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Are the Religiously Observant Discriminated Against in the Rental Housing Market? Experimental Evidence from Israel

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Abstract:

In this paper, I test for discrimination against the religiously observant in the Israeli rental housing market. I perform a correspondence study where half of the requests have a religious signal ('basad' written at the top of the request), while the other half do not. Because the requests are identical otherwise, differences in call-back rates represent the causal effect of writing 'basad' at the top of the request. I find that requests with a religious signal receive 12 percent less responses than requests with no such signal, with this differential being greater in cities with more left-leaning voters and when the contact person is female. For comparison, requests signaling individuals from the Former Soviet Union receive about the same percentage of call-backs as religious requests, while requests signaling an Arab individual receive significantly fewer call-backs than the other groups.

Keywords: Discrimination; religiosity; housing; correspondence study

JEL codes: C93, J15, Z12

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Introduction

Housing discrimination can prevent access to high-quality employment opportunities, health care, school quality, and public spaces. In this paper, I test whether there is discrimination towards the religiously observant within the same religion and ethnicity in the Israeli rental housing market. To test for this kind of discrimination, I send fictitious email requests to view an apartment that is available for rent. Half of the requests have no religious signal, while the other half do, and all requests are signaled as being from Jewish individuals, thereby isolating the religious signal as the only difference between the two requests. Although there are numerous articles on discrimination in the rental housing market in other countries with regards to race, ethnicity, type of religion, and sexual orientation, to my knowledge discrimination based on degree of religiosity within the same religion and ethnicity has not yet been investigated. As such, this paper adds an additional dimension to the discussion on housing market discrimination.

In Israel, friction between the religious and non-religious is apparent in several contexts. There are disagreements regarding the timing of school holidays (Chai and Nachshoni, 2017), if businesses can operate during the Sabbath (Morag, 2014), and whether works on public projects can be performed during the Sabbath (Heller, 2016). This is all part of the constant debate in Israel regarding the separation of religion and state (Pew Research Center, 2016). The schism between the religious and non-religious was viewed by Israelis to pose more of an internal threat to Israel than ethnic differences between Mizrahi and Ashkenazi Jews, differences between the political left and political right, and the growing gap between the rich and poor (Zemach, 2010).¹ Differences in views between the religious and non-religious have led to different laws depending on the religious nature of a city. For instance, the opening of businesses on the Sabbath is allowed or tolerated in some cities in Israel, but not in others. This friction in views between the religious and non-religious is not particular to Israel and can be seen in other countries,

¹ The only dissension above the one between the religious and non-religious was the one between Jews and Arabs.

particularly regarding support for abortion and equal rights for the lesbian, gay, bisexual, and transgender (LGBT) community.

Discrimination against the religiously observant in the housing market has not been tested, although other factors have been thoroughly investigated, plausibly because it is difficult to isolate religious observance from other factors that may affect a landlord's decision regarding a potential tenant. In the labor market, for example, religious affiliation is commonly signaled through membership to a volunteer group that is associated with a particular religion, which is not something that is present in short written requests to see apartments for rent. To signal religiosity, I use the fact that religiously observant Jews in Israel often write 'basad' ('god-willing' in Aramaic) at the top of written correspondence. Therefore, half of the requests I sent regarding an available apartment had 'basad' written at the top, while the other half did not. This type of correspondence study is a popular way to test for discrimination in the labor and housing markets because the experimenter can hold all applicant characteristics constant, and only vary the attribute that s/he is testing for discrimination against (Riach and Rich, 2002).

Overall, I find that requests signaled as religious receive 12 percent less responses than those that were not, with non-religious and religious requests receiving a response 53.2 and 46.6 percent of the time, respectively. This overall difference is driven by greater differences among the response rates in cities with a greater percentage of left-leaning voters (58.5 percent and 48.4 percent response for non-religious and religious requests, respectively) and for apartments in which the contact person is female (57.2 percent and 47.7 percent response for non-religious and religious requests, respectively). To put these differences into context, I also sent requests with a name indicative of an individual from the Former Soviet Union (FSU) and an Arab-Muslim (Arab) sounding name.² I find that the requests with an FSU name receive similar response rates as religious requests, while those requests with an Arab-sounding name receive significantly less responses than all other groups.

