Religiosity and Discrimination against Same–Sex Couples: The Case of Portugal's Rental Market

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ABSTRACT

We measure and analyze discriminatory behavior against same-sex couples trying to rent an apartment in Portugal and pay special attention to the role of religiosity. This is the first correspondence field experiment investigating discrimination against this minority group in Portugal, and the first one to highlight religion as a factor of importance. In our experiment, four type of applicants varying in gender (male and female) and modality (same and opposite sex) reply to Internet ads to express interest in renting an apartment in the metropolitan areas of Porto and Lisbon. All applicant couples are presented as married, stable and professional. The main finding is that male same-sex couples face significant discrimination: The probability of getting a positive reply is 7–8 percentage points, or 23–26 percent, lower for them compared to opposite-sex couples. Interestingly, this effect is *decreasing* in the religiosity of a parish, suggesting that the more religious, Catholic and religiously homogenous people residing there are (with certain qualifications), the less discrimination of male same-sex couples there is. Further results reveal that discrimination is stronger when the population is older and when the rent and the square-meter price of apartments are higher.

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The present study extends the literature to a southern European, Catholic setting, validates previous research documenting worse treatment of same-sex couples in the housing market and demonstrates a mitigating effect of religiosity under certain conditions.

Keywords: Same-sex couples, Discrimination, Portugal, Field experiment, LGBT, Housing, Religion

JEL classification: C93, D91, J15, R30, Z12

1. Introduction

Discrimination has a number of costly consequences, which makes it important to document the extent to which it occurs and what determines its scope.[1] Against this background, the purpose of this study is to find out to what degree same-sex couples face discrimination on the Portuguese rental market. Even though attitudes towards same-sex couples have improved a great deal in Portugal in recent decades, and even though legislation bars discrimination and has become more inclusive (European Commission, 2019; Mendos, 2019), it might still be the case that an opposite-sex couple is preferred by many landlords over a same-sex couple.

The method used in this study is a correspondence field experiment and is, to our knowledge, the first such test performed in Portugal to measure whether same-sex couples are discriminated against. As such, it pioneers in providing a more objective measure of discrimination for this minority group compared to surveys, and it helps us see whether previous studies in other countries documenting discrimination are verified in a southern European setting.

Also, for the first time in the correspondence field experiment literature on discrimination based on sexual orientation, we pay special attention to *religiosity* in the population as an explanatory factor. There is a large literature on attitudes towards homosexuality among religious people, and most results indicate that these attitudes are negative, which merits taking this factor (in our case, Catholicism) into account.

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[1] One cost comes in the form of deprivation: a person who does not get a job or an apartment lack essential features of a good life (Ali et al., 2013). Another cost is financial: a person who gets a job at a lower wage (Drydakis, 2019) or an apartment at a higher rent is worse off. Yet another cost is deterioration in health (Pascoe and Smart Richman, 2009). These outcomes arguably result in lower well-being (cf. Berggren et al., 2017).

We sent e-mails from four types of fictitious couples (male-male, female-female, female-male and male-female) to potential landlords in the Porto and Lisbon rental markets on the basis of online ads. The results suggest high discrimination against male same-sex couples, who were 7–8 percentage points, or 23–26 percent, less likely to receive a positive reply from a landlord. Interestingly, up to quite high shares of self-identified religious people and Catholics in a parish, more religiosity entails *less* discrimination. The same mitigating effect follows from more religious homogeneity. This suggests that many religious people interpret their Catholicism such that one should not treat same-sex couples worse than others in matters of housing.

Furthermore, discrimination of male same-sex couples is most prevalent in parishes with an older population and a higher population density, and it increases when the objects had a higher rent or higher price per square meter and decreases, up to a point, with distance to the center. We find no indication of statistically significant discrimination of female same-sex couples.

This paper adds to an emerging literature using correspondence field experiments to study discrimination of same-sex couples in housing markets in Sweden (Ahmed et al., 2008; Ahmed & Hammarstedt, 2009), Canada (Lauster & Easterbrook, 2011), Germany (Mazziotta et al., 2015), Serbia (Koehler et al., 2018), Ireland (Ahuja & Lyons, 2019) and the United States (Schwegman, 2019). With the exception of the German case, there is evidence for significant levels of discrimination for male same-sex couples applying for housing, while female same-sex couples seem to face no such discrimination. None of these studies investigates how religiosity affects discrimination.

The primary contributions of the present study, then, are that it provides evidence of discrimination in a new context – a Catholic, southern European country – and that it incorporates religiosity as an important factor.

2. Theoretical background and related literature

2.1. Theoretical background

There are two major theories in economics of discriminatory behavior: taste-based discrimination, introduced by Becker (1957), and statistical discrimination, introduced by Phelps (1972) and Arrow (1973). The taste-based discrimination theory proposes that some individuals have a prejudice against those that are different from themselves and are willing to pay a penalty in order to not interact with them. Becker further claims that discrimination is bound to phase out overtime, with discriminatory firms leaving the market due to lower

competitiveness. In contrast, a key feature of the statistical discrimination models is that decision makers do not have complete information about their applicants and therefore base their choices on the average characteristics of some salient group of which an applicant is part. If such average characteristics are disliked by the decision maker, he may engage in discriminatory behavior.[2] Both theories have been tested through field experiments outside of the typical labor-market context, with various degrees of success.[3]

When applied to same-sex couples on the rental market, a few points are particularly relevant. First, there could be a distaste for homosexuality, and it can be more emphasized for males than females. Second, taste-based discrimination could also emerge from the distaste of others than the landlord, who in turn discriminates due to social pressure. However, discrimination in this context can also be contextualized through a statistical-discrimination lens, with landlords basing their decisions on stereotypes or average characteristics for the minority in question. The more prevalent stereotypes would be connected to a lifestyle of instability and short-term relationships, especially associated with male couples. Landlords could also usually prefer females as tenants, since tend to be regarded as more responsible and better at maintaining a house, particularly among more conservative populations. Additionally, one could argue that since gay people on average have a higher incidence of mental health problems, such as depression (Leonard et al., 2012), this could be a reason to avoid them as tenants.[4]

One factor that potentially affects the scope of discrimination against same-sex couples, but which has so far not been investigated in the literature, is religiosity. Our theoretical approach is described in Fig. 1.

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[2] For critical analyses of these two theories of discrimination, dealing with matters such as imperfect competition, information costs, adjustment costs, education, skills, testability, etc., see, e.g., Helpman (1998), Charles & Guryan (2013) and Lang & Lehmann (2012).

[3] See, e.g., Ahmed et al. (2010), Edelman et al. (2017) and Ciu et al. (2020).

[4] Even though gay men earn less than straight men on average (Drydakis, 2019), since we consider couples, it is their joint income that is relevant. As shown by Ahmed et al. (2011), there is no difference on average between the incomes of same-sex and opposite-sex couples, since straight women earn less than both straight and gay men on average. This makes it unlikely that income considerations drive this type of discrimination.
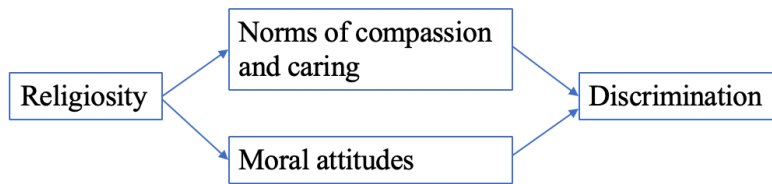
Fig. 1. Religiosity and discrimination.

We propose two links from religiosity to discrimination. First, there are, in most religions, and certainly in Catholicism, norms of compassion and caring. If religious people are influenced by such norms, they may be less inclined to discriminate against a minority that has faced historical and that faces present hardships of various kinds.[5] Second, all religions contain moral positions on sexuality, and one can reasonably assume that most religious people will agree with those positions (especially if they do not concern the religious people themselves). The Catholic Catechism refers to homosexuality as "objectively disordered" (§2358), and it considers all sexual activities between persons of the same sex sinful; it also strongly opposes same-sex marriage as an institution. This can induce Catholics to disapprove of same-sex couples living together and to discrimination in rental situations.

These two links from religiosity to discrimination are in line with findings by Hoffman et al. (2020), who use dictator games to test the impact of two religious ideas, universal love and the notion of one true religion, on discrimination. They show that the idea of one true religion ("moral attitudes" in our setting) increases intergroup discrimination, while that of universal love ("norms of compassion and caring" in our setting) fosters equal treatment. Cf. Doebler (2015), who finds that belief in a personal God is positively related to a moral rejection of homosexuality but to a much lesser extent associated with intolerance toward homosexuals as a group; Krull (2017), who shows that intrinsically religious people regard homosexual behavior as immoral but that they are not prone to utter disrespectful comments or be physically aggressive towards gay people; and Bertone & Franchi (2014),

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[5] In fact, the Catechism of the Catholic Church states (§2358), a propos people with homosexual tendencies: "They must be accepted with respect, compassion, and sensitivity. Every sign of unjust discrimination in their regard should be avoided".

who find that Catholic parents of gay children, while retaining heteronormative attitudes, accept their children on the basis of the idea of unconditional love.[6]

In addition, the character of the religious landscape can have an effect on discrimination as well. More specifically, the level of religious homogeneity – how similar people's religious views in society are – can affect people's attitudes and behavior. First, religious homogeneity implies that people are more similar, which can strengthen norms of compassion and caring. This works against discrimination. Second, religious homogeneity implies a lower probability of meeting people who are different, which makes it less likely that one gains understanding and feels sympathy for others (cf. research on the contact hypothesis by Levy Paluck et al., 2019). This works in favor of discrimination. The net effect must be determined empirically.

