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Understanding Discrimination against Same-Sex Couples in the United States: Evidence from an Email Correspondence Audit

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Abstract

As of 2017, no federal law protected Gay, Lesbian, Bisexual, Transgender, and Queer (LGBTQ) individuals from housing discrimination. However, 22 U.S. states and over 200 municipalities have passed laws prohibiting housing discrimination based on sexual orientation. In this paper, I present the results of a randomized pair-email correspondence audit of 6,490 property owners in 94 U.S. cities. I provide a nationally-representative estimate of the level of discrimination same-sex couples experience when inquiring about rental housing. I find that same-sex male couples, especially Black same-sex male couples, are less likely to receive a response to inquiries about rental units. Same-sex female couples receive preferential treatment compared to heterosexual couples. I then examine how state and local anti-discrimination laws covary with rates of housing discrimination against same-sex couples. Compare to localities without any housing protections, I find that response rates covary positively with state-level protections but negatively with local-level protections. I conclude by testing several hypotheses about the causes of this discrimination. This preliminary evidence suggests that property owners are willfully discriminating against same-sex male couples.

JEL No. J15, J18, R21

Keywords: LGBTQ Discrimination, Same-Sex Households, Housing Audits, State and Local Laws, Rental Market Discrimination

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I. Introduction

As of 2017, it was legal for property owners to discriminate against lesbian, gay, bisexual, transgender, and queer (LGBTQ) individuals in 28 U.S. states.[1] Sexual orientation and gender identity are not protected classes under the U.S. Fair Housing Act (FHA) of 1968 and no subsequent federal legislation has provided protections for the LGBTQ community.[2] In response to federal inaction, many states, counties, and local governments have passed local laws prohibiting housing discrimination based on sexual orientation and/or gender identity. In 2016, according to the Human Rights Campaign's Municipal Equality Index (MEI), 244 local governments have local housing protections for gay and lesbian individuals and 225 of these governments explicitly included gender identity as an additional protected class. In this paper, I examine if these state and local laws correlate with lower levels of discrimination against same-sex couples and use geographical variation in state and local laws to test several hypotheses regarding the causes of anti-LGBTQ discrimination.

While housing discrimination against the LGBTQ community has received limited attention from federal lawmakers or, until somewhat recently, scholars, it is a key concern within the community. In a 2015 survey of self-identified LGBTQ individuals, 73 percent of respondents were "strongly concerned" about housing discrimination by real estate agents, home sellers, property owners and/or neighborhoods

[1] Defining what constitutes discrimination is not without controversy. See Yinger (1998) for a summary of the legal and scholarly definitions. This paper will take a very broad definition of discrimination: any disparate treatment because of their membership to a particular group (e.g. race and/or sexual orientation) that I measured via differential response rates to inquiries for housing between same-sex couples and heterosexual couples.

[2] The Fair Housing Act, or Title VIII of the Civil Rights Act of 1968, prohibits discrimination in the sale, rental, and financing of housing or in other housing-related transactions because of race, color, religion, national origin, sex, familial status, and disability. In 2012, the Department of Housing and Urban Development (HUD) published its final "Equal Access to Housing in HUD Programs Regardless of Sexual Orientation and Gender Identity," which prohibited making determination of eligibility for HUD-assisted or HUD-insured housing on the basis of sexual orientation or gender identity. However, this is an agency rule and can be amended or revoked with a change in unilaterally within the executive branch.

(BHGRE & NAGLREP, 2015). Until two recent studies, most estimates of housing discrimination against LGBTQ-identified individuals came from survey studies (Colvin, 2004; Herek, 2009a; 2009b, and Grant, Mottet, and Tanis, 2011). These findings, which likely only capture blatant forms of discrimination, document clear patterns of discrimination against LGBTQ-identified individuals. Without an appropriate baseline counterfactual, these surveys are unlikely to capture more subtle forms of discrimination, such as non-response to inquiries regarding housing.

Scholars have only recently begun to quantify the level of discrimination faced by the LGBTQ community. Friedman et al. (2013), Levy et al. (2017), and Murchie (2017) are the only three rigorous studies to estimate the level of housing market discrimination same-sex and transgender couples face when searching for housing. These studies found that same-sex male couples do experience less favorable treatment relative to same-sex female couples and heterosexual couples.[3] In their recent HUD-financed in-person audit study, Diane Levy and her team of researchers at the Urban Institute used in-person testers posing as transgender individuals and same-sex couples to audit over a thousand property owners in the Washington, D.C., Dallas-Fort Worth, and Los Angeles metro areas. These scholars found that property owners were more likely to treat same-sex male couples and transgender/gender queer individuals more adversely. Samantha Friedman and her team conducted an email correspondence audit similar to this paper. This team found that same-sex couples suffered from slightly more adverse treatment in cities located in states with state-level anti-discrimination laws. Friedman and her coauthors did not examine the effectiveness of local housing laws. Judson Murchie (2017) found that same-sex non-White couples received fewer responses to email inquiries in the 20 most populous metropolitan

[3] Friedman et al. (2013) employed an email-correspondence audit to examine the top fifty metropolitan statistical areas in the United States, whereas Levy et al. (2017) conducted an in-person audit study in three metropolitan areas - Washington, D.C., Dallas, Ft. Worth, TX, and Los Angeles, CA. HUD financed both studies.

areas, while white male and female couples receive preferential treatment or no differential treatment (compared to their heterosexual peers) from property owners.

Since 2011, when Friedman and her team collected their data, public opinion towards LGBTQ equality, notably same-sex marriage, has become significantly more positive.[4] Between 2011 and 2016, for example, the Pew Research Center reports that the percent of Americans who support same-sex marriage increased from 46 percent to 55 percent (+9 percent), while opposition to same-sex marriage declined by 8 percent (45 percent to 37 percent). This measurable change in public opinion and the relative dearth of scholarship on housing discrimination against sexual minorities prompts the question: Do same-sex couples still experience discrimination in U.S. rental markets? Do they experience more discrimination in municipalities outside of the largest cities? Relatedly, do state and local anti-discrimination laws correlate with lower rates of discrimination? In this paper, I explore these questions using data gathered from a paired-email correspondence field experiment. Between December 2016 and March 2017, I audited 6,490 randomly selected property owners[5] in 94 cities who posted rental units on Craigslist.com. Property owners receive one email from a couple with two distinctly male names and the phrase "my husband" or two distinctly female names and the phrase "my wife" to signal that these individuals are a same-sex couple. The second email contained two opposite-gender names to signal that this is a heterosexual couple. I use within-property owner response rates to these paired email inquiries to measure the level of discrimination against same-sex couples. This is the second nationally

[4] Between 2011 and 2016, the Pew Research Center reports that the percent of Americans who support same-sex marriage increased from 46 percent to 55 percent (+9 percent), while opposition to same-sex marriage declined by 8 percent (45 percent to 37 percent). http://www.pewforum.org/2016/05/12/changing-attitudes-on-gay-marriage/ Accessed: 1/30/2017

[5] Property owner refers to the property manager, the property owner, the "landlord," or the real estate agent who publically posted the rental unit on Craigslist.com.

representative estimate of housing discrimination against same-sex couples, after Friedman et al. (2013).

In line with previous studies, I find that property owners treated same-sex female couples similarly to heterosexual couples. However, property owners do discriminate against same-sex male couples. Overall, gay men are approximately 8 percent less likely to receive a response to a housing inquiry than is a heterosexual couple. Similar to Murchie (2017), I find differential response rates by race. Black same-sex male couples are 10.2 percent less likely to receive a response rate than Black heterosexual couples, whereas a White same-sex male couple is 3 percent less likely than a White heterosexual couple. These results are statistically significant.

