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Discrimination against same-sex couples in the rental housing market, a meta-analysis.

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Abstract

This article presents the findings of the first meta-analysis on sexual orientation discrimination in the rental housing market. Data are collected from 11 separate testing studies conducted in 8 OECD/European countries between 2008 and 2020 and represent a total of more than 36,000 requests made to landlords. Overall, the article shows the presence of relatively weak but significant discrimination against homosexual couples in the rental housing market. However, this result need to be nuanced because there are large differences due to the gender of the homosexual couple: gay males are significantly discriminated against while lesbians are not. Finally, discrimination against homosexual applicants seem not statistical but mainly preference-based. These results are robust to the estimation methods used (random effects and unrestricted weighted least squares methods).

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1. Introduction

Having attracted only marginal attention for some time, research into the plight of lesbian and gay male applicants in the rental housing market has recently gained momentum. Since Ahmed and Hammarstedt (2009), the pioneering testing study in the domain, a significant literature has investigated whether homosexual people face differential treatment in rental housing decisions in OECD countries (e.g., Mazziotta et al., 2015; Levy et al., 2017; Murchie and Pang, 2018; Schwegman, 2018). Some of these studies have revealed sexual-orientation discrimination against homosexual applicants in OECD countries. Finding rental accommodation costs more in time and resources for applicants who are treated unequally, while bias in the rental housing process means landlords[1] potentially miss out on reliable tenants (i.e., tenants able to pay the rent and who do not dilapidate the accommodation). Finally, access to housing must be protected as it can affect tenants' health, family life, and access to employment.

These studies all apply their own specific protocols, report their results in their own ways, and work on different sample sizes. It is therefore crucial to conduct a meta-analysis in order to ascertain the extent of discrimination against homosexual applicants in OECD countries and the explanatory variables underpinning it. There are two sources of discrimination: "taste-based" discrimination refers to discrimination due to preferences, like homophobia (Becker, 1957); "statistical" discrimination (Phelps, 1972; Arrow, 1973) arises from a lack of information about individual characteristics (e.g., ability to pay the rent). Absent any direct information about an individual's reliability and financial stability, landlords may substitute group averages (either real or imagined) or stereotypes to fill the information void (Schwab, 1986). For example, as concerns the housing market, it might be assumed that homosexual couples are financially less sound,[2] but that they also have fewer children on average than heterosexual couples (Klawitter 2011; Black et al. 2007).

The meta-analysis method is particularly suitable for disentangling the sources of discrimination and has been widely used in areas such as ethnic and sexual-orientation discrimination in hiring (Zschirnt and Ruedin, 2016; Flage, 2019) and ethnic discrimination in the rental housing market (Flage, 2018; Auspurg et al., 2019). Indeed, to properly compare studies, it is necessary to code their relative differences. In this paper, we perform the first meta-analysis of sexual-orientation discrimination in the rental housing market. To do this, we construct a database of testing from 11 separate studies conducted in eight OECD/European countries in order to detect discrimination against homosexual applicants in the rental housing market, representing a total of more than 36,000 applications made to landlords.

The remainder of the paper is organized as follows. The data and method used to perform the meta-analysis are presented in Section 2; considerations of publication bias are reported in Section 3; overall results are presented in Section 4 and Section 5 displays a meta-regression to investigate how explanatory variables affect the level of discrimination. Section 6 concludes.

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[1] The term is used generically in this paper, i.e., male or female, individual or corporate, principal or agent.

[2] Much research on the labor market has documented the earning gap between homosexuals and heterosexuals in OECD countries (e.g., Badgett, 1995; Klawitter and Flatt, 1998; Allegretto and Arthur, 2001; Arabsheibani et al., 2005; Plug and Berkhout, 2004; Ahmed et al., 2013). Most studies show that gay men earn less than straight men while lesbians are not discriminated against compared to straight women (and may sometimes earn more). Due to the gender gap in earnings, lesbian couples have lower household incomes than those of married heterosexual couples, while gay male couples have similar incomes despite having lower individual earnings than those of married men (Klawitter, 2015).

2. Method

To search for the data, we used Google Scholar, Econlit, and Elsevier's ScienceDirect, with the following keywords in several languages (e.g., English, French, Dutch, German): "discrimination," "rental housing market," "correspondence test," "sexual orientation," "field experiment," "testing," "LGBTI," "gay," and "lesbian." We found 13 studies but only 11 were comparable and conducted in recent years: Ahmed et al. (2008) and Ahmed and Hammarstedt (2009) for Sweden; Schwegman (2018), Levy et al. (2017), and Friedman et al. (2013) for the USA; Gouveia et al. (2020) for Portugal; Koehler et al. (2018) for Serbia; Lauster and Easterbrook (2011) for Canada; Mazziotta et al. (2015) for Germany; Gielkens and Wegkamp (2019) for the Netherlands; and Verhaeghe (2018) for Belgium.

