

# ETHNIC CONFLICT AND SEGREGATION IN THE MARKETPLACE: EVIDENCE FROM ISRAEL\*

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## Abstract

How does ethnic conflict affect the ethnic structure of the marketplace? To answer this question this paper uses a unique administrative dataset covering the universe of private owner transactions in the Israeli market for used passenger vehicles during 1998-2010, on several measures of the intensity of the Israeli-Palestinian conflict, and on survey data collected from market participants. I find robust evidence that escalations in the conflict breed intolerance toward members of the outgroup and lead to increased segregation between Israeli Arabs and Jews in the market for used cars.

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# 1 Introduction

Segregation is the policy or practice of separating people along racial, ethnic or other lines. Segregation may be enforced by legal barriers to cross-group interactions. Alternatively, it can emerge due to social norms or preferences regarding inter-group versus intra-group interactions. Segregation is thus closely tied to the concepts of discrimination and ingroup bias. The study of this phenomenon by economists has focused almost exclusively on residential segregation (e.g. Schelling, 1971 and Card, Mas, and Rothstein, 2008) although segregation can exist in other contexts, for example in the labor market (see Becker, 1957 and Charles and Guryan, 2008).

This paper studies segregation in a relatively unexplored domain: the product market. It investigates how ethnic conflict affects the ethnic structure of the marketplace, generating segregation by increasing the share of same-ethnicity transactions at the expense of cross-ethnicity transactions. This form of segregation has adverse economic consequences mainly because it reduces the potential for mutually beneficial trades.

More specifically, I analyze how variation in the intensity of the Israeli-Palestinian conflict affects the extent of segregation between Arabs and Jews in the Israeli market for used cars. The analysis builds on a unique dataset which covers the universe of private owner transactions of used passenger vehicles during 1998-2010 – more than 1.3 million observations in total – and allows identification of buyers’ and sellers’ ethnicities. This dataset is merged with detailed information on Israeli and Palestinian fatalities from politically-motivated violence – which number in the thousands during the period under investigation – as well as with data on public support for the peace process between Israel and the Palestinians. The exogenous nature of the temporal and spatial variation in conflict intensity facilitates credible identification of the causal effect of conflict on market outcomes.

The data show that ethnicity plays an important role in the Israeli market for used cars. The market is highly segregated: during the 1998-2010 period, Arabs bought 83 percent of cars sold by Arabs but only 14 percent of cars sold by Jews. The analysis provides robust evidence that the extent of ethnic segregation in this market depends on conflict intensity. For example, I find that an additional Israeli fatality from politically-motivated violence in the immediate vicinity of the seller’s locality in the 7 days preceding the transaction date lowers the likelihood that the buyer is Arab by 2 percent if the seller is *Jewish* but raises this likelihood by 0.9 percent if the seller is *Arab*; the size of these highly robust effects decays with temporal and spatial distance. The analysis also reveals that an increase in the number of Palestinian fatalities (controlling for the number of Israeli ones) heightens segregation in the marketplace, although the marginal effect of a Palestinian fatality is much weaker than

the marginal effect of an Israeli fatality. Controlling for the number of fatalities, I find that greater public support for the peace process with the Palestinians reduces ethnic segregation in the market for used cars.

Using survey data collected by Zussman (forthcoming), the paper provides evidence that escalations in the Israeli-Palestinian conflict lead Jewish participants in the market for used cars to hold more negative attitudes toward Arab Israelis. This highlights a possible mechanism linking conflict with market outcomes: conflict breeds intolerant attitudes and discrimination. Since there is no comparable survey data for Arabs, it is impossible to know whether a similar mechanism operates for them too. To the extent that it does, the results suggest that conflict heightens ingroup bias. The decline in the willingness to transact with members of the outgroup leads to segregation in the marketplace.<sup>1</sup>

This paper is most closely related to the literature on discrimination in product markets. There are two leading explanations for discriminatory behavior in markets. The first, introduced in the seminal contribution of Becker (1957), focuses on “taste-based discrimination”, or personal prejudice, of economic agents who dislike associating with individuals of a given race or ethnicity. The second leading theory, due to Arrow (1972) and Phelps (1972), focuses on “statistical discrimination.” According to this theory discriminatory behavior is the result of differences across groups in aggregate characteristics. The decision maker uses these differences to evaluate some outcome-relevant individual characteristics which are not easily observable.

Establishing that differential economic outcomes across groups are due to discrimination is a difficult challenge for empirical research using non-experimental data as in many cases there are unobserved, potentially outcome-relevant, factors that cannot be controlled for in the analysis. To overcome this challenge economists studying discrimination in product (and other) markets have increasingly turned to experimental methodologies. In an early influential contribution, Ayres and Siegelman (1995) used an audit study to uncover discrimination against black and female prospective buyers at new-car dealerships in the Chicago area. The study provided evidence that dealers quoted significantly lower prices to white males than to black and females buyers and argued that this is likely driven by dealers’ statistical inferences about consumers’ reservation prices.<sup>2</sup> Combining data from bilateral negotiations with complementary field experiments, List (1994) provided evidence of discrimination against minorities in the market for sports cards. The evidence suggested that

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<sup>1</sup>Segregation will result from increased intolerance of Jews toward Arabs even if it does not affect the attitudes of Arabs toward Jews: the conflict-induced change in preferences of Jewish buyers and sellers will lead Arab market participants to transact more among themselves.

<sup>2</sup>Ayres and Siegelman’s results were challenged by Goldberg (1996) who analyzed data from the Consumer Expenditure Survey and found no evidence of race or gender discrimination in the market for new cars.

this was not due to animus but rather to statistical considerations.

Several recent contributions to the literature use field experiments to study discrimination in online markets. Doleac and Stein (forthcoming) posted ads for iPods in local online markets throughout the United States. Each ad featured a photograph of the iPod being held by a dark- or light-skinned hand (“black” or “white”). The authors found that black sellers did worse than white ones on a variety of market outcome measures (e.g. they received fewer responses and offers). Ayres, Banaji, and Jolls (2011) investigated the impact of seller race in baseball card auctions on eBay, where cards were held by either “black” or “white” hands. They found that cards held by “black” sellers sold for significantly less than cards held by “white” sellers. Nunley, Owens and Howard (2011) also studied racial discrimination in product auctions on e-bay, but in this case race was signalled with names, as in Bertrand and Mullainathan (2004). The authors found that “white” names received higher prices for distinctively “white” products and “black” names received higher prices for distinctively “black” products. An additional finding was that price differences dissipated as sellers accumulated credible reputations, a pattern which is consistent with statistical discrimination.

In the paper most closely linked to this one, Zussman (forthcoming) used a combination of field experiments, follow-up telephone surveys and other data collection efforts to study the extent and the sources of ethnic discrimination in the Israeli market for used cars. The paper provided robust evidence of discrimination against Arab buyers and sellers which, the analysis suggested, was motivated by statistical rather than taste considerations.

The current paper complements Zussman (forthcoming) in studying the Israeli market for used cars, but rather than treating the ethnic structure of the market as given – a feature shared with all the studies mentioned above – it seeks to understand how it is affected by exogenous shocks related to the Israeli-Palestinian conflict. In this respect, the approach taken here is related to several other studies which examine the economic effects of discrete shocks associated with political events. A recent example is Michaels and Zhi (2010) who showed that the deterioration in relations between the United States and France in 2002-03 reduced trade between the two countries. In a similar vein, Kaushal, Kaestner, and Reimers (2007) estimated how the 9/11 terrorist attacks affected labor market outcomes of first- and second-generation Arab and Muslim men in the United States. In the Israeli context, Miaari, Zussman, and Zussman (2012) showed that the outbreak of the second Palestinian Intifada (uprising) in September 2000 had a negative effect on labor market outcomes of Arab Israelis. A major advantage of the current study relative to the earlier ones is that it relies on numerous shocks, rather than on a single event, as a source of identification.

This paper is also related to the literature on ingroup bias and social identity. In contrast

to discrimination, which refers to the preferential treatment awarded to members of a given group relative to another, ingroup bias implies symmetry: members of group A discriminate against members of group B and vice-versa. Ingroup bias has been studied extensively using the experimental setting known as the Minimal Group Paradigm. In these experiments an individual allocates some resource between two other individuals, where the only thing she knows about them is whether they belong to her group or not. Starting with Tajfel et al. (1971), this literature has demonstrated that ingroup bias can exist even in artificially created groups, and has examined various factors which facilitate its emergence. See Shayo (2009) and Akerlof and Kranton (2010) for a review of the literature.

Evidence for the existence of ingroup bias and for its sensitivity to group salience comes mostly from experiments. This paper studies ingroup bias and saliency effects in naturally occurring data. In this respect and in terms of context, this paper is closely related to Shayo and Zussman (2011) who studied ingroup bias using data from Israeli small claims courts. They found robust evidence for judicial ingroup bias and demonstrated that the bias was strongly associated with the intensity of politically-motivated violence in the vicinity of the court in the period preceding the ruling. The results presented here, like those reported by Shayo and Zussman (2011), are consistent with theory and lab evidence according to which salience of group membership enhances social identification.

The rest of the paper is organized as follows. The next section describes the data used in the analysis. Results are presented in Section 3. Section 4 provides concluding remarks.

## 2 Data

Data on used cars transactions were obtained from the Israeli Ministry of Transportation (MOT) which is responsible for recording transfers of ownership from sellers to buyers. The dataset covers all transactions involving passenger vehicles between private parties from January 1, 1998 to November 4, 2010. Each observation contains the transaction date and information on the vehicle, the seller, and the buyer. Vehicle information includes manufacturer, model, model year, engine size, number of previous owners, and value group. The last variable determines vehicle registration fees and captures in very rough terms the estimated value of the vehicle.<sup>3</sup> Since used cars transactions are not taxed, the MOT does not record the selling price. For each seller and buyer the dataset reports an identification number (scrambled to preserve anonymity), first name, gender, date of birth and locality of residence.

To deduce the ethnicity of the seller and the buyer I rely – like Shayo and Zussman (2011)

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<sup>3</sup>There are 7 value groups. The value group of a vehicle does not change with its age.

and Zussman (forthcoming) – on a dataset derived from the Israeli Population Registry. This dataset provides, for males and females separately, the probability that a given first name is associated with an Arab citizen of Israel. Using first names to deduce ethnicity is relatively straightforward in the Israeli context since there is little overlap in naming conventions across the country’s two ethnic groups, Arabs and Jews: more than 90 percent of first names are exclusively Arab or exclusively Jewish (i.e. the empirical probability that the name is associated with an Arab citizen is 1 or 0). Using the information on first name and gender from the MOT dataset, I therefore classify as Arab sellers and buyers for whom the probability that the name belongs to an Arab citizen is greater than 0.2, roughly the share of Arabs in total population, and as Jewish all other sellers and buyers.<sup>4</sup>

To capture the intensity of the Israeli-Palestinian and the Arab-Israeli conflicts I use three measures. The main one comes from a self-constructed database containing information on all Israeli civilian and security forces fatalities from politically-motivated violence since January 1, 1997. For each fatality there is information about the date and location of the relevant fatal incident. The Israeli Central Bureau of Statistics divides the country into districts, sub-districts and natural areas. Currently there are 7 districts, 25 sub-districts, and 51 natural areas. The fatality location data are at the natural area level.<sup>5</sup> The Israeli fatalities dataset combines information from several sources: B’Tselem, the Israeli Information Center for Human Rights in the Occupied Territories; The Israeli Ministry of Foreign Affairs; the Israeli National Insurance Institute; and the Israeli Ministry of Defense. It is an extension of the dataset used in Romanov, Zussman, and Zussman (2012) which covers the period 2000-2004.

The second measure of conflict intensity builds on B’Tselem data. It contains information on all Palestinians killed by Israeli security forces in the West Bank and the Gaza Strip on each date since January 1, 1997.

The third measure of conflict intensity is derived from public opinion polls conducted by the Tami Steinmetz Center for Peace Research at Tel Aviv University. The polls have been carried out – typically at the end of each month<sup>6</sup> – since mid-1994 and include a sample of around 500 persons representative of the country’s Jewish population.<sup>7</sup> These polls are

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<sup>4</sup>Below we test the robustness of the results to using an alternative classification of ethnicity. It is important to note that there are practically no inter-ethnic marriages in Israel. Thus, even if a vehicle has more than one registered owner (e.g. husband and wife or parent and child), deducing the ethnicity of one of them is sufficient to deduce the ethnicity of the others.

<sup>5</sup>This is true except for the West Bank and the Gaza Strip, where all fatalities are assigned to a single natural area. I return to this classification issue below.

<sup>6</sup>In a few cases the survey was conducted at other parts of the month; in several other cases the question relevant for this study was omitted from the survey (this was the case in July-August 2006 and in March-May 2008).

<sup>7</sup>Starting in September 2000, Israeli Arabs were added to the polls. Because of the limited coverage period

widely considered to be a reliable measure of Israeli public opinion on questions related to peace and war.<sup>8</sup> Since their inception and until mid-2008, one of the most important questions in the polls concerned support for the Oslo peace process between Israel and the Palestinians.<sup>9</sup> The exact phrasing of the relevant question was “What is your opinion on the agreement that was signed in Oslo between Israel and the PLO (Agreement of Principles)?”. The six possible answers were: (1) strongly in favor; (2) somewhat in favor; (3) neither in favor nor opposed; (4) somewhat opposed; (5) strongly opposed; (6) don’t know/no opinion. I construct a measure of net support for the Oslo agreement (and follow-up agreements), which I call the “Peace Index”, by subtracting the share of those opposed to the agreements (answers 4 and 5) from the share of those who support them (answers 1 and 2). Thus the Peace Index can take a maximum value of 1 – representing complete support of the Oslo peace process – and a minimum value of -1 – representing complete opposition to the process.