Using variation in state and local adoption of anti-housing-discrimination laws, I then examine if local and/or state housing protections correlate with lower or higher rates of discrimination. To my knowledge, this is the first paper to examine if local housing protections correlated with lower or higher rates of discrimination. Contrary to Friedman et al. (2013), I find that state-level housing protections correlate with lower levels of discrimination against same-sex couples. Compared to the response rates for same-sex male couples in localities without any housing protections, same-sex male couples are 4 percent more likely to receive a response and same-sex Black male couples are 8.3 percent more likely to receive a response. Surprisingly, property owners are less likely to respond to a housing inquiry from same-sex male couples in cities with local housing protections compared to cities that had no codified housing protections for same-sex couples. Given the non-random enactment of anti-discrimination laws, I cannot and will not make any causal claims about the efficacy of non-discrimination laws on a property owner's propensity to discrimination. The reader should not interpret any estimate as implying a causal claim.

I conclude by testing two hypotheses about the causes of the anti-LGBTQ housing discrimination. Property owners are less likely to respond to male-same sex couples in localities with local housing protections, implying that customer-base prejudice is unlikely to be the cause of this discrimination. I also find that property owners do not respond at higher rates to email inquiries containing randomly generated income measures compared to emails that do not contain this measure. This provides evidence that property owners are not responding to inquires because they believe male same-sex couples are less likely to pay rent (a form of statistical discrimination). This preliminary evidence suggests property owners are willfully discriminating against same-sex male couples.

In the section below, I review previous audit scholarship, discuss the current state of LGBTQ housing protections, and provide a theoretical framework for understanding housing discrimination in section II. I explain my experimental design, summarize how I executed the audit, and evaluate if property owners became aware of my audit in section III. I summarize my results in section IV and section V concludes.

II. Background

2.1 Previous Audit Scholarship

For several decades, activists and advocates have used audit studies to test for racial discrimination against minorities in U.S. housing markets.[6] While the primary focus of these studies was to evaluate if property owners were complying with Fair Housing Laws, scholars have used auditing as a research tool to explore racial, gender, and other forms of discrimination against protected (and unprotected)

[6] Ross and Yinger (2002) offers a comprehensive overview of discrimination in the mortgage markets. An excellent recent resource on the current state of Housing Discrimination Audit is the 2015 edition of *Cityscapes* (volume 17(3)), which includes writing by many of the scholars cited in this section, including: John Yinger, Stephen L. Ross, Margery Austin Turner, Samantha Friedman, Ali Ahmed, Rob Pitingolo, Sun Jung Oh, among others.

communities (Turner and James, 2015; Oh and Yinger, 2015). Until recently, these studies examine discrimination in credit markets, owner-occupied housing markets, or locality-specific rental markets using underwriting data or an in-person audit strategy. In-person audit studies involve pairs of trained confederates who pose as prospective housing applicants. These confederates are trained to act similarly and interact with property owners in similar ways. The only difference between the couples is one couple belongs to the protected class under examination, e.g. one pair of confederates may be a White couple while the other pair is Black couple (Yinger, 1986, 1995; Ondrich *et al*., 1998, 1999; Zhao, 2005). In paper-based correspondence housing (and résumés) audits, scholars use specific signals—names, information provided in the correspondence with the property owner (or hiring manager), etc.—to subtlety inform the property owner of the race, gender, socioeconomic status, or age of the person inquiring about the apartment. Studies aimed at estimating employment discrimination against racial minorities, for instance, have used stereotypical Black names on résumés to signal the race of the applicant (Bertrand and Mullainathan, 2004). Scholars conclude that property owners (or hiring managers, lending institutions, employers, etc.) are discriminating if response rates are lower for housing (or résumés) inquiries with names associated with the racial minority (or any other signal indicated membership to a protected class).

Increasingly, researchers have used low-cost email correspondence audits to test for discrimination in the housing market. The email audits have evolved into two distinct designs. In a randomized single-email audit, the researcher randomly selects a property owner who will receive a single email containing a signal (e.g. a gendered and/or racialized name) that the fictitious emailer belongs to a protected class. Other property owners are randomly selected to receive an email from a fictitious emailer containing information to signal that this emailer does not belong to a protected class. While these emails vary in their language and syntax in order to prevent detection, the primary difference between the emails is the

race and/or gender (or another protected class) signal in the email. Scholars compare overall response rates between groups and assert that any difference in response rates between members of the protected class and the majority group is evidence of discrimination.

In a matched-pair email-correspondence audit design, a property owner receives two emails—one from a protected class and another from a majority-group individual. This audit design reduces the number of property owners that the researcher must contact in order to have sufficient power to detect an effect. It also allows the researcher to control for all property-owner and unit unobservables (via property-owner fixed effects). However, given that each property owner receives two somewhat similar emails, the probability that a property owner discovers the audit is higher than with a single-email audit design. If property owners become aware that researchers are auditing them, then they will likely alter their behavior, making it impossible to draw valid conclusions from the study. These studies, as with in-person audit studies, also suffer from limited generalizability. The results of in-person audits are only generalizable to the cities where property owners are audited, and email correspondence audits are further constrained by their sampling frame. Even if the distribution of rental/housing property and property owners in sampling frame is representative of the property and owners/managers in that locality, the result are still only generalizable to that city. Recent studies, such as Murchie (2017) and Friedman et. al. (2013), audit property owners who post on Craigslist in the top 20 to 50 most populous metropolitan statistical areas (MSA) in the United States. Conditional on the scraped Craigslist posts used to contact property owners in these studies providing a representative sample of property owners in each locality, these studies provide nationally representative estimates of housing discrimination for the largest metropolitan areas and the vast majority of the nation's rental housing stock.

Most housing market audit studies examine discrimination based on race or ethnicity. Carpusor and Loges (2006) conducted a single-email correspondence audit using stereotypical names to signal that an

emailer is ethnically White, Black, or Middle Eastern in the Los Angeles, California rental housing market. They found that email inquiries containing non-White names received fewer responses from property owners than emails containing White names. Scholars in Europe using audit studies have found that property owners are more likely to respond to inquiries containing more information about a potential applicant and/or inquiries that signal the prospective tenant is of a higher socioeconomic status (Ahmed, Andersson, and Hammarstedt, 2010; Bosch, Carnero, and Farré, 2010). In the United States, Hanson and Hawley (2011) used a matched-pair email audit to estimate discrimination in the rental housing market and test various hypotheses regarding discrimination. Recently, scholars have begun to estimate levels of discrimination in the sharing economy (Edelman, Luca, and Svirsky, 2017). The literature broadly finds that inquires with Black (or minority member) names are much less likely to receive a response.

Few studies have examined housing or rental market discrimination against same-sex couples. Small-scale in-person audits in Michigan found evidence of adverse treatment of same-sex couples when searching or applying for housing (Michigan Fair Housing Centers, 2007). Ahmed, Andersson, and Hammarstedt (2008) and Ahmed and Hammarstedt (2009) examined rental market discrimination against same-sex male couples, but not same-sex female couples in Sweden using an email correspondence field experiment. Lauster and Easterbrook (2011), who conducted a small-scaled audit in Canada, did not find differential rates of discrimination against same-sex female couples. However, they found that same-sex male couples suffered from discrimination. As noted above, Friedman et al. (2013) and Levy et al. (2017) found measurable discrimination against same-sex male couples (both studies) and transgender couples (Levy et al.), while Murchie (2017) only found discrimination against non-White same-sex couples.

