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‘Two Gentlemen Sharing’: Rental Discrimination of Same-Sex Couples in Portugal

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‘Two gentlemen sharing’: Rental discrimination of same-sex couples in Portugal^o

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ABSTRACT

We measure and analyze discriminatory behavior against same-sex couples trying to rent an apartment in Portugal. This is the first correspondence field experiment investigating discrimination against this minority group in Portugal, adding to a literature using this method to ascertain discriminatory behavior in the housing market. 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 26 percent, lower for them compared to opposite-sex couples. The effect is even more negative in parishes where the population is older, and discrimination increases in magnitude over the rental value and the square meter price of apartments. However, and perhaps surprisingly, the risk of discrimination decreases with religiosity (up to a point) and the distance to the metropolitan center (up to a point). The results for female same-sex couples also show a sizable negative effect, with a 3 percentage-point, or 10 percent, lower probability of a positive response compared to opposite-sex

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couples, even though this difference is less precisely estimated. The present study extends the literature to a southern European setting and validates previous research documenting worse treatment of same-sex couples in the housing market. Interestingly, in spite of less positive attitudes to same-sex couples among the Portuguese public, the level of discrimination is comparable to that found in Sweden and lower than on the Irish short-term rental market. This arguably illustrates that attitudes and discriminatory behavior need not be closely aligned.

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

JEL classification: C93, D91, J15, R30

1. Introduction

Discriminatory behavior entails treating equals unequally (Lang & Lehmann, 2012, p. 2). It is most often exercised against minority groups, who, in spite of having similar qualities as others, experience worse treatment, e.g., in the labor and rental markets. Discrimination has a number of costly consequences – first and foremost for those subjected to it. 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 physical and mental health (Pascoe and Smart Richman, 2009). These outcomes arguably result in lower well-being (cf. Berggren et al., 2017), which makes it important to investigate and care about discriminatory behavior. Indeed, Lippert-Rasmussen (2006) argues that discrimination is bad by bringing harm to those being discriminated against.

Adding to this, there are detrimental effects for society as well. The allocation of resources will be less efficient if productive people are being kept out or treated worse. Discrimination can furthermore lead to friction and conflict between people and between groups working for the disadvantaged and the government. This was seen in many western countries during the second half of the 20th century, with the emergence of the civil-rights, gay-liberation and women's-liberation movements pressing for change.

As a result, many countries in the western world have legislated against and have allocated substantial resources over the last decades to fight discriminatory behavior, in order to protect vulnerable groups of people and to promote a more cohesive society. However,

although well-intended, these measures have not been a panacea – prejudicial attitudes and treating minorities worse are still a reality in many places.

Against this background, the purpose of this study is to find out whether and 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 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 and how much 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. 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 26 percent, less likely to receive a positive reply from a landlord. Furthermore, such discrimination is most prevalent in parishes with an older population and a higher population density, 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 and religiosity. While the outcomes show no statistical significance for discrimination against female same-sex couples, the parameter for this couple type is still quite sizable, indicating a 3 percentage point, or 10 percent, lower probability of a positive reply).

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.¹

The primary contribution of the present study is that it provides evidence of discrimination in a new context. Showing that discrimination of a certain type exists in one

¹ Only in the Serbian study are there indications of discrimination against female same-sex couples, but like in the present study, the difference compared to opposite-sex couples is not statistically significant.

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). A first thing to note 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 first reason to investigate the scope of discrimination in a different country, noting, e.g., that levels of tolerance towards same-sex couples are higher in Sweden, Germany and Ireland than the EU 28 average (European Commission, 2019) and higher than in Portugal. But even so, it is not certain that discrimination is higher in Portugal, since things like formal and informal institutions and the character of the housing markets differ, which are factors that arguably interact with attitudes to shape the amount of discrimination taking place.² In fact, in line with this, we find that in spite of more negative views of same-sex couples in Portugal than in other European countries studied before, the level of rental discrimination is similar to that in Sweden and lower than that in Ireland.

Indeed, Portugal is a unique case in Europe, as the majority of people are Catholic, 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).³ Our results may be taken to indicate that the legal reforms have proceeded at a faster pace than attitudinal change in the population, where the

² It bears noting that 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 and Italy.

³ For more about the case of Portugal, see Appendix A.

former are still able to influence discriminatory behavior such that it is not more prevalent than in countries with more favorable attitudes.

The rest of the paper is organized as follows. Section 2 contains a presentation of the theoretical background and the relevant literature, Section 3 covers the data and empirical method used in the field experiment, Section 4 contains the results and Section 5 concludes with a discussion of the implications of our findings.