To find out whether developments in the Israeli-Palestinian conflict affect attitudes of participants in the Israeli market for used cars, I rely on survey data collected by Zussman (forthcoming). The survey targeted Jewish individuals who either posted ads or reacted to ads posted in Israel’s main online market for used cars (the next section provides further details on the survey).

## 3 Conflict and Segregation: The Evidence

### 3.1 Broad Patterns

I begin the analysis by presenting some broad patterns concerning the role of ethnicity in the Israeli market for used cars. Table 1 shows the ethnic composition of transactions over the entire 1998-2010 period. The data indicate that the market for used cars is highly segregated: the share of Arab buyers is more than six times higher when the seller is Arab (82.9 percent) than when the seller is Jewish (13.5 percent); only 14.4 percent of transactions cross ethnic lines. This pattern likely reflects to a large degree residential ethnic segregation: the population of most localities in Israel is either all-Jewish or all-Arab and integrated localities are generally ethnically segregated by neighborhood. To the extent that distance increases transaction costs, residential ethnic segregation works to limit the potential for

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and the fact that the Arab sample is small (typically less than 100 participants), the analysis is restricted to the responses of Jewish participants.

<sup>8</sup>See Zussman, Zussman and Nielsen (2008) for an analysis using these data.

<sup>9</sup>The Oslo Accord, signed in 1993, was the first face-to-face agreement between the government of Israel and the Palestine Liberation Organization (PLO). It aimed to resolve the Israeli–Palestinian conflict in steps involving the creation of a Palestinian interim self-government, withdrawal of the Israel Defense Forces from parts of the West Bank and Gaza Strip and further negotiations leading to a permanent agreement.

ethnic integration in the market for used cars.

[Table 1]

Figure 1 demonstrates that the ethnic composition of transactions is not constant but rather evolves over time. The two series displayed in the figure exhibit both long-term trends and shorter-term fluctuations. For cars sold by Arabs, the share of Arab buyers increased from 77 to 83 percent between 1998 and 2010. For cars sold by Jews, the share of Arab buyers increased from 11 to 16 percent during the same period. These long-term trends may reflect various structural factors such as changing incomes and preferences over used versus new cars among members of the two ethnic groups. The main goal of this paper is to test whether the shorter-term fluctuations in these series are related to variation in the intensity of the Israeli-Palestinian conflict.

[Figure 1]

Figures 2A, 2B, and 2C present three measures of the intensity of the conflict. Figure 2A reveals substantial temporal variation in conflict intensity as measured by the number of Israeli civilian and security forces fatalities. According to this measure, violence escalated during the Second Intifada, which erupted in the fall of 2000, and reached a peak in the first quarter of 2002. The Second Lebanon war (July-August 2006) saw a spike in the number of Israeli fatalities.<sup>10</sup> Overall, from the first quarter of 1998 to the third quarter of 2010 there were 1,432 Israeli fatalities, 904 of them civilian. As Appendix Table A1 demonstrates, the number of Israeli fatalities was characterized not only by temporal variation but also by spatial variation. During the period under investigation the number of fatalities was especially high in the Jerusalem district and in the West Bank and the Gaza Strip.

[Figure 2A]

The number of Palestinians killed by Israeli security forces, both in the West Bank and the Gaza Strip, increased dramatically following the outbreak of the Second Intifada (Figure 2B). In the post-Intifada period, Palestinian fatalities were concentrated in the Gaza Strip. Violence in Gaza reached a peak during the Gaza War (“Operation Cast Lead”) of December 2008-January 2009. Overall, from the first quarter of 1998 to the third quarter of 2010, 6,343 Palestinians were killed by Israeli security forces, 71 percent of them in the Gaza Strip.

[Figure 2B]

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<sup>10</sup>The Second Lebanon War is not directly related to the Israeli-Palestinian conflict and thus fatalities from this war should possibly be distinguished from other fatalities. I return to this issue below.



Figure 2C demonstrates that within the period examined, support for the Oslo peace process exhibited marked fluctuations. The series reached a peak in October 1998 (net support of 33 percent), following the signing of the Wye River memorandum between Israel and the Palestinian Authority.<sup>11</sup> Later, support for the process declined dramatically until it reached a low point in April 2002 (net support of -35 percent), as Israel was reacting to the spike in the number of fatalities by launching (at the end of March 2002) operation “Defensive Shield.” During the operation large scale military forces took over Palestinian localities, conducted mass arrests and set up a large number of military posts, roadblocks and checkpoints. The operation marked a turning point in the evolution of the Intifada, eventually leading to a sharp decline in Israeli and Palestinian fatalities. The peace index rebounded after the spring of 2002, but never returned to its pre-Intifada levels.

[Figure 2C]

### 3.2 Econometric Analysis

I now turn to an econometric analysis of the effect of conflict intensity on ethnic segregation in the market for used cars. As a measure of conflict intensity, I first use the number of Israeli fatalities from politically-motivated violence. Relying on the temporal and spatial variation in the number of fatalities to identify the causal effect of conflict on market outcomes, I estimate the following model:

$$\begin{aligned}
 ArabBuyer_i = & \beta_0 + \beta_1 ArabSeller_i + \beta_2 IsraeliFatalities_{it} + \\
 & + \beta_3 ArabSeller_i * IsraeliFatalities_{it} + \\
 & + \gamma_l + \delta_t + \Gamma' S_i + \Omega' V_i + \varepsilon_i,
 \end{aligned} \tag{1}$$

where  $ArabBuyer_i$  is an indicator which takes the value of 1 if the buyer in transaction  $i$  is Arab and 0 if the buyer is Jewish;  $ArabSeller_i$  is an indicator which takes the value of 1 if the seller in transaction  $i$  is Arab and 0 if the seller is Jewish;  $IsraeliFatalities_{it}$  is the number of total (civilian and security forces) fatalities in the natural area surrounding the seller’s locality in the 7 days preceding the transaction date (the number of fatalities was divided by 100 for ease of exposition);  $\gamma_l$  is a fixed-effect for seller locality;  $\delta_t$  includes a set of fixed-effects for the year, month, and day of week of the transaction as well as a variable representing the total number of transactions on that day;  $S_i$  is a vector of seller

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<sup>11</sup>The Memorandum was an agreement to implement the 1995 Oslo II Accord. It was brokered by the United States in Wye River, Maryland, and signed on October 23, 1998.

characteristics which includes gender and age;  $V_i$  is a vector of vehicle characteristics which includes model year, engine size, number of previous owners and value group; and  $\varepsilon_i$  is a well-behaved error term. The model is estimated by OLS (i.e. I use a linear probability model).

The focus is on the coefficients  $\beta_2$  and  $\beta_3$ . The coefficient  $\beta_2$  measures the marginal effect of an additional fatality on the likelihood that the buyer is Arab when the seller is *Jewish*. The sum of the coefficients  $\beta_2$  and  $\beta_3$  measures the marginal effect of an additional fatality on the likelihood that the buyer is Arab when the seller is *Arab*. I start with a parsimonious specification that includes on the right hand side the *ArabSeller* indicator, the *IsraeliFatalities* variable, the interaction term between these two variables and the locality fixed effects and then progressively add explanatory variables.

The results presented in column 1 of Table 2 indicate that an increase in conflict intensity leads to heightened ethnic segregation in the Israeli market for used cars. When the seller of the car is Jewish, an additional fatality in the natural area surrounding the seller’s locality in the preceding 7 days lowers the likelihood that the buyer is Arab by 0.27 percentage points. Given that during the period under investigation 13.5 percent of the cars sold by Jews were bought by Arabs, this represents a 2.0 percent decline. In contrast, when the seller of the car is Arab, an additional fatality in the natural area surrounding the seller’s locality in the preceding 7 days raises the likelihood that the buyer is Arab by 0.73 percentage points (the sum of  $\beta_2$  and  $\beta_3$  is reported in the third row from the bottom of the table). Given that during the period under investigation 82.9 percent of the cars sold by Arabs were bought by Arabs, this represents a 0.9 percent increase. Thus, the effect of conflict intensity on the likelihood that the buyer is Arab is roughly twice as large for Jewish than for Arab sellers. Adding to the estimated equation time controls (column 2), seller characteristics (column 3), and vehicle characteristics (column 4) leads to a slight decline in the absolute size of the estimated effects, but both remain highly statistically significant.

[Table 2]

In Table 3 I test the robustness of the results to several changes in the specification of Equation (1). To facilitate comparison, column 1 replicates the results of the baseline specification (Table 2, column 4). In order to mitigate the possible influence of outliers and to relax the assumption of linearity in the effect of violence intensity on market outcomes, I replace the original fatalities variable with an indicator for a positive number of fatalities. The results (column 2) imply that when the seller of the car is Jewish, a fatal incident in the natural area surrounding the seller’s locality in the preceding 7 days lowers the likelihood that the buyer is Arab by 2.3 percentage points (a 17.1 percent decline). In contrast, when the

seller of the car is Arab, a fatal incident in the natural area surrounding the seller’s locality in the preceding 7 days raises the likelihood that the buyer is Arab by 7.8 percentage points (a 9.5 percent increase).

[Table 3]

The reaction of Israelis to civilian fatalities may differ from their reaction to security forces fatalities (e.g. because the former are perceived as an illegitimate target of politically-motivated violence) and this may be reflected in the marketplace. To examine this issue, in column 3 conflict intensity is measured with civilian instead of total fatalities. This change indeed raises somewhat the estimated effects of conflict intensity on market outcomes.

In column 4 I exclude from the analysis sellers residing in the West Bank and the Gaza Strip. I do so for several reasons. First, the immediate neighbors of Jewish residents of these areas are Palestinians rather than Arab Israelis. Transactions between Israeli citizens and Palestinians do not appear in the MOT dataset. Second, as mentioned above, unlike in other areas, all fatalities in the West Bank and the Gaza Strip were assigned to a single natural area. Third, the West Bank and the Gaza Strip saw an especially large number of fatalities from politically-motivated violence during the period under investigation (see Appendix Table A1). As the results in column 4 indicate, however, excluding this set of observations from the analysis has a very limited influence on the coefficients of interest.

As a final robustness check, I apply a stricter definition of seller and buyer ethnicity. I now classify as Arab only those sellers and buyers with names that, according to the dataset derived from the Israeli Population Registry, are at least twice as popular among Arabs as among Jews; analogically, I classify as Jewish only those sellers and buyers with names that are at least twice as popular among Jews as among Arab. The new classification leads to a loss of roughly 90 thousand observations (7 percent of the total) but has only a minor effect on the results. In sum, the evidence presented in Table 3 suggests that the baseline results are robust.

So far the analysis has examined the effect of violence intensity on market outcomes using a short, 7 days, window. This naturally raises the question whether the effect of violence intensity is persistent. To answer this question I re-estimate Equation (1) using windows of increasing length: the 7, 15, 30, 90, 180, and 360 days preceding the transaction date. The results are presented in Table 4 and illustrated graphically in Figure 3.

For both Jewish and Arab sellers I find that the effect of violence intensity on market outcomes decays monotonically with window length. For cars sold by Jews, the marginal negative effect of an additional fatality on the likelihood that the buyer is Arab declines from 0.22 to 0.06 percentage points (a drop of 71 percent) when using a 360 days window instead of

a 7 days window. For cars sold by Arabs, the marginal positive effect of an additional fatality on the likelihood that the buyer is Arab declines from 0.66 to 0.26 percentage points (a drop of 61 percent) when using a 360 days window instead of a 7 days window. The results therefore suggest that temporal distance has a strong negative influence on the marginal effect of fatalities on market outcomes.

[Table 4]

[Figure 3]

Does the effect of politically-motivated violence on market outcomes decrease with distance from the location of the fatal incident? So far the analysis has focused on the immediate vicinity of the seller’s locality – the natural area. To explore the role of physical distance I re-estimate Equation (1) using fatalities suffered in increasingly larger areas surrounding the seller’s locality: natural area, sub-district, district, and “country-wide” – the last category includes the West Bank and the Gaza Strip as well as Lebanon. Results are presented in Table 5 and illustrated graphically in Figure 4.

For both Jewish and Arab sellers I find that the effect of conflict intensity on market outcomes decays monotonically and strongly with distance. For cars sold by Jews, the marginal negative effect of an additional fatality on the likelihood that the buyer is Arab declines from 0.22 to 0.02 percentage points (a drop of 93 percent) when using fatalities suffered country-wide instead of at the natural area level. For cars sold by Arabs, the marginal positive effect of an additional fatality on the likelihood that the buyer is Arab declines from 0.66 to 0.04 percentage points (a drop of 94 percent) when using fatalities suffered country-wide instead of at the natural area level. The results therefore suggest that physical distance has a strong negative influence on the marginal effect of conflict intensity on market outcomes.

