaller during 2002-2004 compared to the period of 1998-2001. Two main reasons account for that. First, the full sample (before any observations are dropped) is smaller in 2002-2004 because of the political conflict and the challenge in collecting the data. Second, there is an increase in the proportion of workers who report to be self-employed, which are dropped from the sample. For example, the share of self-employed in 2000 is only 20 percent while it is 30 percent during 2002-2004. Self employed are not included in the final sample. To account for these differences I use sample weight to represent the entire population and I show that the results are not driven by changes in the composition of the labor force.

to time it would decrease as a result of political events. However, these reductions were temporary, and the fraction of Palestinian men working in Israel would rise again (Angrist, 1996). Even during the 1990s, when Israel opened its labor market to foreign non-Palestinian workers, about 30-35 percent of Palestinians still commuted to Israel. The change in the fraction of workers after the year 2000 was significantly different from past experiences. It dropped from 31 percent in 2000 to 12 percent in 2004, more than a fifty percent change (see Table 1).

The question about work location is asked with regard to current or usual job. Usual commuters who were unemployed at the time of the survey could still report Israel as their work location, while other unemployed workers did not report a work location. Thus, the work location variable incorporates information about both current location and *expectations* about work location. This is reflected in the high proportion of unemployed workers who continued to report Israel as their work location in 2001, when workers still expected to go back. As a result, the first sharp increase in the domestic labor supply (as defined later in the paper) did not actually occur until the third quarter of 2001, and continued to vary through 2004 (see Figures 2a and 2b).

Figure 3 plots the quarterly mean log real daily wages for residents of the West Bank who were employed locally for the years 2000-2004.[14] The figure shows a sharp decrease immediately after the outbreak of the second Intifada in the fourth quarter of 2000. The wages increase slightly towards the beginning of 2001 and then continue to decrease gradually throughout 2002-2003 and stabilize at a lower rate by 2004. Between the second quarter of 2001 and the last quarter of 2004 daily wages fell by about 14 percentage points.

[14]Daily wages are reported in constant 1996 New Israeli Shekels (NIS). In 1996, 1 NIS equals approximately 0.33 dollars.

3.3 Composition Effects

A common problem in the immigration literature is that the observed reduction in wages might be a result of a "composition" effect (Friedberg, 1995). The idea is that the observed city-level mean wages are composed of the wages of natives and of the new immigrants. Therefore, if immigrants earn less than natives (for example because of skill differences), then the average wage in cities with higher proportions of immigrants will be lower even if immigrants have no adverse impact on the wages of natives.

Since individuals who were employed in Israel in the past (and are not anymore) cannot be identified, decomposing the wages between past commuters and non-commuters is not possible. However, we can use changes in observable determinants of wages (such as education, and age) to address the likely impact of composition changes on local average wages. As shown in Table 1, the distribution of skills (education and age) over time among works employed in the West Bank, workers who usually commute to Israel, and the unemployed seems to be remarkably stable across the three populations given the large changes in shares. The average characteristics of workers who usually commute to Israel hardly moves despite their numbers being cut by more than half, and the average characteristics of the unemployed did not change much despite their numbers more than doubling. There is a slight increase in the mean years of education and age of workers employed in the West Bank. It might indicate that the most skilled workers among past-commuters replaced unskilled workers in the local labor market, while driving unskilled workers into unemployment.

To further explore the potential impact of composition changes, I estimate the following wage equation conditional on demographic characteristics separately for the years 2000-

2004 restricting the samples to include only workers employed in the West Bank:

$$\ln W_{it} = \sum_q t_{iq}\alpha_{qt} + \sum_s a_{is}\gamma_{st} + \sum_c b_{ic}\delta_{ct} + \sum_d g_{id}\eta_{dt} + m_i\beta + r_i\sigma + \epsilon_{it} \quad (1)$$

In (1) t_{iq} is a dummy variable indicating whether person i is observed in quarter q, a_{is} is a dummy that indicates if i is in education group s, b_{ic} is a dummy that indicates if i is in age group c, g_{id} is a dummy for industry d, m_i is a marital status dummy, and r_i indicates whether i lives in a refugee camp.[15] After obtaining the estimates I decompose the decline in average wages between the year 2000 and each of the years that follow using the Oaxaca method, Oaxaca (1973). This decomposition helps in determining which percentage of the decline in average wages is due to changes in the average characteristics and which is due to changes in the coefficients.

The results of the decomposition are in line with the raw data in Table 1.[16] Between 2000 and 2001, 25 percent of the decline in wages is due to changes in the mean characteristics, but this figure drops to less than 1 percent when the average decline of 2000-2002 is decomposed and becomes negligible for the years 2000-2003 and 2000-2004. This analysis provides additional evidence that changes in the average wages are not due to composition effects but are a result of other factors.

3.4 Mobility between Cities in the West Bank

The Israeli restrictions on Palestinian mobility to Israel were accompanied by restrictions on the movement of Palestinians between cities in the West Bank. These restrictions, in

[15] The education groups indexed by s are 9-11, 12, 13-15 years, and 16 or more years. The age groups indexed by c are 25-34, 35-44, 45-54, 55-64. The industries indexed by d are agriculture, manufacturing, construction, commerce, hotels and restaurants, and services. The omitted industry group is transport and communication.

[16] The results of the decomposition are not reported and can be provided from the author upon request.

the form of road blocks and check points, increased dramatically the traveling time between relatively close cities. Moreover, the cost of daily commuting between cities in the West Bank also increased because short and direct routes that pass through Israel were blocked to Palestinians. Instead, Palestinians have to take much longer countryside roads which in some instances more that triple regular traveling time.[17] As a result, it is likely that most workers who could not travel to Israel anymore would have had to look for jobs in their city of residence, and as a consequence, the labor supply shocks would have been absorbed locally. Thus, in the analysis I assume that past-commuters who could not work in Israel anymore looked for jobs in their city of residence because they were unable to commute to another city. But how effective were these restrictions in practice? There is, for example, some anecdotal evidence of Palestinians trekking in the countryside to avoid the barriers and checkpoints imposed by the Israeli Army. It is not clear, however, how many of these commuters are day workers and what is the quantitative importance of this phenomena to the empirical analysis.