2.2. Related literature

The discrimination literature is vast, and studies can be differentiated by the objects of study (ethnicity, gender, sexual orientation, gender identity), the type of market in which discrimination occurs (rental, labor) and the method used (surveys, audit tests, correspondence tests). The most relevant part of the literature for this study is the one looking at discrimination on the basis of sexual orientation in the rental market, and we relate to seven field-experimental studies for this minority and this market.[7]

The overall finding is one of male same-sex couples being discriminated against on the rental market – in Sweden (Ahmed et al., 2008; Ahmed & Hammarstedt, 2009), Canada (Lauster & Easterbrook, 2011), Serbia (Koehler et al., 2018) and the United States (Schwegman, 2019) for applications to rent regular apartments and in Ireland for Airbnb rentals (Ahuja & Lyons, 2019).[8] However, there was no indication of discrimination against

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[6] There is a fairly large body of research on moral attitudes towards homosexuality or same-sex marriage among Christians, mostly finding these attitudes to be negative (e.g., Whitley, 2009; Jäckle & Wenzelburger, 2014; Janssen & Scheepers, 2019), but some do not find an effect (e.g., Slenders et al., 2014; Berggren et al., 2019) or find Catholics to be relatively accepting (e.g., Olson et al., 2006; Adamczyk, 2017).

[7] Hence, we do not cover discrimination in the labor market or ethnic/gender discrimination in the rental market; see Neumark (2018) for a survey of studies of the former and Flage (2018) for a review of studies of the latter.

[8] The study on Serbia is based on telephone calls rather than correspondence.

male same-sex couples in Germany (Mazziotta et al., 2015), nor of discrimination against female sex-same couples in any of the studies (except possibly in Serbia).[9]

When looking at further explanatory factors, a number have been included, such as: landlord gender (see, e.g., Ahmed & Hammarstedt, 2009; Koehler et al., 2018; Ahuja & Lyons, 2019); whether the apartment is in an major urban area or not (Ahmed & Hammarstedt, 2009; Lauster & Easterbrook, 2011); applicant gender (Ahmed & Hammarstedt, 2008; Baldini & Federici, 2011; Andersson et al., 2012); and applicant ethnicity (Baldini & Federici, 2011; Carlsson & Eriksson, 2015; Koehler et al., 2018). No previous field-experimental study of discrimination against same-sex couple has evaluated the effects of religiosity.

3. Empirical approach and data

3.1. The case of Portugal

Showing that discrimination of a certain type exists in one setting does not in itself prove that it exists in other settings. Discrimination is a complex phenomenon, and many of its country-level determinants vary between countries. These include both formal and informal institutions (including anti-discrimination laws and social norms about how to treat others), and in the case of the housing market, how the market works (depending on, e.g., whether there is excess demand or supply and whether there is rent control) and which part of the market that is being studied (purchases of houses or apartments, renting houses or apartments or short-term stays through services like Airbnb). One thing to note, in line with Fig. 1, is that negative attitudes towards a certain group as a rule precede discrimination (Lang & Lehmann, 2012, p. 2) and that negative attitudes vary. This is a reason to investigate the scope of discrimination in more countries, noting, e.g., that levels of tolerance towards

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[9] What can explain the relatively more favorable treatment of female same-sex couples? Ahmed & Hammarstedt (2009) suggest the presence of worse stereotypes for male same-sex couples; Ahmed et al. (2008) theorize that lesbians are attractive candidates, since they have higher earnings, on average, than heterosexual women; and Baert (2014) finds that non-heterosexual women are preferred in the labor market due to having less children, a logic that could apply on the rental market as well.

same-sex couples are higher in Sweden, Germany and Ireland than the EU 28 average (European Commission, 2019) and higher than in Portugal.[10]

Indeed, Portugal is a unique case in Europe, as the country was under a dictatorship that persecuted homosexuality until 1974 and as same-sex intercourse was not legalized until 1983 (the thirtieth country in Europe by that time) (Mendos, 2019). Nevertheless, the country has demonstrated swift progress in combating discrimination for lesbian, gay, bisexual, trans and other (LGBT+) minorities, being the sixth country in Europe (eight in the world) to legalize same-sex marriage (Mendos, 2019), the sixth country in Europe to adopt a policy of gender self-determination in its legal framework, and the second in the world to outlaw nonconsensual unnecessary medical intervention on intersex people (ILGA Europe, 2019). Not least, since 2004, the constitution has, as one of the few constitutions in the world, prohibited any form of discrimination based on sexual orientation.[11]

When it comes to the religious character of the country, it is predominantly Catholic (81% identify as such according to the 2011 census). However, there are indications that many Portuguese Catholics are not very dogmatic and craft their own (interpretation of) religion, especially in Lisbon (Dix, 2011).

3.2. Experimental design

To estimate the extent of discrimination against a minority group on the housing market, running a field experiment in the shape of a correspondence study stands as the best method.[12] Hence, since we want to analyze discrimination in the rental market for same-sex couples in Portugal, we decided to compare application response rates for same-sex and opposite-sex couples, with applicants alternating between male and female. The landlords were sent two applications in close temporal proximity, one from a same-sex couple and

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[10] The present study is the first for a Mediterranean country, and we expect the findings to be especially applicable to other countries with similar values and institutions, such as Spain, France and Italy.

[11] For more about the case of Portugal, see Online Appendix A.

[12] One advantage of this approach is that there is a minimal risk of omitted variable bias (Charles & Guryan, 2013), which is otherwise a concern since minority groups are likely to have unequal access to various spheres of society, such as education, job opportunities or housing (Bertrand & Duflo, 2017). Concerns have also been raised that experimental discrimination studies are biased upwards if there is differential variation in the unobservable determinants of the quality of majority and minority groups. Reassuringly, Neumark & Rich (2019) find that for housing market studies, the estimated effect of discrimination is robust to this correction.

another from an opposite-sex couple. Bias was minimized by randomizing the e-mail type sent out regarding whether a male or a female would contact the landlord, and in which order.

When designing the experiment, four couples were included: a male same-sex couple, a female same-sex couple, an opposite-sex couple with the female as the designated person to contact and an opposite-sex couple with the male as the designated person to contact. Each landlord got two e-mails: one from a same-sex couple (with randomization as to whether it was a male or female couple, subject to the constraint that half of the same sex-couples were to be male and half female) and one from an opposite-sex couple (with randomization as to whether the female or the male was the designated person to contact, subject to the constraint that half of the opposite sex-couples had the female, and that half of them had the male, as the designated person to contact).[13] Their names were selected from a list of the most popular names in 1987, excluding those that ran out of popularity, and a list of the most common surnames in Portugal.[14] The couple names were João and Pedro Pereira Costa for the male same-sex couple, Ana and Maria Ferreira Santos for the female same-sex couple and Joana and Tiago Rodrigues Oliveira for the opposite-sex couple.[15] The couples were described as being in their thirties, married and middle class, and were given jobs with similar earnings, according to the report by Egor (2018). These characteristics were chosen in order to assure a high reply by signaling respectability and by eliminating possible biases against the names. E-mails were created on the Gmail platform for each contacting person.

Two written e-mails were designed, both written in European Portuguese with a formal tone and sharing the same type of information. In order for the landlord to not be able to detect that these were sent by the same person, the e-mails were structured differently. The original versions, and translations into English, can be found in Online Appendix B.

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[13] Ideally, each landlord should have been contacted by each couple type, but it was deemed unrealistic for a landlord to be contacted by two same-sex couples on the same day without raising suspicion. Therefore, a second-best alternative was chosen: randomly sending e-mails from one of the same-sex couple and from one of the partners in the opposite-sex couple.

[14] See https://www.jn.pt/nacional/galerias/interior/os-nomes-mais-usados-em-portugal-ao-longo-dos-anos-9029408.html for the personal names and https://forebears.io/portugal#surnames for the surnames.

[15] These were the only names used, and hence, no randomization of names as such took place. The main reason is that, unlike in studies using names as indicators of ethnicity, such as Bertrand & Mullainathan (2004), the names here are perfect signals of the category investigated (i.e., gender and, by implication, the sexual orientation of the couples involved)

3.3. Data collection

The experiment made use of a popular all-purpose online commerce website (*Custo Justo*). This website has a high inflow of apartments for rent from both real estate companies and individuals (2,683 active ads as of October 2019). This website allows contacts by e-mail, and lists various pieces of information (such as apartment size in square meters, number of bedrooms and location).[16]

Data collection was carried out in April 2019, during which we responded to all rental ads for the metropolitan areas of Porto and Lisbon (the two most populous cities in Portugal). Each ad was randomly assigned one of the same-sex couples and one of the partners from the opposite-sex couple. For each pairing, the decision of who would e-mail first and with which e-mail type was also randomized. The time gap from the first e-mail sent out to the second e-mail was set between 30 minutes to 1 hour, in order for the landlord not to suspect it was the same person sending them out, but also not having a large enough time difference to greatly affect the chances of getting an apartment. In total, 506 ads were answered, resulting in approximately 250 observations for each type of couple. In answering, we kept track of the accounts had contacted previously and ensured that no landlord account was contacted twice.[17]

Replies to the various ads were then categorized into three different categories, resulting in three independent variables, generally following the categorization used by Ahmed & Hammarstedt (2009). The first one was whether the application received a reply or not, be it either positive or negative. The second category referred to whether the response was positive, with a positive response being defined as some intent from the landlord in continuing the application procedure, for instance, asking for more information or offering an invitation to schedule an apartment showing. The last category referred to being invited for

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[16] Only whole apartments were considered for this experiment, as previous evidence indicates that there is no significant difference for discriminatory behavior whether the landlord is renting out a room or a whole apartment (Edelman et al., 2017; Ahuja & Lyons, 2019).