[Table 5]

[Figure 4]

Next, I augment Equation (1) with the second measure of conflict intensity – the number of Palestinian fatalities. Specifically, I add to the equation the number of Palestinians killed by Israeli security forces in the West Bank and the Gaza Strip in the 7 days preceding the transaction date and the interaction between this variable and the *ArabSeller* indicator. To facilitate comparison, column 1 of Table 6 replicates the results of the baseline specification (Table 2, column 4). In column 2 I examine the effect of variation in the number of Palestinian fatalities on market outcome while excluding from the estimated equation the number of Israeli fatalities. I find that when the seller of the car is Jewish, an additional

Palestinian fatality in the preceding 7 days lowers the likelihood that the buyer is Arab by 0.001 percentage points. This effect is, however, statistically insignificant. In contrast, when the seller of the car is Arab, an additional Palestinian fatality in the preceding 7 days raises the likelihood that the buyer is Arab by 0.007 percentage points. The effect of Palestinian fatalities can be compared to the estimated effects of the country-wide number of *Israeli* fatalities (last column of Table 5), which are, respectively, -0.016 and 0.039 percentage points. The comparison indicates that the marginal effect of an Israeli fatality on market outcomes is roughly an order of magnitude larger than the marginal effect of a Palestinian fatality.<sup>12</sup> Including both Israeli and Palestinian fatalities in the regression has little influence on the estimated effects of both type fatalities (compare column 3 to columns 1 and 2).

[Table 6]

I next introduce into the analysis the third and last measure of conflict intensity: the Peace Index. While the evidence presented in Figure 2 suggests that all measures of conflict intensity – Israeli and Palestinian fatalities from politically-motivated violence and support for the Oslo process – are linked to each other, the correspondence between them is far from perfect. Public support for the peace process could rise or fall in the absence of any change in violence intensity, e.g. due to the perceived success or failure of peace negotiations.

To estimate the effect of this measure of conflict intensity on market outcomes, I augment the regression specification with the value of the Peace Index and its interaction with the *ArabSeller* indicator.<sup>13</sup> To facilitate comparison with previous results, I start the analysis by estimating Equation (1) – augmented with the number of Palestinian fatalities and the interaction of this variable with the *ArabSeller* indicator – for the period for which the Peace Index is available, January 1998 to June 2008. This leaves us with roughly 85 percent of the original number of observations. Comparing the results presented in column 1 of Table 7 to those reported in column 3 of Table 6, I find that the change in the period analyzed does not influence the estimated effect of Israeli fatalities on market outcomes but increases quite markedly the effect of Palestinian fatalities. This result may be due to the fact that the period under examination in Table 7 excludes the spike in the number of Palestinian fatalities during the 2008-09 Gaza War.

[Table 7]

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<sup>12</sup>However, given the fact that the number of Palestinian fatalities is almost 5 time larger, the difference in the overall effect of the two type of fatalities is much less pronounced.

<sup>13</sup>For each observation in the MOT database I compare the difference between the transaction date and the previous and next Peace Index survey dates. The observation is assigned the value of the Peace Index in the closer survey.

I next drop from the estimated equation the fatalities variables and their interactions with the *ArabSeller* indicator and add the Peace Index variables. The results (column 2) indicate that greater public support for the peace process reduces ethnic segregation in the market for used cars. When the seller of the car is *Jewish*, a one unit increase in the value of the Peace Index raises the likelihood that the buyer is Arab by 1.4 percentage points (or roughly 10 percent). Conversely, when the seller of the car is *Arab*, a one unit increase in the value of the Peace Index lowers the likelihood that the buyer is Arab by 1.5 percentage points (or 1.8 percent).

In the last column I include in the estimated equation all three measures of conflict intensity together. This does not have a qualitative effect on the results but does lead to a decline in the absolute size and statistical significance of the coefficients of interest, a pattern which is likely due to collinearity between the three measures of conflict intensity.<sup>14</sup>

### 3.3 Conflict and Attitudes

Why does ethnic conflict affect the ethnic structure of the marketplace? To shed light on this question I use survey data collected by Zussman (forthcoming). The survey, which targeted Jewish sellers and buyers in the Israeli market for used cars and was conducted between August 2009 and April 2011, had two parts (the text of the survey is in Appendix A). The questions in the first part focused on socio-demographic and other personal characteristics of the participants. In the second part survey participants were asked to rank their agreement with the following six statements:

- “The Arabs in Israel are more violent than the Jews”
- “The Arabs in Israel are more likely to cheat than the Jews”
- “The Arabs in Israel have lower natural intelligence than the Jews”
- “I would not want to live in the same building with an Arab Israeli neighbor”
- “Jews and Arabs should be separated in recreational areas”
- “There should be a law prohibiting marriages between Jews and Arab Israelis”

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<sup>14</sup>In the regression sample, the correlation between Israeli and Palestinian fatalities is 0.08, the correlation between Israeli fatalities and the Peace Index is -0.07, and the correlation between Palestinian fatalities and the Peace Index is -0.37 (all correlation coefficients are highly statistically significant). When excluding from the analysis the Palestinian fatalities (see Appendix Table A2) the coefficients of interest rise in absolute size and statistical significance.

Several of the attitude questions, e.g. the one on “cheating”, were aimed to capture the type of considerations highlighted in models of statistical discrimination in the sense that market participants might use ethnicity, which is observable, to evaluate some outcome-relevant individual characteristics which are not easily observable. Other questions, e.g. the ones on “neighbors” and “marriage”, were aimed to capture prejudicial views as in the Becker model of taste-based discrimination in the sense that market participants might exhibit aversion to cross-group contact. In total, 3,750 individuals participated in the survey. Appendix Table A3 provides summary statistics for socio-demographic and other individual characteristics reported by the survey participants.

Table 8 displays the distribution of survey participants’ attitudes and views toward Arab Israelis. Nearly 60 percent of the participants agreed (strongly or otherwise) with the statement that Arabs are more violent than Jews while 36 percent agreed with the statement that Arabs are more likely to cheat than Jews. Around one half agreed with the statements that Arabs have lower natural intelligence than Jews, that they do not want to live in the same building with Arabs, that Jews and Arabs should be separated in recreational areas, and that there should be a law prohibiting cross-ethnicity marriages. These results are consistent with those obtained in other recent surveys exploring Arab-Jewish relations in Israel (e.g. Arian *et al.*, 2010, Smooha, 2010, Ali and Inbar, 2011, and Hermann *et al.*, 2011).

**[Table 8]**

The responses to the attitude statements are correlated within individuals (see Appendix Table A4). The correlation coefficient varies from 0.34 to 0.55 and is highly statistically significant in all cases. This is an interesting finding in light of the fact that some of the statements aim to capture prejudicial views as defined in the theory of taste-based discrimination while others aim to capture the type of beliefs that are central to the theory of statistical discrimination. The fact that the correlations between the responses are highly significant highlights the link between the competing concepts of discrimination and helps to explain why it is often so difficult to pinpoint the source of observed discriminatory behavior. On the other hand, the fact that the correlations are far from perfect suggests the potential usefulness of examining the role of each attitude separately rather than aggregating the attitudes into a single index.

Next, I correlate Jewish survey participants’ attitudes toward Arabs with their socio-demographic and other characteristics, restricting the analysis to those who responded to all the attitude statements in order to facilitate comparison across columns (Appendix Table A5). I find that several characteristics are significantly and consistently associated with favorable attitudes toward Arabs: female gender, age, education, secularism, and military

service. One characteristic is significantly and consistently associated with unfavorable attitudes toward Arabs: Sephardic origin. Overall, these results demonstrate that attitudes toward Arabs are significantly associated with socio-demographic and other individual characteristics in a way that conforms to conventional wisdom and to previous research, e.g. Smootha (2010).

The last set of results suggests that the responses to the attitude statements contain a sufficiently high signal to noise ratio to be useful in answering the following question: does variation in the intensity of the Israeli-Palestinian conflict affect the attitudes of Jewish participants in the market for used cars toward Arab Israelis? To answer this question I rely on the three measures of conflict intensity used previously: Israeli and Palestinian fatalities from politically-motivated violence and public support for the peace process with the Palestinians. Since July 2008 the question about the Oslo process was replaced in the public opinion polls conducted by Tel Aviv University by a slightly different question: “What is your opinion on negotiations between Israel and the Palestinian Authority?”. I construct a measure of net support for negotiations, which I again call the “Peace Index”, by subtracting the share of those opposed to the negotiations from the share of those who support them.<sup>15</sup> Figure 5 displays the behavior of the Peace Index during the period under investigation in this section.

[Figure 5]

To study how conflict affects attitudes I estimate the following equation for each attitude separately:

$$\begin{aligned}
 Attitude_i = & \beta_0 + \beta_1 IsraeliFatalities_{nt} + \beta_2 PalestinianFatalities_t \\
 & + \beta_3 PeaceIndex_t + \gamma_n + \delta_t + \Theta' Z_i + \varepsilon_i,
 \end{aligned} \tag{2}$$

where  $Attitude_i$  is an indicator variable taking the value of 1 if Jewish survey participant  $i$  agreed (strongly or otherwise) with a particular statement concerning Arab Israelis;  $IsraeliFatalities_{nt}$  is the number of total Israeli fatalities in the natural area surrounding the survey participant’s locality in the 30 days preceding the survey date<sup>16</sup>;  $PalestinianFatalities_t$

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<sup>15</sup>The question on negotiations has five possible answers: (1) strongly in favor; (2) somewhat in favor; (3) somewhat opposed; (4) strongly opposed; (5) don’t know/no opinion.

<sup>16</sup>The period in which the survey was conducted – August 17, 2009 to April 6, 2011 – was characterized by low numbers of fatalities, especially Israeli ones: in total, there were 19 Israeli fatalities and 134 Palestinian ones. Thus, in order to avoid undue influence by outliers, there is a need to use a longer window (the 7 days window has only 10 non-zero Israeli fatalities observations; the 30 days window, in contrast, has 70 such observations).



is the number of Palestinians killed by Israeli security forces in the West Bank and the Gaza Strip in the 30 days preceding the survey date;  $PeaceIndex_t$  is the value of the Peace Index at survey date  $t$ <sup>17</sup>;  $\gamma_n$  is a fixed-effect for natural area surrounding the survey participant’s locality;  $\delta_t$  includes a linear time trend and day of week fixed effects;  $Z_i$  is a vector of socio-demographic and other characteristics of survey participant  $i$ ; and  $\varepsilon_i$  is a well-behaved error term. The model is estimated by OLS. To facilitate comparison across columns, I again restrict the analysis to those survey participants who responded to all the attitude questions.

The results provide some evidence that escalations in the Israeli-Palestinian conflict lead Jewish participants in the market for used cars to hold more negative attitudes toward Israeli Arabs (Table 9). Almost all the coefficients have the expected signs – positive for Israeli and Palestinian fatalities and negative for the Peace Index – and several are also statistically significant. In some instances the effect of Israeli fatalities is quite large. For example, an additional Israeli fatality in the natural area surrounding the survey participant’s locality in the 30 days preceding the survey date raises the probability that the Jewish survey participant would agree with the (negative) statements concerning “intelligence”, “neighbors” and “marriage” by 6 to 7 percentage points. As before, the effect of Palestinian fatalities is in all cases much weaker than the effect of Israeli fatalities. With respect to the Peace Index I find that a one unit increase in it lowers the probability that Jewish survey participants would agree with the statements concerning “intelligence”, “neighbors” and “segregation by 20 or more percentage points.

[Table 9]

An alternative approach to analyzing the effect of conflict intensity on market outcomes is to conduct an event study around a key conflict-related development (this is similar to the approach taken by Kaushal, Kaestner, and Reimers, 2007, Michaels and Zhi, 2010, and Miaari, Zussman, and Zussman, 2012). A prominent candidate to play this role is the Israeli military raid on the “Gaza Flotilla” on May 31, 2010. The flotilla was organized by pro-Palestinian groups with the intent of breaking the Israeli-Egyptian blockade of the Gaza Strip. The raid resulted in the death of nine activists (and the wounding of many others, including several Israeli soldiers) on board the Turkish ship MV Mavi Marmara, and to a sharp deterioration in relations between Israel and Turkey. It also had a direct effect on Arab-Jewish relations in Israel, as several Arab Israelis, including one member of the Parliament, participated in the flotilla. The “Gaza Flotilla” incident may be responsible for the sharp decline in the Peace Index between May and June 2010, which is apparent in Figure 5.

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<sup>17</sup>I use the same method as before to assign the appropriate value of the Peace Index to each survey observation.

To assess the effect of the “Gaza Flotilla” incident, Figure 6 displays, for each of the attitude statements separately, the mean value of  $Attitude_i$  in the eight survey dates immediately before and the eight survey dates immediately after the raid – this covers the period from May 23, 2010 to June 7, 2010 – together with 95% confidence intervals around these means. Although the data is quite noisy – there are less than 300 survey observations in total for these dates – the figure hints that the raid strengthened anti-Arab attitudes.

[Figure 6]

To examine this issue more rigorously, I estimate the following equation for each attitude separately:

$$Attitude_i = \beta_0 + \beta_1 PostRaid_i + \Theta' Z_i + \varepsilon_i, \quad (3)$$

where  $PostRaid_i$  is an indicator variable taking the value of 0 before May 31, 2010 “Gaza Flotilla” raid and the value of 1 afterwards; the other variables are defined as before. The results indicate that the raid led Jewish participants in the market for used cars to hold more unfavorable attitudes toward Arabs (Table 10). The effect is quite large: relative to the pre-flotilla period, the share of participants agreeing with the statements concerning “violence”, “cheating” and “neighbors” increased by between 15 and 18 percentage points.