Fortunately, individuals who are employed in the West bank are also asked whether they work in their own city of residence or commute to a different city in the West Bank. The data shows that the percentage of workers who traveled to a different city in the West Bank (from the total population of employed men) *decreased* from 10 to 7 percent between 2000 and 2001. This trend was reversed in 2002, when 13 percent of workers reported that they commuted to a different city; by 2004 the share of workers commuting to another city had decreased back to 10 percent.[18] One needs to be cautious in the interpretation of the

[17] The Israeli and International press provide ample evidence about the increase in the commuting time between relatively close cities in the West Bank. For example, Bethlehem and Ramallah are 20 miles apart with a direct commuting time of about 30 minutes. Due to mobility restrictions, Palestians have to take alternative routes that increase the travel time to at least 2 hours.

[18] These figures are based on aggregate analysis of the data. I repeated the same analysis using data from each city individually. There are no significant differences between the aggregate and the city-level figures.

2001 figures since people might have reported to be working in Israel even if they could not commute at the time of the survey. In other words, the expectations of past-commuters in 2001 might have been such that workers were not looking for another job either in their same city of residence or outside their locality.

One possible way of describing the 2002 figures is that of the 23 percentage point decline in the share of workers who usually work in Israel (between 2000 and 2002, see Table 1), about 13 percent can be accounted for by employment outside the worker's city of residence (an increase of 3 percentage points). This is also the case for 2003 where the share of workers employed in another city is 12 percent. In order to further explore the importance of this phenomena, I calculated the city-level correlation between the share of workers commuting to another city and the share of workers usually working in Israel. Indeed, I find a negative correlation between the two ranging, on average, from 0.05-0.10 (in absolute value) during 2002 and 2003 and a smaller correlation in 2004. Since these between-city flows are endogenous, the results I provide should be interpreted as reduced form estimates of labor supply shocks in the presence of limited, but positive mobility. Nevertheless, the relatively modest change in mobility patterns between cities in the West Bank compared to the large change in the labor supply offers a unique environment to study the effects of labor supply shocks on labor market outcomes.

Permanent migration between cities in the West Bank or from cities in the West Bank to other countries might also attenuate the results. I do not have data on permanent migration at the city-level in the West Bank, but considering the traditional structure of the Palestinian society and the period of instability under consideration it does not seem plausible that significant changes in internal permanent migration patterns are occurring. However, in the case that permanent migration is quantitatively important, the estimates

will be biased towards zero.

As for the ability to emigrate outside of the West Bank, I do not have data on emigration rates at the city-level. Aggregate data on the net migration rate in the West bank can be found in the 2008 CIA world factbook for the period of 2000-2004. The data suggest that there was a positive net migration rate ranging between 1.51 per 1000 in 2000 to a high of 2.98 per 1000 in 2004. This gives me confidence that large flows of emigration from the West Bank were not occurring during the period I analyze.[19]

4 Empirical Framework

4.1 Within City Variations

As mentioned in previous sections, the source of the increase in the Palestinian labor supply is the decrease in the number of workers who are able to commute to Israel. Formally, individuals in the sample are categorized into one of three exhaustive and mutually exclusive categories: employed locally, usually work in Israel, and unemployed who do not report a current or usual work location.[20] Since the data does not allow me to measure the absolute size of the labor force in each city, the labor supply measure is calculated as the share of the employed locally and the unemployed from the entire working force. Taking the natural logarithm, it can be expressed as follows:

$$L_{jcqt} = \ln[D_{jcqt} + U_{jcqt}] - \ln[D_{jcqt} + U_{jcqt} + I_{jcqt}] \tag{2}$$

[19] The net migration rates reported in the CIA factbook are high, especially because the sample period is characterized by high levels of political instability. Even if these figures are biased upwards, it is unlikely that a large flow of emigration was taking place.

[20] Employed individuals who did not report a workplace locations were dropped out of the sample. Over the 2000-2004 sample period 20 such observations were dropped.

where D_{jcqt} is the number of workers employed locally (of skill j, in city c, quarter q, and year t), U_{jcqt} is the number of unemployed men who did not report a work location, and I_{jcqt} is the number of workers who reported Israel as their usual work location. In this approach, workers prohibited from employment in Israel are assumed to be "pushed" into either employment or unemployment in their local labor market.[21] Therefore L measures within-city variation in the log labor supply over time. Notice that, according to this measure, an unemployed worker who reported Israel as his usual work location is classified under I. Consequently, as Figures 2a and 2b show, the sharp increase in the local labor supply (without a skill distinction) did not occur until the third quarter of 2001 even if the borders were closed in September 2000. This reflects the fact that past-migrants did not change their expectations about the prospects of getting back to work in Israel right after September 2000 but updated their expectations gradually over the entire sample period. This allows me to use quarterly variation in the labor supply at the city level and over time to identify the effects on wages and unemployment.[22]

The identifying assumption is that the change in the number of workers reporting Israel as their work location from each city varies over time for reasons that are uncorrelated with the underlying or current city-specific economic conditions, but are only determined by Israeli security measures based, partially, on the level of political unrest.[23] This can be a concern if political unrest and local violent disruptions that varied quarterly across cities impacted wages directly. In this case, areas that were most affected by Israeli sanctions

[21] Provided that the population in each city is constant over the time period I analyze, or that the population in each city grows at the same rate, including city and year fixed effects will capture the term $\ln[D_{jcqt} + U_{jcqt} + I_{jcqt}]$.