² Beginning in 1989, with the lifting of immigration restrictions, there was a large wave of immigration from the Soviet Union to Israel.

This paper highlights an additional factor – religious observance – that could lead to discrimination in housing markets. This discrimination represents an extra cost to the religious as they may be denied housing opportunities that align with their preferences. Those cities in which there were statistically and economically significant differences in response rates are also generally those cities with high quality schooling (Ministry of Education, 2017) and higher paying jobs in the service industry, rather than the manufacturing sector (Barkat, 2016). In Israel, because anti-discrimination laws for private housing do not exist (although they have been proposed), this work underscores the need to implement such protections, not only regarding ethnic discrimination which has already been found in other countries, but also regarding religious observance.

Relevant Literature

Discrimination in the housing market is typically associated with two economic theories, taste-based discrimination and statistical discrimination. With taste discrimination (Becker, 1957), the discriminator is willing to pay more to avoid association with a particular group. In the framework of potential tenants, a discriminating landlord will not reply to requests from a group that s/he has animus towards, even if the requests are of equal quality to other requests. That is, s/he is willing to limit the pool of candidates to maintain his/her animus. Limiting the pool of candidates imposes extra search costs on the landlord, or forces the landlord to settle for lower quality (e.g. lower income) tenants that are from the group s/he does not discriminate against.

With statistical discrimination, the discriminator has incomplete information about potential tenants and therefore uses group averages to gain more information about them (Phelps, 1972; Arrow, 1973). Therefore, differential behavior towards potential tenants from different groups is not driven by prejudice towards a group, but rather by profit-maximizing behavior. From a landlord's point of view, an individual from a group with higher mean incomes will, on average, have a higher income than an individual from a group with lower mean incomes. In this case, even if there is no taste-based discrimination against religious individuals, they may receive less call-backs due to statistical

discrimination as non-religious Jewish Israeli females and males earn 18 percent and 17 percent more than religious Jewish Israeli females and males, respectively (Taub Center, 2016). An additional reason may be that religious families, on average, have more children than non-religious families, with an average of 4.22 children for religious Jewish females versus 2.56 children and 2.14 children for “not so religious” and secular Jewish females, respectively (Hleihel, 2017). If landlords are worried about wear and tear on their apartment, complaints from neighbors regarding noise, or other factors associated with larger families, these are more likely, on average, to be issues with larger, religious families.

As mentioned earlier, discrimination in the housing market based on religious observance alone has not been tested. Existing work examines discrimination based on identification with a particular religion and religiosity in the labor market. Wallace et al. (2014) and Wright et al. (2013), testing for discrimination in the South and Northeast US labor markets, respectively, find that those signaling any religious affiliation, or those signaling themselves as atheists, receive less call-backs for job interviews. As one of the groups they examine are those who do not have a religious indicator on their resume, they have an indication of the effect of religiosity. Weichselbaumer (2016), performing a correspondence study in the German labor market, found that applicants with Turkish names wearing headscarves receive much fewer call-backs than applicants with Turkish names not wearing headscarves. Valfort (2017) finds a religiosity penalty for Muslims, but a religiosity advantage for Christians in the labor market in France. That is, religious Muslims receive the least percentage of call-backs, and religious Christians the most.

Also related to this work in the sense of examining differentials in economic outcomes between Jewish subjects, Chiswick and Huang (2008) examine earnings differentials across degree of religiosity among American Jews. Running wage regressions, they find an inverted U-shaped relationship between religiosity and earnings after controlling for observable characteristics, including education. Unexplained differentials in wage regressions are another way to measure discrimination. They find that the moderately religious (Conservative Jews) earn more than the non-religious (Reform Jews), who earn more than the very religious (Orthodox Jews). The religious fictitious applicant in this study in Israel

would be most closely associated with the Conservative Jews and the non-religious associated with the Reform Jews.

