WORKING PAPER Nº IDB-WP-01639

Unequal Access? Gender and Sexual Orientation in Ecuador's Rental Market

Wladimir Zanoni
Hugo Hernández
José Gómez
Judith Brito

Inter-American Development Bank
Country Department Andean Group

December 2024

Unequal Access? Gender and Sexual Orientation in Ecuador's Rental Market

Wladimir Zanoni
Hugo Hernández
José Gómez
Judith Brito

Inter-American Development Bank
Country Department Andean Group

December 2024

IDB

Cataloging-in-Publication data provided by the

Inter-American Development Bank

Felipe Herrera Library

Unequal access? gender and sexual orientation in Ecuador's rental market / Wladimir Zanoni, Hugo Hernández, José Gómez, Judith Brito

p. cm. — (IDB Working Paper Series ; 1639)

Includes bibliographical references.

1. Housing-Ecuador. 2. Sexism-Economic aspects-Ecuador. 3. Sexism-Social aspects-Ecuador. 4. Gender mainstreaming-Ecuador. 4. Sexual minorities-Ecuador. I. Zanoni López, Wladimir, 1975-. II. Hernández, Hugo. III. Gómez, José Gregorio. IV. Brito, Judith. V. Inter-American Development Bank. Country Department Andean Group. VI. Series.

IDB-WP-1639

Keywords: Field experiments, Prejudice, Gender, LGBTQ+
JEL Codes: J71, R21, J16

http://www.iadb.org

Rea_can@iadb.org

Unequal Access? Gender and Sexual Orientation in Ecuador's Housing Rental Market

Wladimir Zanoni*
Hugo Hernández†
José Gómez‡
Judith Brito§

December 3, 2024

Abstract

This study examines discrimination in Ecuador's housing rental market, focusing on disparities faced by women-led, gay, and lesbian families compared to their male-led and heterosexual counterparts. Discrimination in housing exacerbates social inequalities, limiting access to safe neighborhoods and economic opportunities for marginalized groups. Using an artifactual field experiment with real estate agents (REAs), this research reveals how biases manifest during the review stage of rental applications. Findings show that women-led families are disproportionately favored, driven by stereotypes about reliability rather than objective suitability. Conversely, gay and lesbian families experience varying degrees of disadvantage influenced by the REAs' gender and perceptions of tenant quality. The analysis highlights the dynamic interplay between fixed prejudices and belief systems, emphasizing that immutable biases do not primarily drive discrimination. The study concludes with actionable recommendations, calling for targeted interventions to challenge stereotypes and promote equitable access to housing markets.

Keywords: Field experiments, Prejudice, Gender, LGBTQ+
JEL Codes: J71 ; R21 ; J16

*Inter-American Development Bank
†ANOVA Policy Research
‡ANOVA Policy Research
§Inter-American Development Bank

The authors gratefully acknowledge the feedback from Omar Zambrano and Ricardo Benzecry from the ANOVA team, as well as Catalina Arias-Ortiz, Maria Emilia Worm, Maria Laura Romero, and Gustav Brauckmeyer from the Equilibrium team. Jorge Paredes provided excellent research assistance. We also thank Lina Diaz, Paloma Acevedo, Osmel Manzano, Tatiana Gallego, Allen Backman, and Nora Libertum for their comments.

1 Introduction

Discrimination against historically disadvantaged groups in Latin America's housing market exacerbates the region's deep-rooted social inequalities, limiting access to safe neighborhoods, essential amenities, quality services, and social networks for specific populations [1]. This perpetuates cycles of poverty, economic inefficiency, and inequality across the region. Measuring how relevant it is and understanding the mechanisms behind such discrimination is crucial for designing effective policies to promote the economic inclusion of minorities.

In Latin America, policymakers, advocates, and practitioners suggest that gender norms and sexual orientation influence the access of WGL families to essential markets, including housing, labor, credit, and public goods. Research has shown that housing discrimination against WGL families in OECD countries might stem from gender norms that punish nonconformity (Seelman, 2016; Glick et al., 2019; Turner, 2007; Wilets, 1997; Greene, 2018; Ehlke et al., 2022). However, for Latin American countries, empirical evidence supporting such claims is limited (Abbate et al., 2024; Zanoni et al., 2024b; Arceo-Gomez and Campos-Vazquez, 2014; Urban et al., 2020; IDB, 2022).

This paper investigates whether straight women-led families, same-sex lesbian families, and gay families—here collectively referred to as WGL families—encounter discrimination by real estate agents (REAs) when their applications to rentals are compared to those of similarly qualified male-led and non-homosexual families in Ecuador's formal housing market. Discrimination in housing can manifest in various ways, including biased treatment during the assessment of rental applications, property showings, and pricing practices (Ahmed et al., 2008; MacDonald et al., 2016; Barata and Stewart, 2010; Ahmed and Hammarstedt, 2008; Flage, 2018; Cummings and Seitchik, 2020). In Ecuador, the formal selection process for rental properties begins with the review of submitted documentation, where REAs assess applicants based on the information provided in an application (the review stage). That review stage acts as a preliminary filter, determining whether candidates advance in the selection process. We study REAs' discriminatory behaviors at this stage, an important one that shapes applicants' opportunities from the outset.

[1] See the social inequality matrix in Latin America by ECLAC (2016) and studies on the historical roots of discrimination and inequality in the region (Chong et al., 2010; Puyana, 2018)

To conduct our research, we implemented an artifactual field experiment in Ecuador's two largest cities, Quito and Guayaquil. We hired 455 REAs through incentivized referrals. Their job contract indicated they had to evaluate the reliability of an online platform designed to assess the quality of rental applications for specific properties. However, the study's actual objective was to measure REAs' discrimination.

In the experiment, REAs reviewed ten pairs of synthetic rental applications—created for the study—selecting one applicant from each pair and rating both applicants in terms of their fit for the property. Each pair was observationally equivalent, except that one applicant was randomized to be a WGL family. The experiment was multi-purpose, and, besides WGL families, some pairs of property applicants presented a migrant and a local family (data not used in this paper). To validate our data collection method, we incorporated a placebo round where both families showed no conspicuous differences. We constructed these equivalent family profiles based on fieldwork, including qualitative interviews and focus groups with REAs and other real estate professionals. The comparability of families in each "synthetic" pair we created was further validated using AI algorithms.

As part of the REA hiring process, we collected detailed data on their attributes, including gender, demographics, professional histories, and scores from standardized assessments of cognitive abilities, socio-emotional skills, and self-esteem. This dataset, combined with our study design—where REAs evaluated multiple family pairs—produced a longitudinal database to analyze discriminatory behaviors over time. By comparing estimates with and without controls for REA time-invariant characteristics, we tested whether discrimination stems solely from stable, time-invariant prejudices (as defined in the taste discrimination theory by Becker (1957)) or reflects a more complex interaction where prejudices play a role but are not the sole determinant.

The data consists of 7,372 observations at the applicant level linked to the REAs' attributes. We employed ordinary least squares (OLS) regression to compute coefficient estimates for indicators of women, gay, and lesbian families on two outcome variables: 1) an indicator for whether the REA referred the WGL applicant, and 2) a rating of "good fit for the property", which is an indicator on whether REAs rated applicants beyond seven on a Likert scale that measures suitability from one to ten. This enabled us to quantify

the percentage-point differences in selection rates (the "discrimination coefficient") and differences in property fit assessments between WGL and other families. We estimated discrimination coefficients for the subsamples of REAs, which were men and women, to study heterogeneity in discrimination according to the gender of the REA.

Our findings indicate that REAs treat otherwise observationally equivalent families differently based on the gender and sexual orientation of the applicants. Women-led families were favored over men-led ones, being selected 25.25 percent more frequently. Despite REAs choosing them more often, women-led families were not assigned a higher "fit for the property" ratings than men-led ones. This result suggests that the choice for women-led families is not based on attributes of fit but on other considerations, such as fairness, equity norms, or perhaps negative perceptions about men-led families, with women conceived more often to be more trustworthy primary caregivers and homemakers.