[22] The analysis in this paper excludes non-participants from the sample and from the labor supply measure. However, since the closure of the borders might affect the participation decision of Palestinian men (e.g. via a "discouraged-worker" effect), I include in unreported specifications non-participants in both terms of equation (2). This allows me to endogenize the participation decision. This alternative measure of labor supply does not affect my results in any significant way.

[23] There is substantial negative correlation between the number of workers employed in Israel and the number of fatalities. The correlation is around -0.42, and -0.30 for the low and high skilled, respectively.

might also have experienced a larger overall decline in economic activity. To the extent that this was true, my estimates will be upward biased. To deal with this concern, I explicitly control for measures of political instability that vary by city and over time in the regressions and show that my results are similar both in turbulent and more stable cities. In addition, L might be endogenous because the size of the labor force changes in response to the closure of the borders, either because workers drop out of the labor force or emigrate. The identification assumption, however, suggests that we can use variation in the log of the *number* of individuals usually working in Israel from each city, $\ln[I_{jcqt}]$, as an instrument.

Estimating the standard errors of a city-level measure of labor supply using an individual-level wage regression is potentially problematic because of serial correlation in the error term (Bertrand et al., 2004). One, of course, could cluster the standard errors at the city-level to allow for any form of serial correlation. However, as Cameron et al. (2008) point out, when the number of clusters is small (only 10 cities in this case) the standard errors are still likely to be underestimated. To deal with potential serial correlation, I adopt a strategy proposed by Donald and Lang (2007).

I start by estimating an individual-level wage regression on individual-varying characteristics:

$$w_{icqt} = X_{icqt}\lambda + \bar{W}_{cqt} + \epsilon_{icqt} \tag{3}$$

where w_{icqt} is the natural logarithm of real daily wages for individual i who lives in city c ($c = 1, ...10$), is observed in quarter q ($q = 1, ..., 4$), and year t ($t = 2000, ..., 2004$). X is a vector of personal characteristics including age group fixed effects, a marital status dummy, a dummy for working in the public sector, years of education, and industry indicators. Since

my unit of analysis is at the city-quarter-year level, I include a vector of 200 fixed effects, $\bar{W}$, corresponding to each cell (5 year*4 quarters*10 cities=200), and ϵ is an error term. I estimate this regression separately for 2 broadly defined skill groups: The first includes workers with less than 12 years of education (i.e., low skilled) and the second includes workers with 12 or more years of education (i.e., high skilled).[24] The estimated coefficients of the fixed effects, $\hat{W}$, represent average wages for each skill group in every city, quarter, and year net of individual-varying characteristics. The estimated coefficients on the fixed effects then become the dependent variable in a regression that estimates the effect of an increase in a quarterly measure of labor supply at the city level on average wages in each city.[25]

Formally, the second step is to estimate the following regression:

$$\hat{W}_{cqt} = \gamma_1 UL_{cqt} + \gamma_2 SL_{cqt} + Z_{cqt}\theta + C + Q + T + \varepsilon_{cqt} \tag{4}$$

where $\hat{W}$ is the skill-specific average wage at the city-quarter-year level, which is equal to the estimated fixed effects in equation (3), UL is the natural logarithm of a measure of the low-skilled labor supply (as defined in equation 2) and SL is the natural logarithm of a measure of the high-skilled labor supply. The effect of the increase in the labor supply of low-skilled workers on (low or high skilled) wages is captured by $\gamma_1 = d\hat{W}/dUL$ and the effect of the increase in the labor supply of high-skilled workers on wages is captured

[24] Unskilled workers are defined as men with less than 12 years of education. Alternatively, I define them as those with schooling years that are less than the mean plus one half of the standard deviation of years of schooling for a year-of-birth cohort. For example, workers who were born before 1944 are considered unskilled if they have 9 years of education or less. However, unskilled workers that were born after 1955 are defined as unskilled if they have less than 12 years of education. Both definitions yield similar results and I choose to work with the first for simplicity.

[25] Donald and Lang (2007) show that if the group errors are independent then the two-step estimator is efficient. Moreover, with a large number of groups (200 in my case) the t-statistics resulting from the two-step estimation should have very close to a normal distribution. A large number of observations per cluster reduces concerns about heteroskedasticity. In the sample I use, about 70 percent of the clusters have more than 200 observations.

by $\gamma_2 = d\hat{W}/dSL$. This specification allows the estimation of the own- and cross-wage elasticities. The vector Z includes instability measures that vary across cities and over time, such as the number of Palestinians killed by the Israeli security forces and the number of days under curfew to control for city-specific effects of political instability. I also include a set of city fixed effects, C, to capture time-invariant city characteristics, year fixed effects, T, to capture long term trends and common shocks to the West Bank, and quarter fixed effects, Q, to capture seasonality. ε is an error term.[26,27]

Before I present the results of the estimation, it is useful to depict the variation in the domestic labor supply across cities and their relation to the political instability within those cities. Table 2 presents annual figures for the number of Palestinians killed by the Israeli army in ten different cities ranked in descending order.[28] For example, the city of Nablus and Jenin experienced the largest numbers of fatalities, while the cities of Qalqilya and Jericho experienced substantially lower number of fatalities. Figure 2a graphs the domestic labor supply, as defined in equation (2), for the six cities with the highest numbers of fatalities (Nablus to Bethlehem) and Figure 2b graphs the same measure of labor supply for the four remaining cities with the lowest numbers of fatalities. Both figures show large labor supply shocks in most cities. For example, both Jenin and Qalqylia experienced a very similar increase in the labor supply starting from the third quarter of 2001 despite the fact that Nablus was much more politically turbulent. The local labor supply, however, varies more in more stable cities during 2002-2004 (see Figure 2b) compared to cities with

[26] The two-step estimator proposed by Donald and Lang (2007) does not address possible serial correlation in the city-level idiosyncratic terms over time. I tested for serial correlation in panel data using the method proposed by Wooldridge (2002). The test for both the low- and high-skilled wage specifications has a p-value of about 0.13 and 0.15, respectively. Thus, I cannot reject the null hypothesis of no serial correlation. Similar results are found for the unemployment specifications.