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). Much of the background for the development of these theories was racist behavior, especially towards non-white individuals in the labor market (Figart & Mutari, 2005).

The taste-based discrimination theory of Becker (1957) 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 model of Phelps (1972) and Arrow (1973) 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, even though they may not in fact be present in applicants *qua* individuals.⁴

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 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.

⁴ 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., Aigner & Cain (1977), Helpman (1998), Charles & Guryan (2008, 2013) and Lang & Lehmann (2012).

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), coupled with lower earnings in the case of males (Drydakis, 2019), this could be a reason to avoid them as tenants.

Both theories have been tested through field experiments outside of the typical labor-market context, with various degrees of success. Edelman et al. (2017) claim that taste-based discrimination is present in the short-term rental market in the United States, having estimated that rejecting ethnic-minority requests had a significant monetary cost. Other field experiments attempt to display statistical discrimination by manipulating the amount of information that decision makers receive. Results in these tests vary, with some reporting a decrease in discriminatory behavior, sometimes disappearing (Ciu et al., 2019) and sometimes not completely disappearing (Bosch et al., 2010; Bartoš et al., 2016), while others report that discrimination remains at similar levels, despite both groups on average facing higher reply rates (Ahmed et al., 2010; Drydakis, 2014). Charles & Guryan (2013) question the usefulness of such tests and affirm that many attempts at proving taste or statistical discrimination are erroneous – not least, both types of discrimination often end up showing similar patterns.

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).⁵ The most relevant part of the literature for this study is the one

⁵ Conducting separate studies of the various combinations is merited; consider, e.g., the following aspects of being an ethnic or a sexual-orientation minority. First, ethnic minorities tend to reside in neighborhoods where their ethnicity is the most common (Lang & Lehmann, 2012), which leads to lower educational quality. That phenomenon is not present for sexual-orientation minorities. Second, since sexual orientation is not shared with the individual's parents, sexual-orientation minority individuals are raised in diverse backgrounds. Third, since sexual-orientation minorities may choose to not reveal their minority status, they may face a lower hardship in both the rental and job markets.

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.⁶

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).⁷ However, there was no indication of discrimination against male same-sex couples in Germany (Mazziotta et al., 2015)⁸, nor of discrimination against female sex-same couples in any of the studies (except possibly in Serbia).⁹

When looking at further explanatory factors, there are contradictory results regarding host gender. While Ahuja & Lyons (2019) find that a male host is more likely to accept both male and female same-sex relationship applications, and while Koehler et al. (2018) find that male landlords tend to be more prone to discriminate, Ahmed & Hammarstedt (2009) find no significant differences when it comes to landlord gender affecting reply rates. When it comes to geographical region, Ahmed & Hammarstedt (2009) find no significant difference in discriminatory behavior between metropolitan areas and other regions in Sweden, while Lauster & Easterbrook (2011) show some evidence for a higher reply rate for male same-sex couples in the central areas of Vancouver, where citizens are more frequently exposed to this

⁶ 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. Also see Edelman et al. (2018), Kakar et al. (2018) and Ciu et al. (2019) regarding ethnic discrimination in Airbnb rentals.

⁷ It bears noting that the study on Serbia is based on telephone calls rather than correspondence.

⁸ Results could be unrepresentative of discrimination in Germany due to a small sample size and the choice of cities. The field experiments exclude Munich, a city which has been previously associated with sexual-orientation discrimination in the labor market (Weichselbaumer, 2015).

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.

relationship type. Ahuja & Lyons (2019) further show that the host renting a whole apartment or a unit in their house was of no importance. Furthermore, applicant specific characteristics can soften the level of discrimination. Studies conducted mention that the applicant's gender tends to affect the amount of discrimination, with women being the preferred applicants in Italy (Baldini & Federici, 2011), Norway (Andersson et al., 2012) and Sweden (Ahmed & Hammarstedt, 2008). Studies which measured discrimination for more than one ethnic minority have reported various levels of discrimination for the various ethnic groups (Baldini & Federici, 2011; Carlsson & Eriksson, 2015) and when ethnicity and sexual orientation were interacted (Koehler et al., 2018). Lastly, on the impact of laws, Schwegman (2019) finds ambiguous effects of state and local anti-discrimination laws in the acceptance rates for same-sex couples in the United States. While local laws are ineffective, state laws are better for tackling discrimination, primarily for same-sex couples of ethnic minorities.