2.2 State and Local Housing Protections for the LGBTQ Community

No federal law explicitly prohibits discrimination based on sexual orientation or gender identity. In 1974, Representatives Bella Abzug and Ed Koch introduced the Equality Act (HR 14572), which would have added sexual orientation to the protected classes specified in the Civil Rights Act (CRA) of 1964. Congress did not pass the Act. In the 1990s, pro-LGBTQ rights legislators and activists focused primarily on prohibiting employment discrimination based on sexual orientation. Since 1994, the Employment Non-Discrimination Act (ENDA) has been regularly (though not consistently) introduced in Congress. Congress has consistently failed to pass ENDA, which would prohibit discrimination based on sexual orientation nationwide (Albelda et al., 2009; Kaiser Foundation, 2000).[7]

Under the Obama Administration, the Department of Housing and Urban Development (HUD) posted a public statement that discrimination against an LGBTQ individual "may be covered by the Fair Housing Act if it is based on non-conformity with gender stereotypes."[8] As of 2017, HUD had an internal departmental policy that prohibited housing providers who received HUD or Federal Housing Authority (FHA) funds from discriminating against a tenant based on sexual orientation (HUD, 2017). However, in July 2017, the Trump Administration submitted an amicus brief in a private lawsuit in the Second Circuit Court of Appeals that argued the ban on sex discrimination in the Civil Rights Act of 1964 does not prohibit discrimination based on sexual orientation.

[7] As of 2017, only twenty states prohibit employment discrimination based on both sexual orientation and gender identity. An additional two state prohibit employment discrimination based on sexual orientation, six states prohibit discrimination against *public* employees based on sexual orientation and gender identity, and five states prohibit discrimination against *public* employees based on sexual orientation only. Seventeen states do not prohibit employment discrimination.

[8] https://portal.hud.gov/hudportal/HUD?src=/program_offices/fair_housing_equal_opp/LGBT_Housing_Discrimination. Accessed: 1/9/2017. 77 Federal Registration. 5662, 5674 (Feb. 3, 2012)

In April 2017, the Seventh Circuit Court of Appeals ruled that the Fair Housing Act's ban on sex discrimination applied in the case of two married plaintiffs, one of whom identified as a transgender male. This was the first time a federal court has applied the Fair Housing Act to a case of anti-trans discrimination. The Court ruled with the plaintiffs who alleged sex, familial, and sexual orientation discrimination based on the Federal Housing Act and Colorado's state-level Anti-Discrimination Act. The deciding Judge wrote that the property owner discriminated against the couple because of "sexual nonconformity," and this is a form of discrimination based on sex. Under the FHA, "sex" is a protected category. The Court declined to consider if sexual orientation, and thus same-sex couples, was a protected class under the FHA.[9]

With federal inaction, many states, counties, and local municipalities have begun to enact their own local anti-discrimination laws. As of 2016, 22 states had comprehensive state-level anti-discrimination laws in place to protect same-sex couples. Not all of these laws prohibit discrimination based on gender identity.[10] To explore municipal-level protections, this study relies on the 2016 Human Rights Campaign (HRCF) Municipal Equality Index (MEI), which "examines the laws, policies, and services of municipalities and rates them on the basis of their inclusivity of LGBTQ people who live and work there" (HRCF, 2016). This paper uses a subcategory of the MEI's non-discrimination law section, which examines housing protections.[11] The MEI codes for the presence of a law or ordinance at the state,

[9] See *Smith & Smith v. Avanti*, 2017, via https://www.lambdalegal.org/sites/default/files/legal-docs/downloads/smith_co_20170405_order.pdf

[10] The states that do prohibit discrimination based on gender identity are California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Iowa, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, New Mexico, New York, Oregon, Rhode Island, Utah, Vermont, Washington, and Wisconsin.

[11] The MEI assigns a numerical value to municipalities housing protections: 0 points for no protections, 5 points for prohibiting housing discrimination based on sexual orientation, and 10 points for prohibiting discrimination based on both gender identity and sexual orientation -- 129 of the 186 municipalities examined have housing protections - 14 municipalities (11 percent) prohibit discrimination only based on sexual orientation and the remaining 115 prohibit discrimination based on both sexual orientation and gender identity.

county, and city level that prohibit discrimination against same-sex couples. That is, these laws codify sexual orientation as a protected class in local housing law. This paper uses GPS coordinates on the audited properties in order to certify that they are located within a locality with LGBTQ protection or a locality without protection. For example, Tampa, Florida has a local LGBTQ non-discrimination ordinance, but the state of Florida and Hillsborough County, where Tampa is located, does not. In the Tampa rental market, any properties with GPS coordinates within the city of Tampa are included in the local protections categories.[12]

2.3 Theories of Housing Discrimination

Gary Becker (1957) put forth the first economic theory of racial discrimination. He formalized discrimination, specifically racial discrimination, as a distaste by a dominant group to interact with a subaltern group. The dominant group, property owners in this study, may have a personal dislike with having to house same-sex couples. Becker's taste-based model has evolved, as summarized by Yinger (1986), into three major theories of why there is housing discrimination. Agent-prejudice discrimination occurs when a property owner or real estate agent discriminates against a member(s) of a minority due to their own prejudices (akin to Becker's model). Customer-prejudice discrimination occurs when an agent discriminates against a minority group if they know or believe that their business depends on the prejudice of their current or future customers. While it is challenging to parse between these two forms of discrimination, one hypothesis is that property owners are personally prejudicial (agent-prejudice discrimination) if they discriminate against same-sex couples within localities that have local housing

[12] Table A in the appendix lists the municipalities surveyed in this paper that do not have local or state-level protections. Table B in the online appendix lists the municipalities surveyed in this audit that have either state, county, and/or local anti-discrimination protections.

protections for same-sex couples. If we are to believe that local laws reflect the preferences of the local community, then the local customer base should be proponents of (or at least indifferent to) housing protections for same-sex couples. This is why there are local anti-discrimination laws in these localities. Albeit, while I test this theory in the paper, this would not constitute definitive evidence of agent-prejudice discriminate. It is still only correlational.

The final theory of discrimination is statistical discrimination—rental agent discriminates because of their perception of the minority group's preferences (such as living in racially or culturally homogenous neighborhoods) or false perceptions about socioeconomic status (i.e. the economic risk) of a potential tenant based on their race, ethnicity, etc. As explained in more detail below, this study tests for statistical discrimination by including a randomly generated income measure in randomly selected emails. Assuming that property owners harbor certain assumptions about the financial capacity of same-sex couples (i.e. they are less likely to afford rent), I hypothesize that response rates will be higher for same-sex couples that provide an income measure than those that do not. If response rates are not measurably different between the same-sex couples that provide this information and those that do not, then this provides some evidence that property owners are prejudicial towards same-sex couples and willfully discriminating against them.

III. Experimental Design

3.1 Experimental Design

This study explicitly examines the market impact of discrimination based on sexual orientation, not discrimination based on gender identity. It examines if property owner discriminate against self-identified gay (two male) or lesbian (two female) couples. This paper does not estimate the level of discrimination against members of the LGBTQ community more broadly defined, i.e. transgender,

bisexuals, queer-identified, or non-binary individuals. Moreover, this study is only exploring formal rental units and property owners, it does not examine if individuals seeking roommates, property owners seeking in-house tenants to live in the same house as them, or providers of short-term rental units (e.g. hostels, Airbnb, etc.) discriminate. While Fair Housing Laws prohibit racially discriminatory advertisements for housing, owner-occupied housing in a building with fewer than four units are exempt from federal Fair Housing Acts and many state and local level laws.[13] During the initial stage of collective audit-able property owners, I remove any rental postings requesting roommates or live-in tenants.