Overall, there were no statistically significant differences in REAS' choices between gay and straight families. However, when analyzing REAs' behavior according to their gender, male REAs rated gay applicants significantly lower than straight applicants in terms of property fit (there is a negative and statistically significant 0.05 points difference), while female REAs did not (the coefficient is 0.003 point difference and it is not statistically significant).

Regarding lesbian families, overall, the REAs choose them at the same rate as their heterosexual counterparts. However, when examining REAs' behavior according to their gender, we notice that female REAs were less likely to choose lesbian families compared to straight ones (the rate difference is 11.24 percentage points), whereas male REAs showed no such preference. The difference in a good fit for the property assigned to lesbian families is, on average, a negative 0.05 percentage point. For this group, ratings by both male and female REAs show the same negative sign and are statistically significant: both male and female REAs rated lesbian applicants significantly lower on property fit than they did straight applicants.

Exploiting the longitudinal nature of the data, we found no significant differences in either the discrimination coefficients or the indicator for assessments of a good fit for the property between models with and without recruiters' fixed effects. Assuming that

prejudices are a fixed trait over the short term, those results suggest that taste-based discrimination does not solely and directly drive discriminatory behaviors. However, we hypothesize that prejudices can still influence discrimination, yet indirectly, through their interaction with other manifestations of discriminatory behavior. For instance, prejudices can affect the REAs' belief systems, shaping how they interpret observable attributes and form stereotypes about disadvantaged groups. This interaction has been acknowledged in the literature: taste-based discrimination and statistical discrimination can be interrelated, with animus and prejudice potentially driving stereotypes, which manifest as statistical "truths" when market intermediaries (such as our REAs) assess candidates (Bertrand and Duflo, 2016).

Our findings are consistent with studies presenting evidence that women receive preferential treatment in some markets, including the labor market (Carlsson, 2011; Arceo-Gomez and Campos-Vazquez, 2014; Carlsson and Eriksson, 2019; Kline et al., 2021; Birkelund et al., 2021). Our results align with findings by Zanoni et al. (2024b) in a similar field experiment showing a preference for women over men job seekers in Ecuador, documenting a consistent pattern with a narrowing employment gap over time. Our results are also consistent with the idea that stereotyping (a process that does not rule out the influence of prejudices) is the main driver of discrimination, similar to, for instance, the findings in Lepinteur et al. (2023).

Our results contribute to the literature on discrimination toward disadvantaged populations in the real estate market in several ways. First, we document the extent of differences in discriminatory patterns towards LGW families in LATAM. In this region, experimental evidence of housing discrimination towards those groups is scarce (a notable exception is Abbate et al. (2024)). Our results suggest that policies to include LGW families in the housing market in Ecuador should not be homogeneous, for their effects will vary according to the existing baseline levels of discrimination. Too often, policies toward discrimination in the region are based on the assumption that there is negative discrimination and that unequal treatment is uniform across all dimensions of disadvantage. Yet empirical evidence has significant gaps and lacks standardized methodologies Urban et al. (2020) to generate a plausible bulk of evidence. Our paper reveals that assumption to be inconsistent with

the empirical evidence in the Ecuadorian housing market.

Second, taking advantage of our design's unique ability to recover information about the REAs (out of the scope of the standard method of correspondence studies), we found that REAs treat LGW families in ways that vary according to their gender. This finding, documented in developed countries,[2] underscores a complex pattern between REAs' characteristics and their discriminatory behaviors that require further research. We contribute with evidence from developing countries to this new line of inquiry. We also suggest that in Latin American countries, anti-discrimination initiatives and policies that, for instance, seek to challenge stereotypes about minority groups can be targeted differently to REAs according to their gender to increase their effectiveness.

Finally, we emphasize that prejudices against LGW families in the housing market do not directly manifest in real estate agents' (REAs') behavior as a fixed trait. Our findings, enabled by a longitudinal dataset and an innovative research design, suggest that a complex interplay between fixed prejudices and dynamic belief systems likely drives REAs' discriminatory actions. While prior literature extensively investigates how prejudices and belief systems influence discriminatory behaviors, the specific examination of interactions between fixed prejudices and dynamic belief systems in the context of REAs remains underexplored. Studies such as those by Fossett (2006) and Drydakis (2011) have examined ethnic preferences and systemic biases in housing markets, while Lang and Spitzer (2020) and Ihlanfeldt and Mayock (2009) have analyzed economic and psychological determinants of discrimination. However, these studies primarily focus on static prejudices or systemic structures without leveraging the longitudinal capabilities of experimental data. By incorporating a longitudinal design and a conceptual framework that isolates taste-based discrimination within a dynamic context, our research addresses a critical gap, offering a novel contribution to the empirical literature.

Framing the job of the REAs as testing a platform and hiring REAs with a competitive salary were deliberate methodological choices intended to minimize the effects of experimenter demands and promote professionalism. With the former choice, REAs concentrated

[2]For instance, Schwegman (2018) documents that in the US same-sex male couples, particularly non-White couples, are less likely to receive responses to rental inquiries compared to heterosexual couples (a pattern not found among same-sex female couples).

on platform functionality rather than fairness considerations, and we diverted their focus from potential social desirability biases induced by the experimenter. By hiring the REAs and paying them a competitive salary, we created a professional environment where their work generated expectations for future hires and kept incentives aligned with professional performance on the tasks assigned by the contract. The framing and incentives were carefully designed to elicit authentic behavior and a professional mindset. We paid careful attention to controlling these factors so that the possibility that subtle cues unintentionally signaled the study's purpose or that the tasks were not conducted with professionalism was minimal.

While field experiments measuring discrimination, like ours, raise concerns about external validity, they offer significant advantages by rigorously addressing relevant questions about who discriminates and how. Standard methods, such as correspondence studies, utilize natural setups but limit interactions with decision-makers to their unique responses to applications—responses that are often minimal and understudied—making it difficult to gather longitudinal information. In contrast, our methodology enables the collection of detailed data about gatekeepers of the process, such as REAs, and multiple inquiries about their behaviors. Although the naturality of our field experiment is simulated—unlike correspondence studies where it is inherent—our careful design, proper simulations of a platform functionality test, and aligned incentives through hiring the REAs effectively minimize these biases.

The paper is organized as follows. Chapter 1 provides an overview of gender and diversity inclusion in Ecuador, highlighting institutional advancements and challenges faced by the LGBTQ+ community. Chapter 2 describes the experimental design, including the recruitment of the REAs and the creation of synthetic rental applications. Chapter 3 details the demographic and professional characteristics of the REAs, offering insights into the sample's diversity. Chapter 4 presents the results, examining baseline discrimination, the role of prejudices, and subgroup heterogeneities. Finally, Chapter 5 summarizes the findings, discusses implications, and offers policy recommendations to address housing discrimination and foster inclusion.

2 Gender and Sexual Orientation in Ecuador

Over the past three decades, Ecuador has taken significant steps to protect the rights of people based on their gender identity and sexual orientation. This progress is evident in a series of milestones in the country's legal and institutional framework, including the decriminalization of homosexual relationships in 1997, the recognition of gender identity in its 2008 Constitution, and the legalization of same-sex marriage in 2019. Further advances are evident with the creation of dedicated agencies to protect the rights of LGBTQ+ people, such as the Undersecretariat of Diversities in 2021, tasked with designing an equality-focused public policy agenda [3].

Ecuador stands at the forefront of Latin America after a decade of dedicated efforts to record the LGBTQ+ population and generate rigorous data on the socioeconomic challenges they face. The first initiative involved a nonprobabilistic sampling survey of 2,805 respondents conducted between November 2012 and January 2013 by the National Institute of Statistics and Censuses (Instituto Nacional de Estadística y Censos/INEC). A second effort aimed to collect information about the characteristics and legal situation of LGBTQ+ people in penitentiary centers. A third noteworthy step is the recent 2022 Population and Housing Census, which included, for the first time, two questions to capture information about gender identity and sexual orientation. Official figures indicate that the LGBTQ+ community consists of 270,970 individuals (over 18 years of age), which constitutes 2.43 percent of the total population. Regarding individuals with diverse sexual orientations, the latest census (2022) recorded 221,721 people, of whom 55 percent are lesbians, 36.1 percent are gay, 7.1 percent are bisexual, and 1.8 percent are other.