3. Empirical method and data

3.1. Experimental design

To correctly 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. 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). The other main method, audit studies, consisting of trained actors carrying out full application procedures, are used less frequently since bias from unobservable variables cannot be ruled out (Lang & Lehman, 2012). When looking at the topic at hand, it is defined by a small population size, lack of available data, and a likely selection bias. This provides further reason to use a field experiment with correspondence testing.¹⁰

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

¹⁰ 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.

were sent two applications in close temporal proximity, one from a same-sex couple and 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 potential couples were included: a male same-sex couple, a female same-sex couple, an opposite-sex couple with the male partner as their contact and ditto with the female partner as their contact. 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.¹¹ 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. 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.

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.

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 Appendix B.

3.2. 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,

¹¹ 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.

and lists various pieces of information (such as apartment size in square meters, number of bedrooms and location).¹²

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.

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 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.¹³

Both 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 are

¹² 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).

¹³ 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 minimize the inconvenience.

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)¹⁴, 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), the average age and the share of self-identified religious people, 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.

3.3. Descriptive statistics

Upon completion of the data collection, it is apparent that randomization was done correctly (see Table A1 in 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. 1). 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 (26 percent). Table 1 provides average descriptive statistics, while further details about these variables by couple type can be found in Table A2 in Appendix C.

¹⁴ The data were retrieved from national statistics for 2016 and have been inflation-adjusted to mimic 2019 levels.

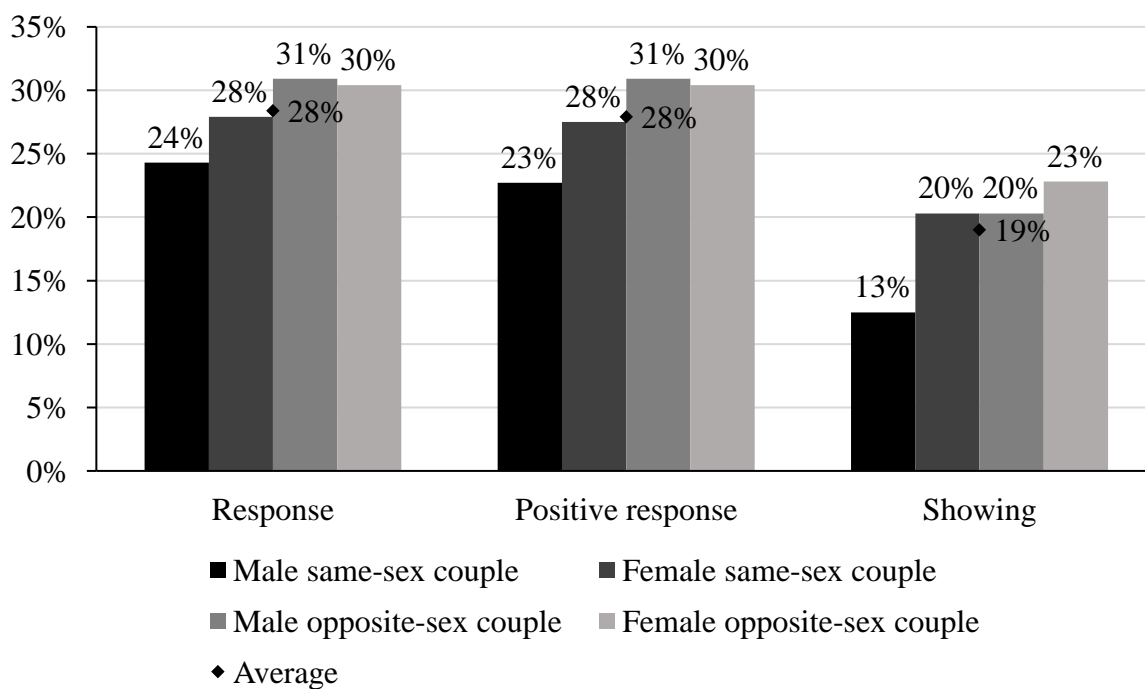


Fig. 1. Reply rates by couple type.

Table 1

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	3.4.5	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
Average age	1,012	42.840	3.055	36	50
Religion	1,012	0.876	0.043	1	1
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

We use probit regressions in order to estimate the marginal effects of discrimination. 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.¹⁵

4. Results

4.1. Baseline findings

Our baseline findings are based on probit regressions and are illustrated in Fig. 2. 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.