In these studies, fictitious homosexual and heterosexual couples apply by email or by phone for vacant rental apartments advertised by landlords. So that it is not too obvious that they are part of a testing, applications are not strictly identical (when more than one involves the same agent), but all essential characteristics, such as experience, qualification, and even wage bracket, are closely matched so that the couples differ only in the variable of interest: their sexual orientation. Discrimination against homosexuals is measured as the difference in treatment by landlords between these fictitious couples. Homosexuality and heterosexuality are signaled in a natural implicit and non-ostentatious manner through the gendered first names of the members of the couple. With the testing method (especially in written testing; the correspondence test), the authors have the advantage of being able to experiment on real data while maintaining significant control over the variable (see Gaddis, 2018 for more detailed information about the method). Minor differences between these studies (e.g., procedure used, type of information provided in the requests) are tested and controlled for in a meta-regression (see below).

We omitted the study by Page (1998) from the database because it is somewhat dated now and because it uses a different protocol from the others (e.g., the application is not made for a couple and homosexuality is pointedly signaled). Also omitted was the study by Murchie and Pang (2017) because, in their design, homosexual couples are compared to a single heterosexual person, and, as they say in their paper: "gay and lesbian couples in this experiment should be favored by landlords, as their emails alone suggest the presence of another potential earner to assist in paying rent."

To clarify, we present the results of these studies on the same basis, in terms of relative discrimination, through the risk ratio. This is the ratio of the proportion of positive responses (invitations to visit the accommodation) received by the test group (homosexual couples) to the proportion of positive responses received by the control group (heterosexual couples).

3. Consideration of publication bias

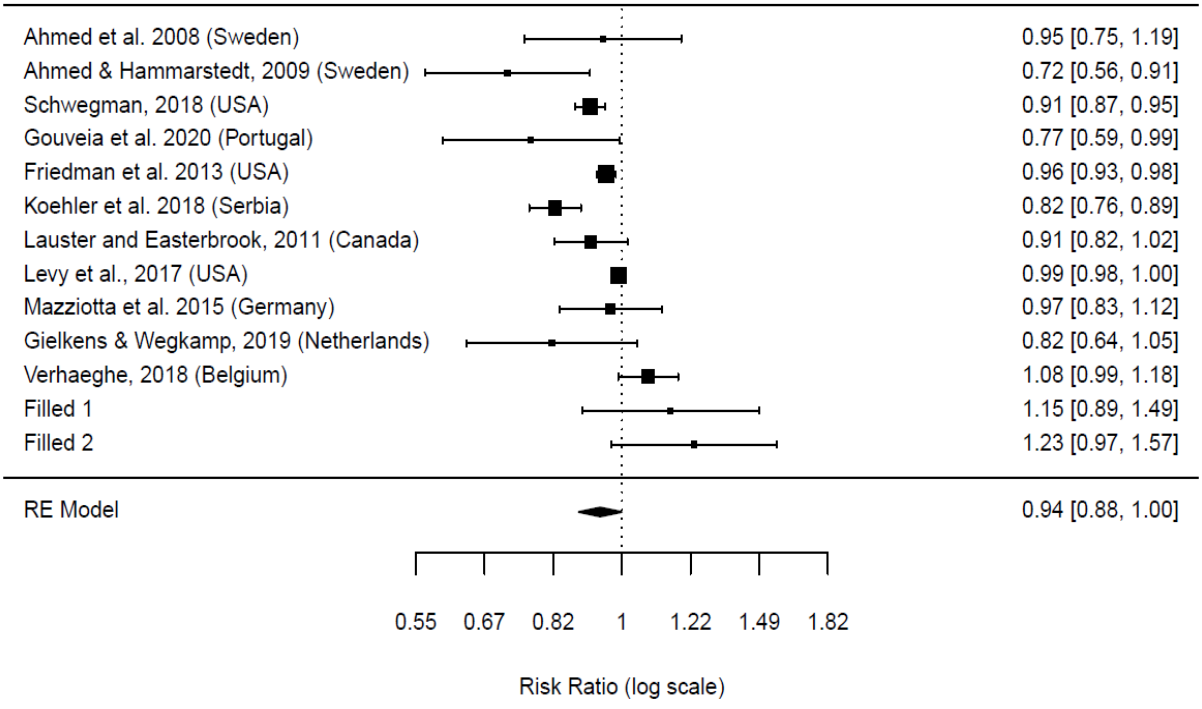
There is a greater likelihood of studies reporting significant results attracting interest and being published than studies reporting negative (non-significant) results. This alone may bias the outcome if analysts look only at the most reported studies on the subject. Accordingly, we have included both published and unpublished papers in our study. However, it is not sufficient either to correct a possible "file-drawer effect" (Rosenthal, 1979). There are different ways of statistically evaluating the existence of a publication bias. The most widespread is through the "funnel plot" (a graph shaped like an upturned funnel). Such graphs plot the study precision (or sample size) on the y-axis against the effect size on the x-axis. If the dots are not evenly distributed around the true value found and fail to form an image of an inverted funnel, then there are missing publications.