[17] In order to examine if landlords detected that they were part of an experiment, which in turn could undermine the internal validity of the study, we performed two separate tests. First, we checked if the response rates differed depending on whether a same-sex couple answered an ad first or second, and we found no statistically significant difference. Results are available on request. Second, we analyzed the response-rate change over time – see Table A1 in Online Appendix C and its explanatory note. Based on these tests, we find no robust indication of detection.

showings and consisted of either informing the applicant of when they will be showing the apartment or inviting them to call and schedule a showing.[18]

To investigate whether the religiosity of people in society influences the scope of discrimination, we collected data on the share of the population in each parish in which the apartments were located that self-identified as religious, the share of the population in each parish that is Catholic, and the parish level of religious homogeneity (based on the shares of all religious groups and measured by a Herfindahl index).[19] In addition, various apartment-specific and geography-specific control variables were collected in order to provide further insight into the treatment of same-sex couples. The apartment-specific variables collected are rent (in euros), apartment size (in square meters), apartment's square meter price (in euros) number of bedrooms (with studios counting as 0), apartment-geographic location for the various administrative scales (parish, county and urban area), the landlord's perceived gender, whether the ad placer was an individual or a real-estate firm and whether the apartment was rented first- or second-hand. The geography-specific variables in addition to religiosity are the driving distance between the apartment's parish and the central urban area's parish (in kilometers), average salary by county in 2019 (in euros) [20], the left/right alignment of the political party that got the highest number of votes in the local elections of 2017 at the parish level, population density by county in 2017 (average number of individuals per square kilometer) and the average age for each parish based on 2011 census data. The geographic variables concerning county and civil parish level were taken from official Portuguese public statistics or estimated in the case of the driving distance.

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[18] The potential ethical problem with this kind of methodology concerns sending fake applications to landlords and taking up their time. Like much research before, and in line with List (2009), we did not consider this a sufficiently grave imposition so as to not undertake the study. Not least, we made an effort to cause minimal impact for the landlords: Most positive responses received got a decline within a 24-hour period in order to make the inconvenience as small as possible

[19] While it would have been desirable to know about the degree of religiosity of the landlords in our sample, such data are unfortunately not available. What we can measure is a *community* characteristic arguably influencing (some) landlords. In addition to the listed parish data, we also collected data on the share of religious weddings, but these are only reported at the county level.

[20] The data were retrieved from national statistics for 2016 and have been inflation-adjusted to mimic 2019 levels.

3.4. Descriptive statistics

Upon completion of the data collection, it is apparent that randomization was done correctly (see Table A2 in Online Appendix C), resulting in minimized bias. The randomization test conducted runs an OLS regression on the various couple types, using control variables as the treatment variables. Since very little significance is found and estimates are very close to zero, it can be concluded that the experiment exhibits validity.

Descriptive statistics of the data collected show a discrepancy in response rates unfavorable for male same-sex couples (Fig. 2). For example, while the average opposite-couple with a male as the contacting person got a 31 percent positive reply rate, the corresponding figure for the average male same-sex couple was 23 percent, a difference of 8 percentage points. Table A3 in Online Appendix C provides average descriptive statistics, while further details about these variables by couple type can be found in Table A4 in Online Appendix C.
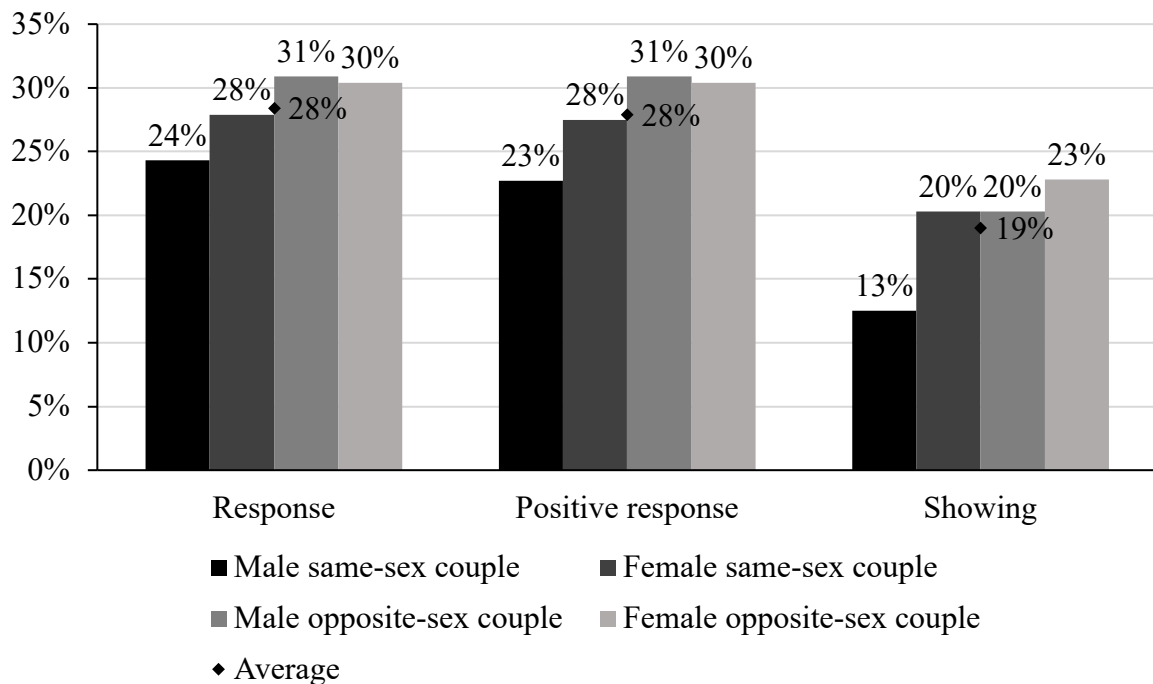
Fig. 2. Reply rates by couple type as a share of total contacts. The diamond indicates average rates across all types of couples for each type of response.

We use linear probability model (LPM) regressions in order to estimate the marginal effects of discrimination (but we have carried out all the regressions using probit as well). The robustness of the coefficients for discriminatory behavior is checked by adding control variables. Despite having collected three dependent variables, the focus of the analysis in this

study is on the dummy variable collected for positive responses, which we consider the most relevant for this study.[21]

4. Results

4.1. Baseline findings

Our baseline findings are based on LPM regressions and are illustrated in Fig. 3. As can be seen, there is evidence of discriminatory behavior against same-sex couples, with a 6 percentage-point lower probability of a positive response. Broken down by gender, it is evident that this result is driven by the treatment of male same-sex couples and that the effect for female same-sex couples is not significantly different from zero.
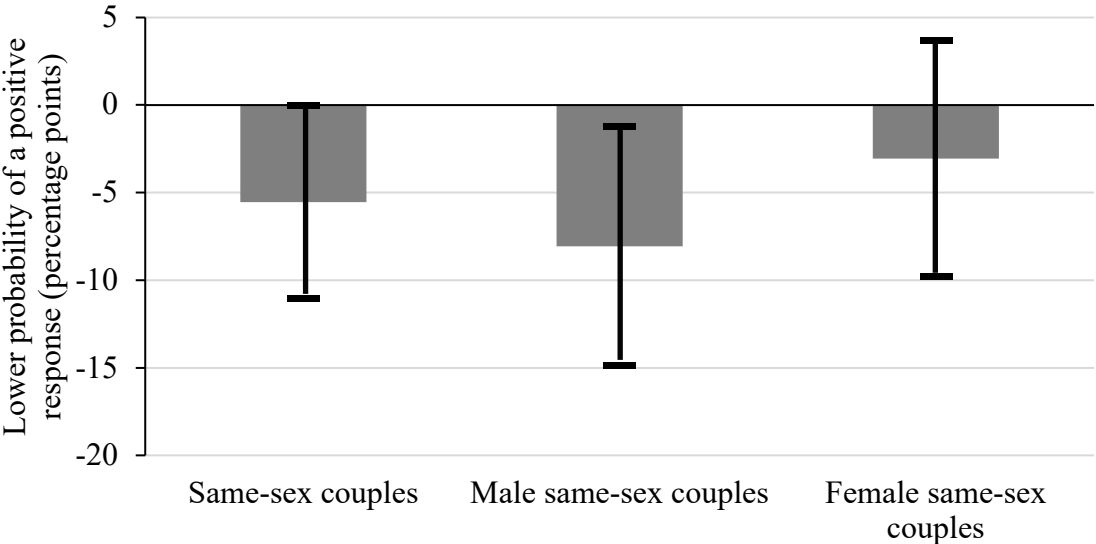
Fig. 3. Estimate (in percentage points) for male and female same-sex couples on positive responses compared to opposite-sex couples and 95 percent confidence intervals (based on Table 1, columns 1 and 4).