Complementing the findings of the aforementioned studies that dealt with religiosity in the labor market, this paper addresses the housing market, where typically two experimental approaches have been used to test for discrimination. The first are audit studies, where real-life applicants are matched on all characteristics except the one being studied (e.g. one Black individual and one white individual), coached to behave similarly, and sent to seek housing from randomly selected landlords or agencies (see Bertrand and Duflo 2016 for a review of the audit procedure). Overall, these studies have found discrimination against Blacks and Hispanics in the US and also against ethnic minorities in Europe (see Oh and Yinger 2015 for a review).

The other type of experimental studies are correspondence studies, which is the type of procedure I use in this paper. Using this approach, existing literature has found discrimination with respect to factors other than religiosity, including sexual orientation, type of religion (Muslims vs. non-Muslims), ethnicity, family status, and employment status. For instance, testing for discrimination based on sexual orientation, Ahmed and Hammarstedt (2009) find that homosexual males get discriminated against in terms of number of call-backs and showings, and Ahmed et al. (2008) find no evidence of discrimination against lesbians in the Swedish housing market.

Most studies on discrimination in the housing market have examined ethnicity, which can also signal religion. For example, people with Arab-sounding names in Europe and the US. In Europe, Ahmed and Hammarstedt (2008) find that Arab males receive fewer call-backs than Swedish males and that males overall receive fewer call-backs than females. Also in Sweden, Carlsson and Eriksson (2014) find that landlords avoid ethnic minorities and the unemployed. Bosch et al. (2010) find discrimination against Moroccans in the Spanish rental housing market. When more information is provided to differentiate between high-quality and low-quality applicants, some of the discrimination goes away. Baldini and Federici (2011) find discrimination against those with Arab names and those with Eastern European names in Italy, and Acolin et al. (2016) find discrimination in France against some applicants with non-

French-sounding names (e.g. from Turkey, North African countries, and Sub-Sahara African countries), while no differential responses regarding those with Eastern or Southern European ancestry. Auspurg et al. (2017) find discrimination against Turkish applicants versus native applicants in Germany, which decreased if the individuals had high-status occupations.

In Los Angeles county, California, in the US, Carpusor and Loges (2006) find that White-sounding applicants receive the most responses, followed by applicants with Arab names, followed by those signaled by their name to be African-American. Also in the US, Hanson and Hawley (2011) find discrimination against African-Americans that is greater when there is a signal that both white and African-American candidates are of lower quality, and Ewens et al. (2014) find statistical discrimination to be the main source of discrimination against African Americans in their study of 34 US cities.

Examining rental contract data, Beatty and Sommervoll (2012) find that non-Norwegians pay more for comparable apartments than native Norwegians. In Vancouver, Canada, Lauster and Easterbrook (2011) find that both female and male single parents and gay male couples are less likely to get call-backs than heterosexual couples, while same-sex female couples get similar positive responses to heterosexual couples.

As a whole, these articles point to different levels of discrimination for various groups in society, representing a barrier for these groups to high quality employment, health services and schooling. However, none of these studies hold ethnicity constant while varying only the level of religiosity, thus isolating possible discrimination based on religious observance, which may also lead to unequal treatment in the housing market.

Experiment

The experiment was performed by applying to apartments through Israel's largest housing search internet site (yad2.co.il). Short email messages, with and without a religious signal and with alternating names, were sent to ads between 8:30am and 11am on weekdays (Sunday through Thursday in Israel). To not reveal the experiment, each apartment for rent was only applied to once, either with or without the

signal for religiosity. The disadvantage to this approach is that I am unable to measure whether the *same* landlord responded to one type of request and not the other. On the other hand, an identical request was sent, so there are no concerns about the content of the religious and non-religious requests not being identical in quality, nor is there a chance of the experiment being compromised.