Where significant publication bias is observed it may be corrected by the "trim and fill" method (Duval and Tweedie, 2000). The missing studies as seen in the mirror image are assumed to yield results that are the exact opposites of those found in the studies reported. Adding these fictitious missing studies provides a new summation of results. Funnel plots (corrected) associated to each overall result (see below) are appended (Fig. 1.1, Fig. 2.1, Fig. 3.1). We did not find real evidence of publication bias with Egger's test (z = -1.8264, p = 0.07; Egger et al., 1997) but, since we can never rule out publication bias for sure, we present both corrected and uncorrected results. This correction barely changes the results. Moreover, even if "random effects" (R-E) seem to be the most appropriate method for conducting this meta-analysis, we have also detailed the results with the "unrestricted weighted least squares" (WLS) method (Stanley and Doucouliagos, 2015, 2017). This is a more appropriate method for dealing with publication bias. The effect sizes found with these two models are very similar and lead us to the same conclusions.

4. Overall Results

We begin by setting out the overall results of a meta-analysis that takes into account the discrimination reported against same-sex couples in all these studies. A random effect model is used in setting out the results because it can reasonably be supposed that the real effect size is not identical across all the studies (presence of between-studies heterogeneity). Fig. 1 is a forest plot presenting the overall results. The left-hand column lists the names of the authors of each study (by country). The right-hand side indicates the risk ratio of each study and the 95% confidence interval. The weight attributed to each study is reflected by the size of the boxes. The dotted vertical line (y-axis) indicates equal treatment (no discrimination: a risk ratio of 1). The lozenge indicates the global effect size across the studies.

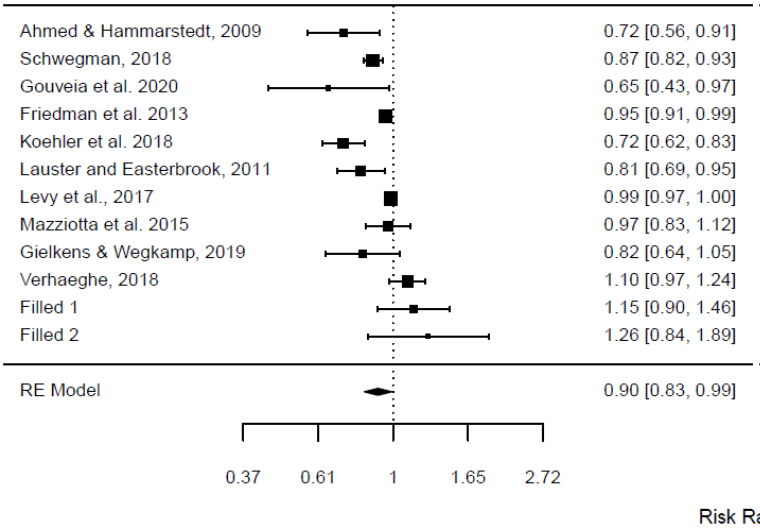
Fig. 1 Discrimination against same-sex couples in rental housing market



Note: This forest plot (figure 1) displays the risk ratios in log scale of each study (point estimate as square, two standard errors as lines). The lozenge at the bottom indicates the effect size across studies, two fictitious studies have been automatically generated to correct possible publication bias (N = 13: study level; 36.010 applications, tau2 = 0.0081 with *SE = 0.0051, I-squared = 91%)*

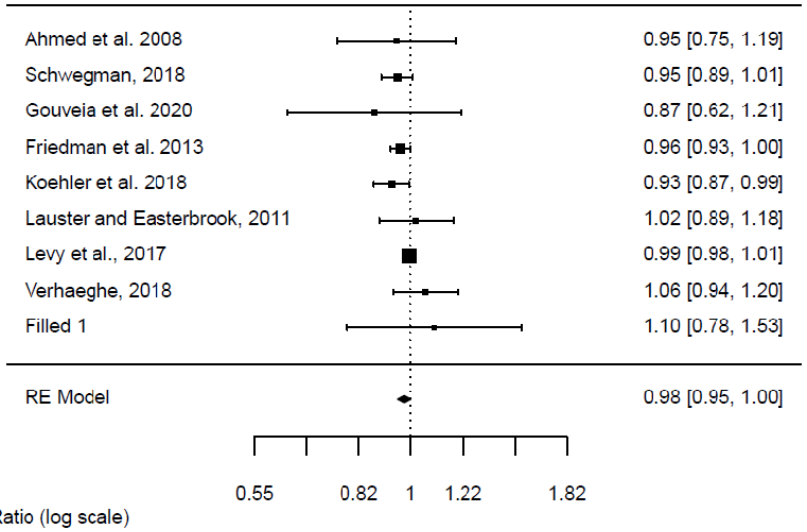
Discrimination against homosexual couples in rental housing markets in OECD countries is significant at the 5% level (p-value = 0.0495) and the risk ratio is 0.94: homosexual couples have a 6% lower chance than heterosexual couples of receiving an invitation to visit accommodation from a landlord (8% with the uncorrected results), for equal information provided in the applications. As often in the literature (e.g., Gouveia et al., 2020; Schwegman, 2018; Verhaeghe, 2018; Friedman et al., 2013), we can separate responses provided by landlords according to the applicants' gender to investigate whether there is differential treatment between gay and lesbian couple applicants.