Despite this progress in protecting LGBTQ+ human rights, discriminatory behavior in Ecuador continues to be reported. A 2021 survey conducted by the UNFPA and national NGOs revealed that 85 percent of LGBTQ+ respondents had been victims of psychological violence, 23 percent had suffered sexual abuse, and 11 percent had been subjected to physical violence (CNIG, 2022). In addition, the report indicates that the LGBTQ+ population faces obstacles within the labor market, as only 28 percent of respondents reported having

[3] Plan de Acción de Diversidades LGBTI+ (PAD) 2022-2025

full-time jobs (over 40 hours per week) with incomes above minimum wage (CNIG, 2022).[4]

Delving into the housing market landscape, the 2022 census data reveal the state of housing tenure among lesbian and gay individuals. Despite similar homeownership rates between lesbian (59.9 percent) and gay individuals (57.4 percent), the picture changes when examining rental housing occupancy. The census shows a higher proportion of gay individuals (21.6 percent) residing in rental houses compared to lesbians (18.2 percent).

The evidence of housing discrimination against the lesbian and gay population in Ecuador is limited. The only prior field experiment conducted in the country (a correspondence study) found a statistically unequal treatment effect with regard to transgender heterosexual couples within the housing rental market, but not gay male couples (Abbate et al., 2024).

Although the existing literature does not reveal evidence of prejudice against lesbian and gay families when they seek rental houses in Ecuador, an artifactual experiment did shed light on discrimination based on sexual orientation in the labor market (Zanoni et al., 2024b). This study found that while lesbian job seekers were preferred to their heterosexual counterparts, they were offered lower salaries. Conversely, gay male candidates faced lower selection rates and were perceived as less qualified for the job (Zanoni et al., 2024b). The results reveal heterogeneous patterns of discrimination based on the interaction between job applicants' gender identity and sexual orientation, as well as the interplay between job seekers' sexual preferences and the gender of the human resource recruiters (Zanoni et al., 2024b,a).

The context described underscores the unequal treatment and perception of people based on their sexual orientation. When the combination of gender identity and sexual orientation is factored into the analysis, discrimination involves multifaceted and complex dynamics. In our country of interest, this complexity is further amplified given that gender-based discrimination encompasses historical legacies. Since the pre-Columbian period, women have often been perceived as inferior to men and primarily assigned to domestic and child-rearing activities (Arévalo, 2021). The current context of discrimination, on the other

[4]The 2022 Ecuadorian Census data provide a picture of the labor market status of LGBTQ+ community members: 136,825 individuals (50.5 percent of the LGBTQ+ population) reported being employed, while 9.3 percent declared themselves to be unemployed.

hand, is shaped by factors that aim to reduce the problem, such as social norms advocating gender equality (Zanoni et al., 2024a) and ongoing policy interventions to address the challenges of diversity and gender inclusion[5].

3 Experimental Design

To investigate potential discrimination based on gender and sexual orientation within Ecuador's real estate market, we conducted a 'vignette study' involving REAs in Ecuador following the methodological approach of Zanoni and Díaz (2024). REAs were recruited in Quito and Guayaquil, the country's primary urban centers, through various channels, including LinkedIn, real estate chambers, and individual agencies. To encourage participation and ensure a robust sample size, REAs were incentivized for successful referrals. Furthermore, to secure their commitment to the experiment, REAs were offered competitive compensation and informed that they were engaged in providing consulting services regarding rental candidates, thus minimizing any potential deception from an experimental economics standpoint.

The experiment unfolded online through a tailored web platform, providing REAs with a seamless interface to evaluate rental candidates. The platform aimed to simulate the authentic conditions under which REAs evaluate rental applications. Subsequent focus groups conducted after the experiment confirmed that the REAs were unaware of the study's real objectives, validating the platform's effectiveness in achieving its intended purpose. This unique approach, which combines working with real REAs and simulating real interactions, offers a distinctive combination not found in the existing literature.

Before the experiment began, the REAs were required to complete an onboarding assessment, which encompassed the collection of personal attributes, standardized cognitive tests, and socio-emotional assessments. These socio-emotional tests comprised three psychological evaluations, including the Wonderlic Personnel Test (WPT), a timed cognitive ability assessment commonly utilized in employment settings; the Rosenberg Self-Esteem Scale (RSE), a 10-item measure assessing overall self-esteem; and the NEO Five-Factor

[5]Agenda Nacional para la Igualdad de Género 2021-2025

Inventory (NEO FFI), a 60-item tool that evaluates 5 fundamental personality traits: neuroticism, extroversion, openness to experience, agreeableness, and conscientiousness.

During the experiment, we provided clear and concise instructions with the defined objective of discerning the most suitable candidates. REAs' assessment of applicants encompassed three key tasks: ranking each family applicant based on their fit for the corresponding property using a Likert scale from 1 to 10, selecting their preferred applicant, and suggesting an appropriate rent amount for each candidate. To ensure the REAs grasped the study's purpose, we validated their comprehension of the tasks through pilot tests.

The REAs evaluated pairs of rental candidates across ten rounds (or trials). Each trial represented the evaluation of a unique rental property created to portray real rental opportunities from the REA's city of residency (Quito or Guayaquil)(see Tables A1–A2 for more details on the properties created). With each rental property was a pair of applicants carefully designed so that their characteristics (1) aligned with those commonly found among individuals seeking rentals and (2) were equivalent in al but one, the characteristic of interest: gender or sexual preference (see Tables A3–A6). In trials examining gender discrimination, one applicant was male and the other female. Both applicants had the same characteristics in terms of age, nationality, marital status, and number of children. By way of illustration, Table A3 presents an evaluation of three rental properties in Quito for a gender-based discrimination trial. To ensure profile equivalence across all characteristics, the first two properties included single female and male applicants, while the third property compared divorced female and male applicants with children. In the case of the trials of discrimination based on sexual preference, one applicant was signaled as living with a person of the same sex. In contrast, the other applicant was signaled as having a spouse of the opposite sex (See Tables A4 and A6 for more details on applicants' pairing and characteristics).

The applicants were intentionally made comparable in terms of qualifications and attributes, differing only in their gender and LG self-identification to ensure that any differences observed in REAs' choices could be attributed solely to the gender and sexual orientation of the applicants. Moreover, synthetic applicant equivalency was evaluated using focus groups with actual REAs before data collection. Table 2 presents a balance

test table assessing the disparities between women and men, as well as between LG, in terms of key attributes among rental applicants. The table indicates that the candidates exhibited observational equivalence across all dimensions. Therefore, any disparities in the assessment of the REAs would indicate instances of discriminatory behavior by them.

Before the start of round 8, half of the REAs were randomly selected to receive a nudge aimed at mitigating any discriminatory behavior. This nudge appeared as a randomized pop-up message, stating, "*Welcome to the final section of the activity! Many people face discrimination for being part of minority groups. It's important to note that individuals from minority backgrounds often exert additional effort to achieve the same goals as others. This determination may be reflected in their behavior as tenants.*" The rationale behind this nudge was to highlight the challenging circumstances and unique obstacles encountered by diverse gender and LG populations, thereby encouraging REAs to reassess their perceptions. Kirgios et al. (2022) find that highlighting the marginalized identity of women and racial/ethnic minorities activates motivations to avoid prejudiced reactions. Similar results are presented by Munguia Gomez (2023), who analyzes the effect of merit in the selection of disadvantaged applicants.

Hence, rounds 1–7 were aimed at evaluating the degree of discrimination in the Ecuadorian real estate market based on gender or LG self-identification, whereas rounds 8–10 were dedicated to assessing the effectiveness of the nudge in influencing any discriminatory assessments made.

4 The Recruitment Process and Characteristics of the REAs

Regulations governing real estate intermediaries, like REAs, are very minimal in Ecuador. This allows individuals to work as an REA either as their primary or secondary occupation. They can operate independently or be affiliated with real estate agencies, either formally or informally. REAs can also choose their level of effort, engaging in either full-time or part-time work, and enter or withdraw from the market as they see fit, as the dynamism in the real estate transaction often aligns with the economic cycle. Due to this inherent

diversity, the exact scale, professional traits, and demographic characteristics of the REA population in the country are uncertain. These characteristics make the REA population a "hard-to-reach" group, rendering standard survey sampling techniques inadequate for conducting studies.