To avoid selection bias, every other ad listed on the website was applied to when sending each type of request. In addition, only ads that had been active in the past two days were applied to as earlier ads may not still be relevant.³ All relevant information in the ad was recorded, including the price per month, number of rooms, name of contact person, and floor. Overall, 1,818 ads were applied to, 909 with each type of signal.

The two types of requests to see an apartment were:

- 1) Hello, I am interested in the apartment. When is a good time to come see it?

Moshe Sasson or Yossi Biton

- 2) 'Basad'

Hello, I am interested in the apartment. When is a good time to come see it?

Moshe Sasson or Yossi Biton

Because the two requests were identical in every respect except the word 'basad' at the beginning of the message, I interpret differential response rates as the causal effect of writing 'basad' on the probability of receiving a response.

³ After individuals post rental openings, they can go in every four hours to "jump" the ad to the top of the list. When an ad is jumped to the top of the list, the date on the ad is updated. Only ads that had been "jumped" the same day or the day before were applied to.

‘Moshe’ and ‘Yossi’ are common first names to Jewish Israelis and ‘Sasson’ and ‘Biton’ are common last names indicative of a Mizrahi/Sephardi Jew.⁴ A last name common to Mizrahi Jews was included to avoid religiosity signaling ethnicity as there is evidence in Israel that Mizrahi Jews are more religious than Ashkenazi Jews (Pew Research Center, 2016). Since Ashkenazi Jews have, on average, higher incomes than Mizrahi Jews (Haberfeld and Cohen, 2007), differential call-back rates may be due to perceived ethnic differences signaling income differences, rather than perceived differences in religiosity. Last names have been used to signal Jewish ethnicity in other studies, including Rubinstein and Brenner (2014) and Sansani (2017).

Literally, ‘basad’ means god-willing in Aramaic.⁵ From a survey of 105 students performed for a different study, there is a statistically significant difference in religious observance between those who write ‘basad’ and those who do not, all in favor of those writing ‘basad’ being more religious. Of those who write ‘basad’ at the top of written correspondence, 70% observe the Sabbath and attend Synagogue, and 100% eat kosher. Of those who do not write ‘basad’, 7.5% observe the Sabbath, 35.5% attend Synagogue, and 51.6% eat kosher. Although the degree of religiosity of someone who writes ‘basad’ is unclear, someone who writes ‘basad’ is religious to some degree.⁶

The correspondence experimental method, like the one used in this study, has several advantages for testing for discrimination. Two key advantages are the ability to isolate one factor for which the researcher is testing for discrimination against, and that a large sample size can be gathered due to the low cost per observation. However, there are also several limitations. First, I am only able to test for differential treatment at the initial screening period for seeing apartments, and do not know whether there

⁴ In Israel, there are two major ethnic Jewish groups, Ashkenazi and Mizrahi. Ashkenazi Jews originate from Europe and the US and Mizrahi Jews from countries including Algeria, Iraq, Morocco and Yemen.

⁵ Whether ‘basad’ should be written or not has been the focus of some controversy in Israel. For instance, in 2015, a lecturer at a college in Israel specifically asked the proctor of the final exam to not write ‘basad’ on the chalkboard, as is customary during final exams (Seidler, 2015). In 2003, the incoming Minister of the Interior requested that ‘basad’ not appear at the top of official documents from the Department of the Interior, drawing the ire of religious parties (Regev, 2003).

⁶ Recently, a smartphone application was introduced that puts the word ‘basad’ at the top of every webpage that a user who downloaded the application visits.

is more/less discrimination in future stages of the process. For instance, it may be the case that landlords are willing to meet with everyone, but are less flexible in terms of bargaining on rent with the group they discriminate against. Beatty and Sommervoll (2012) show that certain ethnic groups pay more for equal quality apartments compared to natives in Norway. Second, the results only represent average differentials in responses when apartments are applied to in a random fashion. However, upon experiencing differential treatment, religious individuals may adjust their behavior to increase their chances of securing an apartment. Third, about 10% of ads do not have an option of sending email requests, so these ads were not applied to.⁷ Given these limitations, correspondence studies still have been used widely to detect discrimination and complement other methods for measuring discrimination. A possible avenue for future research is to perform an audit study with religious and non-religious potential tenants.⁸