Fig. 2 Discrimination against gay male couples



Note: This forest plot (Figure 2) displays the risk ratios in log scale of each study deferring discrimination against gay male applicants, two fictitious studies have been automatically generated to correct possible publication bias (n=12: study level, 18.517 applications, tau² = 0.0179, I² =92 %)

Fig. 3 Discrimination against lesbian couples



Note: This forest plot (Figure 3) displays the risk ratios in log scale of each study deferring discrimination against lesbian applicants, one fictitious study has been automatically generated to correct possible publication bias (n=9: study level, 17.493 applications, tau² = 0.0004, I² =30 %)

Discrimination against gay male couples (Fig. 2) in rental housing markets in OECD/European countries is significant at the 5% level (p-value = 0.03). We can see that the effect size is 0.9: for equal information provided in the applications, gay male couples have a 10% lower chance of receiving a positive response from a landlord than heterosexual couples (12% with uncorrected results). Conversely, discrimination against lesbian couples (results provided in Fig. 3) is not significant (with or without corrected results for possible publication bias).[3]

Ahmed and Hammarstedt (2009) suggest that the presence of negative stereotypes (presumed higher risks of mental health problems, suicide, or even HIV infection: e.g., Worthen, 2013; Jorm et al., 2002; Saunders and Valente, 1987) is more pronounced for male homosexual couples than for female homosexual couples. This could go some way to explaining these results. There is another possible explanation: we know that landlords prefer women tenants to men tenants *ceteris paribus* (e.g., Ahmed et al. 2008; Flage 2020). However, this fails to explain why lesbian couples are not preferred to heterosexual couples. Moreover, this more pronounced discrimination against gay men than against lesbians is not peculiar to the rental housing market

[3] To check the robustness of our results, we also performed these meta-analyses with published papers only (N = 6) and found results of the same order of magnitude: a risk ratio of 0.91 globally (significant), 0.88 for gay male couples (significant), and 0.96 for lesbian couples (not significant).

but has also been revealed in recent studies in other areas (e.g., Mackenzie-Liu et al. (2020) for decisions by foster care agencies; Ahuja and Lyons (2017) in the sharing economy).

5. Meta-regression analysis

We now set out a multivariate regression analysis (MRA) to ascertain what determines the degree of discrimination with two econometric models: unrestricted weighted least squares (WLS) and random effects (R-E). Whereas meta-analysis concentrates on the value of the variable of interest, meta-regression looks at the variables influencing it.

Almost every study can be divided into subgroups, depending on the gender of the applicant couple, the procedure used by the experimenter, etc. The decisions are made by different landlords and it is therefore unlikely there is any mutual influence. This means that each subgroup may be thought of as a separate experiment (e.g., the study of Schwegman (2018) is divided in two subgroups: results for lesbian and gay male couples).

It is important to know where discrimination originates if it is to be countered. As mentioned before, this discrimination may be preference-based or statistical. As statistical discrimination is mainly due to a lack of information about the applicants, one method of testing the source of discrimination is to compare the level of discrimination between same-sex and opposite-sex couples when no information is provided to the landlords about financial stability against the level of discrimination when positive information about financial stability is provided to landlords. We assume that providing more correct information about the applicants should not affect the level of discrimination against homosexual couples if discrimination is taste-based, but it should reduce the discrimination if part of the discrimination is statistical (based on financial resources).

Our baseline model for the MRA is specified as follows:

$$y_j = \beta_0 + \beta_1 x_{1j} + \beta_2 x_{2j} + \cdots + \varepsilon_j$$

where y_j is the risk ratio (in log) for a subgroup of a study *j* and β_0 is the intercept. The variables x_i specify the different characteristics of the subgroup, such as whether positive information about stability is provided to landlords (no information is the reference in our regression), whether testing was done by telephone or email (reference), whether only one application was made per landlord (single inquiry procedure) or whether both couples applied to the same landlord (matched paired procedure, the reference), and finally whether the homosexual couple was female or male (reference). ε_j in this baseline model specifies the between-subgroup variation.