I chose a paired-audit email correspondence design because, for several of my models, it allows for the use of property-owner fixed effects and provides improved precision for a given sample size. While the risk of detection is higher with a paired audit study than a single-email audit design, I included 94 cities in this study and thus I did not send a preponderance of inquiries within any one single rental market. As explained below, I also used multiple data points—name, phone number, location of the property, property owner/real estate agent's name, and name of the property management company—to prevent multiple property owners from being contacted twice. I check for the possibility that property owners became aware of the audit in section 3.3 below.

I audited property owners in cities that fall within three major protection categories/legal regimes: cities with state-level sexual orientation housing protections, cities with municipal or county-level sexual orientation housing protections, and cities with no housing protections for same-sex couples. Using a web-scraper program, I randomly collected each property-owner's phone number (if provided), their contact emails, as well as all the self-provided structural characteristics of the unit (e.g. size, how

[13] U.S. Department of Housing and Urban Development, "Fair Housing Information for Housing Providers," https://portal.hud.gov/hudportal/HUD?src=/program_offices/fair_housing_equal_opp/HousingProviders (Accessed: 11/4/2016)

many bedrooms, etc.), the rent, and the address (street address and longitudinal and latitudinal coordinates) for posts from randomly selected cities' Craigslist websites. If a property owner worked for a larger rental agency, I also recorded the name of this organization and the rental agent. To prevent a property owner (or property management company) from being audited twice and thus increase the risk of detection, I did not use any scraped posts that contained the same phone number, rental organization/property management company's name, posting id (unique to each post), name of the rental/real estate agent, street address, and/or longitudinal-latitudinal coordinates as a previously collected/contacted post. I did not use that post if it did not have an email address or longitudinal-latitudinal coordinate, which prevented me from either contacting the property owner or confirming its location.

Once I collected each property owner's information, I randomly assigned property owners to a sexual orientation category for their first email. If the sexual orientation was gay male or lesbian, the second sexual orientation category was mechanically heterosexual. If the first sexual orientation category was heterosexual, then second category was randomly selected between lesbian or gay male. If the unit's rent was at or below 150 percent of HUD's County-level Fair Market Rent (FMR) for 2016, I classified the post as low-income. To limit the risk of detection, I sent out four different emails types. Two versions of a high-class email, which were sent to landlords with units 150 percent above the FMR price, and two versions of a low-class emails. A high-class email contains formal greetings and complete sentences. See version A of the high-class email below:

High-Class Email Version A:
Dear sir/madam,

[My Husband] NAME and I are interested in the rental unit you posted on Craigslist, is it still available?

We both have good rental history and reference. We are happy to send a copy of a recent credit report.

Regards, [*First name*]

[*First name*]

The low-class email contained broken and informal syntax. This email structure signals that the emailer has less education, less income, would be interested in a lower cost rental unit, and, possibly, is younger.

Low-Class Email Version A:

Hi! *[My Wife]* NAME, saw your post CL and were interested in the apartment. Were both employed and can afford the apartment. We do you need to know about us. Let us know! Thanks! [First Name #1] & [First Name #2]

I randomly assigned the first email to be either version A or B, the second version followed mechanically from this random assignment. I also randomly selected emails to contain a fictitious income value rounded to the nearest $1000. This income was randomly generated to make the fictitious applicant's annual salary (rounded to the nearest $1000) between 25 percent and 45 percent of the posted annual rent (the stated monthly rent multiplied by twelve). To limit the risk of detection, socioeconomic status is not randomly assigned to the property owner. As discussed above, I randomly select emails to contain this fictitious income measure in an attempt to test for statistical discrimination. Prima farcie, I expect that this additional information will reduce the level of adverse treatment (increase the response rates). This finding would be consistent with the prior literature (Ahmed, Andersson, and Hammarstedt, 2010; Bosch, Carnero, and Farré, 2010).

I randomly assigned each property owner a race for each email. Following Murchie (2017), this study uses stereotypical Black and Hispanic names that are generally unique to each racial group. The names used in this study are:

Table 1: Names used in the Study

Names By Race	Men	Women
White	Brian Robert Eric	Jennifer Sarah Denise
Black	Leroy Jamal Darnell	Michelle Akeelah Jada
Hispanic	Santiago Alejandro Mateo	Sofia Isabella Gabriella

I randomly assigned names in combinations (two-male, two-female, and male-female) to emails. If the email was randomly selected to be a Black same-sex male couple, I randomly selected either Leroy, Jamal, or Darnell, and then, from the remaining two, I randomly selected the second name.

3.2 Audit Execution

I conducted an initial pilot of 300 property owners in New York City, Houston, Miami, Chicago, and Los Angeles in November 2016 to evaluate if property owners were responding at substantive different, and statistically different rates to the two different within-class email versions. That is, did email A for the high-class email convey something different than email B, which prompts property owners to respond more to email version B? The average response rate for the high-class email types were 60 percent for version A and 62 percent for version B. For low-class emails, the average response rates for version A and B were 53 percent and 54 percent, respectively. These differences were not statistically significantly different from one another.

I conducted the full audit between December 2016 and March 2017. During these months, I anonymously emailed 6,490 unique property owners from 94 cities in 46 states.[14] Of the 94 localities, 66 cities (70.2 percent) had state or local anti-discrimination laws prohibiting housing discrimination against same-sex couples, while 28 cities (29.8 percent) did not have such protections. The localities audited were geographically dispersed - 15.8 percent of the localities were located in the Northeast, 35 percent were located in the South, 25.4 percent were located in the Midwest, and 23.8 percent were located in the West. Table two presents a breakdown of the number of property owners contacted, and the localities with the various types of legal regimes (i.e. state, local, or no protections).

Table 2: Geographical Distribution

Census Regional Grouping	Census Sub-Regional Grouping	Number of Property Owners Contacted	Number of Localities with State Housing Protections (% of Total)	Number of Localities with Local Housing Protections (% of Total)	Number of Localities with No Housing Protections (% of Total)
Midwest	East North Central	902	4 (4%)	10 (11%)	6 (6%)
	West North Central	722			
Northeast	Middle Atlantic	503	18 (19%)	2 (2%)	0 (0%)
	New England	509			
West	Mountain	874	16 (17%)	4 (4%)	2 (2%)
	Pacific	653			
South	South Atlantic	1,008	5 (5%)	6 (6%)	21 (22%)
	East South Central	571			
	West South Central	665			

Almost all of the localities without housing protections are located in the South and all localities audited in the Northeast have local or state-level protections. Within these regions, there is a great heterogeneity in the rental housing markets, local stock of rental housing, and the monthly cost of

[14] As an additional precaution, I used nine different email accounts to contact property owners. I did not contact any property owner with the same two email accounts. However, Craigslist does use anonymized email links that generally prevent end-users from seeing one another's emails.

housing. For the units in the regions posted on Craigslist, the Midwest had, for example, the cheapest median monthly rent at $850, followed with the South at $1,033 per month. The Northeast and the West had the highest median monthly rents, at $1,200 and $1,350 respectively. Highly active rental markets, e.g. Boston and New York City in the Northeast and San Francisco, San Diego, Seattle, and Los Angeles in the West are mostly responsible for driving up the rent in these regions. Importantly, while the rents of the audited units may reflect the average rental prices and general housing stock of these areas, there may be systematic differences between the average rental unit in any locality audited in this paper (and those posted on Craigslist) and the average rental unit in the entire distribution of the rental housing stock.

Of the localities audited, twelve cities had populations less than 50,000 people and I contacted 319 property owners in these cities. Thirteen localities had populations between 50,001 and 100,000 people. I audited 736 property owners in these localities. The majority of the localities I audited in this study had populations between 100,001 and 500,000 residents. Fifty-one percent of the property owners audited (3,339 unique property owners) actively posted units in these housing markets. Fourteen localities had populations between 500,001 and 1 million, which accounted for 1,158 property owners (18 percent). Eight localities had over one million residents—Chicago, Dallas, Houston, Los Angeles, New York City, Philadelphia, Phoenix, and San Diego. These cities have some of the most active rental markets in the county. They account for 14 percent if the property owners audited (938 unique property owners). One of the limitations of this study is that highly active rental markets with a large number of unique property owners will be oversampled. Cities with small populations with less active rental markets are likely to have fewer unique property owners.