We recruited REAs using the referral-driven sampling method (RDS henceforth). When researching hard-to-reach populations, such as REAs in this study, RDS sampling has been shown to ensure the representativeness of the underlying population (Heckathorn, 1997a,b; Johnston and Sabin, 2010). To gain a broad scope of the sampling seeds (REA-seeds, i.e., the individuals initially contacted), we reached out to REAs via LinkedIn and through real estate chambers and agencies in Quito and Guayaquil. Referrals from these REA seeds to other REAs expanded the sampling tree until we reached six levels of referrals. Out of the 477 REAs contacted, 455 signed up to work with us for pay, evaluating profiles of candidates and making tenant recommendations. Of these, 361 finished all 10 trials, 3 completed up to 9 trials, and 19 REAs carried out 7 trials or less, leading to a dataset with 7372 observations. Out of 383 REAs who completed at least 1 trial, 192 REAs were randomly selected to receive the nudge aimed at mitigating discriminatory behavior.

Table 1 presents various demographic, employment, and educational attributes of the REAs who completed at least one gender or sexual preference trial. Per the table, 58.42 percent of the REAs were women, and, on average, they were 36 to 37 years old. Most REAs possessed university degrees, with 44.21 percent having completed their college education (12.63 percent held technical degrees and 5.58 percent master's degrees or above). Their average work experience was 3.82 years, and 34 percent of them reported working full-time in the real estate sector. Approximately 55 percent of the REAs worked independently.

In Table 1, we examine variances between the characteristics of REAs whom we initially contacted directly and those who were referred by other REAs. In general, there are notable differences between the two groups of REAs. Referred REAs were typically younger and had fewer years of experience, with an average age difference of about six years and nearly two years less experience. Additionally, they possessed lower educational qualifications, with fewer having college degrees. Regarding personality traits and self-esteem, referred REAs scored lower on the Rosenberg self-esteem test and showed higher levels of neuroticism

but lower levels of extroversion, openness, and agreeableness compared to those initially contacted. The differences between initially contacted and referred REAs enhanced the diversity of the sample in terms of age, experience, education, and personality traits and thus captured a broader swath of the REA population.

Nevertheless, these differences could bring into play external validity limitations if the behaviors of younger and less experienced REAs differed from those of older and more experienced ones. While testing this hypothesis is important, it falls outside the scope of our study. As a result, we assume our findings primarily apply to younger-than-average REAs.

Using individual-level records from the 2022 Ecuador Census, we approximated the demographic characteristics of REAs in the population and compared them to our sample.[6] Similar to our sample of REAs, census data revealed that in Ecuador, the majority of individuals working in the real estate market are women (55.94 percent), with approximately half (50.55 percent) reporting that they had undergraduate degrees. The workforce in the real estate sector predominantly consists of middle-aged adults, with an average age of 45, which means they are older compared to our RDS sample.

[6]To identify the population of REAs, the following steps were taken. First, we identified individuals who were employed and reported working in the real estate sector. Second, we selected individuals working in occupations related to "Directors and managers, "Administrative support staff, Scientific and intellectual professionals, Service workers and store and market salespersons, Technicians and mid-level professionals, and those who did not know their occupation category. Third, we identified people who reported having completed their respective educational level using the variables P17R (Highest level of education attended or attended), P18R (Highest grade, course or year passed), and P20 (Earned a degree at the level indicated).

Table 1: REAs' Attributes

Variable	All REAs	Initial contact	Referred	Difference
Demographics and Education				
REAs Age (years)	36.5184	41.2979	35.8438	-5.454***
	(11.1408)	(11.1529)	(10.9893)	(1.7347)
REAs Gender (Female == 1)	0.5842	0.5745	0.5856	0.0111
	(0.4935)	(0.4998)	(0.4934)	(0.0778)
REAs Nationality (Ecuadorian == 1)	0.9816	0.9787	0.982	0.0033
	(0.1346)	(0.1459)	(0.1332)	(0.0225)
REAs Employment Experience (Years)	3.8253	5.4574	3.5949	-1.8626**
	(4.1086)	(5.9516)	(3.7325)	(0.8919)
Does REA Works Full Time? (Yes == 1)	0.3421	0.4255	0.3303	-0.0952
	(0.475)	(0.4998)	(0.471)	(0.0773)
REAs Work Status (Independent == 1)	0.5474	0.4681	0.5586	0.0905
	(0.4984)	(0.5044)	(0.4973)	(0.0785)
Does the REA has a college degree? (Yes == 1)	0.4974	0.617	0.4805	-0.1365*
	(0.5007)	(0.4914)	(0.5004)	(0.0767)
Education: Primary	0.0026	0	0.003	0.003
	(0.0513)	(0)	(0.0548)	(0.003)
Education: Secondary	0.3632	0.2766	0.3754	0.0988
	(0.4815)	(0.4522)	(0.4849)	(0.0711)
Education: Technical Degree	0.1263	0.0851	0.1321	0.047
	(0.3326)	(0.2821)	(0.3391)	(0.0451)
Education: College Degree	0.4421	0.5319	0.4294	-0.1025
	(0.4973)	(0.5044)	(0.4957)	(0.0784)
Education: Masters Degree	0.05	0.0638	0.048	-0.0158
	(0.2182)	(0.2471)	(0.2142)	(0.0379)
Education: PhD Degree	0.0053	0.0213	0.003	-0.0183
	(0.0725)	(0.1459)	(0.0548)	(0.0215)
Share of knowledge of Real State Market (%)	33.1579	33.617	33.0931	-0.5239
	(18.3638)	(16.2086)	(18.6691)	(2.5761)
Scores on standardized tests				
Score in Wonderlic test (std.)	-0.0122	0.0906	-0.0267	-0.1173
	(1.0017)	(0.9612)	(1.0078)	(0.1507)
Score in Rosenberg test (std.)	0.0163	0.5215	-0.0568	-0.5783***
	(0.9968)	(0.7704)	(1.0055)	(0.1255)
Score in Neoffi test (std.)	0.0152	0.2579	-0.0193	-0.2772**
	(0.9956)	(0.8029)	(1.0164)	(0.1312)
Score in Neoffi - Neuroticism (std.)	-0.0046	-0.4117	0.0525	0.4642***
	(0.9968)	(0.8725)	(1.001)	(0.14)
Score in Neoffi - Extroversion (std.)	0.0139	0.2644	-0.0212	-0.2856**
	(0.9943)	(0.8412)	(1.01)	(0.136)
Score in Neoffi - Openness (std.)	0.0216	0.3652	-0.0267	-0.3919**
	(1.0067)	(1.0038)	(0.9991)	(0.158)
Score in Neoffi - Agreeableness (std.)	0.0033	0.298	-0.0381	-0.3361**
	(0.9932)	(0.9192)	(0.9975)	(0.1463)
Score in Neoffi - Conscientiousness (std.)	0.0076	0.2059	-0.0204	-0.2264
	(0.999)	(0.8803)	(1.0128)	(0.1414)
Observations	380	47	333	380

Note: Stars indicate the statistical significance of differences in means across groups at various significance levels: * $p < .10$, ** $p < .05$, *** $p < .01$. Each group exhibits the difference between the referred group and the initial contact group. Note that variables bearing the notation of a value followed by `==1` are indicative of the group's proportion.