In our article, and in order to test the source of discrimination, we also control for the level of "homonegativity" in each country where testing had been carried out. Homonegativity should be understood as "an aversion to homosexuality as a social practice or way of life" (Jäckle and Wenzelburger, 2015). To measure this concept, we use the same indicator as Jäckle and Wenzelburger (2015), i.e., the supposed percentage of persons in a country who do not like having homosexuals for neighbors (from the responses to question 38 of the World Values Survey). Descriptive statistics of variables used in the MRA are provided in Table 1.1.

Stanley and Doucouliagos (2015, 2017) suggest the baseline be estimated using an unrestricted least squares (WLS) model. This means estimating this equation using WLS with $1/\mathrm{se}^2(\mathrm{y_j})$ (where se is the standard error of log risk ratio) as the weights. WLS-MRA estimates are preferable to random effects estimates where publication bias occurs.

Only the study by Gielkens and Wegkamp (2019) reports the level of discrimination by type of landlord (real-estate agents or private landlords) so unfortunately we cannot include landlord type as a variable in our regression. It is worth noting that in their study, the authors do not report any differences due to landlord type. Results by rent or accommodation type are not reported neither.

For the sake of thoroughness, standard errors were grouped at the study level in all specifications, to make them robust to intra-study dependence. Lastly, close attention is paid to multicollinearity in our regressions because a meta-regression analysis is more prone to this problem than classical econometrics. Indeed, most of the explanatory variables are dummy variables. In our study, the variance inflation factor for all the explanatory variables is less than 3, reflecting little correlation among them (Hair et al., 1998).

The results are reported in Table 1 in terms of log risk ratio. Once again, the risk ratio is the ratio of the proportion of positive responses received by the test group to the proportion of positive responses received by the control group. Thus, positive values indicate a lower level of discrimination (less differential treatment) between homosexual and heterosexual couples whereas negative values denote a higher level of discrimination.

Table 1. Meta-regression

	Model used					
	REML			WLS		
	(1)	(2)	(3)	(1)	(2)	(3)
Intercept	-0.112**	-0.116**	-0.081	-0.026*	-0.06**	-0.085
	(0.03)	(0.04)	(0.06)	(0.01)	(0.01)	(0.07)
Lesbian couples[(a)]	0.085*	0.093*	0.094*	0.015**	0.014**	0.015*
	(0.05)	(0.05)	(0.05)	(0.00)	(0.00)	(0.00)
Single inquiry procedure[(b)]		0.012	0.082		-0.009	0.049
		(0.08)	(0.08)		(0.02)	(0.05)
Phone-call auditing[(c)]		-0.017	0.057		0.042*	0.086**
		(0.06)	(0.07)		(0.01)	(0.01)
Detailed information[(d)]			-0.135*			-0.066**
			(0.07)			(0.02)
North America[(e)]			0.045			0.046
			(0.05)			(0.07)
Homonegativity			-0.281*			-0.307*
			(0.18)			(0.17)
N requests	36010	36010	36010	36010	36010	36010
Subgroups of study	18	18	18	18	18	18
R-squared	0.27	0.27	0.47	0.05	0.23	0.51

Notes. Robust standard errors in parentheses. ***p < 0.01, **p < 0.05, et *p < 0.1. Reference: [(a)] Gay males couples, [(b)] Matched paired procedure, [(c)] Correspondence test, [(d)] No information, [(e)] Europe.

First of all, we can see that the finding that lesbian couples are subject to less discrimination than gay male couples is robust to other models used and to the inclusion of certain control variables.

Interestingly, the coefficient for the variable "*Detailed information"* is negative and significant for all models. This means that when more positive information about financial stability is provided to landlords, discrimination against same-sex couples increases too. More precisely, we assume that the positive response rate obviously increases for both types of profile, but the differential treatment between the two couples' profiles also increases. One suggestion could be that a heterosexual couple with a high income and financial stability thus become the ideal applicant for landlords. Moreover, we can see that the coefficient for the variable "*Homonegativity*" is also negative and significant, which implies that discrimination in the market is stronger in countries where aversion to homosexuality as a social practice or way of life is high.

These results strongly suggest discrimination against gay men is mainly due to preferences. Further evidence of this is the fact that lesbian couples are significantly less discriminated against than gay male couples although the same statistical stereotypes linked to the rental housing market can be attributed to them (e.g., lower financial stability and less probability of having children). Discrimination resulting from these considerations is problematic because it implies that the market has failings and that rental units are not always allocated to the most "efficient" individuals.

Finally, it seems (for WLS estimates only) that testing conducted by phone reports less discrimination against same-sex couples than testing by email. This might be because, in phone-call auditing, the nature of the verbal responses is more subject to interpretation (a very courteous answer may very well hide deep-rooted homophobia). When landlords answer the phone, they will not necessarily dare to display hostility during the conversation even if the caller's sexual orientation does not meet with their approval. Thus it is possible that phone audits underestimate the true level of discrimination (see Heylen and Van den Broeck, 2016; Verhaeghe et al., 2017).