Methodology

I first examine the unconditional differences in response rates overall and by certain city characteristics. Then, to determine whether there are differential response rates conditional on apartment characteristics, I run linear probability models (LPM) of the following form:⁹

$$Y_{ic} = \alpha + \beta X_{ic} + \rho \text{Religious}_{ic} + \sigma_c + \varepsilon_{ic}$$

⁷ There are no statistically significant differences in the characteristics of ads with and without the possibility of reaching the landlord by email.

⁸ Religiosity can also be signaled in several ways in face to face interactions including the hijab in Islam and the headscarf and kippah in Judaism.

⁹ A linear probability model (LPM) is used for two main reasons. First, interaction effects are not estimated correctly in non-linear models (e.g. probit and logit) with standard statistical software commands (Ai and Norton, 2003). Second, the main drawback of using LPM is that it may lead to predicted probabilities that are greater than 1 or less than 0 and, therefore, biased and inconsistent estimates. However, there are no predicted probabilities that fall outside this range. That said, I test for the robustness of the results by estimating probit and logit models as well. I use the *inteff* command in Stata (Norton et al. 2004) to estimate the interaction terms correctly, finding that the results are qualitatively the same as the LPM.

Where i represents each ad and c the city the apartment is in. Y is equal to 1 if the request received a response, and 0 otherwise. *Religious* is a dummy variable indicating whether ‘basad’ was written at top of message and X represents a vector of apartment characteristics, gender of contact person, city characteristics, and the name on the request (Yossi Biton or Moshe Sasson). σ represents city fixed effects. Standard errors are clustered at the city level in all specifications.

To get a sense of the magnitude of the discrimination against the religious relative to discrimination based on other applicant characteristics that have been used in the existing literature, I test for discrimination against requests with an Arab name and requests with a typical name of an immigrant from the FSU. Arab and FSU individuals make up about 17% and 12% percent of the Israeli population, respectively (Central Bureau of Statistics, 2016). Two-hundred requests were sent with an Arab name (Ahmed) and 200 requests were sent with a name typical of someone from the FSU (Dimitry). To compare the discrimination of the religious to discrimination against other groups, I add the dummy variables *Arab* and *FSU*, each depicting a request with that type of name, to the regression above and estimate the following model:

$$Y_{ic} = \alpha + \beta X_{ic} + \rho_1 \text{Religious}_{ic} + \rho_2 \text{Arab}_{ic} + \rho_3 \text{FSU}_{ic} + \sigma_c + \varepsilon_{ic}$$

All of the other control variables remain unchanged.

Results

In Table 1 are the number of apartments applied to in each city and the proportion of requests that received a call-back in that city. In each city, I sent an equal number of religious and non-religious requests, with the number of requests sent in each city determined by the number of ads in that city that are not more than two days old. Overall, 909 requests were sent without a religious signal and 909 with a religious signal.

Table 1: Number of Requests Sent by City

City	Religious		Non-Religious	
	N	Prop. of call-backs	N	Prop. of call-backs
Tel Aviv	136	0.471	136	0.581
Ramat Gan/Givatayim	118	0.475	118	0.576
Jerusalem	98	0.520	98	0.561
Rishon Lezion	82	0.354	82	0.439
Herzliya/Ramat HaSharon	70	0.443	70	0.614
Be'er Sheva	62	0.548	62	0.548
Holon/Bat-Yam	61	0.492	61	0.361
Petah Tikva	60	0.267	60	0.467
Rehovot/Ness Ziona	58	0.500	58	0.483
Kfar Saba/Raanana	56	0.589	56	0.625
Haifa	56	0.482	56	0.536
Netanya	52	0.462	52	0.500
Total	909	0.466	909	0.532

Notes: Number of requests sent in each city for each category of request. Some smaller cities that are adjacent to other cities are grouped together by the website.