3.3 Testing for Audit Detection

As noted above, the primary risk of paired-audit research is that property owners may detect an audit is being conducted. If they do, they are likely to alter their behavior as a result. A property owner could respond to the first email and then, having found similarities between the first email in the second email, not respond to the second email. Alternatively, if a property owner becomes aware of the audit, they may respond to both emails when, in the absence of knowing of the audit, they would have only responded to one of the emails. Granted, the effect could be ambiguous—if the landlord reviews their emails from the most recent emails to the oldest emails, they will read the second email first (it will appear first in their email) and then read the first email. However, there is no evidence that property owners responded differently to the first and second emails. Table 3 presents the response rates and the resulting t-statistic of a paired difference-of-mean test of within-class response rates. The differences in table 3 are substantively small and statistically insignificant.

Table 3: Response Rates by Email Order

Category	Email Types	Response Rates	T-Statistics
High Class Email	First Email	66%	0.23
	Second Email	66%	
Low Class Emails	First Email	58%	0.98
	Second Email	57%	

Note: T-statistic computed using a simple difference-of-mean test

Another concern is that property owners may respond differentially between the two types of emails sent by socioeconomic status. Again, I sent four different email messages—two high-class and two low-class. Ideally, response rates between these email types should not differ. Although the initial pilot

did not detect any difference in response rates, it is possible that one message contained an (or several) element(s) that signaled something unique to property owners.

Table 4: Response Rates by Email Version for High and Low Class

Category	Email Types	Response Rates	T-Statistics
High Class Email	Version 1	65%	0.67
	Version 2	66%	
Low Class	Version 1	57%	0.12
	Version 2	57%	

Note: T-statistic computed using a difference-of-mean test

Table 4 provides the response rates between the four different emails. Within-class response rates between the different versions were not substantively different or statistically significantly different from one another. There is no evidence that property owners were aware I was conducting an audit.

IV. Results

4.1 Discrimination by Sexual Orientation

Beginning with a descriptive overview of the results, table 5 presents the mean callback rate by sexual orientation, as well as mean callback rates by race and sexual orientation. I calculate the mean response rate by dividing the number of responses received by each sexual-orientation group or sexual-orientation-race group by the total number of email sent by each group.

Table 5: Baseline Response Rates by Race and Sexual Orientation

	Column [1]	Column [2]	Column [3]	Column [4]
	Overall	State Protections	Local Protections	No Protections
All Races				
Heterosexual	63%	64%	61%	61%
Gay	56%	59%	53%	55%
Lesbian	65%	67%	65%	61%
White				
Overall	69%	71%	65%	66%
Heterosexual	70%	71%	68%	68%
Gay	65%	69%	61%	63%
Lesbian	70%	75%	66%	64%
Black				
Overall	54%	57%	50%	52%
Heterosexual	56%	59%	54%	55%
Gay	45%	50%	39%	44%
Lesbian	58%	59%	55%	55%
Hispanic				
Overall	62%	63%	60%	60%
Heterosexual	62%	63%	60%	61%
Gay	58%	59%	56%	57%
Lesbian	65%	67%	63%	63%

Note: Baseline response rates are simply the fraction of responses received to the number of responses sent.

Beginning with the top panel. Regardless of race and the legal protections, same-sex male couples are less likely to receive a response compared to same-sex female couples or heterosexual couples. In most cases, same-sex female couples receive preferential treatment relative to both heterosexual and same-sex male couples. Emails containing two female names received a response 65 percent of the time regardless of the perceived race of the couple. Only 63 percent of the emails containing two opposite-sex names and 56 percent of the emails containing two male names receive a response to their inquiries. Consistent with previous audit studies, property owners are less likely to respond to emails containing stereotypically Hispanic or Black names, regardless of sexual orientation. Moreover, emails containing

Black names were less likely to receive a response from property owners than either Hispanic or White names.

Rather than rely on baseline measures, I use a linear probability model of the following form to estimate the level of discrimination faced by individuals stratified on race and sexual orientation:

$$y_{ilcs} = \beta_0 + \beta_1 SameSex_i + \beta_2 Inc_i + \lambda_l + \varepsilon_{ilcs}\,, \qquad \text{(Eq. 1)}$$

Where y_{ilcs} is a dummy variable that adopts the value 1 if emailer *i* receives a reply to their inquiry about the posted rental unit from property owner *l*. In this case, property owner is synonymous with the rental units. $SameSex_i$ adopts the value 1 if the email conveys that the inquiring couple is a same-sex couple. Inc_i is a control variable that equals one if the emailer contained a randomly generated income measure, zero otherwise. Equation [1] includes property-owner fixed effects, synonymous with property-unit fixed effects, denoted by λ_l. The identifying variation for equation [1] is thus within-unit responses to paired-emails, in which the only difference between responses is the sexual orientation of emailers. I cluster the standard errors at the property-unit level. Table 6 presents the result of equation [1] stratified on sexual orientation and race:

Table 6: Response Rates by Sexual Orientation and Race with Property Owner Fixed Effects

Column	(1)	(2)	(3)	(4)
VARIABLES	Same-Sex Male	Same-Sex Male White	Same-Sex Male Black	Same-Sex Male Hispanic
	Location Protections	Location Protections	Location Protections	Location Protections
Protections	-0.0580***	-0.0373	-0.0913***	-0.0445**
	(0.0110)	(0.0242)	(0.0226)	(0.0178)
Same Sex	-0.0292**	0.0258	-0.0559	-0.0421
	(0.0139)	(0.0298)	(0.0650)	(0.0331)
Protections*Same Sex	-0.0448*	-0.0324	-0.103**	0.0165
	(0.0223)	(0.0367)	(0.0468)	(0.0437)
Constant	0.183	0.631	0.215	-0.260
	(0.170)	(0.266)	(0.258)	(0.319)
Observations	9,418	3,085	3,105	3,228
R-squared	0.023	0.027	0.050	0.029
Colum	(5)	(6)	(7)	(8)
VARIABLES	Same-Sex Female	Same-Sex White Female	Same-Sex Black Female	Same-Sex Hispanic Female
	Location Protections	Location Protections	Location Protections	Location Protections
Protections	-0.001	0.016	-0.028	0.011
	(0.0202)	(0.0423)	(0.0335)	(0.0342)
Same Sex	0.0154	0.00601	0.00226	0.0310
	(0.0145)	(0.0254)	(0.0233)	(0.0231)
Protections*Same Sex	0.0262	0.0175	0.0541	0.00868
	(0.0218)	(0.0278)	(0.0396)	(0.0473)
Constant	0.300	0.556	0.164	0.0991
	(0.209)	(0.310)	(0.278)	(0.310)
Observations	9,383	3,154	3,050	3,179
R-squared	0.015	0.028	0.029	0.024
Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1				
All models included city fixed effects, as well as the following unit-level controls: # of Bedrooms, # of baths, Square feet, and Annualized Monthly Rent.				