Fig. 3 is based on Table 1, which contains the results of LPM regressions that show in more detail how being a male same-sex couple elicits discriminatory behavior in the rental market in Portugal.[22] Column 1 shows a marginal effect of –0.06, indicating that a same-sex couple is about 18 percent less likely to receive a positive response than an opposite-sex

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[21] Results for the positive reply rate are presented in Section 4, while results for the other two dependent variables are presented in Online Appendix C.

[22] Just like the results of Table 1 are more or less the same when probit is used – see Table A5 in Online Appendix C – Fig. 3 is just about identical when based on probit.

couple is. When male same-sex couples are singled out in columns 2 and 4, the negative effect increases to between 7 and 8 percentage points, depending on whether female same-sex couples are included or not, corresponding to a 23 and 26 percent lower probability of getting a positive response, respectively. Moreover, it can be seen in columns 3 and 4 that there is no significance for discriminatory behavior against female same-sex couples. Columns 5 and 6 show the robustness of the results in columns 2 and 4 by illustrating that the coefficients for male and female same-sex couples remain very similar when introducing relevant control variables. In addition, being the first of the two couples to send out the e-mail, number of bedrooms, price per square meter as well as the housing unit being located in Porto's metropolitan area all positively impact all couple types' chances of a positive response. When adding religiosity to the specifications of columns (5) and (6), the basic results hold, while religiosity itself is unrelated to the probability of a positive response (see results in Table A6 in Online Appendix C; and see Section 4.2 for interaction results). We have also added further control variables (the ones used in the interaction analysis in Section 4.3) to the specification in column 6, and our main variables of interest (being a same-sex couple) remain robust (results are available on request).[23]

Table 1

Marginal effect of being in a same-sex couple on positive responses – LPM.

	Dependent variable: Positive response					
	(1)	(2)	(3)	(4)	(5)	(6)
Same-sex couple	-0.055**					
	(0.028)					
Male same-sex couple		-0.068**		-0.079**	-0.066**	-0.076**
		(0.031)		(0.033)	(0.031)	(0.033)
Female same-sex couple			-0.005	-0.031		-0.029
			(0.033)	(0.035)		(0.034)
E-mail sent out first					0.107***	0.106***
					(0.028)	(0.028)
Number of bedrooms					0.036**	0.036**
					(0.017)	(0.017)
Price per sqm					0.011***	0.011***
					(0.004)	(0.004)

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[23] We have also estimated Table 1 including landlord-fixed effects, and reassuringly, the results (which are available on request) are very similar. We decided not to include them in the main specification, since the randomization should produce causal effects and since we prefer a model that allows for an analysis of time-invariant variables.

					0.051	0.050
Company					(0.033)	(0.033)
Porto					0.061**	0.062**
					(0.031)	(0.031)
N	1,012	1,012	1,012	1,012	1,012	1,012

Note: An LPM model was used to estimate the marginal effect of treatment. For probit estimations, see Table A5 in Online Appendix C; for LPM estimations including religiosity in columns 5 and 6, see Table A6 in Online Appendix C. *, ** and *** denote significance levels of 0.1, 0.05 and 0.01 respectively. Values in parentheses refer to robust standard errors.

When comparing the results for the three dependent variables (response, positive response and showings), they all suggest discriminatory behavior against male same-sex couples, while discrimination against female same-sex couples is not significant (see Table 1, Table A7 and Table A8 in Online Appendix C). On the one hand, results from regressions using response rates as the dependent variable show a lower significance level, as well as a smaller effect size for male same-sex couples as compared to the results focusing on a positive response. On the other hand, results from regressions using invitations for a showing as the dependent variable indicate a stronger and larger significant effect for male same-sex couples, who are about 9 percentage points, or about 42 percent, less likely to be invited than an opposite-sex couple, as compared to the results focusing on a positive response.[24]

4.2. The role of religiosity

We propose that religiosity in the population may be an important explanatory factor behind the scope of discrimination against male same-sex couples, in line with the theoretical considerations presented in Section 2.1.

In order to investigate this, we begin by presenting, in Figs. 4–6, three graphs of how the discrimination against same-sex couples (interpreted as in Fig. 3) varies by how religious, how Catholic and how religiously homogeneous people are in the parishes in which the apartments in question are located. This variation is shown by quintiles.

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[24] Results for Tables A7 and A8 are almost identical when based on probit regressions and when including religiosity; they are available on request.

Fig. 4. Estimate (in percentage points) for male and female same-sex couples on positive responses compared to opposite-sex couples by parish-religiosity quintile.

Fig. 5. Estimate (in percentage points) for male and female same-sex couples on positive responses compared to opposite-sex couples by parish-Catholic quintile.
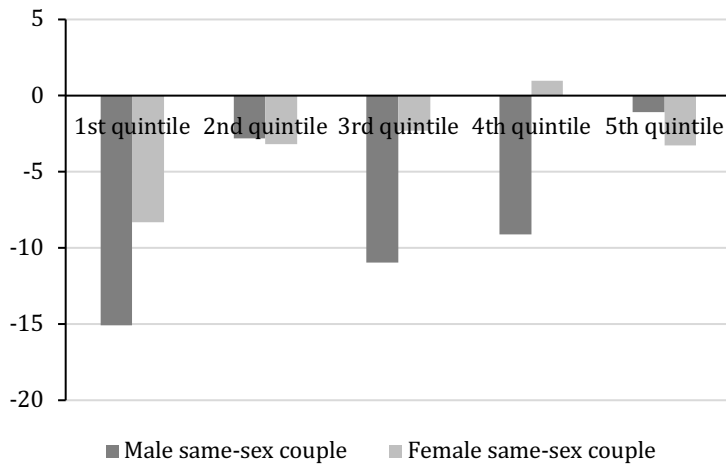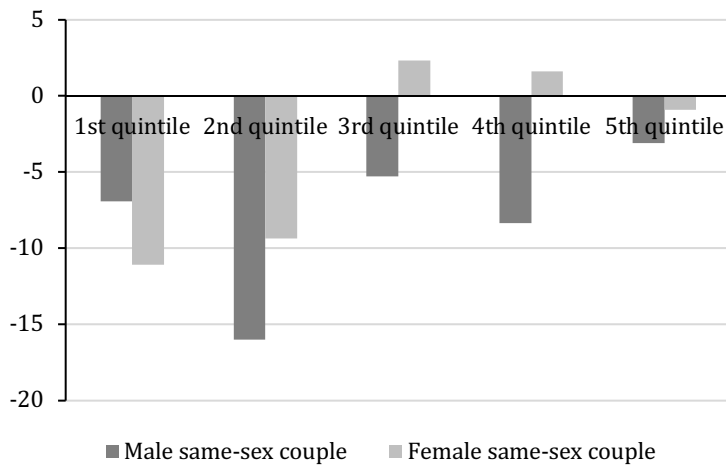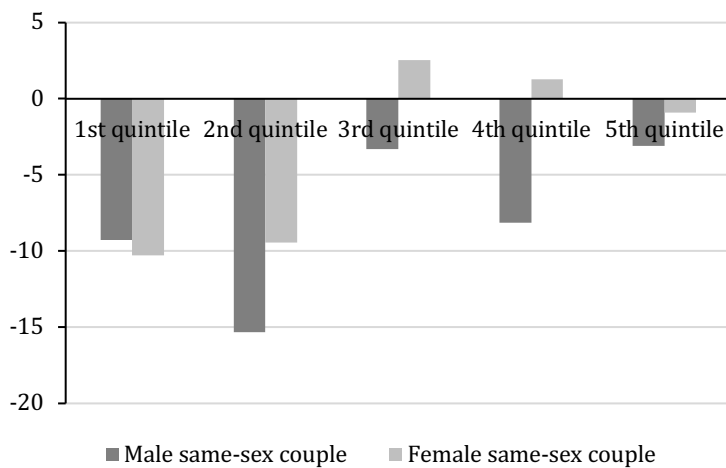
Fig. 6. Estimate (in percentage points) for male and female same-sex couples on positive responses compared to opposite-sex couples by parish-homogeneity quintile.

These findings all show that the most religious, the most Catholic and the most religiously homogeneous quintiles feature *the least* discrimination of male same-sex couples in the Portuguese rental market.