Table 2 compares the observable characteristics of apartments applied to with a religious signal and those applied to without a religious signal. This is important if the probability of receiving a call-back is associated with the characteristics of the apartment. For instance, if landlords of higher priced apartments generally respond more than those of lower priced apartments, then if more non-religious requests are sent to higher priced apartments, this could bias the results in favor of finding differential response rates between the two types of requests. As shown in the table, however, there is no statistically significant difference in the characteristics of the apartments to which the two types of requests were sent.

The unconditional differences in response rates, both overall, and by certain apartment and city characteristics, are in table 3. Overall, 46.6% ($n = 424$) of the religious requests received a response while 53.2% ($n = 484$) of the requests with no religious signal received a response. This difference is statistically significant, and comes out to one less response for religious requests for every 15 requests sent out. When looking at the monthly rent of the apartment, I find that although the overall response rate

Table 2: Comparison of Apartment Characteristics

Apartment Characteristic	Religious	Non-Religious	Difference (std. err.)
Price (1000s of NIS)	4.410	4.445	-0.035 (0.057)
Rooms	3.189	3.204	-0.014 (0.032)
Floor	2.729	2.733	-0.003 (0.120)
Female/Male Contact Person (Male = 1)	0.613	0.633	-0.020 (0.023)
Availability (0 = immediately, 1 = future date)	0.403	0.438	-0.035 (0.023)

Notes: Apartment characteristics by type of request sent. Standard errors in parentheses.

*** significant at 1%; ** at 5%; * at 10%.

to both religious and non-religious requests is higher with higher-priced apartments, the difference in response rate is similar whether the monthly rent of the apartment is below or above the median rent.

Regarding gender, the difference is greater in magnitude (and statistically significant) when the apartment contact person is female versus when the contact person is male. When the contact person is female, the difference between the response rate for non-religious and religious requests is 9.5 percentage points and when the contact person is male, the difference is 4.2 percentage points. This difference may be because males in Israel are generally more religiously observant than females (Pew Research Center, 2016). Note that there are less observations when comparing females and males since there are gender-neutral names.

Table 3: Comparison of Call-Back Rates by Apartment and City Characteristic

Category	Religious	Non-Religious	Difference	(Standard error)
Overall (n = 1,818)	0.466	0.532	-0.066***	(0.023)
Below Median Rents (n = 884)	0.411	0.470	-0.059*	(0.033)
Above Median Rents (n = 934)	0.521	0.589	-0.069**	(0.032)
Female Contact Person (n = 526)	0.477	0.572	-0.095**	(0.044)
Male Contact Person (n = 894)	0.473	0.516	-0.042	(0.033)
Percent Left-leaning Voters Above Median (n = 902)	0.484	0.585	-0.101***	(0.033)
Percent Left-leaning Voters Below Median (n = 916)	0.449	0.480	-0.032	(0.033)
Name = <i>Moshe Sasson</i> (n = 909)	0.469	0.527	-0.058*	(0.033)
Name = <i>Yossi Biton</i> (n = 909)	0.464	0.537	-0.074**	(0.033)

Notes: Call-back rates by apartment, city, and applicant characteristics. *** significant at 1%; ** at 5%; * at 10%.

The difference in response rates is greatest when examining cities that are more left-leaning.¹⁰ In cities that are more left-leaning, the difference in responses to non-religious and religious requests is 10.1 percentage points; in cities that are less left-leaning the difference is 3.2 percentage points. This difference is not surprising as political leanings are related to religiosity, with 76 percent of the secular Jews identifying as center or left politically, while around 48 percent of the religious (non-Orthodox) identify as center or left politically (Pew Research Center, 2016). As expected, the difference in the call-back rates received by the name used is similar.

In Table 4 are the results of the LPM model which controls for apartment and city characteristics. In the specifications with an indicator for gender there are less observations because some landlords have gender-neutral names. In columns 1 through 3 are the results without interaction terms. Without interaction terms, the coefficient on *Religious* is statistically significant and economically meaningful with a coefficient between -0.058 and -0.064, indicating that sending in a request with ‘basad’ written at

¹⁰ To determine the general political views of voters in a city, I examined how voters in that city voted in the last Israeli elections in 2015. I measured the sum of the percentage of voters who voted for the two left-leaning Jewish parties (Meretz and Mahane Tsioni).