Table 2: Applicants' Characteristics

Variable	(1) Male	(2) Female	(3) Difference (1) - (2)	(4) Male straight	(5) Male gay	(6) Difference (4) - (5)	(7) Female straight	(8) Female Lesbian	(9) Difference (7) - (8)
Demographics									
Candidates Age (years)	42.9025	43.1105	0.208	38.1579	38.7632	0.6053	40.0172	40.2086	0.1914
	(6.8777)	(6.4602)	(0.3106)	(6.3752)	(5.5783)	(0.3967)	(6.7159)	(6.7496)	(0.4416)
Candidates Laboral Experience (Years)	2.4382	2.4434	0.0052	2.3931	2.3723	-0.0208	2.4188	2.4387	0.0199
	(0.9448)	(0.9464)	(0.044)	(0.9715)	(0.9614)	(0.064)	(0.9167)	(0.9024)	(0.0597)
How higher is the candidate's income in relation to rent?	3.0563	3.0567	0.0003	3.0026	3.0175	0.0149	3.0196	3.012	-0.0075
	(0.4743)	(0.4723)	(0.022)	(0.4508)	(0.4644)	(0.0303)	(0.443)	(0.4351)	(0.0288)
Does the candidate has a college degree? (Yes == 1)	0.4572	0.4572	0	0.375	0.375	0	0.5333	0.5333	0
	(0.4984)	(0.4984)	(0.0232)	(0.4847)	(0.4847)	(0.0321)	(0.4994)	(0.4994)	(0.0328)
Does candidate have kids? (Yes == 1)	0.6046	0.6046	0	0.4035	0.4035	0	0	0	0NA
	(0.4892)	(0.4892)	(0.0228)	(0.4911)	(0.4911)	(0.0325)	(0)	(0)	(0)
Job of the applicant:									
Working Area: Culture/Tourism and Entertainment	0.1398	0.1398	0	0.1447	0.1447	0	0.1677	0.1677	0
	(0.3469)	(0.3469)	(0.0161)	(0.3522)	(0.3522)	(0.0233)	(0.374)	(0.374)	(0.0245)
Working Area: Health and Education	0.2958	0.2958	0	0.2917	0.2917	0	0.2968	0.2968	0
	(0.4566)	(0.4566)	(0.0213)	(0.455)	(0.455)	(0.0301)	(0.4573)	(0.4573)	(0.03)
Working Area: Management and Law	0.1181	0.1181	0	0.0987	0.0987	0	0.0989	0.0989	0
	(0.3229)	(0.3229)	(0.015)	(0.2986)	(0.2986)	(0.0198)	(0.2989)	(0.2989)	(0.0196)
Working Area: Marketing and Sales	0.2449	0.2449	0	0.2632	0.2632	0	0.2237	0.2237	0
	(0.4302)	(0.4302)	(0.02)	(0.4408)	(0.4408)	(0.0292)	(0.4171)	(0.4171)	(0.0274)
Working Area: Science and Technology	0.2015	0.2015	0	0.2018	0.2018	0	0.2129	0.2129	0
	(0.4014)	(0.4014)	(0.0187)	(0.4018)	(0.4018)	(0.0266)	(0.4098)	(0.4098)	(0.0269)
Observations	923	923	1846	456	456	912	465	465	930

Note: Stars indicate the statistical significance of differences in means across groups at various significance levels: * $p < .10$, ** $p < .05$, *** $p < .01$. Columns (1) and (2) display the attributes of applicants based on whether they identify as part of the Women's community.

5 Results

Discrimination Estimates

In this section, we document how discrimination unfolded in our experiment by showing the differences in the choice rates and ratings of fit for the property between applicant families who were led by WGL individuals and those who were not. In Table 3, we present the β_1 coefficient estimates produced by OLS regression from the following model specification:

$$Y_{itr} = \beta_0 + \beta_1 X_{it} + \beta_k Z_{it} + \epsilon_{itr}. \tag{1}$$

In this model, Y_{it_r} denotes one of two dependent variables, either an indicator with the value of one if the family is chosen by the REA and zero otherwise (for the Choice of prejudiced family outcome) or the score in a Likert scale from 1 to 10 (for the Good Fit for property outcome). The values of Y_{it_r} reflect those outcomes associated with REA r when assessing the rental applicant i during trial t of the experiment. The variable X_{i_t}

Table 3: Baseline Discrimination

	Choice of prejudiced family				Good fit for the property			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
	General	**Male REA**	**Female REA**	**Difference (2)-(3)**	**General**	**Male REA**	**Female REA**	**Difference (6)-(7)**
A. Women								
Discrimination Coeff.	0.2524 ***	0.2238 ***	0.2728 ***	-0.049	0.0078	0.0053	0.0097	-0.0044
	(0.0325)	(0.0526)	(0.0416)		(0.0115)	(0.0169)	(0.0158)	
Mean of Control group	0.3738	0.3880	0.3636		0.8852	0.9036	0.8720	
Observations	1846	768	1078		1846	768	1078	
B. Gay								
Discrimination Coeff.	-0.0527	-0.0118	-0.0821	0.0703	-0.0235	-0.0504 *	-0.0025	-0.0479
	(0.0487)	(0.0761)	(0.0643)		(0.019)	(0.0265)	(0.0268)	
Mean of Control group	0.5263	0.5077	0.5402		0.8838	0.9179	0.8582	
Observations	912	390	522		912	390	522	
C. Lesbian								
Discrimination Coeff.	-0.0404	0.0635	-0.1124 *	0.1758 **	-0.056 ***	-0.0754 **	-0.0433 *	-0.0321
	(0.0482)	(0.0751)	(0.0638)		(0.0185)	(0.0306)	(0.0233)	
Mean of Control group	0.5204	0.4684	0.5564		0.8860	0.9053	0.8727	
Observations	930	380	550		930	380	550	

Note: In the panels dedicated to the choice of prejudiced family, various statistical indicators are presented, including the discrimination coefficient, standard error (in parenthesis), mean value of the control group, and a number of observations in the sample. This table has a major vertical separation for each dependent variable and a minor vertical separation indicating the general discrimination coefficient (columns 1 and 5), Male REA, Female REA, and the difference between male and female REAs followed by a Wald test to check whether there are statistically significant differences between coefficients. The shown specification includes demographic attributes of the candidate (age, gender [when needed], nationality, college degree, partner, child, income level, and extra documentation), the sampling method (LinkedIn or RDS), and fixed effects of occupation, city, and trial. Significance levels: * $p < .10$, ** $p < .05$, *** $p < .01$.

is an indicator that signifies whether the rental applicant under evaluation was randomly designated as a woman, gay, or lesbian, and β_1 is the discrimination coefficient. Z_{i_t} represents a control vector that includes structural variables such as the sampling method, city fixed effects, and applicants' characteristics [7]. Finally, ϵ_{it_r} accounts for unobserved heterogeneity.

The findings from our study reveal significant gender and sexual- orientation-based discrimination in Ecuador's rental market. Women-led families are favored over men-led ones, being selected 25.25 percentage points more frequently, a trend consistent across both male and female REAs. However, women-led families did not receive significantly higher "Good fit for the property ratings. The significant favoritism toward women-led families, consistent across both male and female REAs, underscores the complexity of gender dynamics in housing discrimination in Ecuador. However, the lack of higher Good fit for the property ratings for these women-led families suggests that the preference might not be rooted in perceived suitability but rather in inherent biases.

In contrast, male REAs rated gay applicants significantly lower in terms of property fit, although this did not impact the overall selection rates of the latter. Lesbian applicants faced notable discrimination, particularly from female REAs, who selected 11.23 percent fewer lesbian applicants. Additionally, both male and female REAs rated lesbian applicants significantly lower on good fit for the property, with negative discrimination coefficients of -0.0745 and -0.0437, respectively. These results highlight a gender-driven pattern of discrimination, emphasizing the need for targeted anti-discrimination measures in the housing market. Such marked discrimination against lesbian applicants, mainly by female REAs, and the lower ratings Good fit for the property for gay and lesbian applicants from male REAs highlight a previously ignored interaction between gender and sexual orientation in discriminatory practices that extends beyond the applicants to include the REAs themselves.

[7] We consider the following applicants' characteristics: age, gender, nationality, education level (with a dummy variable indicating whether the candidate has a college degree or higher), marital status (whether the applicant has a partner), parental status (if the applicant has children), the ratio of the applicant's income to rent, years of work experience, and the applicant's field of work.

5.1 REAs Prejudice as a fixed trait

In this subsection, we compare discrimination coefficient estimates from models with and without fixed effects. We assume that prejudices toward disadvantaged groups remained constant during the experiment and exploited the longitudinal nature of our data to establish whether tastes were a direct driver of discriminatory behaviors of the REAs. Table 4 presents the discrimination coefficients for each group (women, gay, and lesbian families) under two model specifications: one without recruiter fixed effects and one with those fixed effects.