Column [1] pools all same-sex male couples together regardless of race. The comparison group is heterosexual couples. Same-sex male couples were 7.7 percent less likely to receive a response than were heterosexual couples. Stratifying on race, the remaining terms reflect the pattern seen above in table 5. Same-sex Black male couples were 10.2 percent less likely to receive a response than Black heterosexual couples, while the gay-heterosexual disparity for Whites was approximately 3 percent. Same-sex Hispanic male couples were approximately 8 percent less likely to receive a response from a property owner than were heterosexual Hispanic couples. For same-sex White and Black male couples, I am able to reject the null hypotheses that these results are random. Consistent with Friedman et al. (2013) and Levy et al. (2017), these results further provide evidence that same-sex male couples face discrimination in the U.S. rental markets.

Columns [5] through [8] in the second panel of table 6 provide the results of Equation [1] stratified on sexual orientation for same-sex female couples. Consistent with the results in table 5, property owners prefer same-sex female couples to heterosexual couples. Compared to Black heterosexual couples, Black same-sex female couples are 10.5 percent more likely to receive a response, while White Same-Sex couples are 1.4 percent more likely to receive a response than were White heterosexual couples. Hispanic same-same female couples were only 1.1 percent more likely to receive a response than were Hispanic heterosexual couples. I fail to reject the null hypothesis that these results are non-random. It appears that same-sex female couples do not face measurable discrimination from property-owners in response to inquiries regarding housing.

4.2 Discrimination by Legal Regime, Sexual Orientation, and Race

As shown in column [2] of table 5, property owners are more likely to respond to emails in states with same-sex housing protections regardless of the inquiries' sexual orientation. White couples receive

responses at a higher rate than Black or Hispanic couples. Property owners are more likely to respond to a same-sex female couple's inquires, with the exception of Black same-sex female couples, in states with housing protections. White same-sex male couples appear to have similar response rates to White heterosexual couples in these states. This is consistent with Murchie (2017). However, same-sex Black and Hispanic male couples have lower response rates compared to Black and Hispanic female same-sex and heterosexual couples. Contrary to Friedman et al. (2013), that state-level protections appear to correlate with higher response rates for same-sex couples compared to rental markets in areas with local housing protections and no housing protections.

The response rate overall is the same for heterosexual couples (column [3] and [4] for table 5), regardless of race. However, same-sex male couples are, contrary to my initial speculation, less likely to receive a response in rental markets with local protections. In particular, Black same-sex male couples are much less likely to receive a response compared to other same-sex couples. This disparity is particularly acute in areas with local protections. Same-sex Black male couples in rental market with local housing protections only received a response to housing inquires 39 percent of the time, which is 11 percent lower than the average for all Black couples in these localities and 14 percent lower than heterosexual couples. Local housing protections, however, do not appear to correlate with higher response rates for gay men. For White and Black same-sex male couples, their response rates were slightly lower - 1 percent and 2 percent, respectively - in localities with local housing protections compared to localities without such protections.

To formally investigate if anti-discrimination laws correlated with lower rates of discrimination, I employ the following model:

$$y_{ilcs} = \beta_0 + \beta_1 SameSex_i + \beta_2 Law_{cs} + \beta_3 (SameSex_i * Law_{cs}) + \gamma \mathbf{X} + \phi_c + \varepsilon_{ilcs}, \quad \text{(Eq. 2)}$$

The terms y_{ilcs} and $SameSex_i$ are defined in equation [1]. The indicatory variable Law_{cs} adopts unity if the locality c in state s where the rental unit is located has a local or state anti-discrimination law (Law_{cs}), and zero if the rental unit is located in a locality where there are no anti-discrimination protections. I coded localities in states that also have state-level housing protections who also have local-level housing protections as only having state-level housing protections. I run this model separately by legal regime and race. The coefficients of interest are the interaction between the same-sex indicator variable and the legal regime variable (captured by β_3). I include city fixed-effects (ϕ_c) and a vector of unit-level characteristics and controls related to audit execution ($\mathbf{X}$).

Equation [2] is also a linear probability model, and thus has a direct interpretation. The coefficient β_3 captures property owners' differential response rates to same-sex inquiries in localities with state-level housing protections, compared to same-sex inquires in localities without housing protections. To reiterate, localities adopt these anti-discrimination laws in a non-random way. This coefficient only captures the correlation between a property owner's differential response rates to same-sex inquires between localities operating under different legal regimes, not the causal effect of these laws. Table 7 provides the results from equation [2] run only for localities with local housing protections, run separately for same-sex male and female couples:

Table 7: Correlation between Local Protections and Response Rates, by Sexual Orientation and Race

Column	(1)	(2)	(3)	(4)
VARIABLES	Same-Sex Male	Same-Sex Male White	Same-Sex Male Black	Same-Sex Male Hispanic
	Local Protections	Local Protections	Local Protections	Local Protections
Protections	-0.0580***	-0.0373	-0.0913***	-0.0445**
	(0.0110)	(0.0242)	(0.0226)	(0.0178)
Same Sex	-0.0292**	0.0258	-0.0559	-0.0421
	(0.0139)	(0.0298)	(0.0650)	(0.0331)
Protections*Same Sex	-0.0448*	-0.0324	-0.103**	0.0165
	(0.0223)	(0.0367)	(0.0468)	(0.0437)
Constant	0.183	0.631	0.215	-0.260
	(0.170)	(0.266)	(0.258)	(0.319)
Observations	9,418	3,085	3,105	3,228
R-squared	0.023	0.027	0.050	0.029
Colum	(5)	(6)	(7)	(8)
VARIABLES	Same-Sex Female	Same-Sex White Female	Same-Sex Black Female	Same-Sex Hispanic Female
	Location Protections	Location Protections	Location Protections	Location Protections
Protections	-0.001	0.016	-0.028	0.011
	(0.0202)	(0.0423)	(0.0335)	(0.0342)
Same Sex	0.0154	0.00601	0.00226	0.0310
	(0.0145)	(0.0254)	(0.0233)	(0.0231)
Protections*Same Sex	0.0262	0.0175	0.0541	0.00868
	(0.0218)	(0.0278)	(0.0396)	(0.0473)
Constant	0.300	0.556	0.164	0.0991
	(0.209)	(0.310)	(0.278)	(0.310)
Observations	9,383	3,154	3,050	3,179
R-squared	0.015	0.028	0.029	0.024
Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1				
All models included city fixed effects, as well as the following unit-level controls: # of Bedrooms, # of baths, Square feet, and Annualized Monthly Rent.				

The top panel of table 7 provides the results of equation [2] for same-sex male couples pooled (Column [1]) and then stratified by race (columns [2] through [4]). The coefficient of interest is the (Protections * Same Sex couples) variable. Column [1] presents the result for all same-sex male couples regardless of race. Consistent with the baseline evidence in table 5, same-sex male couples are approximately 5 percent less likely to receive a response in localities with housing protections compared to same-sex couples in localities without housing protections. Black same-sex male couples (column [3]) were 10.3 percent less likely to receive a response in localities with local housing protections than in localities without any housing protections. This coefficient is both large in magnitude and statistically significant. White male couples were 3.2 percentage points less likely to receive a response in localities with local housing protections and the differential response rate for same-sex Hispanic couples was negligible and statistically significant (a positive .01 percent). The second panel of table 7 presents the differential response rates for same-sex female couples. While all the terms are relatively small and insignificant, they are all positive in sign. Same-sex Black female couples, in particular, are more likely (5.4 percent) to receive a response in localities with local housing protections than in localities without such protections. The differential response rates for all same-sex female couples regardless of race, White female couples, and Hispanic female couples were 2.6, 1.7, and .8 percent respectively.

Table 8 presents the result of equation [2] where Law_{cs} equals one if the localities are located in state with state-level housing protections. Again, if the locality also had a redundant local ordinance (which may have predated the state-level measure), it is coded as one for the purposes of this paper.