Table 4: Probability of Receiving Call Back
Dependent Variable: Positive Response to Request to See Apartment

	(1)	(2)	(3)	(4)	(5)	(6)
Religious	-0.064** (0.022)	-0.064** (0.022)	-0.058* (0.028)	0.058 (0.084)	0.008 (0.048)	-0.086** (0.032)
Price (1000s of NIS)	0.042** (0.018)	0.042** (0.018)	0.048*** (0.016)	0.055*** (0.014)	0.041** (0.018)	0.048*** (0.016)
Number of Rooms	0.015 (0.023)	0.014 (0.023)	0.019 (0.026)	0.015 (0.024)	0.016 (0.023)	0.018 (0.026)
Floor of Apartment	-0.001 (0.004)	-0.001 (0.004)	-0.001 (0.006)	-0.001 (0.004)	-0.001 (0.004)	-0.001 (0.006)
Entrance date (1 = future date; 0 = immediately)	0.010 (0.030)	0.011 (0.030)	0.002 (0.032)	0.012 (0.031)	0.012 (0.030)	0.002 (0.032)
Name	0.003 (0.023)	0.003 (0.024)	-0.001 (0.025)	0.002 (0.024)	0.003 (0.024)	-0.001 (0.025)
Percentage of left-leaning voters		0.314 (0.204)			0.432* (0.209)	
Male			-0.026 (0.024)			-0.049 (0.032)
Religious*Price				-0.028 (0.018)		
Religious*Left-leaning					-0.241* (0.120)	
Religious*Male						0.045 (0.031)
Observations	1818	1818	1420	1818	1818	1420

Notes: Linear probability model where dependent variable is equal to 1 if a call-back was received. Standard errors clustered on city are in parentheses. All specifications include city fixed effects. *** significant at 1%; ** at 5%; * at 10%.

the top decreases the probability of receiving a response by around 0.06, similar to the unconditional differences found in table 3. In addition, a higher rental price leads to a higher probability of receiving a call-back. The other apartment characteristics do not have a statistically significant effect on the call-back rate.

In columns 4 through 6 I interact religious with price, a measure of the political leanings of the city, and gender. The only statistically significant interaction is with the political leanings of the city. The more left a city leans, the less likely a religious request to receive a response. This is expected given the large differences in response rates found for left-leaning cities in table 3. The interactions of price and male are of the expected sign given the unconditional differences reported in table 3, but the point estimates are statistically insignificant.

In Table 5 I test for the magnitude of the differentials in call-backs that the religious queries received by comparing them to other groups who may be discriminated against, Arab and FSU individuals. In Panel A are the unconditional differences in call-back rates and in Panel B are different specifications of the LPM. First, although the unconditional difference in call-back rates between the non-religious and religious is 0.066, the difference between the non-religious and FSU individuals is 0.077, and the differences between the non-religious and Arab individuals is 0.287. All of these differences are statistically significant and in favor of the non-religious. The difference between religious applicants and FSU applicants is a non-statistically significant 0.011, and the difference between the religious applicants and Arab applicants is a statistically significant 0.221. When controlling for apartment characteristics in the LPM model (Panel B), expectedly similar results emerge. FSU individuals receive less call-backs than religious individuals, and Arabs receive much fewer call-backs than religious individuals. However, there is no statistically significant difference between the call-backs received by FSU signaled requests and religious requests.