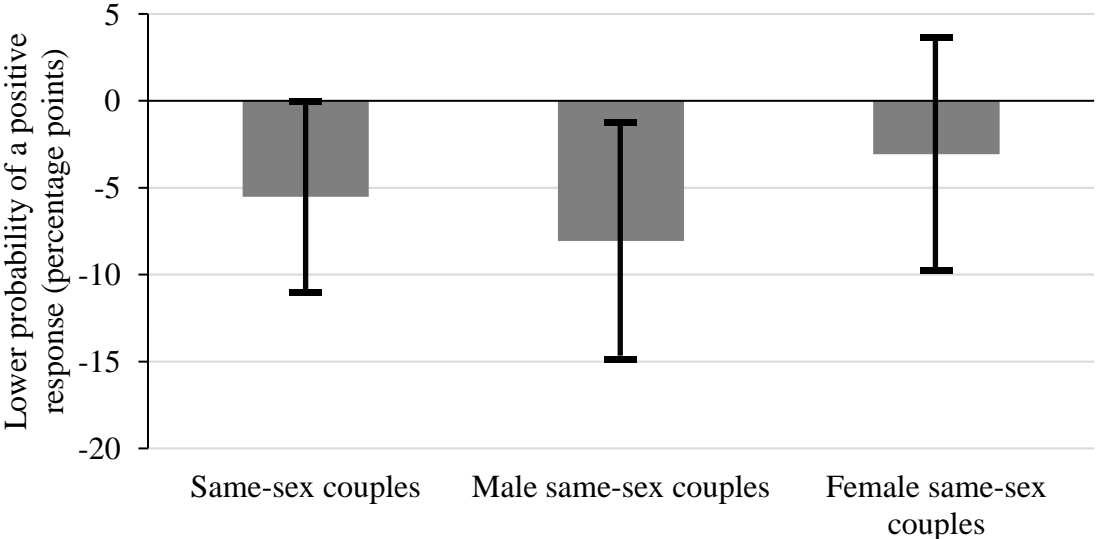


Fig. 2. Estimate (in percentage points) for male and female same-sex couples on positive responses compared to opposite-sex couples and 95 percent confidence intervals (based on Table 2, column 1 and column 4).

¹⁵ Results for the positive reply rate are presented in Section 4, while results for the other two dependent variables are presented in Appendix C.

Fig. 2 is based on Table 2, which contains the results of probit regressions that show in more detail how being a male same-sex couple elicits discriminatory behavior in the rental market in Portugal. 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 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, although the coefficient points in a negative direction and corresponds to a 10 percent difference as compared to opposite-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. We have also added further control variables (the ones used in the interaction analysis in Section 4.2) to the specification in column 6, and our main variables of interest (being a same-sex couple) remain robust (results are available on request).

Table 2

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

	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**	0.061**
					(0.031)	(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.

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 (Table 2, Table A3 and Table A4 in 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 9-10 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.

4.2. Interaction analysis

To get a better understanding of possible mechanisms, we next introduce further control variables and interact key control variables with being a same-sex couple to test whether such couples are treated differently based on parish differences (Table A5 in Appendix C) or host and apartment characteristics (Table A6 in Appendix C).¹⁶ 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. 3. These are all for male same-sex couples.¹⁷

¹⁶ 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, since the left-wing parties in Portugal tend to be more liberal on social issues and since the Catholic Church has traditionally embraced a negative view of same-sex relationships.

¹⁷ We do not show the corresponding graphs for female same-sex couples, but they all confirm the null-result finding noted in Table 2 for this couple type, independently of where in the distributions of the modifying variables we look. The graphs are available on request.