[Table 10]

The results presented in this section thus provide a link between developments in the Israeli-Palestinian conflict and outcomes in the market for used cars. Escalations in the conflict breed intolerant attitudes toward Arabs among Jewish market participants, a fact which is consistent with the observed increase in marketplace segregation. An interesting aspect of the results is that such escalations cannot be viewed as strictly a shock to “tastes” in the Becker sense. The evidence presented in Table 9 and Table 10 indicate that the conflict affects not only attitudes capturing aversion to cross-group contact (e.g. the one concerning “neighbors”), but also perceptions of outgroup characteristics such as trustworthiness (captured by the “cheating” statement), which may plausibly be viewed as relevant for market transactions.

## 4 Conclusion

This paper has studied how developments in the Israeli-Palestinian conflict affect the extent of segregation between Arabs and Jews in the Israeli market for used cars. The analysis

builds on a unique administrative dataset which covers the universe of used-cars transactions in Israel during 1998-2010 and on three measures of conflict intensity: Israeli and Palestinian fatalities from politically-motivated violence and public support for the peace process between Israel and the Palestinians. Identification of causal effects is facilitated by the exogenous nature of the temporal and spatial variation in conflict intensity.

I find robust evidence that ethnic segregation rises with conflict intensity. An increase in the number of Israeli and Palestinian fatalities from politically-motivated violence in the period preceding a used-car transaction lowers the likelihood that the buyer is Arab if the seller is *Jewish* but raises this likelihood if the seller is *Arab*. Controlling for violence intensity, I find that developments that lead to greater public support for the peace process with the Palestinians reduce ethnic segregation in the market for used cars. Using survey data the paper provides evidence that escalations in the conflict lead Jewish participants in the market to hold more unfavorable views of Arabs, a result that is consistent with the observed increase in the extent of segregation.

The results highlight once again an important aspect of conflict: the “collateral damage” it inflicts on markets. What is special about the context studied here is that Israeli Arabs are for the most part not directly involved in the Israeli-Palestinian conflict. As members of a minority, Arabs stand to gain more than Jewish Israelis from full market integration. They thus suffer more from conflict-induced heightened segregation in the marketplace.

## Appendix A: attitude survey

This appendix contains the text of the telephone survey targeting Jewish participants in the Israeli online market for used cars.<sup>18</sup> Text in bold face was read out loud to the survey participant. Text in brackets provides additional information.

**Hello, this is [name of research assistant] calling from The Hebrew University of Jerusalem. We are conducting a short survey for research purposes which focuses on attitudes held by Israeli citizens. Your answers will be kept secret. You can refuse to answer any question. I would appreciate your participation.**

Gender [identified from conversation]: male / female

**I will now ask you a few background questions:**

- **How old are you?**
- **In which country were you born?**
- [If participant was born in Israel] **In which country was your father born?**
- [If participant's father was born in Israel] **In which country was your paternal grandfather born?**
- [If participant was not born in Israel] **In what year did you emigrate to Israel?**
- **What is the highest diploma or degree that you have earned in your studies? up to and including high-school / post-secondary, non-academic / bachelor's degree / master's degree / doctoral degree / other**
- **Do you consider yourself: secular / traditional / religious / haredi [ultra-orthodox]?**
- **Did you serve in the Israeli Defense Forces [/ border police]? yes / no**
- [if yes] **Did you serve for an extended period of time [months/years] in Judea, Samaria, the Gaza Strip or in Lebanon? yes / no**
- **What is the name of the locality in which you reside?**
- [if refused to answer] **Do Arabs live in your locality? yes / no**
- **Are you: married / single / divorced / widowed?**

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<sup>18</sup>Originally there were separate but highly similar surveys for sellers and buyers (see Zussman, forthcoming, for details). Here we ignore the differences and focus on the shared elements in the surveys.

- How many children do you have?
- [for married participants] The mean net monthly income for an Israeli family is NIS 9,000. Is your family's income: higher than / roughly equal to / less than NIS 9,000?
- [for participants who are not married] The mean net monthly income for an Israeli employee is NIS 6,800. Is your income: higher than / roughly equal to / less than NIS 6,800 [/ unemployed]?
- How would you rank your political views in the following scale: right / right-center / center-left / left [/ center]?
- To what extent do you currently have, or have had in the past, work relations with Arab citizens of Israel or with Palestinians from Judea, Samaria, or the Gaza Strip: a lot / a little / not at all?

I will now ask you questions about the Arab citizens of Israel. For each of the following statements I will ask you to rank your agreement with the statement in a scale of 1 to 4, where 1 means strongly agree, 2 means agree, 3 means somewhat disagree and 4 means strongly disagree.

- “The Arabs in Israel are more violent than the Jews”:  
1 strongly agree / 2 agree / 3 somewhat disagree / 4 strongly disagree
- “The Arabs in Israel are more likely to cheat than the Jews”:  
1 strongly agree / 2 agree / 3 somewhat disagree / 4 strongly disagree
- “The Arabs in Israel have lower natural intelligence than the Jews”:  
1 strongly agree / 2 agree / 3 somewhat disagree / 4 strongly disagree
- “I would not want to live in the same building with an Arab Israeli neighbor”:  
1 strongly agree / 2 agree / 3 somewhat disagree / 4 strongly disagree
- “Jews and Arabs should be separated in recreational areas”:  
1 strongly agree / 2 agree / 3 somewhat disagree / 4 strongly disagree
- “There should be a law prohibiting marriages between Jews and Arab Israelis”:  
1 strongly agree / 2 agree / 3 somewhat disagree / 4 strongly disagree

Thank you very much.

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**APPENDIX TABLE A1: NUMBER OF ISRAELI FATALITIES BY DISTRICT AND YEAR**

| year  | Jerusalem | North | Haifa | Center | Tel Aviv | West Bank & |     | Lebanon | Total |
|-------|-----------|-------|-------|--------|----------|-------------|-----|---------|-------|
|       |           |       |       |        |          | Gaza Strip  |     |         |       |
| 1998  | 5         | 0     | 0     | 1      | 0        | 1           | 10  | 21      | 38    |
| 1999  | 0         | 4     | 0     | 0      | 0        | 1           | 2   | 10      | 17    |
| 2000  | 3         | 5     | 3     | 0      | 0        | 0           | 40  | 8       | 59    |
| 2001  | 31        | 15    | 31    | 16     | 30       | 0           | 90  | 0       | 213   |
| 2002  | 88        | 22    | 75    | 57     | 17       | 7           | 186 | 0       | 452   |
| 2003  | 61        | 8     | 39    | 14     | 32       | 2           | 60  | 0       | 216   |
| 2004  | 22        | 4     | 0     | 1      | 4        | 33          | 54  | 0       | 118   |
| 2005  | 2         | 1     | 8     | 10     | 5        | 3           | 26  | 0       | 55    |
| 2006  | 1         | 45    | 17    | 1      | 11       | 4           | 13  | 98      | 190   |
| 2007  | 0         | 0     | 0     | 0      | 0        | 6           | 8   | 0       | 14    |
| 2008  | 14        | 0     | 0     | 0      | 0        | 18          | 5   | 0       | 37    |
| 2009  | 1         | 1     | 0     | 1      | 0        | 0           | 10  | 0       | 13    |
| 2010  | 1         | 0     | 0     | 0      | 0        | 1           | 8   | 0       | 10    |
| Total | 230       | 105   | 173   | 101    | 99       | 76          | 512 | 137     | 1,432 |

*Notes.* The table reports total (civilian and security forces) Israeli fatalities from politically-motivated violence by district and year (the 2010 figures exclude the fourth quarter). See text for sources.



**TABLE A2: THE PEACE PROCESS AND THE MARKET FOR USED CARS  
EXCLUDING PALESTINIAN FATALITIES**

| Dependent variable: Arab buyer         |                                  |                                  |                                  |
|--|----------------------------------|----------------------------------|----------------------------------|
|  | (1)                              | (2)                              | (3)                              |
| Arab seller                            | 0.350 <sup>***</sup><br>(0.002)  | 0.349 <sup>***</sup><br>(0.002)  | 0.348 <sup>***</sup><br>(0.002)  |
| Israeli Fatalities                     | -0.216 <sup>***</sup><br>(0.034) |                                  | -0.209 <sup>***</sup><br>(0.034) |
| Israeli Fatalities*Arab seller         | 0.885 <sup>***</sup><br>(0.098)  |                                  | 0.861 <sup>***</sup><br>(0.098)  |
| Peace index                            |                                  | 0.014 <sup>**</sup><br>(0.006)   | 0.013 <sup>**</sup><br>(0.006)   |
| Peace index*Arab seller                |                                  | -0.029 <sup>***</sup><br>(0.005) | -0.026 <sup>***</sup><br>(0.005) |
| Seller locality fixed effects          | Yes                              | Yes                              | Yes                              |
| Time controls                          | Yes                              | Yes                              | Yes                              |
| Seller characteristics                 | Yes                              | Yes                              | Yes                              |
| Vehicle characteristics                | Yes                              | Yes                              | Yes                              |
| Sum of Israeli fatalities coefficients | 0.670 <sup>***</sup><br>(0.092)  |                                  | 0.652 <sup>***</sup><br>(0.092)  |
| Sum of peace index coefficients        |                                  | -0.015 <sup>**</sup><br>(0.007)  | -0.013 <sup>*</sup><br>(0.007)   |
| R <sup>2</sup>                         | 0.4841                           | 0.4840                           | 0.4841                           |
| Observations                           | 1,113,049                        | 1,113,049                        | 1,113,049                        |

*Notes.* “Arab buyer” (“Arab seller”) is an indicator that takes the value of 1 if the buyer (seller) is Arab and 0 if the buyer (seller) is Jewish. “Israeli fatalities” is the number of total (civilian and security forces) Israeli fatalities from politically-motivated violence in the natural area surrounding the seller’s locality in the 7 days preceding the transaction date. Fatalities figures were divided by 100 for ease of exposition. “Peace index” measures the strength of support among Israeli Jews for the Oslo agreements between Israel and the PLO (see text for details). “Time controls” include indicators for the year, month, and day of week of the transaction as well as the total number of transactions on that day. “Seller characteristics” include gender and age. “Vehicle characteristics” include model year, engine size, number of previous owners and value group.

Estimated using OLS. Robust standard errors in parentheses. \*, \*\*, \*\*\* represent statistical significance at the 10, 5, and percent levels.

**APPENDIX TABLE A3: SUMMARY STATISTICS FOR  
SURVEY PARTICIPANTS' CHARACTERISTICS**

| Variable                                     | Mean  | Standard deviation | N     |
|--|-------|--------------------|-------|
| Female                                       | 0.162 | 0.368              | 3,750 |
| Age  | 34.59 | 11.63              | 3,738 |
| New immigrant <sup>1</sup>                   | 0.102 | 0.303              | 3,733 |
| Sephardic <sup>2</sup>                       | 0.556 | 0.497              | 3,743 |
| Higher education degree <sup>3</sup>         | 0.351 | 0.477              | 3,743 |
| Secular                                      | 0.525 | 0.499              | 3,732 |
| Served in military                           | 0.868 | 0.338              | 3,740 |
| Lives in an integrated locality <sup>4</sup> | 0.222 | 0.416              | 3,750 |
| Married                                      | 0.581 | 0.494              | 3,728 |
| Number of children                           | 1.409 | 1.557              | 3,686 |
| High income                                  | 0.436 | 0.496              | 3,515 |

*Notes.* <sup>1</sup> Immigrated to Israel since 1989. <sup>2</sup> Following a convention adopted by the Israeli Central Bureau of Statistics, we use continent of origin in order to identify ethnic divisions within the Jewish community: Ashkenazic (Western) Jews are associated with Europe and America and Sephardic (Eastern) Jews are associated with Asia and Africa. This applies either to the individual, to his or her father, or to his or her paternal grandfather. Additionally, we classify as “third generation Sabra (native-born)” those individuals who were born in Israel, and whose fathers and grandfathers too were born in the country. <sup>3</sup> Holds a bachelor’s, a master’s or a doctoral degree. <sup>4</sup> Classification of localities by ethnicity is provided by the Israeli Central Bureau of Statistics.

**APPENDIX TABLE A4: CORRELATION ACROSS ATTITUDES**

|              | Violence            | Cheating            | Intelligence        | Neighbors           | Segregation         | Marriage |
|--------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------|
| Violence     | 1.000               |                     |                     |                     |                     |          |
| Cheating     | 0.509***<br>(0.000) | 1.000               |                     |                     |                     |          |
| Intelligence | 0.390***<br>(0.000) | 0.416***<br>(0.000) | 1.000               |                     |                     |          |
| Neighbors    | 0.408***<br>(0.000) | 0.433***<br>(0.000) | 0.430***<br>(0.000) | 1.000               |                     |          |
| Segregation  | 0.401***<br>(0.000) | 0.391***<br>(0.000) | 0.447***<br>(0.000) | 0.553***<br>(0.000) | 1.000               |          |
| Marriage     | 0.336***<br>(0.000) | 0.341***<br>(0.000) | 0.390***<br>(0.000) | 0.403***<br>(0.000) | 0.520***<br>(0.000) | 1.000    |

*Notes.* The table displays the pair-wise correlation between the attitudes Jewish survey participants expressed toward Arab Israelis. See Table 8 for full text of statements. p-values in parentheses. \*, \*\*, \*\*\* represent statistical significance at the 10, 5, and percent levels.