The results in Table 5 provide some context for the discrimination, as measured in this paper, faced by religious individuals versus those not signaling any religiosity. The magnitude of the differential in call-backs for the religious is on roughly the same order as the discrimination faced by FSU

Table 5

Panel A: Proportion of Requests Receiving a Response				
Non-Religious	0.532		Non-Religious	0.532
FSU	0.455		Arab	0.245
Difference	0.077**		Difference	0.287***
(std. error)	(0.039)		(std. error)	(0.038)
Religious	0.466		Religious	0.466
FSU	0.455		Arab	0.245
Difference	0.011		Difference	0.221***
(std. error)	(0.039)		(std. error)	(0.038)
Panel B: Probability of Receiving Call-Back				
Dep. Var.: Positive Response to Request to See Apartment				
FSU name	-0.095***	-0.094**	-0.093***	-0.094***
	(0.033)	(0.032)	(0.032)	(0.032)
Arab name	-0.258***	-0.256***	-0.255***	-0.256***
	(0.027)	(0.028)	(0.028)	(0.028)
Religious	-0.064**	-0.064**	-0.064**	-0.064**
	(0.023)	(0.023)	(0.022)	(0.022)
Price (1000s of NIS)	0.046***	0.045***	0.045***	0.045***
	(0.010)	(0.014)	(0.014)	(0.014)
Number of Rooms		0.008	0.008	0.008
		(0.019)	(0.019)	(0.019)
Floor of Apartment		-0.003	-0.003	-0.003
		(0.003)	(0.003)	(0.003)
Entrance date			0.015	0.015
(1 = future date; 0 = immediately)			(0.028)	(0.028)
Percentage of left-of-center voters				0.198
				(0.264)
Observations	2218	2218	2218	2218

Notes: Linear probability model where dependent variable is equal to 1 if a call-back was received. Omitted group is the non-religious. Standard errors clustered on city are in parentheses. All specifications include city fixed effects. *** significant at 1%; ** at 5%; * at 10%.

individuals, but much less than that faced by Arab individuals. The finding of significant inter-religion discrimination faced by Arab individuals is similar to that found in other countries, as in the papers mentioned above. Although not the focus of this paper, these results highlight the vast discrimination that Arab individuals face in the housing market in Israel, in addition to the discrimination they face in other market transactions in Israel (e.g., see Zussman 2013; Bar and Zussman 2017).

Conclusion

Discrimination in the housing market makes it tougher for families belonging to the group that is discriminated against to gain access to employment opportunities, health care, school quality, and public spaces. Recognizing where and for what characteristics discrimination exists can help policymakers address the matter. The aim of this paper is to examine whether religious observance (independent of ethnicity) leads to discrimination in the housing market. This is a factor that has not been analyzed previously. I isolate the causal effect of religiosity by sending requests that are identical, except that half the requests have ‘basad’ written at the top and the other half do not. As such, any difference in call-back rates can be attributed to writing ‘basad’, which religious individuals write at the beginning of written communication.

I find that religious requests receive a response 46.6 percent of the time while non-religious requests receive a response 53.2 percent of the time. This difference is statistically significant and holds when including control variables representing apartment and city characteristics. When including interaction terms, I find that the difference in call-backs increases as the percentage of left-leaning voters in the city increases. To get a sense of the magnitude of the differential response that religious requests receive, I also sent out requests with an Arab sounding name and an FSU-sounding name. I find that requests with FSU-sounding names receive less call-backs than religious requests, but this difference is statistically insignificant, and requests with Arab names receive much less call-backs than religious requests and this difference is statistically significant. As such, although it pales in comparison to the

discrimination measured for Arab individuals, religious individuals face an extra cost in their apartment search relative to non-religious individuals, at least in the initial stages of the process.

In Israel, there is currently no law regarding discrimination for private real estate, although there are many policy recommendations for such mandates (e.g. Dvir and Tsion, 2016). Studies that find discrimination against several different groups, such as this, highlight to the need to pass such laws. In the US, the Department of Justice runs the Fair Housing Testing Program, which has resolved 105 cases since 1992, imposing an average penalty of \$130,000 for discriminatory housing practices (US DOJ, 2016). These sanctions, to the extent that landlords are aware of them, certainly aid in the fight against discriminatory housing practices, and provide a potential roadmap for other countries in the fight against housing discrimination.

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