For women, the discrimination coefficient in the Choice of candidate variable remains virtually unchanged irrespective of whether we include those fixed effects: 0.2524 without fixed effects and 0.2525 with fixed effects. This suggests that the discriminatory preference for women-led families is consistent and driven by factors other than pure taste-based prejudice. Instead, the decision to favor women-led families is indicative of a more complex pattern of discrimination, which we hypothesize might result from an interaction of prejudices with the REAs' belief systems.

Similarly, for gay families, the discrimination coefficient shows minimal variation between the models (-0.0527 without fixed effects and -0.0535 with fixed effects). This result indicates that prejudices may play a limited direct role in shaping discriminatory behaviors. However, this does not imply that prejudices are insignificant; rather, they may influence behaviors in more complex and indirect ways. The consistent negative coefficient across both models suggests that REAs might be influenced by the dynamics of belief systems when assessing gay applicants.

For lesbian families, the Choice of candidate variable also shows a negative discrimination coefficient, slightly increasing from -0.0404 without fixed effects to -0.0321 with fixed effects. This slight change implies that while stereotypes contribute to the lower selection rates for lesbian families, there may also be some pure taste-based prejudice at play, though its impact is minimal.

The coefficients for the 'good fit for the property' variable show minimal differences across all groups (women, gay, and lesbian families) between models with and without fixed effects. This consistency suggests that discriminatory behaviors are influenced by

factors beyond direct prejudice, potentially interacting dynamically with individual biases. These findings imply that REAs' assessments are not predominantly shaped by fixed, pre-conceived biases but rather by short-term, malleable biases, opening the door for targeted interventions to address and modify these behaviors.

Overall, the results in Table 4 indicate that direct prejudice or individual preferences are not the primary drivers of discriminatory behavior in this rental market. Instead, prejudice likely operates indirectly by shaping REAs' beliefs about the attributes and qualifications of applicants, which then influence their evaluations and decision-making processes.

Table 4: Baseline Discrimination

	Choice of prejudiced family			Good fit for the property		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
	No fixed effects	**Fixed effects**	**Difference**	**No fixed effects**	**Fixed effects**	**Difference**
A. Women						
Discrimination Coeff.	0.2524 ***	0.2525 ***	0 ***	0.0078	0.008	-0.0002 **
	(0.0325)	(0.0365)		(0.0115)	(0.0129)	
Mean of Control group	0.3738	0.3738		0.8852	0.8852	
Observations	1846	1846		1846	1846	
B. Gay						
Discrimination Coeff.	-0.0527	-0.0535	0.0009 **	-0.0235	-0.0232	-0.0003 **
	(0.0487)	(0.0633)		(0.019)	(0.0244)	
Mean of Control group	0.5263	0.5263		0.8838	0.8838	
Observations	912	912		912	912	
C. Lesbian						
Discrimination Coeff.	-0.0404	-0.0321	-0.0084	-0.056 ***	-0.055 **	-0.0011 *
	(0.0482)	(0.0635)		(0.0185)	(0.0242)	
Mean of Control group	0.5204	0.5204		0.886	0.886	
Observations	930	930		930	930	

Note: In the panels dedicated to each prejudiced, various statistical indicators are presented, including the discrimination coefficient, standard error (in parentheses), mean value of the control group, and the observations conforming the sample. This table has a major vertical separation for each dependent variable, and a minor vertical separation indicating the general discrimination coefficient (columns 1 and 5), Male REA, Female REA, and the difference between male and female REAs followed by a Wald test to check whether there are statistically significant differences between coefficients. Significance levels: * $p < .10$, ** $p < .05$, *** $p < .01$.

5.2 Heterogeneity Analysis

In this section, we analyze the diverse patterns in discrimination coefficients across different subgroups of the characteristics of REAs and applicants. This analysis makes a unique contribution to our study by showing how REAs' and applicants' characteristics interact with applicants' gender and sexual orientation, enhancing the findings of the previous section. Figure 1 provides a graphical representation of the discrimination coefficients across the subgroups, accompanied by 90 percent confidence intervals.

Our findings indicate that applicants from women-led families are more likely to be selected than male-led families, irrespective of the REAs' gender and working conditions and the candidates' characteristics. The most pronounced discrimination is observed for women who are Scientific and intellectual professionals, who were 28 percent more likely to be selected compared to men in the same sector. Additionally, across all subgroups, women-led families do not consistently receive higher or lower ratings on the good fit for the property indicator.

Conversely, families led by gay individuals working in the Marketing and sales sector, as well as the Culture, tourism, and entertainment industries, were less likely to be selected compared to their heterosexual counterparts. However, they did not receive lower rankings on Good Fit for the Property (see figure 1). In contrast, families headed by lesbians are ranked lower on the chart across several subgroups, including REAs in Guayaquil, both female and male REAs, dependent and independent REAs, and lesbians working in Marketing and sales. Nonetheless, our findings show that these families do not generally face lower selection probabilities except when interacting with female REAs.

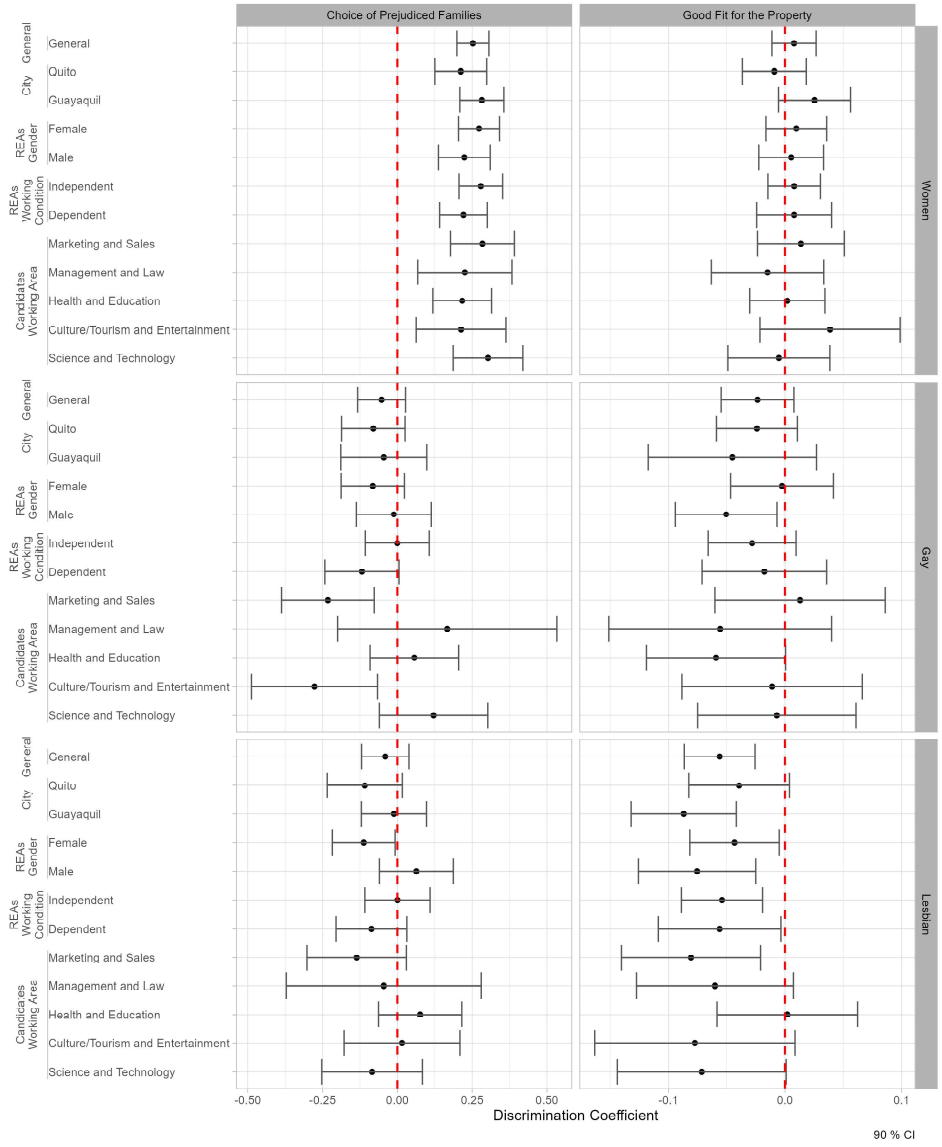

Figure 1: Heterogeneity in the Discrimination Coefficients

Note: The figure presents estimates for the discrimination coefficients using different subgroups, accompanied by 90 percent confidence intervals.