[27] Even if I cannot reject the hypothesis of no serial correlation in the panel, we might still worry about the estimated standard errors. Clustering is not a good option since there are only 10 cities in the data. Despite this, clustering the standard errors at the city-level produces slightly larger, but mostly similar, standard errors than the Huber-White standard errors I report in the paper.

[28] In practice, fatalities vary also by quarter. I include in Table 4 only the annual figures.

higher political turbulence where there was little variation in the labor supply measure after the initial large shock in 2001, suggesting that mobility to Israel was easier from more stable cities. More precisely, I find a negative correlation between the variation in the number of workers employed in Israel and the number of fatalities in each city, (about -0.42 for the low skilled and -0.30 for the high skilled). This, of course, highlights the problem that political unrest at the city-level may have direct impact on wages. Interestingly, however, the large negative correlation between the number of fatalities and the labor supply becomes much weaker (around -0.05) once I control for year and quarter effects. This is encouraging since it indicates that city-level demand effects are only weakly correlated with the labor supply measure, after controlling for region-wide time effects and thus are unlikely to attenuate the results significantly.

4.2 Wage Effects

Panel A of Table 3, presents the results of estimating equation (4) using low-skilled wages as the dependent variable. Starting from column 1, where I use a measure of total labor supply, L (with no skill distinction), the results indicate that a 10 percent increase in the labor supply decreased low-skilled wages by about 1.2 percent, significant at the 5 percent level. Column 2 uses a measure of low-skilled labor supply (UL) and the estimated effect suggests that a 10 percent increase in the low-skilled labor supply reduced their own wages by about 0.7 percent, also significant at the 5 percent level. Including the low- and high-skilled measures of labor supply (UL and SL, respectively) jointly in the regression in column 4 reduces the coefficient on the low-skilled labor supply to -0.030 and increases substantially the standard error while the coefficient on the high skilled labor supply remains sizable (-0.160) but also looses significance. Because of the high correlation

between the low- and high-skilled labor supply measures (about 0.83), the results in column 4 should be interpreted cautiously since they are likely a reflection of a multicollinearity problem. Despite the fact that the standard errors increase substantially, it is encouraging that the signs of the coefficients do not change and that the size of the coefficient on the high-skilled labor supply remains large. Moreover, a joint F-test rejects the hypothesis that the coefficients are jointly equal to zero. Including the high-skilled labor supply on its own in the regression (without the own elasticity) in column 3 indicates that a 10 percent increase in the high-skilled labor supply reduces low-skilled wages by about 2.1 percent, significant at the 5 percent level. These results suggest that high-skilled workers might compete for low skilled jobs causing a decline in the wages of low-skilled workers.

Since we might still suspect that the local supply measure is endogenous, the identifying assumption suggests that we can use the log of the *number* of individuals who usually work in Israel, I, from each city as an instrument for the labor supply measure.[29] Similarly, the log of the number of unskilled and skilled individuals who usually work in Israel (UI and SI, respectively) can be used to instrument the low- and high-skilled labor supply. The correlation between the number of individuals who usually work in Israel from each city and the measure of labor supply in each city is negative, strong, and highly significant with an F-test of about 94. The correlations between the number of low- and high-skilled individuals who usually work in Israel and the skill-specific labor supply measures are also negative and highly significant with F-tests that are at least above 50.[30] Panel B of Table 3 presents the reduced form results - the effects of changes in the number of individuals

[29] Endogeneity in the labor supply measure (equation 2) can occur because some of the employed or unemployed drop out of the labor force or emigrate. Instrumenting the local labor supply with the number of individuals who usually work in Israel takes advantage only of the exogenous variation in the local labor supply generated by restrictions on mobility to Israel. The validity of this instrument is threatened if some of the workers who usually worked in Israel drop out of the labor force or emigrate.

[30] The first-stage results are not presented in the paper but can be provided from the author upon request.

who usually work in Israel on the wages of the low skilled. The results are positive and significant at least the 5 percent level, suggesting that an increase in the number of workers who usually work in Israel increases local unskilled wages. The IV results, presented in Panel C of Table 3, are slightly larger that the OLS results but are mainly consistent with the findings reported in Panel A. The coefficient in column 2 suggests that a 10 percent increase in the supply of the low skilled reduces their wages by about 1 percent, significant at the 5 percent level. Including the high-skilled labor supply in the regression reduces the magnitude of the effects and increases the standard errors, but the effect of the high skilled remains larger in magnitude than that of the low skilled. Including it on its own in column 3 confirms this finding.

Panel A of Table 4 includes the results of estimating equation (4) using high-skilled wages as the dependent variable. Unlike the results in Table 3, the coefficients on the different labor supply measures are small and statistically insignificant. The coefficient on the high-skilled labor supply in column 2 is about -0.0462 and maintains the same magnitude with or without including the labor supply of the low skilled, which enters the regression with a very small coefficient and large standard error. These results suggest that high-skilled workers who could not migrate to Israel competed for low-skilled jobs in the West Bank. This is not entirely surprising because, despite the higher skills of these workers, jobs in Israel were mainly concentrated in traditionally low-skilled industries such as construction and agriculture. The difference in the effects on the low- and high-skilled workers also suggest that the coefficients are not picking up the direct effects of political instability which likely affected, at least to some degree, the wages of all workers regardless of their skill level.