This can also be investigated through interaction analysis. We therefore next interact the share of religious people in each parish with the two same-sex couple variables. The regression results are in Table A9 in Online Appendix C, but note that these results must be interpreted with care, since the estimates of the variables that are involved in interactions cannot be interpreted on their own, being conditional estimates (Brambor et al., 2006). To facilitate interpretation, we therefore present a marginal plot of the full interaction effect in Fig. 7 based on LPM regressions.[25]
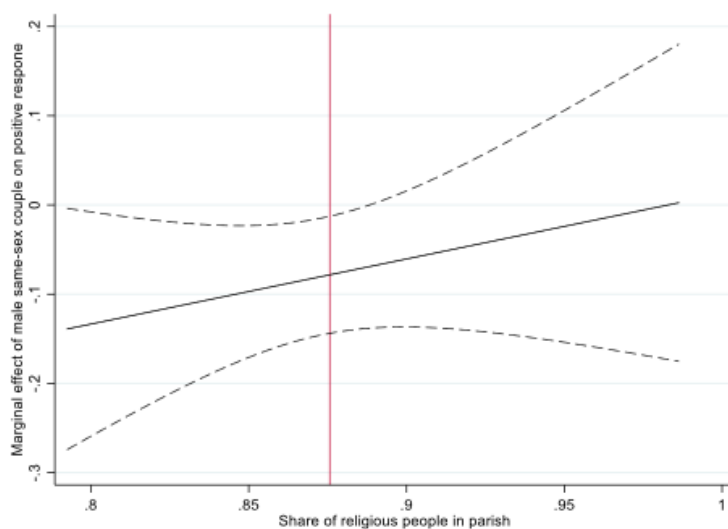
Fig. 7. The marginal effect on the probability of getting a positive response of being a male same-sex couple over the share of people self-reporting as religious in the parish, with 95 percent confidence intervals. Based on LPM. The vertical line indicates the mean share of religious people in the sample.

This result is very much in line with the quintile graphs: the marginal effect on the probability of a male same-sex couple getting a positive response *increases* with religiosity, with the sign of the coefficient always being negative, i.e., signaling discrimination. This

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[25] For female same-sex couples, the interaction effect is never statistically significant. The graph is available on request.

holds in parishes with a share of religious people approximately below 88%, which is a bit slightly above the sample mean, where the marginal effect is significant and ranges between –0.14 and –0.08.[26]

Based on our theoretical reasoning, we interpret the quintile and interaction findings such that more religious people, while possibly disliking homosexuality and same-sex marriage (on the basis of moral attitudes), are motivated by norms of caring, compassion and the idea of universal love to take a stand against discrimination in everyday life of a traditionally maltreated minority. Such a position is probably underscored and reinforced by many who self-identify as religious having embraced a non-doctrinaire and humanistic type of religiosity, rather than faithfulness to Catholic doctrine, which implies less moralistic attitudes to begin with.

4.3. Interaction analysis of other factors

To get an even better understanding of possible mechanisms, we next introduce further control variables and interact them with being a same-sex couple to test whether such couples are treated differently based on parish characteristics (Table A9 in Online Appendix C) or host and apartment characteristics (Table A10 in Online Appendix C).[27] As in the case of religiosity, to get a clear illustration of the interaction effects across the whole distributions of the control variables, we present them in the form of five marginal plots for the variables that display some statistically significant interaction, based on the two tables, in Fig. 8. These are all for male same-sex couples.[28]

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[26] We have also carried out the same interaction analyses for the share of Catholics and for the level of religious homogeneity in a parish, with very similar results. We have moreover undertaken an interaction analysis for the share of people who choose a religious wedding when they get married, but we could unfortunately only acquire data on the more aggregate county level, causing limited variation in the data and no statistical significance. All graphs are available on request.

[27] These factors were considered potentially relevant since people further away from the center may have less contact with same-sex couples, since Porto is traditionally more socially conservative than Lisbon and since the left-wing parties in Portugal tend to be more liberal on social issue.

[28] Graphs for female same-sex couples confirm the null-result finding in Table 1. The graphs are available on request.
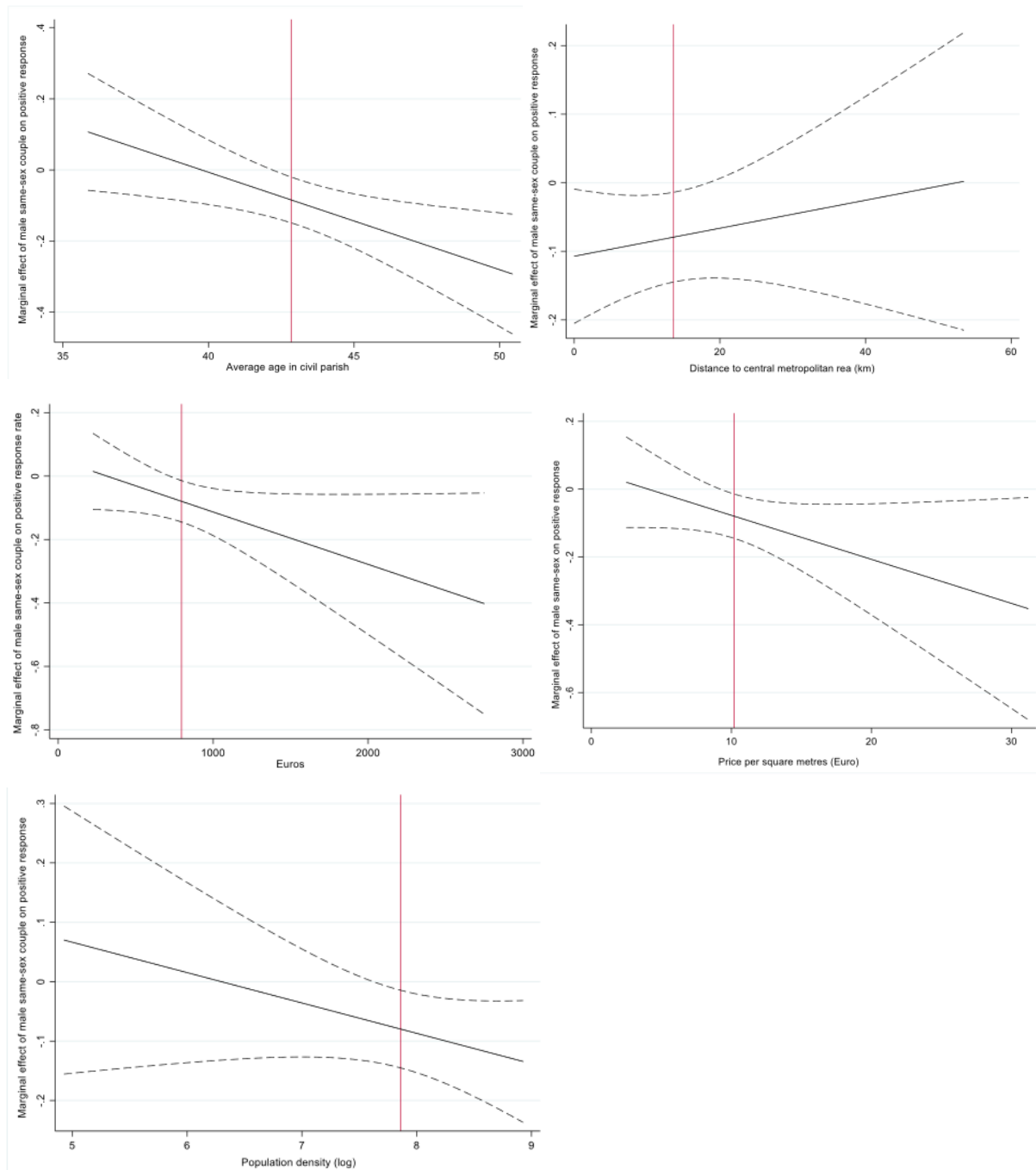
Fig. 8. The marginal effect on the probability of getting a positive response of being a male same-sex couple over the average age in the parish, over the distance to the metropolitan center, over the monthly rent (€) of the apartments, over the square meter price (€) of the apartments and over population density, with 95 percent confidence intervals. Based on LPM. The vertical line indicates the sample mean of each characteristic.

We begin looking at the effect for male same-sex couples across the average age distribution in the parishes where the apartments were located. The graph illustrates that roughly above the mean age of the population, about 41 years, discrimination towards male same-sex couples increases with mean age. We see two possible interpretations. The first is

that the landlords in those populations are likely to be older, and therefore have a stronger prejudice against male same-sex couples, as evidenced by survey data (European Commission 2015; ILGA Portugal 2018). The second option is that average parish age is correlated with other observable and unobservable variables and as such cannot be used as a substitute or approximation for the unobservable landlord age. The fact that the age variable correlates positively with population density and average salary and negatively with distance and voting left provides some indication of such an interpretation. If so, the result implies that male same-sex couples are more unwanted tenants in wealthier or more desirable areas of the city. Finally, we also examine the noted discrimination effect across parishes with different population density and find that same-sex couples are treated worse in very densely populated locations (above the mean population density in our sample).

Examining apartment characteristics in a similar manner, we first focus on the distance to the center of the metropolitan area. Once again there is a surprising result: while there is always evidence of discrimination towards male-same sex couples, with the effect always being negative, it decreases with distance. Hence, it seems as if inner-city people are more discriminatory than those in the suburbs, perhaps reflecting higher education and professional experience of meeting people who are different for those living a bit outside of the cities. We obtain significance for distance up until about 20 km away from the metropolitan center. For the two price measures, monthly rent and average square meter price (both reported in euros), it is also evident that male same-sex couples fare worse. The marginal effect is negative and is decreasing with higher monetary values. It is also significant for large parts of the distributions, pointing to more discrimination the higher the apartment rent and square meter value.