Table 8: Correlation between State Protections and Response Rates, by Sexual Orientation and Race

	(1)	(2)	(3)	(4)
	Same-Sex Male	Same-Sex Male White	Same-Sex Male Black	Same-Sex Male Hispanic
VARIABLES	State Protections	State Protections	State Protections	State Protections
Sexual Orientation	-0.0886***	-0.0607***	-0.161***	-0.0470*
	(0.0135)	(0.0204)	(0.0222)	(0.0273)
Legal Protections	0.347***	0.0489	0.553***	0.487***
	(0.0511)	(0.133)	(0.0379)	(0.0358)
Sexual Orientation * Legal Protections	0.0395*	0.0319	0.0836**	0.00714
	(0.0200)	(0.0409)	(0.0408)	(0.0330)
Constant	0.0714	0.607**	0.0262	-0.426
	(0.178)	(0.275)	(0.258)	(0.320)
Observations	9,418	3,085	3,105	3,228
R-squared	0.023	0.027	0.048	0.029
	(5)	(6)	(7)	(8)
	Same-Sex Female	Same-Sex White Female	Same-Sex Black Female	Same-Sex Hispanic Female
VARIABLES	State Protections	State Protections	State Protections	State Protections
Sexual Orientation	0.132***	-0.321***	0.667***	0.488***
	(0.0245)	(0.0524)	(0.0378)	(0.0319)
Legal Protections	0.0205	-0.00236	0.0243	0.0279
	(0.0146)	(0.0245)	(0.0251)	(0.0262)
Sexual Orientation * Legal Protections	0.00950	0.0367	-0.0121	0.0154
	(0.0242)	(0.0345)	(0.0373)	(0.0434)
Constant	0.243	0.668**	-0.0960	-0.0957
	(0.203)	(0.304)	(0.273)	(0.301)
Observations	9,383	3,154	3,050	3,179
R-squared	0.015	0.029	0.030	0.025
Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1				
All models included city fixed effects, as well as the following unit-level controls: # of Bedrooms, # of baths, Square feet, and Annualized Monthly Rent**.**				

Beginning with the top panel in table 8, unlike local housing protections and contrary to the findings of Friedman et al. (2013), property owners in states with state-level discrimination prohibitions were approximately 4 percent more likely to respond to inquiries from same-sex couples than property owners in localities without any protections. In particular, response rates for Black same-sex couples (column [3]) were over 8 percentage points higher in the state-protected localities than in localities without any protections. With the exception of same-sex Black female couples, all same-sex couples were more likely to receive a response

Prima farcie, one would expect that legal protections, regardless of the level of government at which they are enacted, to positively relate with response rates. However, local protections covary negative with response rates while state-level protections covary positively with response rates. Again, while I cannot make a causal statement about the impact of these laws, this evidence suggests that codified legal protections do not increase response rates to inquiries for rental units for same-sex couples. As elaborated upon in section 4.3, this also suggests, conditional on the enactment of local laws reflecting the opinion of the majority (or, at least, median) opinion of the community, that property owners are prejudicially discriminating against same-sex couples.

4.3 Testing Hypotheses Regarding the Causes of LGBTQ Discrimination

A pair-email correspondence audit and the endogeneity of state and local housing protections permits me to test two hypothesis regarding the causes of same-sex male discrimination discussed in sections 4.1 and 4.2. Localities that adopt local housing protections either have electorates that support anti-discrimination protections against same-sex couples, or local government officials who are supportive of these protections and a populous that is largely indifferent to their enactment. State-level protections are more ambiguous—the majority of a city's residents in a state may oppose a state-level

law; however, if there is political support elsewhere in the state, the law could still pass. Thus, if there is evidence of discrimination in a city with local level protections compared to localities without such protection, then it is more likely, albeit still inconclusive, that property owners are willfully discriminating against same-sex couples. I can use equation [1] stratified on local-housing protections to test this hypothesis. A negative sign on β_3 for equation [1] provides evidence of property-owner animus. I discussed above, in columns [1] through [4] of table 7, same-sex males are consistently less likely, regardless of race, to receive a response from property owners in localities with local housing protections than localities without such protection. This suggests that the discrimination this study found is less likely the result of customer-base prejudice and more the result of property-owner prejudice.

As noted above in section 2.3, one other potential reason why property owners might discriminate against same-sex couples is that they have certain negative preconceived notions about these couples and their ability to pay rent. This audit's experimental design allows me to test this theory, and rule out that economic statistical discrimination is driving my results. As noted above, all incomes contained within randomly selected emails were randomly generated values so that the annual rent burden for the unit was between 25 percent and 40 percent of the stated income. Prima farcie, one expects property owners to respond more to inquiries that contain an income measure compared to inquires that do not. The income measures suggests to the property owner that this potential tenant is able to pay the rent and/or that they have a job. If property owners are unresponsive to emails containing income information, then this provides further evidence that property owners are discriminating against same-sex couples because of personal prejudice rather than economic considerations.

To test the effects of providing an income measure, I employ the following model:

$$y_{ilcs} = \beta_0 + \beta_1 I_i + \beta_2 SS_i + \beta_3 (I_i * SS_i) + \lambda_l + \varepsilon_{ilcs}, \qquad \text{(Eq. 3)}$$

The dependent variable and SS_i are defined above. I_i is a binary variable that adopts one if the inquiry provided an income, zero otherwise. This model includes property-owner fixed effects. I expect a positive coefficient on β_3—property owners, unless motivated by person animus, should respond to emails that contain income measures more than emails that do not for two reasons. The income value should signal to the property owner that this applicant is capable of paying the rent. This income value is also an additional piece of information that the comparison group emails do not contain. Granted, an income measure may prompt property owners to not respond to a potential tenant if that income is fairly low relative to the rent. However, I purposely generated income measures to ensure that the income-to-rent ratio was reasonable. A relatively small and insignificant term, a null value, or a negative coefficient for β_3 suggests that property owners are unresponsive to same-sex couples providing income measure rather than heterosexual couples. Table 9 presents of the results of equation [3], run separately for each racial grouping.

Table 9: Testing for Statistical Discrimination.

	(1)	(2)	(3)	(4)
VARIABLES	Same-Sex Male	Same-Sex Black Male	Same-Sex White Male	Same-Sex Hispanic Male
Same Sex	-0.0808**	-0.126	-0.0154	-0.121
	(0.0331)	(0.157)	(0.151)	(0.150)
Income Measure Provided	0.0612	0.0404	0.0872	0.0806
	(0.0450)	(0.229)	(0.210)	(0.207)
Same Sex * Income Measure	-0.03930	-0.0476	-0.0171	0.0761
	(0.1487)	(0.232)	(0.225)	(0.217)
Constant	0.594***	0.571***	0.639***	0.590***
	(0.0252)	(0.118)	(0.124)	(0.119)
Observations	9,759	3,216	3,192	3,351
R-squared	0.682	0.899	0.896	0.892
	(5)	(6)	(7)	(8)
	Same-Sex Female All Races	Same-Sex Black Female	Same-Sex White Female	Same-Sex Hispanic Female
Same Sex	0.0947**	0.0335	0.0940	0.169
	(0.0441)	(0.228)	(0.251)	(0.199)
Income Measure Provided	0.0178	0.0351	0.00452	0.00336
	(0.0342)	(0.170)	(0.168)	0.162
Same Sex * Income Measure	0.00427	0.123	0.0191	0.00575
	(0.0504)	(0.255)	(0.247)	(0.238)
Constant	0.576***	0.517***	0.651***	0.540***
	(0.0247)	(0.118)	(0.143)	-0.115
Observations	9,715	3,168	3,253	3,294
R-squared	0.677	0.903	0.895	0.889

Robust standard errors in parentheses. All Models include property-unit fixed effects and standard errors are clustered at the property owner level.