6 Conclusion

The housing market plays a crucial role in enabling upward social mobility, and consequently, discrimination within this market negatively impacts overall welfare. In our study, we used an artifactual field experiment to uncover how the characteristics of participants in a rental transaction—specifically REAs and prospective tenants—affect discriminatory behaviors in the review phase of the application process.

Discrimination affects whether a candidate can get access to a rental property at several stages of the evaluation process. Real estate agents are one key intermediary in that market, and, as such, their opinions while reviewing applications and interviewing applicants matter for the result. We cannot assert that REAs behave the same way when they receive only information (indirect interaction) and analyze it when they interview people in person (direct interaction) in the process of assessing candidates. Our results are valid for understanding how discrimination plays a role in the kind of indirect interaction involved in evaluating applications– the review stage.

REAs tend to rely on their assessments (right or wrong) when evaluating the suitability of applicants from disadvantaged groups rather than acting solely on fixed biases or tastes. The observed differential treatment toward WGL families, primarily gay and lesbian applicants, appears to be rooted in assumptions about the behaviors of those disadvantaged groups rather than only outright prejudices of the REAs themselves.

For women-led families, the positive discrimination may stem from stereotypes that associate women with greater reliability or lower risk as tenants despite these attributes not being objectively verified. Conversely, the discrimination observed against gay and lesbian applicants, particularly the lower ratings on the Good Fit for the Property indicator, appears to be rooted in negative stereotypes about these groups. These stereotypes likely prompt agents to seek additional information or to evaluate these applicants more harshly, contributing to the observed discrimination.

Consistent with findings by Faber and Mercier (2022), our research also identifies subtle, multidimensional discrimination mechanisms, particularly how stereotypes intersect with race and family structure in shaping housing access.

Interventions aiming to reduce housing discrimination should focus on altering those

underlying stereotypes that drive statistical discrimination. For instance, educational campaigns and training for REAs could help dismantle these stereotypes and promote more equitable decision-making processes. Our findings highlight the importance of considering the gender of REAs in policy interventions because the interaction between an REA's gender and an applicant's gender or sexual orientation matters in the manifestation of discrimination. Studying the effectiveness of behavioral interventions that modify the information content upon which REAs make assessments of applicants' qualities is a promising line of research.

The professional execution of the task and the heterogeneity we observed in the patterns in REAs' family choices by condition of disadvantage provide evidence that experimenter demand effects were minimal. If REAs had been influenced by perceived expectations of the study, we would expect a uniform approach toward all disadvantaged groups, either consistently favoring or disfavoring them in a socially desirable manner. However, our findings reveal variation in discriminatory behaviors across different groups, with REAs not uniformly preferring or rejecting disadvantaged families. In some cases, the rate of selection for different disadvantaged families even differed in sign, which supports the notion that REAs were not responding to implicit pressures to conform to presumed research objectives. This heterogeneity in responses suggests that REAs engaged with the task genuinely, guided by their professional judgments rather than demand effects.

Furthermore, experimenter demand effects are less likely to emerge in the initial rounds of the experiment, particularly the first one, where REAs would be more focused on evaluating the platform's functionality—the task they were hired to accomplish. We found no significant variation in the rates of choice of disadvantaged families between the first and later rounds, reinforcing the consistency and reliability of REAs' choices throughout the experiment. Additionally, systematic classification of open-ended responses revealed that REAs justified their choices based on perceived differences in attributes related to tenant quality, aligning with a neutral assessment approach.

Overall, our research underscores the complexity of the discriminatory behaviors in Ecuador's rental market and the necessity of targeted antidiscrimination policies that address both notorious and subtle forms of bias. Our study not only contributes to the

academic understanding of housing market discrimination but also provides actionable insights for designing more effective policy interventions that promote social inclusion and equal access to housing.

References

Abbate, N., Berniell, I., Coleff, J., Laguinge, L., Machelett, M., Marchionni, M., Pedrazzi, J., and Pinto, M. (2024). Discrimination against gay and transgender people in latin america: A correspondence study in the rental housing market. *Labour Economics*, 87:102486.

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*, 17:234–238.

Ahmed, A. M. and Hammarstedt, M. (2008). Discrimination in the rental housing market: A field experiment on the internet. *Journal of Urban Economics*, 64:362–372.

Arceo-Gomez, E. O. and Campos-Vazquez, R. M. (2014). Race and marriage in the labor market: A discrimination correspondence study in a developing country. *American Economic Review*, 104(5):376–380.

Arrow, K. (1973). *The theory of discrimination*, pages 3–33. Princeton University Press.

Arévalo, E. (2021). Gender inequality in latin america: The case of ecuador.

Banaji, M. R., Fiske, S. T., and Massey, D. S. (2021). Systemic racism: individuals and interactions, institutions and society. *Cognitive Research: Principles and Implications*, 6(1):1–15.

Barata, P. and Stewart, D. (2010). Searching for housing as a battered woman: Does discrimination affect reported availability of a rental unit? *Psychology of Women Quarterly*, 34:43–55.

Becker, G. (1957). *The economics of discrimination*. University of Chicago Press.

Bertrand, M. and Duflo, E. (2016). Field experiments on discrimination. *NBER Working Paper*, (22014).

Birkelund, G. E., Lancee, B., Larsen, E. N., Polavieja, J. G., Radl, J., and Yemane, R. (2021). Gender discrimination in hiring: Evidence from a cross-national harmonized field experiment. *European Sociological Review*, 38(3):337–354.

Blanco, A. G., Cibils, V. F., and Muñoz, A. F. (2014). *Rental Housing Wanted: Policy Options for Latin America and the Caribbean.* IDB Monograph ; 181. Inter-American Development Bank, Washington, D.C. Cataloging-in-Publication data provided by the Inter-American Development Bank Felipe Herrera Library. Includes bibliographical references.

Carlsson, M. (2011). Does hiring discrimination cause gender segregation in the swedish labor market? *Feminist Economics*, 17(3):71–102.

Carlsson, M. and Eriksson, S. (2019). In-group gender bias in hiring: Real-world evidence. *Economics Letters*, 185:108686.

Chong, A., Ñopo, H., and Moro, A. (2010). Discriminacion en america latina: una perspectiva economica. Technical report, Inter-American Development Bank.

Christensen, P. and Timmins, C. (2018). Sorting or steering: The effects of housing discrimination on neighborhood choice. Working Paper 24826, National Bureau of Economic Research.

CNIG (2022). Agenda nacional para la igualdad de género 2021-2025.

Cummings, K. H. and Seitchik, A. E. (2020). The differential treatment of women during service recovery: How perceived social power affects consumers' postfailure compensation. *Business Horizons*, 63:647–658.

Drydakis, N. (2011). Ethnic discrimination in the greek housing market. *Journal of Population Economics*, 24(4):1235–1275.

ECLAC (2016). The social inequality matrix in latin america. Technical report, Economic Commission for Latin America and the Caribbean.

Ehlke, S., Cohn, A. M., Boozary, L., Alexander, A. C., Waring, J. J. C., Businelle, M., and Kendzor, D. (2022). Discrimination, substance use, and mental health among sexual and gender minority adults accessing day shelter services. *Substance Use Misuse*, 57:1237–1247.

Faber, J. W. and Mercier, M.-D. (2022). Multidimensional discrimination in the online rental housing market: Implications for families with young children. *Housing Policy Debate*.

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*.

Fossett, M. (2006). Ethnic preferences, social distance dynamics, and residential segregation: Theoretical explorations using simulation analysis. *Journal of Mathematical Sociology*, 30(3-4):185–273.