The IV results for the high skilled are also in line with results reported in Panel A

of Table 4, but with one exception. The coefficient on the high-skilled labor supply in column 2 is larger (-0.0924) and statistically significant at the 5 percent level. Including the low-skilled measure in the regression increases the coefficient even more (in absolute value), to -0.1773, and remains significant at the 10 percent level. These results suggest that an increase in the labor supply of the high skilled reduces their wages, but an increase in the supply of the low skilled does not impact high-skilled wages.[31]

It is also useful to pay some attention to the instability measures included in the regressions. Their inclusion is supposed to capture direct effects of city-level political instability on wages. For low-skilled wages, the coefficient on the number of fatalities (not presented in the Table) is small and statistically insignificant while the effect of days under curfew is negative and significant at least at the 10 percent level. Excluding fatalities and days under curfew from the analysis hardly changes the results. This might be occurring because fatalities had little immediate effect on wages after controlling for year and quarter fixed effects. In fact, the raw correlation between fatalities (or curfews) and local labor supply is reduced significantly once time effects are taken into account.

One scenario which is consistent with the wage results is that while low-skilled workers compete mainly for low-skilled jobs, high-skilled workers compete over both low- and high-skilled jobs. With no growth in the demand for labor, this might also suggest that an increase in the supply of low-skilled workers will increase the unemployment rate of the low skilled but will have no effect on the unemployment rate of the high skilled. Conversely, an increase in the supply of high-skilled workers should increase the unemployment rate of both the low- and the high-skilled workers since they compete for jobs in both markets.

[31] Since changes in expectations of returning to Israel might also be endogenous, I also experimented by using the number of workers *employed* in Israel from each city as an instrument. That is, I exclude all workers that are unemployed but continue to report Israel as their work location from the instrument. The results of this experiment repeats the general results reported in the paper, but with slightly bigger magnitudes for the low skilled. These results can be provided upon request.

The next section tests these hypotheses formally.

4.3 Unemployment Effects

As in the wage analysis, I start by estimating an individual-level regression where I regress an indicator for unemployment (takes 1 if unemployed and 0 if employed, regardless of work location) on individual varying characteristics such as age, education and marital status, and a full set of city-year-quarter fixed effects. I estimate these regressions separately by skill group and obtain a set of city-year-quarter unemployment rates net of individual effects. I then use the estimated coefficients on the fixed effects as my dependent variable to investigate the relationship between the increase in the labor supply and unemployment. However, using the measure of the labor supply in equation (2) is problematic because by construction the number of unemployed men is included in both terms of the equation. Instead, I present only the reduced form results where I estimate the effect of changes in the number of Palestinians who usually work in Israel from each city on unemployment rates.

Panel A of Table 5 includes the results on the unemployment rate of low-skilled workers. Column 1 suggests that a 10 percent increase in the number of individuals usually working in Israel (I, with no skill distinction) reduces the low-skilled unemployment rate by about 0.6 percentage points, significant at the 1 percent level. Similarly, the coefficient on the number of low-skilled workers who report Israel as their work location (UI) in column 2 suggests a negative association between the two variables. This is consistent with the results on wages where an increase in the low-skilled labor supply reduced the wages of the low skilled. Including the number of high-skilled individuals who usually work in Israel (SL) in the regression reduces the magnitude of the effect but it remains significant at

the 10 percent level. The coefficient on the high skilled also enters the regression with a negative sign but it is not statistically significant (in column 4), probably because of multicollinearity.[32] These findings support the argument that high-skilled workers compete for both low- and high-skilled jobs, pushing some of the low skilled into unemployment.

Panel B of Table 5 repeats the analysis using the high-skilled unemployment rates as the dependent variable. Consistent with the wage results, the effects on unemployment are smaller compared to the effects on the low-skilled unemployment rates. The coefficient in Column 2, for example, suggests that a 10 percent increase in the number of high-skilled workers from each city who report Israel as their usual work location reduces the high-skilled unemployment rate by about 0.1 percentage points, consistent with the negative effects of an increase in the high-skilled labor supply on their own wages. As expected, however, the relationship between the number of low-skilled individuals who usually work in Israel and the unemployment rate of the high skilled is small and statistically insignificant (column 3 and 4). This is consistent with the scenario that low-skilled workers do not compete for high skilled jobs.[33]

4.4 Robustness Check

The main identifying assumption in the paper is that the number of workers who usually work in Israel varies across cities and over time for reasons that are uncorrelated with the underlying economic conditions in each city and are mostly determined by the Israeli security forces based on the level of local unrest. Since political unrest can have direct

[32] Excluding fatalities and days under curfew does not change the results significantly both for the skilled and unskilled workers.

[33] Evidence for occupational downgrading among the high skilled workers would also be consistent with the scenario of high skilled workers competing over low skilled jobs. The PLFS classifies workers into seven broadly defined groups. Indeed, in the year 2000, 37 percent of the high skilled report to work in "elementary occupation". This number increases to 52 percent by 2003. Most of the change in the occupational distribution comes from a reduction of high skilled workers reporting to be "craft and trade workers".

impact on wages, not controlling adequately for these city-specific factors will bias my estimates upwards. It is reasonable to think, however, that cities with low fatalities and days under curfews are also likely to have suffered less from unobserved demand-shifts related to the political unrest. Thus, replicating the findings using only data from these cities should increase the confidence in the findings I report in Tables 3 and 4.

Table 6 reports the results of the wage effects when the sample is restricted to include the four cities with the lowest numbers of fatalities (last four in Table 2). Surprisingly, the results for the low skilled (Panel A) are slightly larger than the results reported in Table 3 but are in general very similar. The results for the high-skilled workers in Panel B, columns 5-8 are slightly smaller in magnitude but are still statistically insignificant.[34] This experiment suggests that the results in Tables 3 and 4 are not merely driven by demand-related factors.