***** p<0.01, ** p<0.05, * p<0.1**

For White and Black same-sex male couples, the β_3 coefficient (Same Sex * Income Measure) is negative and statistically insignificant. For same-sex female couples and same-sex Male Hispanic couples, this term is also small and insignificant, but positive. Substantively, these results suggest that providing an income measure does not appear to help either same-sex male or female couples receive responses. However, the direction of the coefficient for White and Black same-sex couples implies that some property owners were actually more averse to responding to inquiries that provided their income relative to inquiries that did not.

Surprisingly, the ratio of rent to income appears to matter little. In aggregate, property owners respond to more emails (65 percent of emails containing an income measure) where the income stated would result in a rent burden that is over 30 percent of income compared to emails containing incomes resulting in tax burdens that are less than 30 percent. While this is pure speculation, it may be that property owners are less likely to believe emails containing incomes higher than incomes traditionally earned by residents of that housing complex or that general area. According to Harvard University's Joint Center for Housing Studies, in 2014, 51 percent of all renters had a rent burden greater than 30 percent of their income. Even if this percentage decreased since 2014, a sizeable percentage of renters dedicate at least 30 percent of their income to rent. Property owners may not be sensitive to the size of the income provided, they expect their tenants to dedicate 30 percent or more of their income to rent, and/or they are skeptical of emails containing income values too high.

While scholars and activists should continue to estimate, examine, and theorize anti-LGBTQ housing discrimination (and other forms of anti-LGBTQ discrimination), the evidence presented in this paper suggests that property owners hold different opinions of same-sex couples than do the average citizen (or average voting resident) in the localities in which the property owners live and/or invest.

Moreover, audited property owners do not seems to respond differentially to same-sex couples that provide income measures compared to those that do not. This evidence suggests that property owners are willfully discriminating against same-sex couples. The cause of the measured discrimination is property-agent prejudice.

V. Conclusion

Using a unique dataset compiled through a rigorous field experiment, I find that same-sex couples, especially male same-sex couples and minority same-sex couples, face higher barriers to access housing in certain communities. Compared to heterosexual couples, male same-sex couples are less likely to receive a response to their rental inquiry. Same-sex female couples receive responses at higher or equivalent rates to heterosexual couples. Moreover, I find that the relationship between response rates and housing protections varies depending on the level at which laws are enacted. Local protections correlate negatively with response rates for same-sex male couples; state-level protections correlate positively with response rates for all couples. While non-causal, this provides some preliminary evidence regarding the efficacy of these laws. More importantly, the result of this study raises questions as to whether codified local anti-discrimination ordinances are effective at lessening or eliminating discrimination. Should activists and government officials pursue state-level laws and/or other enforcement/anti-discrimination measures to ensure an equal treatment regardless of sexual orientation? I then find property owners are discriminate against same-sex couples in localities with local housing protections. Property owners are also relatively unresponsive to same-sex couples providing income measures and thus providing more information about their ability to pay rent. This suggests that property owners are willfully discriminating against same-sex male couples.

While this paper attempts to answer questions that have been relatively unexplored by scholars, it has many limitations. Beyond the much-discussed issue regarding the endogeneity of housing laws, this paper only examines discrimination at the very beginning of the housing selection process. In the housing process, applicants inquiring about the unit. I test for evidence of discrimination in this stage of the housing process. After this stage, property owners then need to provide additional information about the housing unit (stage 2). Here, property owners can withhold information or quote a higher rent to discourage further interest. Property owners can also decide to show or not show the unit. If they manage a large property, they may show the inquiring same-sex couple fewer units. Then, when setting terms and conditions, the property owner may treat the couple less favorable than a heterosexual couple. Lastly, property owners may steer prospective tenants to particular neighborhoods or units that further limit access to housing (Yinger, 1995). To my knowledge, no study has examined these later stages of the housing process, or examined if same-sex couples (or LGBTQ individuals, more broadly) are denied access to credit for housing.

Given the sampling frame for this audit is Craigslist, the external validity of this study is limited to the extent that the distribution of property owners and rental stock on Craigslist is comparable to the distribution of rental stock and property owners in each locality more broadly. The property owners who post to Craigslist or the rental stock posted on Craigslist may be systematically different from the average property owner in each specific locality. If this is the case, it is unclear how generalizable my measure of discrimination is to the rental market more broadly. However, this is likely an unfounded, or at least an overstated, concern. A quick survey of any respective Craigslist website quickly reveals the diversity of property owners and rental stock posted to the site—it includes small rental proprietors, commercial real estate companies, among other types of property owners who use this website.

The ability to access a wide area of housing matters. Barring individuals, couples, and families can have adverse ripple effects throughout their lives. Limiting someone's housing options can affect the types of communities where they can live, the schools and public services they can access, and numerous other dimension of their lives. As the number, visibility, and mobility of same-sex couples increase, it is imperative that scholars and activists examine existing barriers to access for same-sex couples in localities outside of the largest metropolitan areas. It is also important that scholars and activists begin to explore if traditional ways of preventing discrimination, such as codified laws, are effective at preventing discrimination or if alternative anti-discriminatory strategies need to be developed.

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APPENDIX

Table 1: Municipalities with no Protections

Auburn, Alabama	Topeka, Kansas
Bismarck, North Dakota	Waco, Texas
Baton Rouge, Louisiana	Omaha, Nebraska
Houston, Texas	Richmond, Virginia
Chattanooga, Tennessee	Bowling Green, Kentucky
Wichita, Kansas	Savannah, Georgia
Lincoln, Nebraska	Jefferson City, Missouri
Daytona, Florida	Lubbock, Texas
Nashville, Tennessee	Montgomery, Alabama
Cheyenne, Wyoming	Oklahoma City, Oklahoma
Mobile, Alabama	Parkersburg, West Virginia
Raleigh, North Carolina	Birmingham, Alabama
Clarksville, Tennessee	Little Rock, Arkansas
Jackson, Mississippi	Huntsville, Alabama
Little Rock, Alabama	Source: Human Rights Campaign (2016)

Table 2: Municipalities with State and/or Local Protections

Hartford, Connecticut	Helena, Montana	Lansing, Michigan	Albany, New York
Miami, Florida	San Diego, California	San Francisco, California	Eugene, Oregon
Bloomington, Indiana	Dallas, Texas	St. Louis, Missouri	Lawrence, Kansas
Santa Fe, New Mexico	Provo, Utah	Wilmington, Delaware	Cleveland, Ohio
Detroit, Michigan	Dayton, Ohio	Denver, Colorado	Boise, Idaho
Phoenix, Arizona	Riverside, California	Los Angeles, California	Colorado Springs, CO
Seattle, Washington	Columbia, Missouri	New Haven, Connecticut	New Orleans, Louisiana
Buffalo, New York	Annapolis, Maryland	Baltimore, Maryland	Pullman, Washington
Atlanta, Georgia	Minneapolis, Minnesota	Anchorage, Alaska	Syracuse, New York
Philadelphia, PA	Columbus, Ohio	Albuquerque, NM	Auburn, Maine
Boulder, Colorado	Boston, Massachusetts	Tampa, Florida	Tucson, Arizona
Madison, Wisconsin	Orange County, CA	Providence, Rhode Island	Manchester, NH
New York City, New York	Louisville, Kentucky	Green Bay, Wisconsin	Toledo, Ohio
Chicago, Illinois	Nashua, New Hampshire	Indianapolis, Indiana	Dover, New Hampshire
Erie, Pennsylvania	Durham, New Hampshire	Bakersfield, California	Concord, New Hampshire
Las Vegas, Nevada	Newark, Delaware	Portland, Maine	South Portland, Maine
Burlington, Vermont	Source: Human Rights Campaign (2016)		