In all, this analysis gives a richer understanding of the mechanisms involved in discriminatory behavior on the Portuguese rental market. The most favorable type of setting for male same-sex couples seems to be parishes in Porto or Lisbon with populations of relatively high religiosity, relatively young average age, relatively low population density and apartments that are located a bit outside of the city center with relatively low rents and values.

5. Concluding discussion

This study contributes to the emerging field-experimental literature on discrimination of same-sex couples in the rental market, by looking at its prevalence in Portugal, a new case and the first Catholic, southern European country for a study of this kind. Our results suggest that male same-sex couples face significant discriminatory behavior on the rental market in

Portugal. We argue that the findings are important first of all for people and policymakers in Portugal, but also for countries with similar formal and informal institutions, like Spain France and Italy, and perhaps for the Community of Portuguese Language Countries (CPLP) as well, which share a cultural heritage with Portugal. In addition, we contribute to this literature by investigating how religiosity in the population affects the scope of discrimination, which has not been done before. It bears noting that we identify a *mitigating* effect of the share of religious people, the share of Catholics and of the level of religious homogeneity in a parish. The more religious people there are (up to a point), the smaller the amount of discrimination against male same-sex couples. We suggest this follows from norms of caring, compassion and universal love carrying larger weight in many religious communities, compared to moral attitudes of a negative kind.

Like previous studies, we do not find any evidence of discrimination against female same-sex couples.

Our interaction analysis of more variables than religiosity is another contribution to the literature. Through marginal plots, we are able to show that the average age of the population and the population density where the apartment is located intensifies discrimination. Similarly, the negative effect is more negative the higher the rent and average square meter price of the apartments, while the distance to the metropolitan center decreases discrimination up until about 20 km.

Furthermore, we consider our analysis of interest in seeing whether results from other countries are externally valid. By relating to these countries, we can also see whether attitudes, as expressed in surveys – most notably the Eurobarometer (European Commission, 2019) – translate into discrimination in a somewhat linear fashion (as indicated by Carlsson & Eriksson, 2017). Such linearity would suggest that there should be more discrimination in Portugal than in, e.g., Sweden and Ireland, which have been studied before. That, however, does not seem to be the case. Interestingly male same-sex couples in Portugal do not face very different challenges compared to those in Sweden (Ahmed et al, 2008; Ahmed & Hammarstedt, 2009) and in fact face less discrimination than in Ireland (Ahuja & Lyons, 2019). The likelihood of a response is 22 percent in Sweden and 44 percent in Ireland, to be compared with our finding of about 26 percent. Admittedly, comparisons should be made with caution, since the Swedish studies are over a decade old and since the Irish one examines a different market, focusing on short-term rental contracts, where we might expect larger discrimination than on the regular housing market. Still, we think there are indications that there is no direct relationship between attitudes and discrimination, a conclusion that could

only be reached by having a number of studies for different countries, and our study makes an important contribution in this regard.

Given our findings, and the findings of previous studies, it seems clear that discrimination of male same-sex couples is still occurring across Europe, in spite of improving attitudes and in spite of greater legal equality. Given that the introduction of same-sex marriage has changed attitudes in Europe towards gay people in a positive direction (Aksoy et al., 2020), it seems straightforward that further reforms of legal rules that affect sexual minorities is one way in which attitudes can change and, thereby, probably also discrimination.[29] A dose of more moderate Catholicism might, according to our findings, as well.

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[29] The results of this study concern married same-sex couples. An interesting extension would be to see to what extent the results hold for non-married same-sex couples.

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Online Appendix A: Contextual background: the case of Portugal

Portugal has faced a fast-paced development when it comes to minority rights of the LGBT+ community over the past few decades, having as of 2019 one of the most progressive legislations worldwide. Up until 1974, sexual orientation and gender identity rights were inexistent in Portugal, as the country was a dictatorship which actively punished homosexuality (Nogueira & Oliveira, 2010). After 1974, the movement for equal rights began, but only gained strength in the 1980s upon the arrival of the AIDS crisis (Nogueira & Oliveira, 2010). Over the following years, same-sex sexual acts were decriminalized in 1983, equal access to work was established in the penal code in 2009, marriage between same sex couples became legal in 2010 and equal adoption rights to those of opposite sex couples were approved in 2016 (Mendos, 2019). In 2018, Portugal became the sixth country in Europe to implement gender self-determination and the second to impede nonconsensual unnecessary medical intervention on intersex people (ILGA Europe, 2019). Fig. A1 shows an index of legal rights concerning sexual orientation minorities, based on information provided by ILGA Europe's 2019 Rainbow Europe.[30]
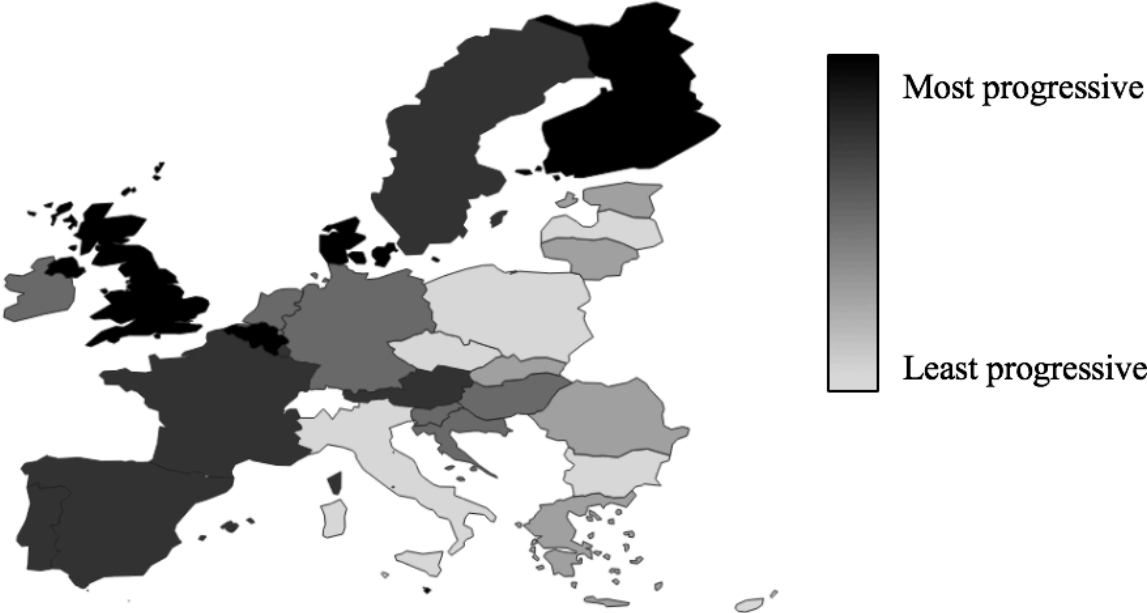
Fig. A1. Legal rights framework in the European Union for sexual-orientation minorities, presented in quantiles.

In spite of having an inclusive legal framework, survey data suggest that social attitudes towards LGBT+ minorities are less positive. Data from the Eurobarometer on

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[30] https://rainbow-europe.org/#0/0/0

discrimination (European Commission, 2019) shows that public opinion on same-sex couples is lagging slightly behind the EU28 average, with 69 percent of the individuals surveyed agreeing with the statement "There is nothing wrong in a sexual relationship between two persons of the same sex", 3 percentage points less than the EU28 average. Additionally, when asked about how comfortable the respondents felt with public demonstrations of affection, 63 percent of Portuguese respondents reply they feel comfortable or indifferent towards affection from a two men couple, 29 percentage points lower than when asked the same for an opposite-sex couple. Fig. A2 illustrates public opinion on same-sex couples, based on the survey question "There is nothing wrong in a sexual relationship between two persons of the same sex" (European Commission, 2019).
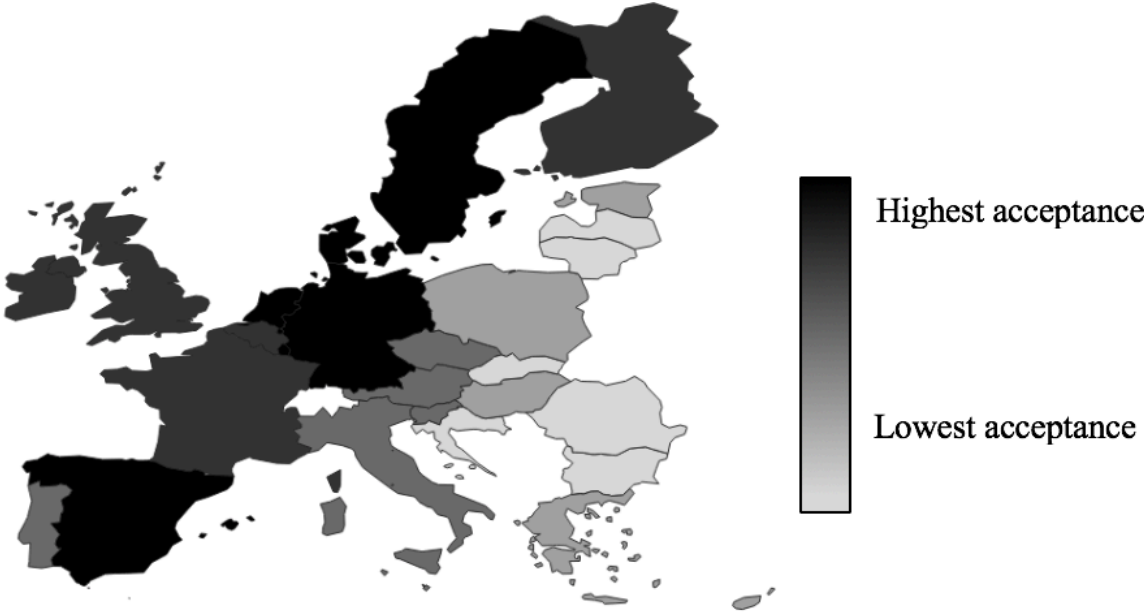
Fig. A2. Public acceptance in the European Union of same-sex couples, presented in quantiles.