5 Conclusion and Discussion

This paper analyzes the adjustment of labor markets to large inflows of workers. It contributes to the existing literature in several ways. The availability of quarterly data allows the investigation of short-term response dynamics of markets to large increases of labor supply. This is in contrast to most studies on the effects of immigration that use decennial or yearly data (Borjas, 2003; Card, 1990). Another unique feature comes from the fact that, because of security measures, the West Bank was segmented into closed labor markets, with positive but limited mobility across cities. As a result, the empirical strategy I employ is arguably not contaminated by a severe native out-migration problem common in the literature. Finally, in contrast to other recent studies of the Palestinian labor market,

[34] The results on unemployment when the sample is restricted to politically stable cities are in line with the results in Table 5 , and consistent with the findings on the wage effects.

I try to disentangle the effects of the labor supply shocks on wages and employment from the effects of the political conflict on the Palestinian labor market. This distinction may be useful when evaluating future border policies between the two nations.

The results reveal an interesting adjustment dynamics of the low- and high-skilled labor markets. I find that an increase of 10 percent in the supply of low- and high-skilled workers reduces the wages of the low-skilled workers by about 1-2 percent. Consistent with the wage results, I find that an increase in the number of low- and high-skilled workers who usually work in Israel reduces the unemployment rate of low-skilled workers.

The wages of high-skilled workers, on the other hand, seem to respond mostly to increases in their own labor supply, although these results are not as precisely estimated. The effect of an increase in the low-skilled labor supply on high-skilled wages is small and statistically insignificant across specifications. I also find that an increase in the number of high-skilled individuals who usually work in Israel reduces the high-skilled unemployment rates. In contrast, an increase in number of low-skilled individuals who usually work in Israel has no effect on the high-skilled unemployment rates. The wage and unemployment results for the low- and high-skilled workers are consistent with a scenario in which high-skilled workers compete for low- and high-skilled jobs, pushing low-skilled workers into unemployment.

Despite the uniqueness of the Palestinian experience, this paper sheds light on the effects of work migrants returning to their home country and the effect of a large labor supply shock on labor markets in developing countries. This might be of particular importance to debates about immigration policies and their effects on both hosting and source countries.

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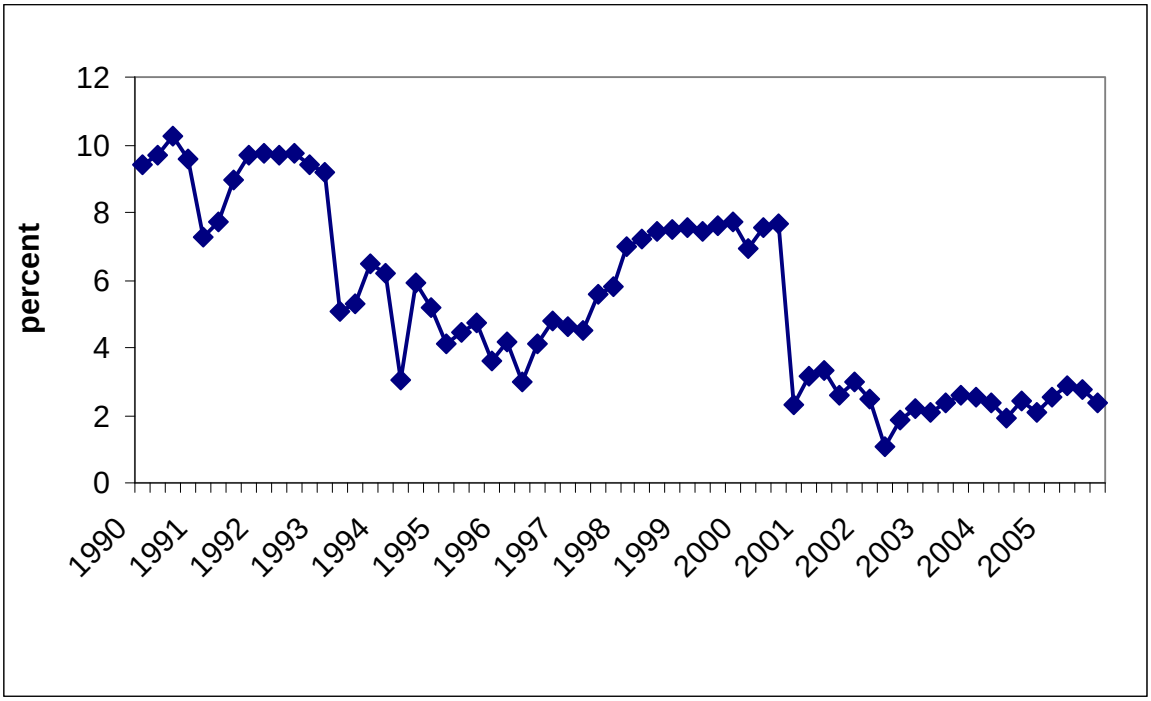

Figure 1: Employed Palestinian as a share of total employed persons in the Israeli business sector. Source: Bank of Israel, Data Series Database. Labor Force, Employment and Wages, 1990:3-2005:4.