6. Conclusion

In this article we present the findings of the first meta-analysis on sexual orientation discrimination in the rental housing market. By using data from 11 separate studies conducted in eight OECD/European countries between 2008 and 2020 and representing a total of more than 36,000 applications to landlords or real-estate agents, we provide evidence of the occurrence of relatively weak but significant discrimination against same-sex couples in the rental housing market. However, this result needs to be nuanced as there are large differences due to the gender composition of the couple: gay males are significantly discriminated against (10% less likely to be invited by landlords to visit the accommodation than heterosexual couples) while lesbians are not. Efficient policy making requires good understanding of the reasons leading to this behavior. The cause of discrimination seems mainly taste-based: the provision of more positive information about financial stability of the couples does not reduce the differential treatment, and discrimination is positively correlated with an indicator of "homonegativity." As discrimination does not arise from lack of information about individual characteristics but rather from deep-rooted negative preferences, the solutions seem limited and unlikely to produce immediate results. One solution, although not an easy one, would obviously be to act more on the root of the problem, to do long-term work through education. It may also be possible to raise awareness of the erroneous or exaggerated stereotypes that agents might have about homosexuals (unrelated to the rental housing market but which may have an implicit impact on behavior, on negative preferences: e.g., presumed promiscuity of gay men, higher risks of HIV infection, etc.).

We hope that our findings will lead to a far better understanding of the extent and sources of discrimination against same-sex couples and provide important information for the future development of equal opportunities for homosexuals in the rental housing market.

References

Ahmed, A. M., and Hammarstedt, M. (2009) "Detecting discrimination against homosexuals: Evidence from a field experiment on the internet" *Economica* **76(303)**, 588-597.

Ahmed, A. M., Andersson, L., and Hammarstedt, M. (2008) "Are lesbians discriminated against in the rental housing market? Evidence from a correspondence testing experiment" *Journal of Housing Economics* **17(3)**, 234-238.

Ahmed, A., Andersson, L., and Hammarstedt, M. (2013) "Sexual orientation and full-time monthly earnings, by public and private sector: evidence from Swedish register data" *Review of Economics of the Household* **11(1)**, 83-108.

Ahuja, R., and Lyons, R. C. (2017) "The silent treatment: LGBT discrimination in the sharing economy" No. tep1917, Trinity College Dublin, Department of Economics, Dublin.

Allegretto, S. A., and Arthur, M. M. (2001) "An empirical analysis of homosexual/heterosexual male earnings differentials: unmarried and unequal?" *ilr Review* **54(3)**, 631-646.

Arabsheibani, G. R., Marin, A., and Wadsworth, J. (2005) "Gay pay in the UK" *Economica* **72(286)**, 333-347.

Arrow, K. (1973) "The theory of discrimination, discrimination in labor markets" Achenfelter, A. Ress (eds.), Princeton–New Jersey.

Auspurg, K., Schneck, A., and Hinz, T. (2019) "Closed doors everywhere? A meta-analysis of field experiments on ethnic discrimination in rental housing markets" *Journal of Ethnic and Migration Studies* **45(1)**, 95-114.

Badgett, M. L. (1995) "The wage effects of sexual orientation discrimination" *ILR Review* **48(4)**, 726-739.

Becker, G.S., (1957) The Economics of Discrimination. University of Chicago press.

Black, D., Gates, G., Sanders, S., and Taylor, L. (2007) "The measurement of same-sex unmarried partner couples in the 2000 US Census" UCLA CCPR Population Working Papers.

Duval, S., and Tweedie, R. (2000) "Trim and fill: a simple funnel-plot–based method of testing and adjusting for publication bias in meta-analysis" *Biometrics* **56(2)**, 455-463.

Egger, M., Smith, G. D., Schneider, M., and Minder, C. (1997) "Bias in meta-analysis detected by a simple, graphical test" *Bmj* **315(7109)**, 629-634.

Flage, A. (2018) "Ethnic and gender discrimination in the rental housing market: Evidence from a meta-analysis of correspondence tests, 2006–2017" *Journal of Housing Economics* **41**, 251-273.

Flage, A. (2019) "Discrimination against gays and lesbians in hiring decisions: A meta-analysis" *International Journal of Manpower*.

Flage, A. (2020) "Pourquoi Vincent a-t-il moins de chances d'obtenir un logement qu'Émilie? Une analyse des causes de la discrimination à l'égard des noms masculins" *Revue d'économie politique* **130(4)**, 633-657.

Friedman, S., Reynolds, A., Scovill, S., Brassier, F., Campbell, R., and Ballou, M. (2013) "An estimate of housing discrimination against same-sex couples" Available at SSRN 2284243.

Gielkens, D., and Wegkamp, F. (2019) "Onderzoeksrapport: Discriminatie op de Utrechtse Woningmarkt".