**APPENDIX TABLE A5: CORRELATES OF ATTITUDES TOWARD ARABS**

| Dependent variable                           | Violence             | Cheating             | Intelligence         | Neighbors            | Segregation          | Marriage             |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|  | (1)                  | (2)                  | (3)                  | (4)                  | (5)                  | (6)                  |
| Female                                       | -0.155***<br>(0.025) | -0.112***<br>(0.023) | -0.101***<br>(0.025) | -0.089***<br>(0.025) | -0.083***<br>(0.024) | -0.042*<br>(0.023)   |
| Age  | -0.006***<br>(0.001) | -0.003***<br>(0.001) | -0.003**<br>(0.001)  | -0.004***<br>(0.001) | -0.005***<br>(0.001) | -0.003***<br>(0.001) |
| New Immigrant <sup>1</sup>                   | 0.020<br>(0.031)     | 0.050<br>(0.031)     | 0.157***<br>(0.032)  | 0.114***<br>(0.032)  | 0.120***<br>(0.031)  | -0.046<br>(0.029)    |
| Sephardic <sup>2</sup>                       | 0.060***<br>(0.019)  | 0.035*<br>(0.019)    | 0.065***<br>(0.020)  | 0.020<br>(0.020)     | 0.098***<br>(0.019)  | 0.112***<br>(0.019)  |
| Higher education degree <sup>3</sup>         | -0.087***<br>(0.020) | -0.042**<br>(0.019)  | -0.174***<br>(0.020) | -0.076***<br>(0.020) | -0.158***<br>(0.019) | -0.155***<br>(0.019) |
| Secular                                      | -0.118***<br>(0.019) | -0.133***<br>(0.019) | -0.128***<br>(0.020) | -0.200***<br>(0.020) | -0.159***<br>(0.019) | -0.276***<br>(0.019) |
| Served in military                           | -0.069**<br>(0.027)  | -0.121***<br>(0.028) | -0.085***<br>(0.028) | -0.084***<br>(0.028) | -0.095***<br>(0.027) | -0.064**<br>(0.026)  |
| Lives in an integrated locality <sup>4</sup> | 0.033<br>(0.021)     | 0.052**<br>(0.021)   | 0.031<br>(0.021)     | 0.004<br>(0.021)     | 0.035*<br>(0.021)    | 0.004<br>(0.020)     |
| Married                                      | 0.020<br>(0.022)     | 0.019<br>(0.022)     | -0.008<br>(0.023)    | 0.031<br>(0.023)     | -0.072***<br>(0.022) | -0.034<br>(0.021)    |
| Number of children                           | 0.014<br>(0.009)     | 0.017*<br>(0.009)    | 0.024***<br>(0.009)  | 0.030***<br>(0.009)  | 0.023***<br>(0.009)  | 0.042***<br>(0.008)  |
| High income                                  | 0.011<br>(0.020)     | -0.052***<br>(0.019) | -0.007<br>(0.020)    | -0.002<br>(0.020)    | -0.037*<br>(0.020)   | <br>(0.019)          |
| R <sup>2</sup>                               | 0.0691               | 0.0619               | 0.0892               | 0.0806               | 0.1297               | 0.1994               |
| Observations                                 | 2,986                | 2,986                | 2,986                | 2,986                | 2,986                | 2,986                |

*Notes.* The dependent variable in each column is an indicator variable taking the value of 1 if the Jewish survey participant agreed or strongly agreed with a particular (negative) statement concerning Arab Israelis and the value of 0 otherwise. See Table 8 for full text of statements. <sup>1</sup> Immigrated to Israel since 1989. <sup>2</sup> Following a convention adopted by the Israeli Central Bureau of Statistics, we use continent of origin in order to identify ethnic divisions within the Jewish community: Ashkenazic (Western) Jews are associated with Europe and America and Sephardic (Eastern) Jews are associated with Asia and Africa. This applies either to the individual, to his or her father, or to his or her paternal grandfather. Additionally, we classify as “third generation Sabra (native-born)” those individuals who were born in Israel, and whose fathers and grandfathers too were born in the country. <sup>3</sup> Holds a bachelor’s, a master’s or a doctoral degree. <sup>4</sup> Classification of localities by ethnicity is provided by the Israeli Central Bureau of Statistics. Estimated using OLS. Robust standard errors in parentheses. \*, \*\*, \*\*\* represent statistical significance at the 10, 5, and percent levels.

**TABLE 1: ETHNIC COMPOSITION OF TRANSACTIONS**

|        |        | Buyer  |        | N         |
|--------|--------|--------|--------|-----------|
|        |        | Arab   | Jewish |           |
| Seller | Arab   | 82.86% | 17.14% | 321,931   |
|        | Jewish | 13.52% | 86.48% | 1,000,544 |
|        | All    | 30.40% | 69.60% | 1,322,475 |

*Notes.* The source of the data is the Israeli Ministry of Transportation. The data cover all transactions between private parties involving passenger vehicles from January 1, 1998 to November 4, 2010. The ethnicity of sellers and buyers is deduced from their names. See text for details.

**TABLE 2: ETHNIC CONFLICT AND SEGREGATION IN THE MARKETPLACE**

| Dependent variable: Arab buyer         |                      |                      |                      |                      |
|--|----------------------|----------------------|----------------------|----------------------|
|  | (1)                  | (2)                  | (3)                  | (4)                  |
| Arab seller                            | 0.384***<br>(0.002)  | 0.382***<br>(0.002)  | 0.372***<br>(0.002)  | 0.352***<br>(0.002)  |
| Israeli fatalities                     | -0.270***<br>(0.034) | -0.250***<br>(0.034) | -0.245***<br>(0.034) | -0.219***<br>(0.034) |
| Israeli fatalities*Arab seller         | 0.997***<br>(0.101)  | 1.002***<br>(0.101)  | 0.965***<br>(0.100)  | 0.880***<br>(0.098)  |
| Seller locality fixed effects          | Yes                  | Yes                  | Yes                  | Yes                  |
| Time controls                          | No                   | Yes                  | Yes                  | Yes                  |
| Seller characteristics                 | No                   | No                   | Yes                  | Yes                  |
| Vehicle characteristics                | No                   | No                   | No                   | Yes                  |
| Sum of Israeli fatalities coefficients | 0.727***<br>(0.096)  | 0.752***<br>(0.096)  | 0.720***<br>(0.095)  | 0.661***<br>(0.092)  |
| R <sup>2</sup>                         | 0.4649               | 0.4660               | 0.4682               | 0.4776               |
| Observations                           | 1,322,475            | 1,322,475            | 1,322,475            | 1,322,475            |

*Notes.* “Arab buyer” (“Arab seller”) is an indicator that takes the value of 1 if the buyer (seller) is Arab and 0 if the buyer (seller) is Jewish. “Israeli fatalities” is the number of total (civilian and security forces) Israeli fatalities from politically-motivated violence in the natural area surrounding the seller’s locality in the 7 days preceding the transaction date. Fatalities figures were divided by 100 for ease of exposition. “Time controls” include indicators for the year, month, and day of week of the transaction as well as the total number of transactions on that day. “Seller characteristics” include gender and age. “Vehicle characteristics” include model year, engine size, number of previous owners and value group.

Estimated using OLS. Robust standard errors in parentheses. \*, \*\*, \*\*\* represent statistical significance at the 10, 5, and percent levels.

**TABLE 3: ROBUSTNESS CHECKS**

| Dependent variable: Arab buyer         |                      |                      |                      |                                  |                              |                                  |
|--|----------------------|----------------------|----------------------|----------------------------------|------------------------------|----------------------------------|
|  | Baseline             | Fatalities indicator | Civilian fatalities  | Excluding sellers from WB and GS | Excluding Lebanon War period | Stricter definition of ethnicity |
|  | (1)                  | (2)                  | (3)                  | (4)                              | (5)                          | (6)                              |
| Arab seller                            | 0.352***<br>(0.002)  | 0.350***<br>(0.002)  | 0.352***<br>(0.002)  | 0.354***<br>(0.002)              | 0.352***<br>(0.002)          | 0.423***<br>(0.002)              |
| Israeli fatalities                     | -0.219***<br>(0.034) | -0.023***<br>(0.002) | -0.280***<br>(0.037) | -0.263***<br>(0.036)             | -0.224***<br>(0.034)         | -0.178***<br>(0.035)             |
| Israeli fatalities*Arab seller         | 0.880***<br>(0.098)  | 0.101***<br>(0.007)  | 1.013***<br>(0.105)  | 0.989***<br>(0.099)              | 0.907***<br>(0.098)          | 0.739***<br>(0.096)              |
| Seller locality fixed effects          | Yes                  | Yes                  | Yes                  | Yes                              | Yes                          | Yes                              |
| Time controls                          | Yes                  | Yes                  | Yes                  | Yes                              | Yes                          | Yes                              |
| Seller characteristics                 | Yes                  | Yes                  | Yes                  | Yes                              | Yes                          | Yes                              |
| Vehicle characteristics                | Yes                  | Yes                  | Yes                  | Yes                              | Yes                          | Yes                              |
| Sum of Israeli fatalities coefficients | 0.661***<br>(0.092)  | 0.078***<br>(0.006)  | 0.733***<br>(0.099)  | 0.726***<br>(0.092)              | 0.682***<br>(0.092)          | 0.561***<br>(0.090)              |
| R <sup>2</sup>                         | 0.4776               | 0.4777               | 0.4776               | 0.4813                           | 0.4775                       | 0.5084                           |
| Observations                           | 1,322,475            | 1,322,475            | 1,322,475            | 1,294,928                        | 1,312,039                    | 1,230,269                        |

*Notes.* See Table 2 for variable definitions. Column 1 replicates the results of the baseline specification (Table 2, column 4). In column 2 violence intensity is measured with an indicator for a positive number of total Israeli fatalities from politically-motivated violence in the natural area surrounding the seller's locality in the 7 days preceding the transaction date (in the other columns fatalities figures were divided by 100 for ease of exposition). In column 3 violence intensity is measured with civilian instead of total fatalities. In column 4 the analysis excludes sellers residing in the West Bank and the Gaza Strip. In column 5 the analysis excludes the period of the Second Lebanon War (12.7.2006-14.8.2006). Column 6 applies a stricter definition of seller and buyer ethnicity (see text for details).

Estimated using OLS. Robust standard errors in parentheses. \*, \*\*, \*\*\* represent statistical significance at the 10, 5, and percent levels.

**TABLE 4: THE EFFECT OF VIOLENCE DECAYS WITH TIME**

| Window length (in days)                | Dependent variable: Arab buyer |                      |                      |                      |                      |                      |
|--|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|  | 7                              | 15                   | 30                   | 90                   | 180                  | 360                  |
| Arab seller                            | 0.352***<br>(0.002)            | 0.350***<br>(0.002)  | 0.348***<br>(0.002)  | 0.341***<br>(0.002)  | 0.336***<br>(0.002)  | 0.330***<br>(0.002)  |
| Israeli fatalities                     | -0.219***<br>(0.034)           | -0.231***<br>(0.022) | -0.209***<br>(0.015) | -0.134***<br>(0.008) | -0.092***<br>(0.005) | -0.063***<br>(0.003) |
| Israeli fatalities*Arab seller         | 0.880***<br>(0.098)            | 0.970***<br>(0.063)  | 0.909***<br>(0.043)  | 0.670***<br>(0.022)  | 0.470***<br>(0.013)  | 0.321***<br>(0.008)  |
| Seller locality fixed effects          | Yes                            | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  |
| Time controls                          | Yes                            | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  |
| Seller characteristics                 | Yes                            | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  |
| Vehicle characteristics                | Yes                            | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  |
| Sum of Israeli fatalities coefficients | 0.661***<br>(0.092)            | 0.739***<br>(0.060)  | 0.700***<br>(0.041)  | 0.536***<br>(0.021)  | 0.378***<br>(0.013)  | 0.257***<br>(0.007)  |
| R <sup>2</sup>                         | 0.4776                         | 0.4777               | 0.4778               | 0.4781               | 0.4783               | 0.4786               |
| Observations                           | 1,322,475                      | 1,322,475            | 1,322,475            | 1,322,475            | 1,322,475            | 1,322,475            |

*Notes.* “Arab buyer” (“Arab seller”) is an indicator that takes the value of 1 if the buyer (seller) is Arab and 0 if the buyer (seller) is Jewish. “Israeli fatalities” is the number of total (civilian and security forces) Israeli fatalities from politically-motivated violence in the natural area surrounding the seller’s locality in windows of increasing length (e.g. the shortest window includes the 7 days preceding the transaction date). Fatalities figures were divided by 100 for ease of exposition. “Time controls” include indicators for the year, month, and day of week of the transaction as well as the total number of transactions on that day. “Seller characteristics” include gender and age. “Vehicle characteristics” include model year, engine size, number of previous owners and value group. Estimated using OLS. Robust standard errors in parentheses. \*, \*\*, \*\*\* represent statistical significance at the 10, 5, and percent levels.