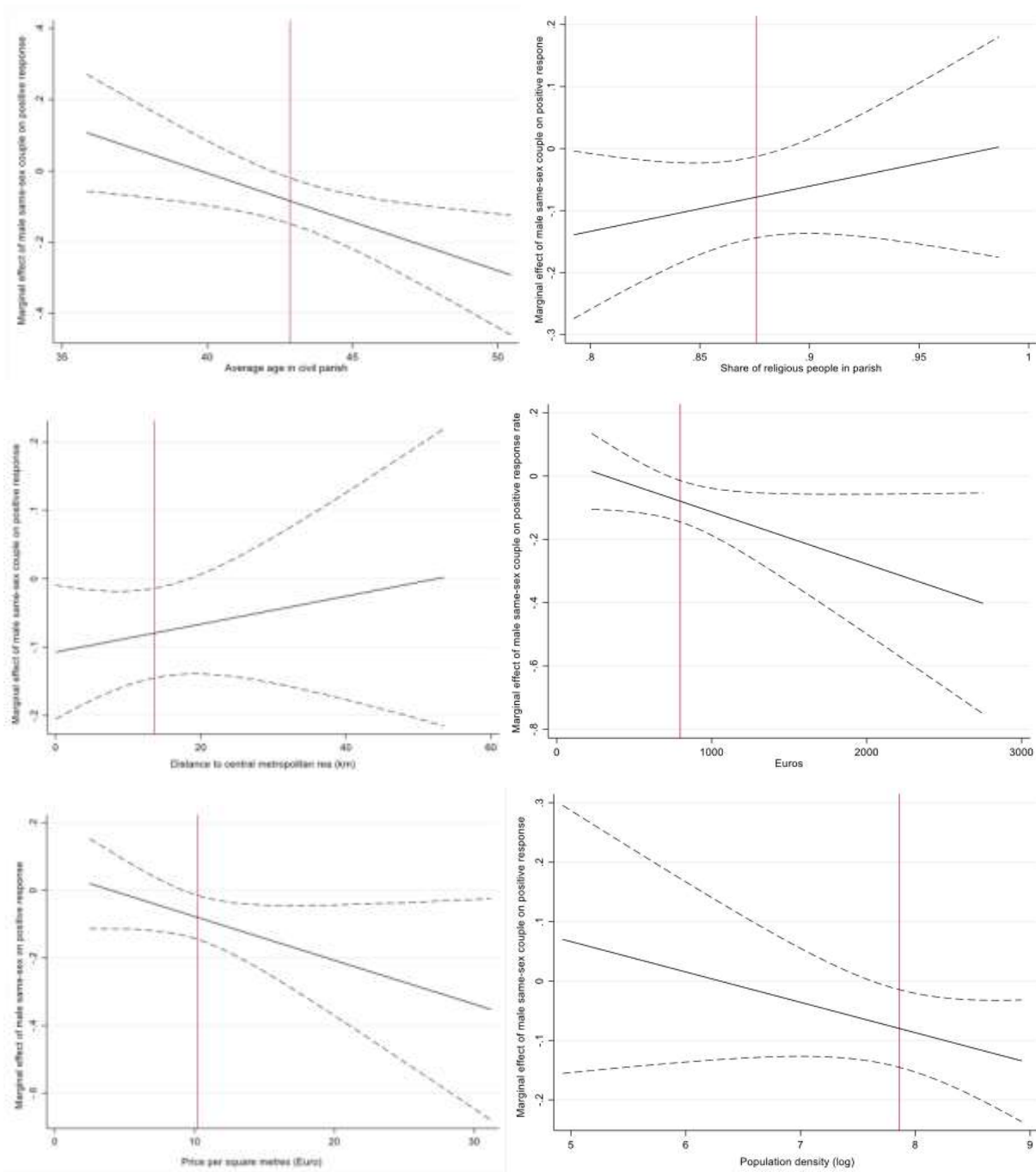


Fig. 3. The marginal effect on the probability of getting a positive response of being a male same-sex couple over the average age in the parish, over the share of people self-reporting as religious in the parish, over the distance to the metropolitan center, over the monthly rent (€) of the apartments, over the square meter price (€) of the apartments and over population density, with 95 percent confidence intervals. The vertical line indicates the mean average age in the sample.

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.

Turning to the parish share of self-reported religious people, we observe a surprising result, in that the marginal effect on the probability of a male same-sex couple getting a positive response increases with religiosity, but the sign of the coefficient is always negative, i.e., signaling discrimination. This holds in parishes with a share of religious people below the sample mean (as indicated by the vertical line), where the marginal effect is significant and ranges between -0.14 and -0.08 . One possible explanation of the positive slope is that religious people, while possibly disliking people of the same sex forming couples, may be motivated by compassion to take a stand against discrimination in everyday life of a traditionally maltreated minority; another possibility is that self-identification as religious may, in many cases, indicate a non-doctrinaire and humanistic type of religiosity, rather than faithfulness to Catholic doctrine. 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 central 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 but 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. 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. Possibly, this result follows from statistical discrimination based on the fact that

gay people on average have lower earnings (Drydakis, 2019) and more mental health problems.

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 young average age, of relatively low population density and of relatively high religiosity 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. 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 and Italy, and perhaps for Brazil as well, which shares a cultural heritage with Portugal.