When looking at who is carrying out discriminatory acts, the European Commission (2015) notes that youths and the more highly educated tend to discriminate less than their counterparts. This receives further support in the questionnaire-based report on violence and discrimination of the LGBT+ population by ILGA Portugal (2018), where there seems to be evidence that discriminatory behavior is more commonly practiced by older individuals. Furthermore, ILGA Portugal (2018) reports a high amount of discriminatory behavior happening online or through media, which is likely tied with anonymity facilitating this type of behavior.

Finally, when looking at discrimination targets, ILGA Portugal (2018) claims that it seems to be disproportionally steered towards gay men when compared to lesbian women. This is backed up by research conducted in the field, which shows more consistent results for discrimination against males than against females. Studies in the field which incorporate both male and female minority applicants reach differing conclusions, some indicating a higher discriminatory behavior towards males (Ahuja & Lyons, 2019; Patacchini et al., 2015), while others find the opposite (Ahmed et al., 2013; Drydakis, 2014).

It is worth noting that while the survey-based reports can provide some insight on the Portuguese context, they should be analyzed critically, and not being taken as exact unbiased measures of discrimination. First, the report by ILGA Portugal (2018) suffers from a small sample size, and it is likely biased towards areas of the country where the association carries out their activities more frequently, as well as likely reflecting a type of individuals with specific characteristics, who would be in contact with them. Second, the European Commission (2015) builds their report based on surveys, where the individuals are aware that their opinions are being documented. In this situation, individuals express explicit prejudice, but implicit prejudice is left out, and individuals give a reply that differs from their normal behavior (Quillian, 2006). Furthermore, there is likely self-selection on who ends up being interviewed for this survey. Therefore, these survey-based estimates are likely to have a downward bias. Despite these faults, these reports are as of now among the few documents which portray the Portuguese context for sexual minorities, and they do bring forth the general issues in need of further studying.

Online Appendix B: The e-mail texts in Portuguese and English

Version 1

Bom dia Sr. [landlord name],

Eu e o meu marido, ambos na casa dos 30, estamos de momento à procura de um apartamento em [county name] onde possamos viver os dois e gostamos do anúncio online do seu apartamento. Ambos trabalhamos, eu como técnico de qualidade e o [partner's name] enquanto formador e procuramos viver mais próximos dos nossos locais de trabalho. Não somos fumadores e não temos, nem planeamos adotar animais de estimação.

Gostaríamos de visitar o apartamento quando possível, [both persons' name]

Good morning mr. [landlord name],

Me and my husband, both in our 30s, are at the moment searching for an apartment in [county name] where we can both live, and we liked your online add for your apartment. We both work, me as a quality technician, and [partner's name] as a trainer and we would like to live closer to our work places. We are not smokers, and we do not own or plan to adopt pets.

We would like to visit the apartment whenever possible, [both persons' name]

Version 2

Exmo. [landlord name],

Vi o seu anúncio online, de um apartamento para arrendar em [county name] e gostava de declarar o meu interesse. Ando de momento à procura de um apartamento para coabitar com o meu marido [partner's name]. Somos um casal nos nossos trinta anos, eu sou programador e o [partner's name] trabalha como analista. Temos sempre um enorme cuidado com os nossos pertences e procuramos tratar a casa como tal. Estamos disponíveis para ver o apartamento quando lhe for conveniente.

Atentamente, [writer's name]

Sir [landlord name],

I saw your ad online of an apartment for rent in [county name] and I would like to declare my interest. At the moment I am looking for an apartment to live with my husband [partner's name]. We are a couple in our thirties, I am a programmer, and [partner's name] works as an analyst. We are very careful with our belongings, and we

are planning to treat the house likewise. We are available to check out the apartment whenever it is convenient for you.

Kindly yours, [writer's name]

Online Appendix C: Further results

Table A1

Changes in the positive-response rate over time – LPM

Dependent variable: Positive response			
	(1)	(2)	(3)
Time	-0.00017*	-0.00016	-0.000
	(0.000)	(0.000)	(0.000)
Company		0.064**	0.064*
		(0.032)	(0.033)
Male same-sex couple			-0.066
			(0.071)
Female same-sex couple			-0.089
			(0.070)
Male same-sex couple*Time			-0.000
			(0.000)
Female same-sex couple*Time			0.000
			(0.000)
N	1,012	1,012	1,012

Note: The variable Time refers to the order in which the ads were answered. Taking the same value for the two e-mails sent as replies to the same ad, the variable ranges from 1 to 506. In column (1), we only regress the positive response-rate on the order in which the ads were replied to. There is a marginally significant decline in reply rates over the data-collection period, but the size of the effect is negligible. When we control for whether the ad placer is a company (as opposed to an individual) in column (2), the significance of Time goes away. In column (3), we conduct an additional robustness check and find no significance for differing behavior for male or female same-sex couples when compared to opposite-sex couples. *, ** and *** denote significance levels of 0.1, 0.05 and 0.01 respectively. Values in parentheses refer to robust standard errors.

Table A2

Randomization tests.

	Male same-sex couple	Female same-sex couple	Male opposite-sex couple	Female opposite-sex couple
E-mail sent out first	-0.001	-0.024	0.018	0.007
	(0.027)	(0.027)	(0.027)	(0.027)
E-mail type	-0.013	0.029	-0.024	0.008
	(0.027)	(0.027)	(0.027)	(0.027)
Rent per month (€)	-0.000	0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Area (sqm)	-0.000	0.000	-0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Price per sqm	-0.001	0.001	-0.004	0.004
	(0.007)	(0.008)	(0.008)	(0.008)
Number of bedrooms	0.011	-0.011	0.037	-0.037
	(0.023)	(0.025)	(0.023)	(0.025)
Company	0.046	-0.046	-0.033	0.033
	(0.032)	(0.032)	(0.031)	(0.032)
Second hand	0.053	-0.052	-0.021	0.021
	(0.042)	(0.047)	(0.047)	(0.043)
Religiosity	-0.803	0.803	-0.413	0.414
	(0.657)	(0.650)	(0.618)	(0.687)
Average age	-0.011*	0.011	-0.011*	0.011
	(0.006)	(0.007)	(0.006)	(0.007)
Left-wing	-0.022	0.022	0.021	-0.021
	(0.034)	(0.034)	(0.034)	(0.034)
Distance	0.000	-0.000	0.001	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)
Porto	-0.002	0.002	0.101*	-0.101
	(0.061)	(0.062)	(0.060)	(0.064)
Salary	-0.000	0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Population density	0.000	-0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
R^2	0.010	0.012	0.014	0.013
N	1,012	1,012	1,012	1,012

Note: The dependent variables are the dummy variables for the various couple types, and randomization was tested by running an LPM model of them on control variables. *, ** and *** denote significance levels of 0.1, 0.05 and 0.01 respectively. Values in parentheses refer to robust standard errors.

Table A3

Summary statistics.

Variable	Obs	Mean	Std. Dev.	Min	Max
Response	1,012	0.284	0.451	0	1
Positive response	1,012	0.279	0.449	0	1
Showing	1,012	0.190	0.392	0	1
E-mail sent out first	1,012	0.500	0.500	0	1
E-mail type	1,012	0.499	0.500	0	1
Rent per month (100 €)	1,012	7.963	3.45	2.25	27.50
Area (sqm)	1,012	84.39	34.42	20	270
Price per sqm (€)	1,012	10.196	4.247	3	31
Number of bedrooms	1,012	1.889	0.889	0	4
Male landlord	810	0.521	0.500	0	1
Company	1,012	0.281	0.450	0	1
Second hand	1,012	0.889	0.314	0	1
Religiosity	1,012	0.876	0.043	0.79	0.98
Average age	1,012	42.840	3.055	36	50
Left-wing	1,012	0.619	0.486	0	1
Distance	1,012	13.63	12.30	0	54
Porto	1,012	0.433	0.496	0	1
Salary	1,012	1094	182	727	1479
Population density	1,012	3373	1962	138	7530

Table A4

Mean values and standard errors of control variables by couple type.