Gouveia, F., Nilsson, T., and Berggren, N. (2020) "Religiosity and discrimination against same-sex couples: The case of Portugal's rental market" *Journal of Housing Economics* **50**, 101729.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., and Tatham, R. L. (1998). Multivariate data analysis (Vol. 5, No. 3, pp. 207-219). Upper Saddle River, NJ: Prentice hall.

Heylen, K., and Van den Broeck, K. (2016) "Discrimination and selection in the Belgian private rental market" *Housing Studies* **31(2)**, 223-236.

Jäckle, S., and Wenzelburger, G. (2015) "Religion, religiosity, and the attitudes toward homosexuality—A multilevel analysis of 79 countries" *Journal of homosexuality* **62(2)**, 207-241.

Jorm, A. F., Korten, A. E., Rodgers, B., Jacomb, P. A., and Christensen, H. (2002) "Sexual orientation and mental health: results from a community survey of young and middle–aged adults" *The British Journal of Psychiatry* **180(5)**, 423-427.

Klawitter, M. M., and Flatt, V. (1998) "The effects of state and local antidiscrimination policies on earnings for gays and lesbians" *Journal of Policy Analysis and Management: The Journal of the Association for Public Policy Analysis and Management* **17(4)**, 658-686.

Klawitter, M. (2011) "Multilevel analysis of the effects of antidiscrimination policies on earnings by sexual orientation" *Journal of Policy Analysis and Management* **30(2)**, 334-358.

Klawitter, M. (2015) "Meta-analysis of the effects of sexual orientation on earnings" *Industrial Relations: A Journal of Economy and Society* **54(1)**, 4-32.

Koehler, D., Harley, G., and Menzies, N. (2018) "Discrimination against sexual minorities in education and housing: evidence from two field experiments in Serbia" The World Bank.

Lauster, N., and Easterbrook, A. (2011) "No room for new families? A field experiment measuring rental discrimination against same-sex couples and single parents" *Social Problems* **58(3)**, 389-409.

Levy, D. K., Wissoker, D., Aranda, C. L., Howell, B., Pitingolo, R., Sewell, S., and Santos, R. (2017) A paired-testing pilot study of housing discrimination against same-sex couples and transgender individuals. Washington, DC: Metropolitan Housing and Communities Policy Center, Urban Institute.

Mackenzie-Liu, M., Schwegman, D. J., and Lopoo, L. M. (2020) "Do Foster Care Agencies Discriminate Against Gay Couples? Evidence from a Correspondence Study" *Journal of Policy Analysis and Management*.

Mazziotta, A., Zerr, M., and Rohmann, A. (2015) "The effects of multiple stigmas on discrimination in the German housing market" *Social Psychology*.

Murchie, J., and Pang, J. (2018) "Rental housing discrimination across protected classes: Evidence from a randomized experiment" *Regional Science and Urban Economics* **73**, 170-179.

Page, S. (1998) "Accepting the gay person: Rental accommodation in the community" *Journal of Homosexuality* **36(2)**, 31-39.

Phelps, E. S. (1972) "The statistical theory of racism and sexism" *The american economic review* **62(4)**, 659-661.

Plug, E., and Berkhout, P. (2004) "Effects of sexual preferences on earnings in the Netherlands" *Journal of Population Economics* **17(1)**, 117-131.

Rosenthal, R. (1979) "The file drawer problem and tolerance for null results" *Psychological bulletin* **86(3)**, 638.

Saunders, J. M., and Valente, S. M. (1987) "Suicide risk among gay men and lesbians: A review" *Death Studies* **11(1)**, 1-23.

Schwab, S. (1986) "Is statistical discrimination efficient?" *The American Economic Review* **76(1)**, 228-234.

Schwegman, D. (2018) "Rental Market Discrimination against Same-Sex Couples: Evidence from an Email Correspondence Audit".

Stanley, T. D., and Doucouliagos, H. (2015) "Neither fixed nor random: weighted least squares meta-analysis" *Statistics in medicine* **34(13)**, 2116-2127.

Stanley, T. D., and Doucouliagos, H. (2017) "Neither fixed nor random: weighted least squares meta-regression" *Research synthesis methods* **8(1)**, 19-42.

Verhaeghe, P. P. (2018) "Discriminatie van homoseksuele en lesbische koppels op de huurwoningmarkt in Gent".

Verhaeghe, P. P., Coenen, A., Demart, S., Van der Bracht, K., and Van de Putte, B. (2017) "Discrimibrux-Discriminatie door vastgoedmakelaars op de private huurwoningmarkt van het Brussels Hoofdstedelijk Gewest".

Worthen, M. G. (2013) "An argument for separate analyses of attitudes toward lesbian, gay, bisexual men, bisexual women, MtF and FtM transgender individuals" *Sex Roles* **68(11-12)**, 703-723.