While previous studies, with the exception of the Serbian one, do not find any evidence of discrimination of female same-sex couples, we find indications of discrimination, albeit on a smaller scale than for the male couples. While the estimated coefficient is not statistically significant as such, its size points towards more negative treatment of such couples in Portugal than in previously studied countries. The Swedish and Irish studies both find very little, if any, discrimination (0 and 2 percent, respectively), which can be compared to our result of a 10 percent lower probability of receiving a positive response.

Our interaction analysis 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, while religiosity in fact diminishes it (up until a point). 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. The most interesting findings may be that discrimination decreases with apartments being located in more religious and less central areas.

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 the finding that the introduction of same-sex marriage has changed attitudes in Europe towards gay people in a positive direction (Aksoy et al., 2018), 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.

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.¹⁸

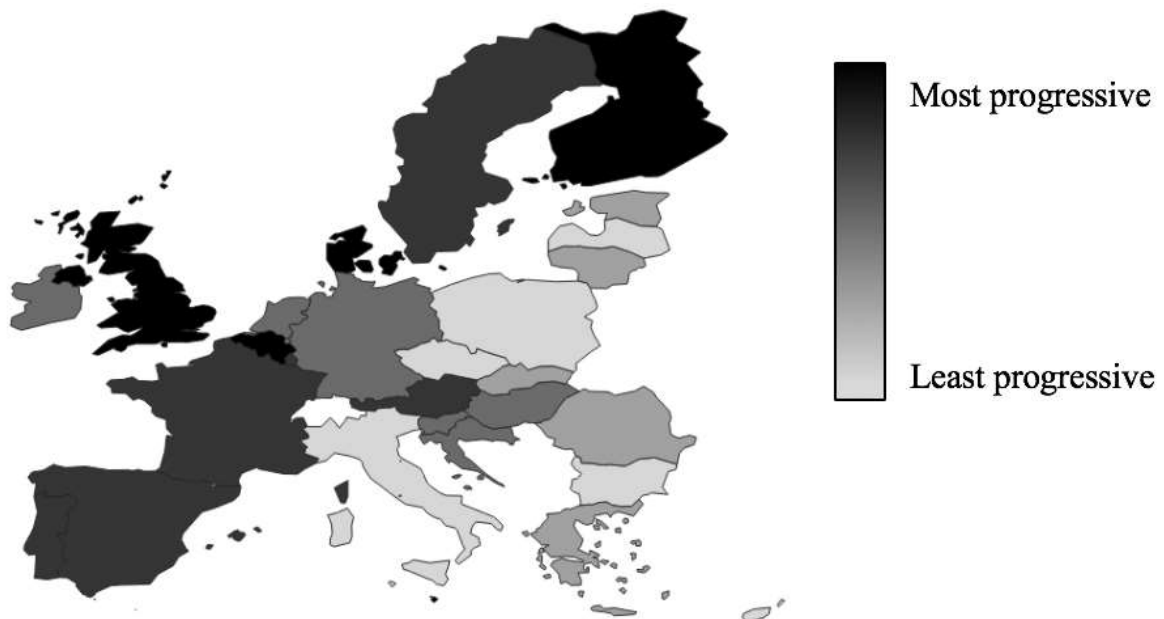


Fig. A1. Legal rights framework in the European Union for sexual-orientation minorities, presented in quantiles.

¹⁸ <https://rainbow-europe.org/#0/0/0>

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 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).