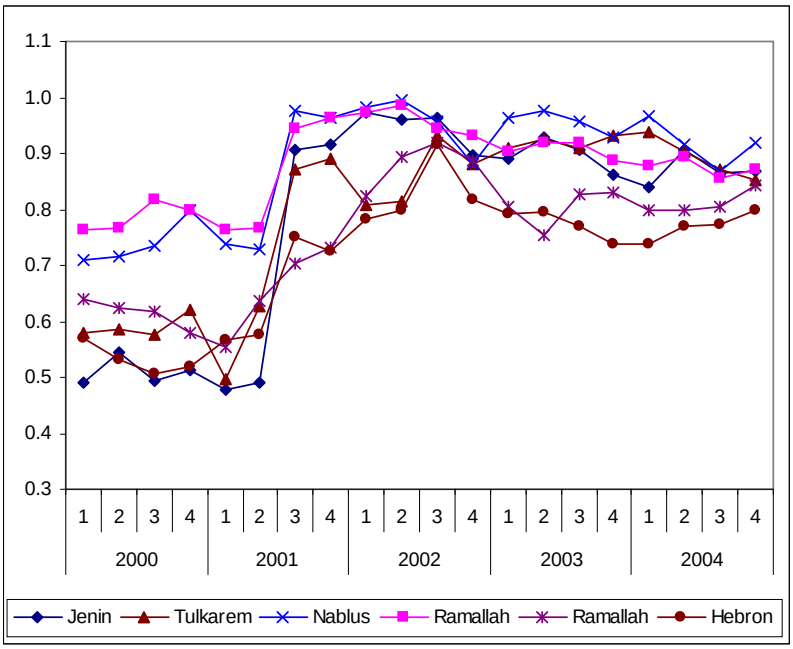

Figure 2a: Domestic labor supply, as defined in equation (2), in West Bank cities with high fatality incidents.

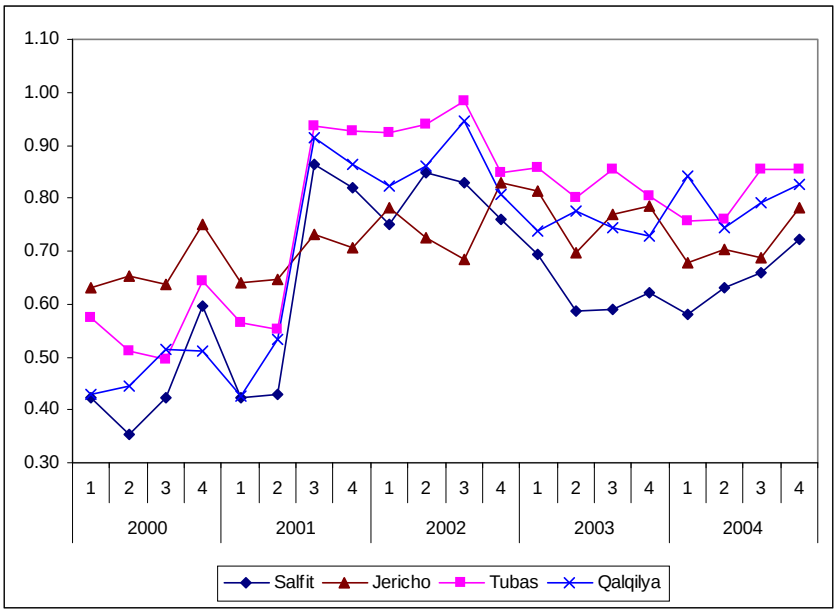

Figure 2b: Domestic labor supply, as defined in equation (2), in West Bank cities with low incidents of fatalities.

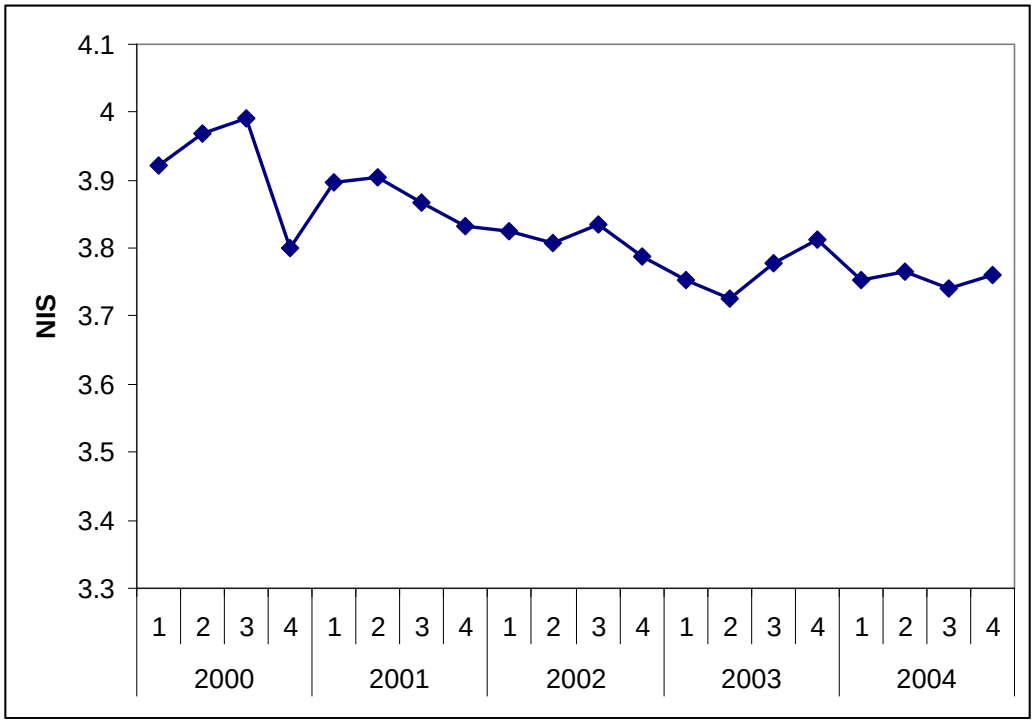

Figure 3: Mean log real daily wages for workers Employed in the West Bank, 2000:1-2004:4.