**TABLE 5: THE EFFECT OF VIOLENCE DECAYS WITH DISTANCE**

| Dependent variable: Arab buyer         |                      |                      |                      |                     |
|--|----------------------|----------------------|----------------------|---------------------|
| Area                                   | Natural area         | Sub-district         | District             | Country-wide        |
| Arab seller                            | 0.352***<br>(0.002)  | 0.352***<br>(0.002)  | 0.352***<br>(0.002)  | 0.352***<br>(0.002) |
| Israeli fatalities                     | -0.219***<br>(0.034) | -0.157***<br>(0.027) | -0.098***<br>(0.024) | -0.016**<br>(0.006) |
| Israeli fatalities*Arab seller         | 0.880***<br>(0.098)  | 0.573***<br>(0.079)  | 0.261***<br>(0.053)  | 0.055***<br>(0.012) |
| Seller locality fixed effects          | Yes                  | Yes                  | Yes                  | Yes                 |
| Time controls                          | Yes                  | Yes                  | Yes                  | Yes                 |
| Seller characteristics                 | Yes                  | Yes                  | Yes                  | Yes                 |
| Vehicle characteristics                | Yes                  | Yes                  | Yes                  | Yes                 |
| Sum of Israeli fatalities coefficients | 0.661***<br>(0.092)  | 0.416***<br>(0.074)  | 0.163***<br>(0.048)  | 0.039***<br>(0.011) |
| R <sup>2</sup>                         | 0.4776               | 0.4776               | 0.4776               | 0.4776              |
| Observations                           | 1,322,475            | 1,322,475            | 1,322,475            | 1,322,475           |

*Notes.* “Arab buyer” (“Arab seller”) is an indicator that takes the value of 1 if the buyer (seller) is Arab and 0 if the buyer (seller) is Jewish. “Israeli fatalities” is the number of total (civilian and security forces) Israeli fatalities from politically-motivated violence in increasingly larger areas surrounding the seller’s locality in the 7 days preceding the transaction date. Fatalities figures were divided by 100 for ease of exposition. “Time controls” include indicators for the year, month, and day of week of the transaction as well as the total number of transactions on that day. “Seller characteristics” include gender and age. “Vehicle characteristics” include model year, engine size, number of previous owners and value group. Estimated using OLS. Robust standard errors in parentheses. \*, \*\*, \*\*\* represent statistical significance at the 10, 5, and percent levels.

**TABLE 6: THE ROLE OF PALESTINIAN FATALITIES**

| Dependent variable: Arab buyer             |                      |                     |                      |
|--|----------------------|---------------------|----------------------|
|  | (1)                  | (2)                 | (3)                  |
| Arab seller                                | 0.352***<br>(0.002)  | 0.352***<br>(0.002) | 0.351***<br>(0.002)  |
| Israeli fatalities                         | -0.219***<br>(0.034) |                     | -0.218***<br>(0.034) |
| Israeli fatalities*Arab seller             | 0.880***<br>(0.098)  |                     | 0.872***<br>(0.098)  |
| Palestinian fatalities                     |                      | -0.001<br>(0.001)   | -0.001<br>(0.001)    |
| Palestinian fatalities*Arab seller         |                      | 0.008***<br>(0.003) | 0.008***<br>(0.003)  |
| Seller locality fixed effects              | Yes                  | Yes                 | Yes                  |
| Time controls                              | Yes                  | Yes                 | Yes                  |
| Seller characteristics                     | Yes                  | Yes                 | Yes                  |
| Vehicle characteristics                    | Yes                  | Yes                 | Yes                  |
| Sum of Israeli fatalities coefficients     | 0.661***<br>(0.092)  |                     | 0.655***<br>(0.092)  |
| Sum of Palestinian Fatalities coefficients |                      | 0.007***<br>(0.002) | 0.007***<br>(0.002)  |
| R <sup>2</sup>                             | 0.4776               | 0.4776              | 0.4776               |
| Observations                               | 1,322,475            | 1,322,475           | 1,322,475            |

*Notes.* “Arab buyer” (“Arab seller”) is an indicator that takes the value of 1 if the buyer (seller) is Arab and 0 if the buyer (seller) is Jewish. “Israeli fatalities” is the number of total (civilian and security forces) Israeli fatalities from politically-motivated violence in the natural area surrounding the seller’s locality in the 7 days preceding the transaction date. “Palestinian fatalities” is the number of Palestinians killed by Israeli security forces in the West Bank and the Gaza Strip in the 7 days preceding the transaction date. Fatalities figures were divided by 100 for ease of exposition. “Time controls” include indicators for the year, month, and day of week of the transaction as well as the total number of transactions on that day. “Seller characteristics” include gender and age. “Vehicle characteristics” include model year, engine size, number of previous owners and value group.

Estimated using OLS. Robust standard errors in parentheses. \*, \*\*, \*\*\* represent statistical significance at the 10, 5, and percent levels.

**TABLE 7: THE PEACE PROCESS AND THE MARKET FOR USED CARS**

| Dependent variable: Arab buyer             |                      |                      |                      |
|--|----------------------|----------------------|----------------------|
|  | (1)                  | (2)                  | (3)                  |
| Arab seller                                | 0.349***<br>(0.002)  | 0.349***<br>(0.002)  | 0.347***<br>(0.002)  |
| Israeli Fatalities                         | -0.210***<br>(0.034) |                      | -0.207***<br>(0.034) |
| Israeli Fatalities*Arab seller             | 0.866***<br>(0.098)  |                      | 0.853***<br>(0.098)  |
| Palestinian Fatalities                     | -0.006*<br>(0.003)   |                      | -0.003<br>(0.003)    |
| Palestinian Fatalities*Arab seller         | 0.020***<br>(0.005)  |                      | 0.011*<br>(0.006)    |
| Peace index                                |                      | 0.014**<br>(0.006)   | 0.012**<br>(0.006)   |
| Peace index*Arab seller                    |                      | -0.029***<br>(0.005) | -0.022***<br>(0.006) |
| Seller locality fixed effects              | Yes                  | Yes                  | Yes                  |
| Time controls                              | Yes                  | Yes                  | Yes                  |
| Seller characteristics                     | Yes                  | Yes                  | Yes                  |
| Vehicle characteristics                    | Yes                  | Yes                  | Yes                  |
| Sum of Israeli fatalities coefficients     | 0.656***<br>(0.092)  |                      | 0.646***<br>(0.092)  |
| Sum of Palestinian fatalities coefficients | 0.014***<br>(0.005)  |                      | 0.008<br>(0.005)     |
| Sum of peace index coefficients            |                      | -0.015**<br>(0.007)  | -0.010<br>(0.007)    |
| R <sup>2</sup>                             | 0.4841               | 0.4840               | 0.4841               |
| Observations                               | 1,113,049            | 1,113,049            | 1,113,049            |

*Notes.* “Arab buyer” (“Arab seller”) is an indicator that takes the value of 1 if the buyer (seller) is Arab and 0 if the buyer (seller) is Jewish. “Israeli fatalities” is the number of total (civilian and security forces) Israeli fatalities from politically-motivated violence in the natural area surrounding the seller’s locality in the 7 days preceding the transaction date. “Palestinian fatalities” is the number of Palestinians killed by Israeli security forces in the West Bank and the Gaza Strip in the 7 days preceding the transaction date. Fatalities figures were divided by 100 for ease of exposition. “Peace index” measures the strength of support among Israeli Jews for the Oslo agreements between Israel and the PLO (see text for details). “Time controls” include indicators for the year, month, and day of week of the transaction as well as the total number of transactions on that day. “Seller characteristics” include gender and age. “Vehicle characteristics” include model year, engine size, number of previous owners and value group. Estimated using OLS. Robust standard errors in parentheses. \*, \*\*, \*\*\* represent statistical significance at the 10, 5, and percent levels.

**TABLE 8: DISTRIBUTION OF ATTITUDES**

| Statement   | Share of total    |                   |       |                | N     |
|---|-------------------|-------------------|-------|----------------|-------|
|   | Strongly disagree | Somewhat disagree | Agree | Strongly agree |       |
|   | (1)               | (2)               | (3)   | (4)            | (5)   |
| The Arabs in Israel are more violent than the Jews                          | 0.181             | 0.222             | 0.300 | 0.297          | 3,584 |
| The Arabs in Israel are more likely to cheat than the Jews                  | 0.345             | 0.300             | 0.193 | 0.163          | 3,517 |
| The Arabs in Israel have lower natural intelligence than the Jews           | 0.316             | 0.202             | 0.263 | 0.219          | 3,534 |
| I would not want to live in the same building with an Arab Israeli neighbor | 0.298             | 0.179             | 0.207 | 0.315          | 3,568 |
| Jews and Arabs should be separated in recreational areas <sup>1</sup>       | 0.359             | 0.158             | 0.198 | 0.286          | 3,533 |
| There should be a law prohibiting marriages between Jews and Arab Israelis  | 0.442             | 0.089             | 0.128 | 0.341          | 3,576 |

*Notes.* The table presents the distribution of attitudes expressed by Jewish participants in the Israeli market for used cars toward Israeli Arabs. <sup>1</sup> The original term in Hebrew refers to places such as restaurants, coffee shops, bars and clubs as well as to outdoor venues such as beaches and parks.

**TABLE 9: CONFLICT AND ATTITUDES TOWARD ARABS**

| Dependent variable          | Violence          | Cheating          | Intelligence        | Neighbors          | Segregation       | Marriage          |
|-----------------------------|-------------------|-------------------|---------------------|--------------------|-------------------|-------------------|
|                             | (1)               | (2)               | (3)                 | (4)                | (5)               | (6)               |
| Israeli fatalities          | 0.024<br>(0.032)  | -0.035<br>(0.038) | 0.075*<br>(0.044)   | 0.061**<br>(0.030) | 0.023<br>(0.041)  | 0.067*<br>(0.036) |
| Palestinian fatalities      | 0.005*<br>(0.003) | 0.005*<br>(0.003) | 0.001<br>(0.003)    | 0.001<br>(0.003)   | 0.000<br>(0.003)  | 0.004<br>(0.003)  |
| Peace Index                 | -0.103<br>(0.133) | 0.084<br>(0.131)  | -0.271**<br>(0.133) | -0.200<br>(0.132)  | -0.207<br>(0.131) | 0.007<br>(0.125)  |
| Natural area fixed effects  | Yes               | Yes               | Yes                 | Yes                | Yes               | Yes               |
| Time controls               | Yes               | Yes               | Yes                 | Yes                | Yes               | Yes               |
| Participant characteristics | Yes               | Yes               | Yes                 | Yes                | Yes               | Yes               |
| R <sup>2</sup>              | 0.0886            | 0.0810            | 0.1105              | 0.1119             | 0.1566            | 0.2174            |
| Observations                | 2,986             | 2,986             | 2,986               | 2,986              | 2,986             | 2,986             |

*Notes.* The dependent variable in each column is an indicator variable taking the value of 1 if the Jewish survey participant agreed or strongly agreed with a particular (negative) statement concerning Arab Israelis and the value of 0 otherwise. See Table 8 for full text of statements. “Israeli fatalities” is the number of total (civilian and security forces) Israeli fatalities from politically-motivated violence in the natural area surrounding the survey participant’s locality in the 30 days preceding the survey date. “Palestinian fatalities” is the number of Palestinians killed by Israeli security forces in the West Bank and the Gaza Strip in the 30 days preceding the survey date. “Peace index” measures the strength of support among Israeli Jews for the peace process with the Palestinians (see text for details). “Time controls” include a linear time trend and day of week fixed effects. “Participant Characteristics” are those included in Appendix Tables A3 and A5.

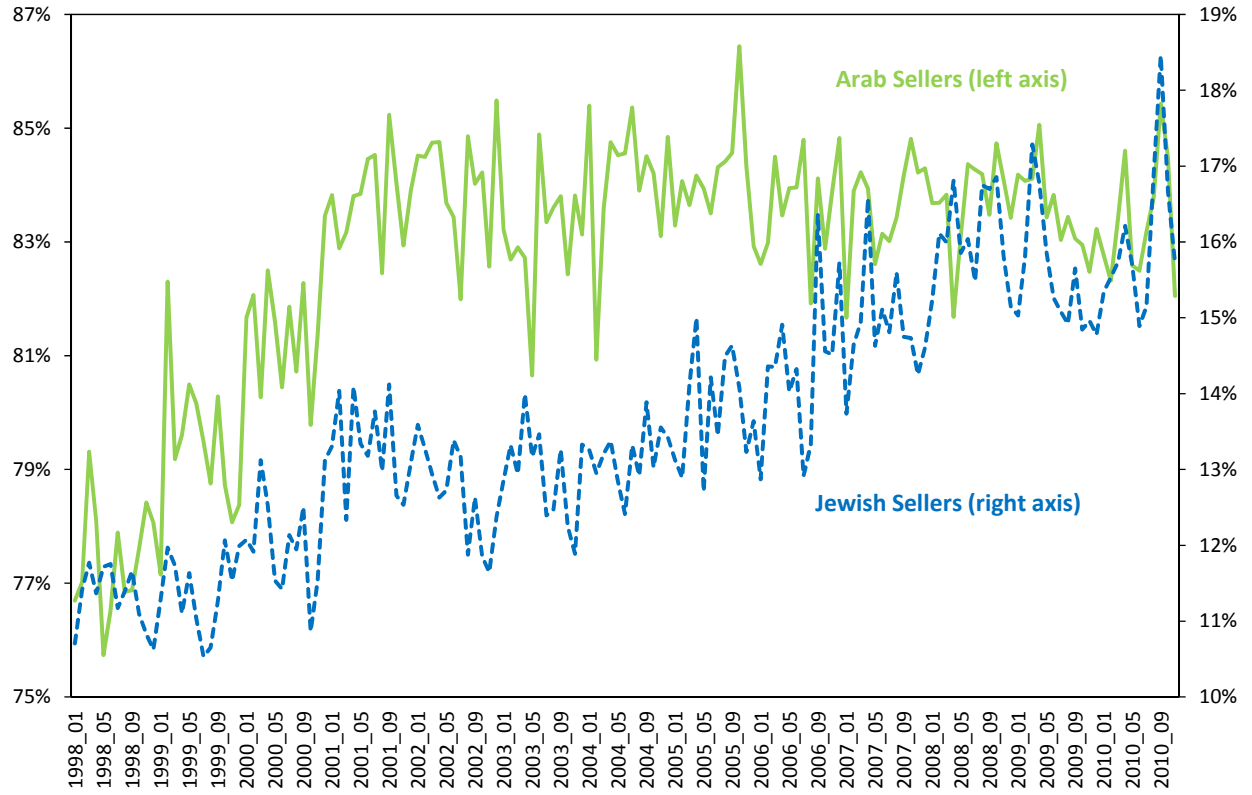
Estimated using OLS. Robust standard errors in parentheses. \*, \*\*, \*\*\* represent statistical significance at the 10, 5, and percent levels.