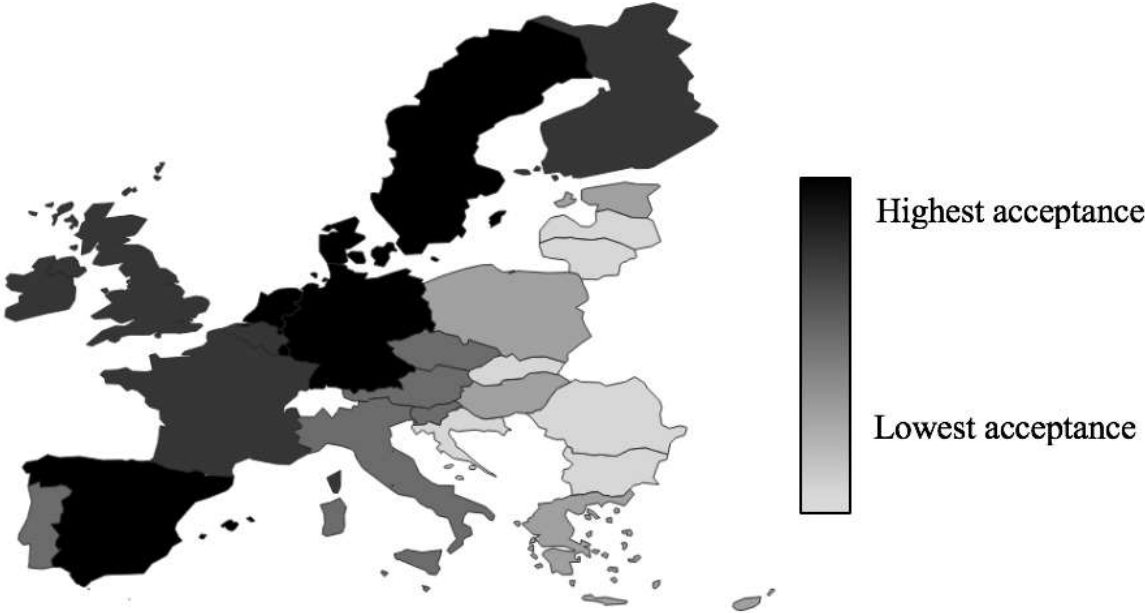


Fig. A2. Public acceptance in the European Union of same-sex couples, presented in quantiles.

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 disproportionately 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.

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]

Appendix C: Further results

Table A1

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 (0.04)	-0.024 (0.88)	0.018 (0.64)	0.007 (0.27)
E-mail type	-0.013 (0.47)	0.029 (1.05)	-0.024 (0.88)	0.008 (0.31)
Rent per month (€)	-0.000 (0.29)	0.000 (0.24)	0.000 (0.45)	-0.000 (0.39)
Area (sqm)	-0.000 (0.30)	0.000 (0.25)	-0.001 (1.48)	0.001 (1.27)
Price per sqm	-0.001 (0.21)	0.001 (0.18)	-0.004 (0.51)	0.004 (0.50)
Number of bedrooms	0.011 (0.48)	-0.011 (0.45)	0.037 (1.63)	-0.037 (1.45)
Company	0.046 (1.42)	-0.046 (1.45)	-0.033 (1.05)	0.033 (1.03)
Second hand	0.053 (1.26)	-0.052 (1.12)	-0.021 (0.45)	0.021 (0.50)
Average age	-0.011* (1.73)	0.011 (1.57)	-0.011* (1.75)	0.011 (1.55)
Religion	-0.803 (1.22)	0.803 (1.23)	-0.413 (0.67)	0.414 (0.60)
Left-wing	-0.022 (0.64)	0.022 (0.65)	0.021 (0.62)	-0.021 (0.63)
Distance	0.000 (0.02)	-0.000 (0.02)	0.001 (0.61)	-0.001 (0.62)
Porto	-0.002 (0.03)	0.002 (0.03)	0.101* (1.69)	-0.101 (1.56)
Salary	-0.000 (1.20)	0.000 (1.33)	0.000 (1.51)	-0.000 (1.53)
Population density	0.000 (0.94)	-0.000 (0.98)	0.000 (1.09)	-0.000 (1.15)
R2	0.01	0.01	0.01	0.01
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 OLS 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 A2

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 (0.031)	0.478 (0.032)	0.516 (0.031)	0.508 (0.032)	0.5 (0.016)
E-mail type	0.486 (0.031)	0.526 (0.032)	0.477 (0.031)	0.508 (0.032)	0.499 (0.016)
Rent per month (100€)	7.860 (20.70)	80.68 (23.02)	79.40 (19.93)	79.87 (23.75)	79.63 (10.92)
Area (sqm)	84.40 (2.068)	84.39 (2.265)	83.03 (1.937)	85.78 (2.381)	84.39 (1.082)
Price per sqm (€)	10.01 (0.262)	10.38 (0.273)	10.27 (0.261)	10.12 (0.273)	10.20 (0.133)
Number of bedrooms	1.906 (0.056)	1.873 (0.056)	1.906 (0.053)	1.872 (0.059)	1.889 (0.028)
Male landlord	0.483 (0.035)	0.559 (0.035)	0.493 (0.034)	0.552 (0.036)	0.521 (0.018)
Company	0.310 (0.029)	0.251 (0.027)	0.262 (0.028)	0.300 (0.029)	0.281 (0.014)
Second hand	0.910 (0.018)	0.869 (0.021)	0.875 (0.021)	0.904 (0.019)	0.889 (0.01)
Average age	42.57 (0.191)	43.11 (0.192)	42.86 (0.181)	42.82 (0.204)	42.84 (0.096)
Religion	0.874 (0.003)	0.877 (0.003)	0.876 (0.003)	0.875 (0.003)	0.876 (0.001)
Left-wing	0.627 (0.030)	0.61 (0.031)	0.605 (0.031)	0.632 (0.031)	0.619 (0.015)
Distance	14.33 (0.736)	12.92 (0.81)	12.60 (0.749)	14.69 (0.794)	13.63 (0.387)
Porto	0.412 (0.031)	0.454 (0.031)	0.453 (0.031)	0.412 (0.031)	0.433 (0.016)
Salary	1083 (11.49)	1104 (11.38)	1111 (11.22)	1076 (11.58)	1094 (5.72)
Population density	3286 (124.7)	3461 (122.1)	3577 (121.0)	3164 (124.8)	3373 (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 A3