	Male same-sex couple	Female same-sex couple	Male opposite-sex couple	Female opposite-sex couple	Total
E-mail sent out first	0.498	0.478	0.516	0.508	0.5
	(0.031)	(0.032)	(0.031)	(0.032)	(0.016)
E-mail type	0.486	0.526	0.477	0.508	0.499
	(0.031)	(0.032)	(0.031)	(0.032)	(0.016)
Rent per month (100€)	7.860	80.68	79.40	79.87	79.63
	(20.70)	(23.02)	(19.93)	(23.75)	(10.92)
Area (sqm)	84.40	84.39	83.03	85.78	84.39
	(2.068)	(2.265)	(1.937)	(2.381)	(1.082)
Price per sqm (€)	10.01	10.38	10.27	10.12	10.20
	(0.262)	(0.273)	(0.261)	(0.273)	(0.133)
Number of bedrooms	1.906	1.873	1.906	1.872	1.889
	(0.056)	(0.056)	(0.053)	(0.059)	(0.028)
Male landlord	0.483	0.559	0.493	0.552	0.521
	(0.035)	(0.035)	(0.034)	(0.036)	(0.018)
Company	0.310	0.251	0.262	0.300	0.281
	(0.029)	(0.027)	(0.028)	(0.029)	(0.014)
Second hand	0.910	0.869	0.875	0.904	0.889
	(0.018)	(0.021)	(0.021)	(0.019)	(0.01)
Religiosity	0.874	0.877	0.876	0.875	0.876
	(0.003)	(0.003)	(0.003)	(0.003)	(0.001)
Average age	42.57	43.11	42.86	42.82	42.84
	(0.191)	(0.192)	(0.181)	(0.204)	(0.096)
Left-wing	0.627	0.61	0.605	0.632	0.619
	(0.030)	(0.031)	(0.031)	(0.031)	(0.015)
Distance	14.33	12.92	12.60	14.69	13.63
	(0.736)	(0.81)	(0.749)	(0.794)	(0.387)
Porto	0.412	0.454	0.453	0.412	0.433
	(0.031)	(0.031)	(0.031)	(0.031)	(0.016)
Salary	1083	1104	1111	1076	1094
	(11.49)	(11.38)	(11.22)	(11.58)	(5.72)
Population density	3286	3461	3577	3164	3373
	(124.7)	(122.1)	(121.0)	(124.8)	(61.7)
N	255	251	256	250	1,012

Note: The number of observations for the variable male landlord is different than the others, and it consists of a 201, 204, 211 and 194 respectively, adding to a total of 810. Values in parentheses refer to standard errors.

Table A5

Marginal effect of being in a same-sex couple on positive responses – probit.

	Dependent variable: Positive response					
	(1)	(2)	(3)	(4)	(5)	(6)
Same-sex couple	-0.055** (0.028)					
Male same-sex couple		-0.071** (0.033)		-0.081** (0.035)	-0.067** (0.033)	-0.076** (0.034)
Female same-sex couple			-0.005 (0.033)	-0.031 (0.034)		-0.028 (0.034)
E-mail sent out first					0.105*** (0.027)	0.104*** (0.027)
Number of bedrooms					0.036** (0.017)	0.036** (0.017)
Price per sqm					0.011*** (0.004)	0.011*** (0.004)
Company					0.050 (0.031)	0.049 (0.031)
Porto					0.060** (0.031)	0.061** (0.031)
N	1,012	1,012	1,012	1,012	1,012	1,012

Note: A probit model was used to estimate the marginal effect of treatment. *, ** and *** denote significance levels of 0.1, 0.05 and 0.01 respectively. Values in parentheses refer to robust standard errors.

Table A6

Marginal effect of being in a same-sex couple on positive responses – LPM with religiosity.

Dependent variable: Positive response.		
	(1)	(2)
Same-sex couple		
Male same-sex couple	-0.067**	-0.076**
	(0.031)	(0.033)
Female same-sex couple		-0.029
		(0.034)
E-mail sent out first	0.107***	0.106***
	(0.028)	(0.028)
Number of bedrooms	0.036**	0.036**
	(0.017)	(0.017)
Price per sqm	0.011***	0.011***
	(0.004)	(0.004)
Company	0.051	0.050
	(0.033)	(0.033)
Porto	0.071	0.072
	(0.044)	(0.044)
Religiosity	-0.163	-0.161
	(0.516)	(0.516)
N	1,012	1,012

Note: The table corresponds to columns 5 and 6 of Table 1, with religiosity added. An LPM model was used to estimate the marginal effect of treatment.*, ** and *** denote significance levels of 0.1, 0.05 and 0.01 respectively. Values in parentheses refer to robust standard errors.

Table A7

Marginal effect of being in a male same-sex couple on receiving a response –LPM.

	Dependent variable: Response					
	(1)	(2)	(3)	(4)	(5)	(6)
Same-sex couple	-0.045 (0.028)					
Male same-sex couple		-0.054* (0.032)		-0.063* (0.034)	-0.053* (0.031)	-0.061* (0.033)
Female same-sex couple			-0.006 (0.033)	-0.027 (0.035)		-0.025 (0.034)
E-mail sent out first					0.116*** (0.028)	0.116*** (0.028)
Number of bedrooms					0.036** (0.017)	0.036** (0.017)
Price per sqm					0.010** (0.004)	0.010** (0.004)
Company					0.055* (0.033)	0.054 (0.033)
Porto					0.061* (0.031)	0.061** (0.031)
N	1,012	1,012	1,012	1,012	1,012	1,012

Note: An LPM model was used to estimate the marginal effect of treatment. *, ** and *** denote significance levels of 0.1, 0.05 and 0.01 respectively. Values in parentheses refer to robust standard errors.

Table A8

Marginal effect of being in a male same-sex couple on being invited for a showing – LPM.

	Dependent variable: Showing					
	(1)	(2)	(3)	(4)	(5)	(6)
Same-sex couple	-0.051** (0.025)					
Male same-sex couple		-0.086*** (0.026)		-0.090*** (0.028)	-0.082*** (0.026)	-0.087*** (0.028)
Female same-sex couple			0.018 (0.029)	-0.012 (0.031)		-0.013 (0.031)
E-mail sent out first					0.063*** (0.024)	0.063** (0.024)
Number of bedrooms					0.020 (0.015)	0.021 (0.015)
Price per sqm					0.011*** (0.004)	0.011*** (0.004)
Company					0.022 (0.029)	0.021 (0.029)
Porto					0.065** (0.027)	0.065** (0.027)
N	1,012	1,012	1,012	1,012	1,012	1,012

Note: An LPM model was used to estimate the marginal effect of treatment. *, ** and *** denote significance levels of 0.1, 0.05 and 0.01 respectively. Values in parentheses refer to robust standard errors.

Table A9

Marginal effect of being in a same-sex couple with interaction terms for parish characteristics – LPM.

	Dependent variable: Positive response				
	(1)	(2)	(3)	(4)	(5)
Male same-sex couple	1.091**	-0.717	-0.059	-0.107**	-0.093**
	(0.463)	(0.652)	(0.054)	(0.050)	(0.043)
Female same-sex couple	-0.395	-0.450	-0.035	-0.010	-0.066
	(0.508)	(0.704)	(0.055)	(0.051)	(0.046)
Average age	0.007				
	(0.007)				
Male same-sex couple*Average age	-0.027**				
	(0.011)				
Female same-sex couple*Average age	0.008				
	(0.012)				
Religion		-0.259			
		(0.471)			
Male same-sex couple *Religion		0.730			
		(0.745)			
Female same-sex couple *Religion		0.478			
		(0.802)			
Left-wing			0.026		
			(0.042)		
Male same-sex couple *Left-wing			-0.033		
			(0.069)		
Female same-sex couple *Left-wing			0.006		
			(0.071)		
Distance				-0.001	
				(0.002)	
Male same-sex couple *Distance				0.002	
				(0.003)	
Female same-sex couple *Distance				-0.002	
				(0.003)	
Porto					-0.001
					(0.041)
Male same-sex couple *Porto					0.035
					(0.068)
Female same-sex couple *Porto					0.076
					(0.070)
N	1,012	1,012	1,012	1,012	1,012

Note: An LPM model was used to estimate the marginal effect of treatment. *, ** and *** denote significance levels of 0.1, 0.05 and 0.01 respectively. Values in parentheses refer to robust standard errors. Using probit instead of LPM produces very similar results.

Table A10

Marginal effect of being in a male same-sex couple with interaction terms for host and apartment characteristics – LPM.

	Dependent variable: Positive response			
	(1)	(2)	(3)	(4)
Male same-sex couple	0.052	0.053	-0.072	-0.101***
	(0.079)	(0.086)	(0.056)	(0.038)
Female same-sex couple	-0.038	-0.086	-0.016	-0.017
	(0.084)	(0.092)	(0.061)	(0.040)
Rent	0.000*			
	(0.000)			
Male same-sex couple*Rent	-0.000*			
	(0.000)			
Female same-sex couple*Rent	0.000			
	(0.000)			
Sqm Price		0.009*		
		(0.005)		
Male same-sex couple*Sqm price		-0.013*		
		(0.008)		
Female same-sex couple*Sqm price		0.005		
		(0.008)		
Male landlord			0.018	
			(0.048)	
Male same-sex couple*Male landlord			-0.049	
			(0.079)	
			-0.056	
Female same-sex couple*Male landlord			(0.082)	
Company				0.064
				(0.047)
Male same-sex couple*Company				0.065
				(0.076)
Female same-sex couple*Company				-0.049
				(0.081)
N	1,012	1,012	810	1,012

Note: An LPM model was used to estimate the marginal effect of treatment. *, ** and *** denote significance levels of 0.1, 0.05 and 0.01 respectively. Values in parentheses refer to robust standard errors. Using probit instead of LPM produces very similar results.