Table 1: Descriptive Statistics of Palestinians based on work location, 1997-2004

		Work in the West Bank			Usually work in Israel			Unemployed with no work location		
Year	Sample size	%	Age	Years of schooling	%	Age	Years of schooling	%	Age	Years of schooling
1997	12,413	43	31.59	10.66	29	30.76	8.90	9	28.49	9.56
1998	16,137	43	31.85	10.58	32	30.81	9.07	6	29.11	10.04
1999	16,103	45	32.29	10.74	31	30.88	8.95	5	29.75	10.06
2000	15,809	46	32.40	10.86	31	30.97	8.88	5	29.74	9.84
2001	14,427	40	33.72	11.11	21	31.25	8.86	17	30.70	9.26
2002	11,805	35	34.38	11.23	8	31.49	8.71	28	31.98	9.32
2003	13,623	43	33.92	10.98	11	31.71	8.80	21	31.46	9.47
2004	13,370	45	33.62	10.84	12	31.87	8.92	19	31.39	9.44

Note: Self employed and unpaid home workers are excluded from the samples. The samples include men aged 18-65, residents of the West Bank. East Jerusalem is excluded. Characteristics of Men out of the labor force are not presented.

Table 2: Number of fatalities in the West Bank, by region, 2000-2004.

Region	2000	2001	2002	2003	2004	Total
Nablus	30	54	170	58	74	386
Jenin	21	45	151	46	43	306
Ramallah	27	38	77	14	12	168
Hebron	20	38	67	27	15	167
Tulkarem	13	24	64	36	29	166
Bethlehem	14	34	48	10	4	110
Qalqilya	6	10	18	8	6	48
Tubas	0	9	22	6	1	38
Salfit	3	11	3	1	2	20
Jericho	7	1	3	2	3	16

Table 3: The effects of labor supply shocks on the wages of low-skilled workers in the West Bank.

			Main Results	
Panel A	(1)	(2)	(3)	(4)
L	-0.1176**			
	[0.0557]			
UL		-0.0717**		-0.0300
		[0.0377]		[0.0412]
SL			-0.2097**	-0.1606
			[0.0999]	[0.1133]
Panel B			Reduced Form	
	(1)	(2)	(3)	(4)
I	0.0250**			
	[0.0111]			
UI		0.0228**		0.0138
		[0.0103]		[0.0145]
SI			0.0191*	0.0111
			[0.0105]	[0.0148]
Panel C			IV	
L	-0.1588**			
	[0.0704]			
UL		-0.1036**		-0.0645
		[0.0472]		[0.0690]
SL			-0.2300*	-0.1268
			[0.1226]	[0.1763]
F-test	94.11	93.87	145.73	52.28

One, two, and three asterix indicate significance at the 10%, 5%, and 1% level. Fixed effects for the city, quarter, and year are included in the regressions. Other controls include the number of fatalities and days under curfew in each city. Standard errors in parenthesis are Huber-White standard errors. Sample size is 200. L is the log of the labor supply measure as defined in equation (2) with no skill distinction. UL and SL are the log of unskilled and skilled labor supply, respectively. I is the log of the number of workers in Israel with no skill distinction. UI and SI are the log of the number of unskilled and skilled workers in Israel. R-squared is about 0.75 in all specifications.

Table 4: The effects of labor supply shocks on the wages of high-skilled workers in the West Bank.

			Main Results	
Panel A	(1)	(2)	(3)	(4)
L	-0.0166			
	[0.0309]			
UL			-0.0120	-0.0001
			[0.0212]	[0.0298]
SL		-0.0462		-0.0461
		[0.0534]		[0.0749]
Panel B			Reduced Form	
	(1)	(2)	(3)	(4)
I	0.0022			
	[0.0078]			
UI			0.0004	-0.0112
			[0.0080]	[0.0113]
SI		0.0077		0.0142*
		[0.0060]		[0.0086]
Panel C			IV	
L	-0.0141			
	[0.0499]			
UL			-0.0016	0.0531
			[0.0361]	[0.0541]
SL		-0.0924**		-0.1773*
		[0.0723]		[0.1101]
F-test	94.11	93.87	145.73	52.28

See Table 3 for definitions and list of controls. R-squared is about 0.66 in all specifications.

Table 5: The effects of labor supply shocks on the unemployment rate of low and high-skilled workers in the West Bank

Panel A: Low-skilled unemployment rate				
	(1)	(2)	(3)	(4)
I	-0.0573***			
	[0.0156]			
UI		-0.0550***		-0.0371*
		[0.0153]		[0.0215]
SI			-0.0435***	-0.0220
			[0.0132]	[0.0190]
Fatalities	0.0040**	0.0040**	0.0044***	0.0040**
	[0.0012]	[0.0009]	[0.0011]	[0.0009]
Curfews	0.0019***	0.0018***	0.0020***	0.0019***
	[0.0005]	[0.0005]	[0.0005]	[0.0005]
Panel B: High-skilled unemployment rate				
	(1)	(2)	(3)	(4)
I	-0.0096			
	[0.0101]			
UI			-0.0089	0.0027
			[0.0101]	[0.0152]
SI		-0.0127		-0.0142
		[0.0083]		[0.0124]
Fatalities	0.0022**	0.0023**	0.0022**	0.0023**
	[0.0008]	[0.0007]	[0.0008]	[0.0008]
Curfews	0.0011**	0.0012**	0.0011**	0.0012**
	[0.0004]	[0.0004]	[0.0004]	[0.0004]

See Table 3 for definitions and list of controls. R-squared is about 0.67 and 0.56 for the low and high-skill specifications, respectively.

Table 6: The effects of labor supply shocks on the wages of low- and high-skilled workers in the West Bank - restricted to stable cities.

	Low skilled workers			
Panel A	(1)	(2)	(3)	(4)
L	-0.2002**			
	[0.0953]			
UL		-0.1140*		-0.0631
		[0.0605]		[0.0541]
SL			-0.3020*	-0.2109
			[0.1663]	[0.1666]
Panel B		High skilled workers		
	(1)	(2)	(3)	(4)
L	0.0084			
	[0.0447]			
UL			0.0022	0.0151
			[0.0300]	[0.0431]
SL		-0.0317		-0.0535
		[0.0724]		[0.1021]

See Table 3 for definitions and list of controls.
R-squared is about 0.73 and 0.61 for the low and high-skill specifications, respectively. Sample size is 80.