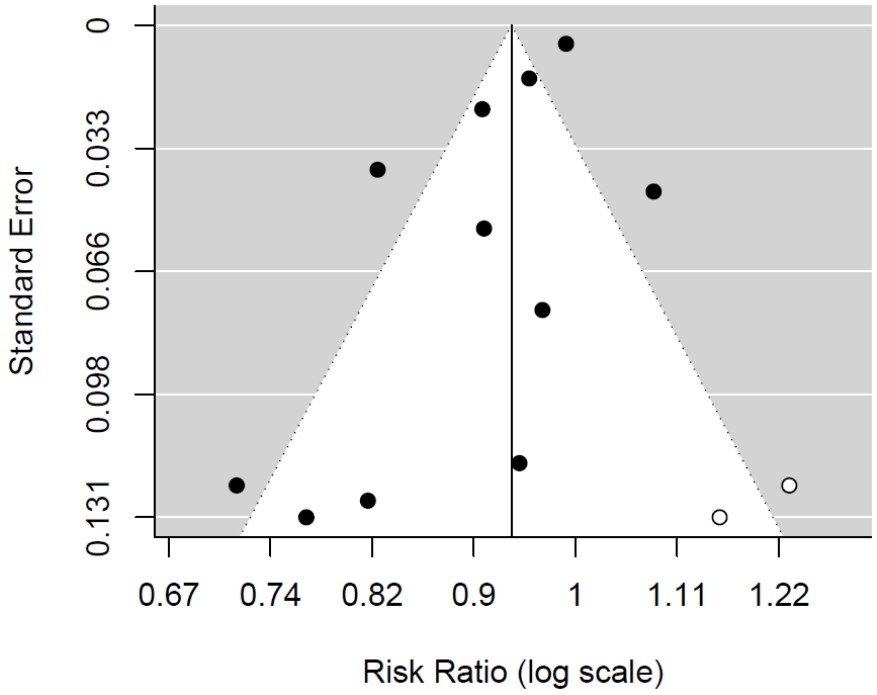
Zschirnt, E., and Ruedin, D. (2016) "Ethnic discrimination in hiring decisions: a meta-analysis of correspondence tests 1990–2015" *Journal of Ethnic and Migration Studies* **42(7)**, 1115-1134.

Appendix

Table 1.1: Descriptive statistics of variables used in the MRA (risk ratios same-sex couples against opposite-sex couples, subgroup level)

Variable	Type	Min.	Max.	Std. Dev.	Mean
	Dummies				
Lesbian couples	1 if lesbian couples (0 if gay male couples)				0.44
Single inquiry	1 if single inquiry procedure (0 if matched paired)				0.16
Phone-call auditing	1 if testing was made by phone (0 if made by e-mails : correspondence test)				0.22
Detailed information	1 if detailed information about financial stability was provided to the landlord (0 if not)				0.72
North America	1 if testing was made in North America (0 if made in Europe)				0.44
Homonegativity	***Continuous***	0.04	0.60	0.15	0.23

Fig. 1.1. Funnel plot of the global result



Note: Each dot represents a risk ratio estimated from a test against the standard error of the risk ratio (in log scale), with a reversed scale that places the larger, most powerful studies toward the top. White points represent fictitious studies automatically generated to correct possible publication bias.

Fig. 2.1 Funnel plot linked to discrimination against gay males

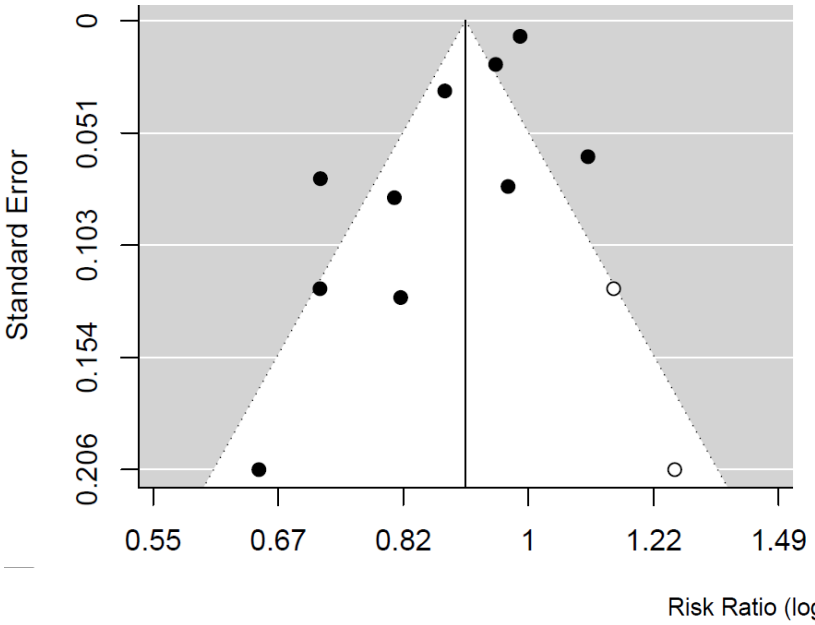


Fig. 3.1 Funnel plot linked to discrimination against lesbians