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

	Dependent variable: Response					
	(1)	(2)	(3)	(4)	(5)	(6)
Same-sex couple	-0.045 (0.028)					
Male same-sex couple		-0.055*		-0.064*	-0.053	-0.061*
		(0.033)		(0.035)	(0.033)	(0.034)
Female same-sex couple			-0.006 (0.033)	-0.027 (0.035)		-0.024 (0.034)
E-mail sent out first					0.115*** (0.027)	0.115*** (0.027)
Number of bedrooms					0.036** (0.017)	0.036** (0.017)
Price per sqm					0.010*** (0.004)	0.010*** (0.004)
Company					0.054* (0.031)	0.053* (0.031)
Porto					0.061** (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 A4

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

	Dependent variable: Showing					
	(1)	(2)	(3)	(4)	(5)	(6)
Same-sex couple	-0.051**					
	(0.025)					
Male same-sex couple		-0.093***		-0.097***	-0.086***	-0.090***
		(0.030)		(0.032)	(0.030)	(0.031)
Female same-sex couple			0.018	-0.011		-0.012
			(0.028)	(0.029)		(0.029)
E-mail sent out first					0.062**	0.061**
					(0.024)	(0.024)
Number of bedrooms					0.020	0.020
					(0.014)	(0.014)
Price per sqm					0.011***	0.011***
					(0.003)	(0.003)
Company					0.024	0.023
					(0.027)	(0.027)
Porto					0.063**	0.063**
					(0.027)	(0.027)
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 A5

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

	Dependent variable: Positive response				
	(1)	(2)	(3)	(4)	(5)
Male same-sex couple	1.175** (0.479)	-0.759 (0.686)	-0.060 (0.057)	-0.110** (0.053)	-0.097** (0.046)
Female same-sex couple	-0.404 (0.502)	-0.443 (0.698)	-0.035 (0.056)	-0.008 (0.050)	-0.066 (0.047)
Average age	0.007 (0.006)				
Male same-sex couple*Average age	-0.030*** (0.011)				
Female same-sex couple*Average age	0.009 (0.012)				
Religion		-0.249 (0.452)			
Male same-sex couple *Religion		0.776 (0.783)			
Female same-sex couple *Religion		0.470 (0.795)			
Left-wing			0.025 (0.040)		
Male same-sex couple *Left-wing			-0.032 (0.072)		
Female same-sex couple *Left-wing			0.008 (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 (0.039)
Male same-sex couple *Porto					0.038 (0.071)
Female same-sex couple *Porto					0.075 (0.069)
N	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 male same-sex couple with interaction terms for host and apartment characteristics.

	Dependent variable: Positive response			
	(1)	(2)	(3)	(4)
Male same-sex couple	0.054 (0.085)	0.052 (0.090)	-0.073 (0.058)	-0.109** (0.043)
Female same-sex couple	-0.041 (0.081)	-0.084 (0.090)	-0.016 (0.059)	-0.017 (0.040)
Rent	0.001* (0.000)			
Male same-sex couple*Rent	-0.020* (0.000)			
Female same-sex couple*Rent	0.001 (0.000)			
Sqm Price		0.008* (0.004)		
Male same-sex couple*Sqm price		-0.013 (0.008)		
Female same-sex couple*Sqm price		0.005 (0.008)		
Male landlord			0.018 (0.046)	
Male same-sex couple*Male landlord			-0.051 (0.082)	
Female same-sex couple*Male landlord			-0.055 (0.081)	
Company				0.059 (0.043)
Male same-sex couple*Company				0.077 (0.074)
Female same-sex couple*Company				-0.045 (0.077)
N	1,012	1,012	810	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.

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