**TABLE 10: CASE STUDY – THE GAZA FLOTILLA RAID**

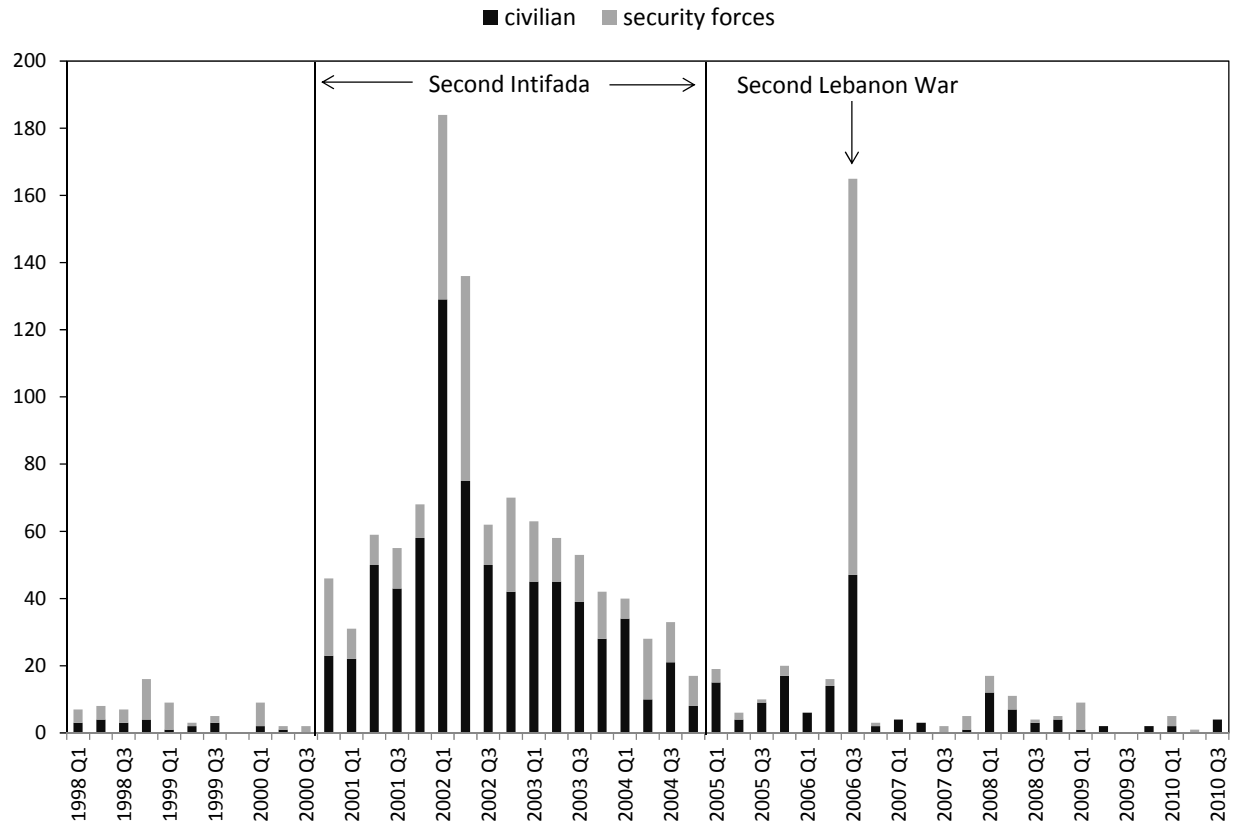
| Dependent variable          | Violence            | Cheating            | Intelligence     | Neighbors           | Segregation      | Marriage         |
|-----------------------------|---------------------|---------------------|------------------|---------------------|------------------|------------------|
|                             | (1)                 | (2)                 | (3)              | (4)                 | (5)              | (6)              |
| Post-Gaza Flotilla raid     | 0.149***<br>(0.057) | 0.156***<br>(0.058) | 0.092<br>(0.060) | 0.182***<br>(0.061) | 0.080<br>(0.060) | 0.062<br>(0.058) |
| Participant characteristics | Yes                 | Yes                 | Yes              | Yes                 | Yes              | Yes              |
| R <sup>2</sup>              | 0.0958              | 0.0985              | 0.1417           | 0.0768              | 0.0956           | 0.1732           |
| Observations                | 278                 | 278                 | 278              | 278                 | 278              | 278              |

*Notes.* The analysis is restricted to the eight survey dates before and after the May 31, 2010 Israeli raid on the Gaza Flotilla (the first survey date included is May 23 and the last one is June 7). The dependent variable in each column is an indicator variable taking the value of 1 if the Jewish survey participant agreed or strongly agreed with a particular (negative) statement concerning Arab Israelis and the value of 0 otherwise. See Table 8 for full text of statements. “Post-Gaza Flotilla raid” is an indicator taking the value of 0 before the raid and the value of 1 afterwards. “Participant Characteristics” are those included in Appendix Tables A3 and A5. Estimated using OLS. Robust standard errors in parentheses. \*, \*\*, \*\*\* represent statistical significance at the 10, 5, and percent levels.

**FIGURE 1: SHARE OF ARAB BUYERS BY SELLER ETHNICITY**

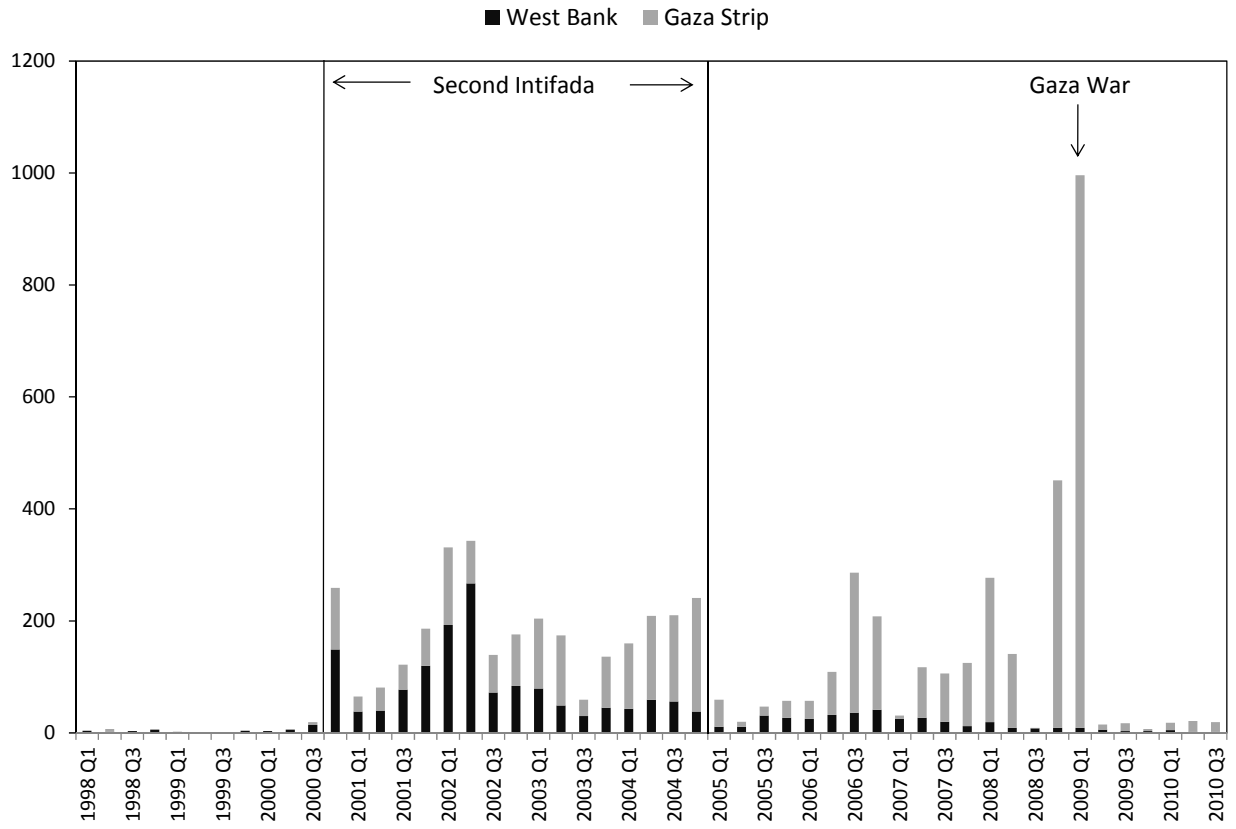


**FIGURE 2A: ISRAELI FATALITIES FROM POLITICAL VIOLENCE**

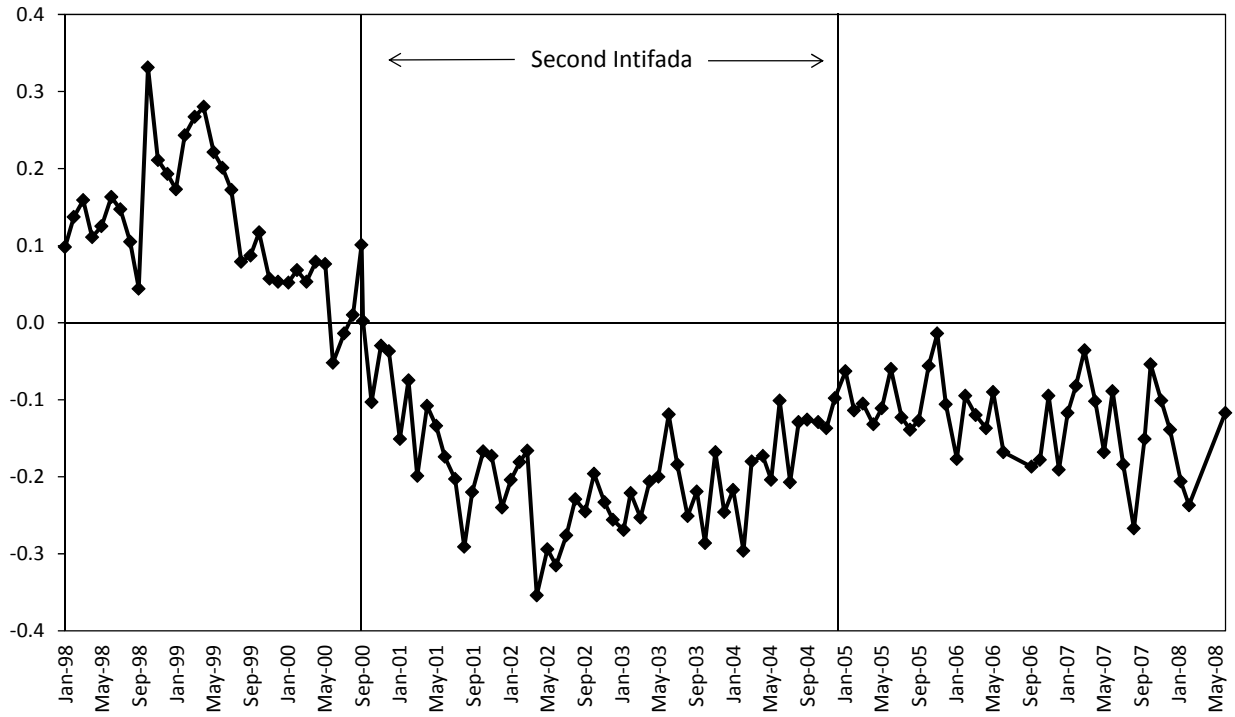




**FIGURE 2B: PALESTINIANS KILLED BY ISRAELI SECURITY FORCES**

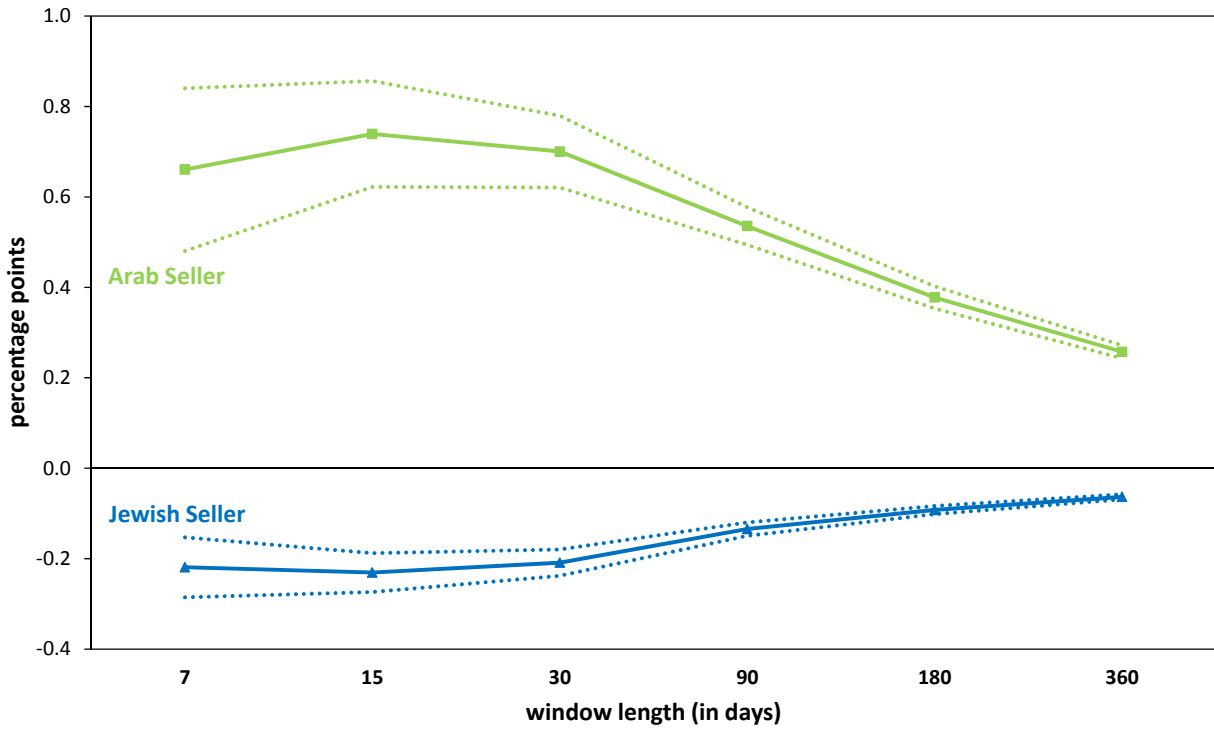


**FIGURE 2C: THE PEACE INDEX - NET SUPPORT FOR THE OSLO ACCORDS**



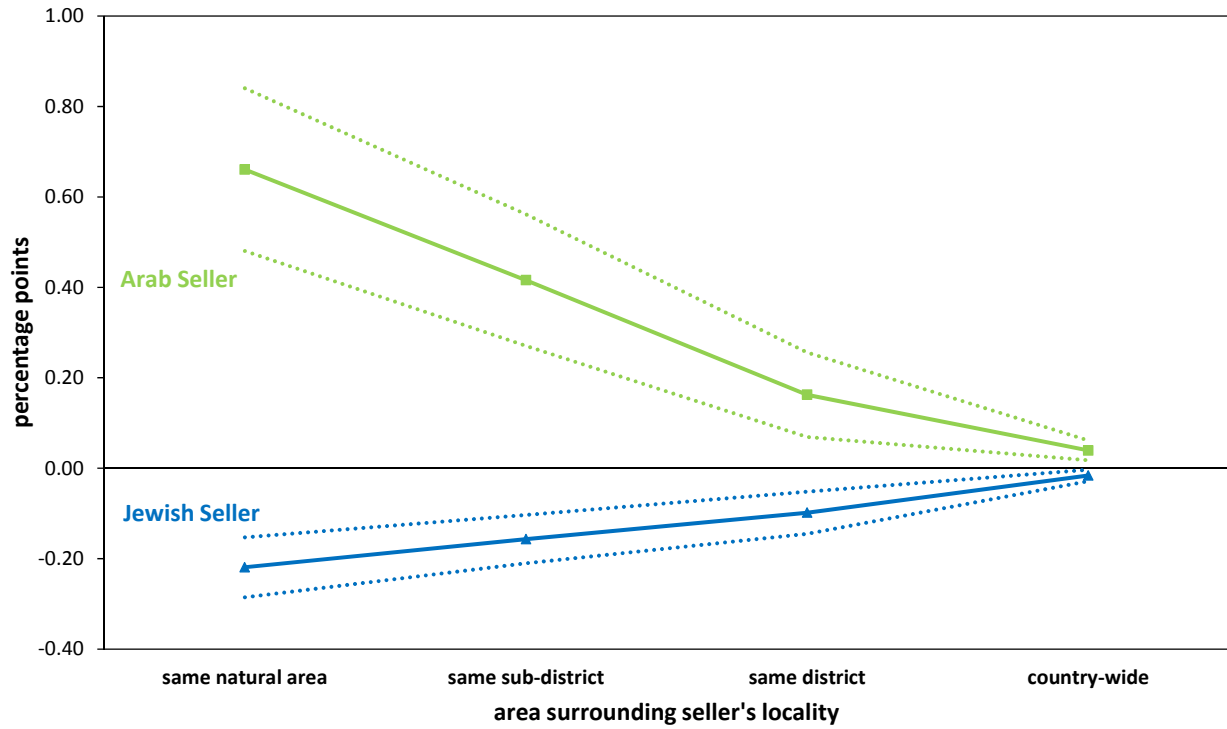
The question concerning support for the Oslo accords was not asked in polls conducted in July and August 2006, in March, April and May 2008 and after June 2008.

**FIGURE 3: EFFECT OF VIOLENCE INTENSITY DECAYS WITH TIME**



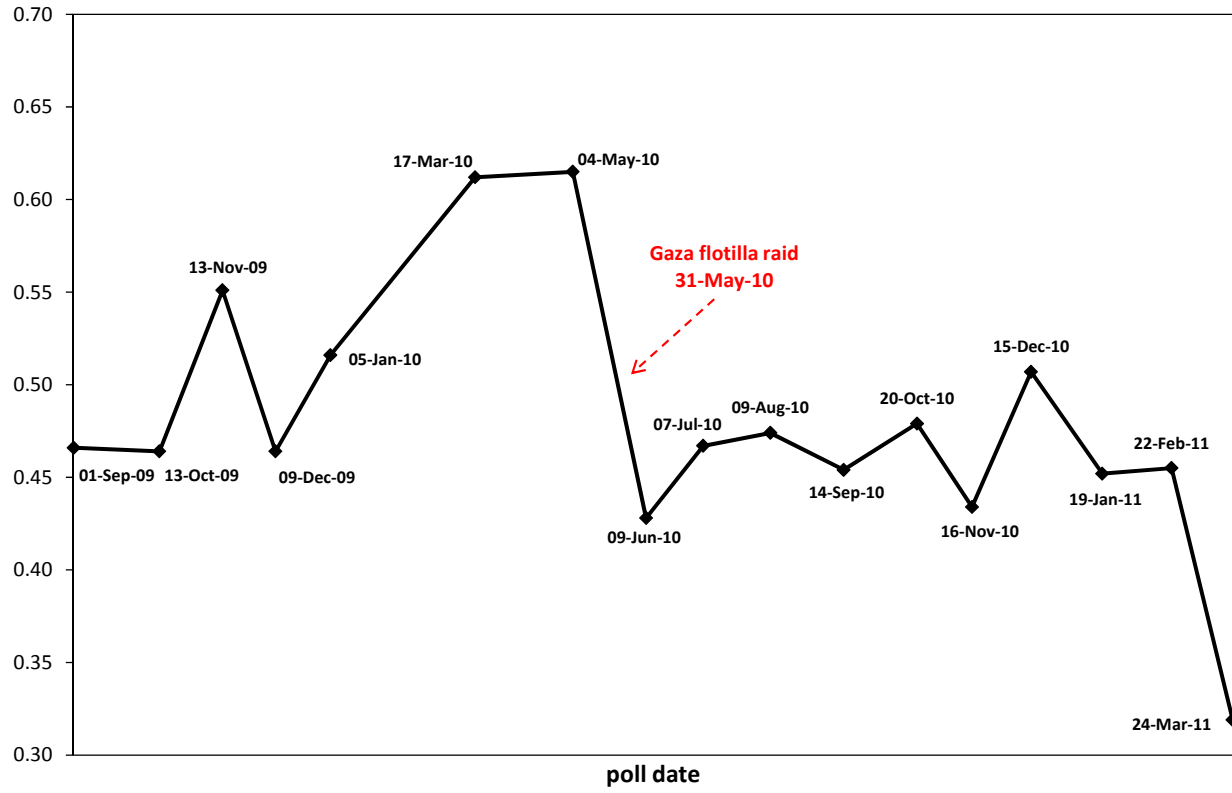
The figure displays the marginal effect of an increase of one fatality from politically-motivated violence in the natural area surrounding the seller's locality in windows of increasing length (e.g. the shortest window includes the 7 days preceding the transaction date) on the probability that the buyer is Arab. See Table 4 for details.

**FIGURE 4: EFFECT OF VIOLENCE INTENSITY DECAYS WITH DISTANCE**

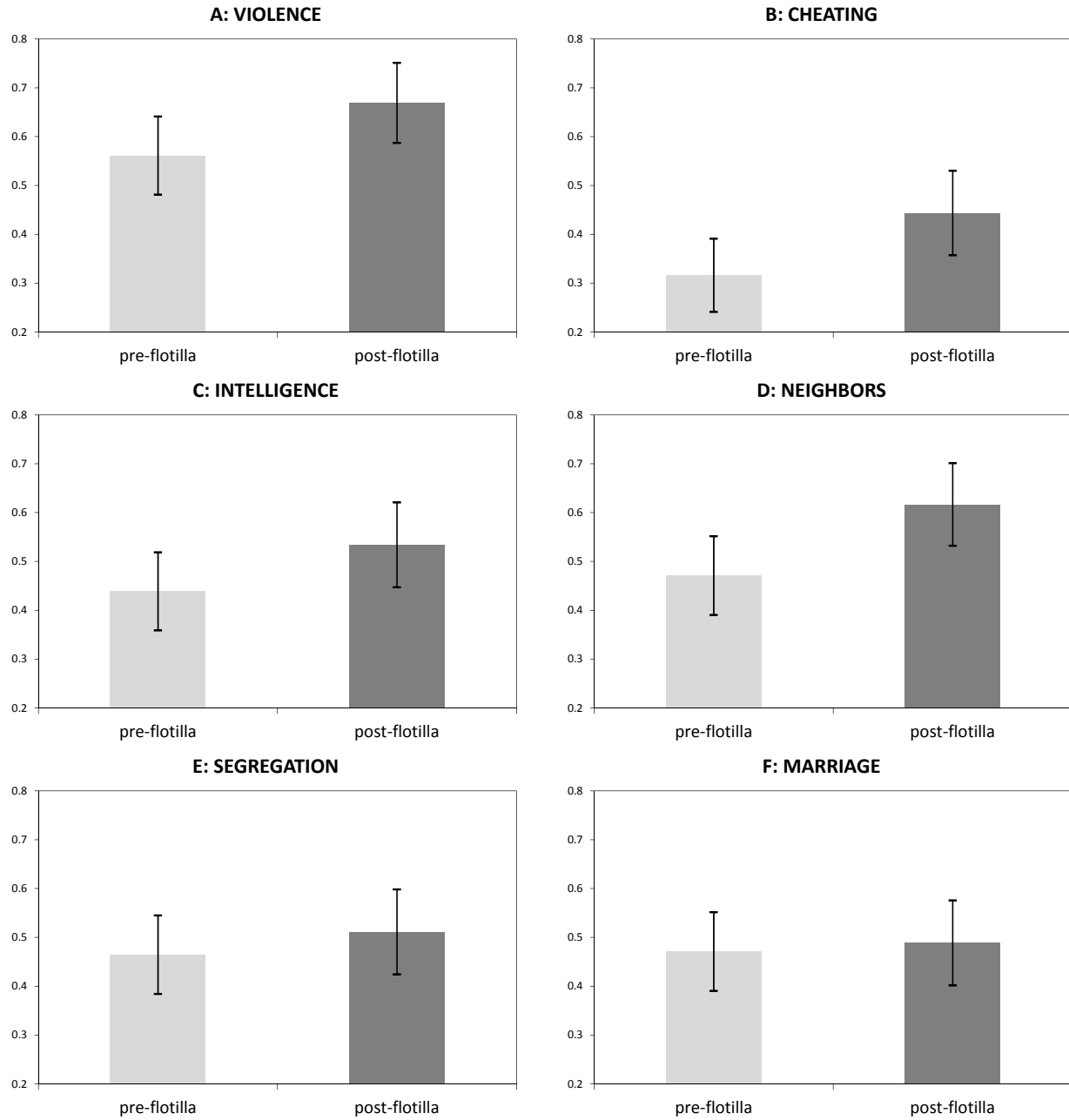


The figure displays the marginal effect of an increase of one fatality from politically-motivated violence in the 7 days preceding the transaction date in increasingly larger geographical areas surrounding the seller's locality on the probability that the buyer is Arab. See Table 5 for details.

**FIGURE 5: THE PEACE INDEX**  
**NET SUPPORT FOR PEACE NEGOTIATIONS WITH THE PALESTINIANS**



**FIGURE 6: EFFECT OF THE GAZA FLOTILLA RAID ON ATTITUDES**



*Notes:* The figure displays, for the eight survey dates immediately before and the eight survey dates immediately after the May 31, 2010 Israeli raid on the Gaza Flotilla – this covers the period from May 23, 2010 to June 7, 2010 – the mean attitudes of Jewish survey participants toward Arab citizens of Israel together with 95 percent confidence intervals around the means. The attitude variables used to construct the figure are indicators which take the value of 1 if the survey participant somewhat or strongly agreed with a particular (negative) attitude statement and the value of 0 otherwise. See Table 8 for full text of statements. Analysis is restricted to survey participants who responded to all attitude questions (in total, there were 288 survey observations during this period).