Glick, J., Lopez, A., Pollock, M., and Theall, K. (2019). "housing insecurity seems to almost go hand in hand with being trans": Housing stress among transgender and gender non-conforming individuals in new orleans. *Journal of Urban Health*, 96:751–759.

Greene, J. (2018). Categorical exclusions: How racialized gender regulation reproduces reentry hardship. *Social Problems*.

Heckathorn, D. D. (1997a). Respondent-driven sampling: A new approach to the study of hidden populations. *Social Problems*, 44(2):174–199.

Heckathorn, D. D. (1997b). Respondent-driven sampling ii: Deriving valid population estimates from chain-referral samples of hidden populations. *Social Problems*, 49(1):11–34.

Hogan, B. and Berry, B. (2011). Racial and ethnic biases in rental housing: An audit study of online apartment listings. *City & Community*, 10(4):379–404.

IDB (2022). Gender and diversity sector framework document. Technical report, Inter-American Development Bank.

Ihlanfeldt, K. and Mayock, T. (2009). Price discrimination in the housing market. *Journal of Urban Economics*, 66(2):125–140.

Johnston, L. G. and Sabin, K. (2010). Sampling hard-to-reach populations with respondent driven sampling. *Methodological Innovations Online*, 5(2):38–48.

Kahneman, D. (2011). *Thinking, Fast and Slow*. Farrar, Straus and Giroux, New York.

Kirgios, E. L., Rai, A., Chang, E. H., and Milkman, K. L. (2022). When seeking help, women and racial/ethnic minorities benefit from explicitly stating their identity. *Nature Human Behaviour*, 6(3):383–391.

Kline, P. M., Rose, E. K., and Walters, C. R. (2021). Systemic discrimination among large u.s. employers. Working Paper 29053, National Bureau of Economic Research.

Lang, K. and Spitzer, A. K. L. (2020). Race discrimination: An economic perspective. *Journal of Economic Perspectives*, 34(2):68–89.

Lepinteur, A., Menta, G., and Waltl, S. R. (2023). Equal price for equal place? demand-driven racial discrimination in the housing market. *SSRN*.

MacDonald, H., Nelson, J. K., Galster, G., Paradies, Y., Dunn, K., and Dufty-Jones, R. (2016). Rental discrimination in the multi-ethnic metropolis: Evidence from sydney. *Urban Policy and Research*, 34:373–385.

Munguia Gomez, D. M. (2023). *Fairness and merit in the selection of advantaged and disadvantaged applicants*. PhD thesis, The University of Chicago.

Puyana, A. (2018). Horizontal inequality and ethnic discrimination in four latin american countries. *CEPAL Review*, 2018.

Schwegman, D. (2018). Rental market discrimination against same-sex couples: Evidence from a pairwise-matched email correspondence test. *Housing Policy Debate*, 28(5):701–718.

Seelman, K. L. (2016). Transgender adults' access to college bathrooms and housing and the relationship to suicidality. *Journal of Homosexuality*, 63:1378–1399.

Turner, I. (2007). Sex stereotyping per se: Transgender employees and title vii. *California Law Review*, 95:561.

Urban, A.-M., Ágreda, M. J. F., Moreno, A. R., and Ortiz, D. (2020). Toward a better understanding of discrimination based on sexual orientation and gender identity. Technical Note IDB-TN-1885, Inter-American Development Bank (IDB), Washington, DC.

Wilets, J. (1997). Conceptualizing private violence against sexual minorities as gendered violence: An international and comparative law perspective. *Albany Law Review*, 60:989.

Zanoni, W., Duryea, S., and Paredes, J. (2024a). Gender and discrimination in urban labor markets: Evidence from a field experiment in ecuador. Working paper, Inter-American Development Bank.

Zanoni, W. and Díaz, L. (2024). Discrimination against migrants and its determinants: Evidence from a multi-purpose field experiment in the housing rental market. *Journal of Development Economics*, 167:103227.

Zanoni, W., Hernández, H., Zambrano, O., and Quiroz, G. (2024b). Discrimination against lesbian and gay job seekers: An artefactual field experiment in urban ecuador. *Labour Economics*, 88:102531.

7 Appendix

Table A1: Characteristics of the Properties in Quito

Property type: House/apartment	Apartment	Apartment	Apartment	Apartment	Apartment	Apartment
Property code	V04	V05	V06	V07	V08	V09
Lease amount/month (USD)	$340.00	$350.00	$390.00	$400.00	$440.00	$450.00
General description	60 m2 Remodeled and furnished apartment in San José de Moran - Calderón.	Apartment in Conocoto sector, Valle de los Chillos of 100 m2. This property is 5–10 years old.	100 m2 apartment in La Florida sector. This property is 20–25 years old.	87 m2 apartment in Conocoto, Valle de los Chillos. 0–3 years old.	Apartment in Ponceano, La Suiza sector of 92 m2 This property is 0–5 years old	Apartment suite sector La Paz, Iñaquito of 70 m2 This property is 10–15 years old.
Specific characteristics	2 bedrooms, living dining room, 1 bathroom, American kitchen, laundry area with washing stone, pergola on the terrace, 1 parking space, 1 storage room	2 bedrooms, living dining room, 2.5 bathrooms, machinery area, terrace and 1 parking space.	Living room, dining room closed kitchen machine room 2 bedrooms 2 bathrooms 1 parking lot	2 bedrooms with private bathrooms 1 social bathroom living room dining room American kitchen machinery area 1 parking lot	3 bedrooms, living room, dining room, 2.5 bathrooms, warehouse, machinery area, 1 parking lot.	2 bedrooms, living room, dining room, 1.5 bathrooms and parking. Includes washing machine, refrigerator and TV
Secondary characteristics	Within a private complex with electric gate, visitor's parking, green areas, electric fence, community room.	Private complex that includes bbq area and children's areas. Apartment inside a one-story house.	Drinking water included in the rent. Located on the second floor of a three-story building. Pets are not allowed.	Condominium building with 24-hour security, camera system, and parking for visitors. Located on the second floor. Pets are not allowed.	Building with magnetic card access and concierge (no guard).	Building with 24-hour security, movie theater, bbq area and gymnasium.
Other relevant characteristics	Brand new furniture. Second floor, three-story building Include photos	Close to restaurants, cafes, and stores. Commercial area. Close to Av. 6 de Diciembre Include photos	Residential area, close to parks and churches Include photos	Close to main roads, parks, and churches Include photos	Close to governmental and educational institutions. Include photos.	Close to restaurants, cafes, and stores. Commercial area. Close to Av. 6 de Diciembre Include photos

Table A2: Characteristics of the Properties in Guayaquil

Property type: House/apartment	Apartment	Apartment	Apartment	Apartment	Apartment	Apartment
Property code	VC04	VC05	VC06	VC07	VC08	VC09
Lease amount/month (USD)	$350.00	$450.00	$350.00	$450.00	$450.00	$550.00
General description	Apartment in Sauces of 90 m2. This property is 10 years old	Apartment of 100 m2 in the Samanes. This property is 20 years old	Apartment of 80 m2 in the Samanes. This property is 0–5 years old	Apartment of 80 m2 in La Alborada 10 sector. This property is 20–25 years old	Remodeled house in La Alborada of 100 m2. New, brand new.	90 m2 furnished apartment in La Alborada. This apartment is 10–15 years old
Specific characteristics	2 bedrooms 2.5 bathrooms Balcony Dining room Kitchen Laundry area	2 bedrooms 3 bathrooms Dining room Semi-integral kitchen Laundry room Maid's room with bathroom	2 bedrooms 2 bathrooms Walk-in closet Dining room American kitchen Balcony	2 bedrooms 2 full bathrooms Living and dining room Kitchen Laundry Patio 2 parking spaces	3 bedrooms 3 bathrooms American kitchen Dining room Patio 2 garages	2 bedrooms 2 bathrooms Dining room Kitchen Balcony 1 parking space
Secondary characteristics	Pets are not allowed Water consumption included in the rent	Gated street with electric fence Parking inside the enclosure Cistern	No 24/7 security or parking	Private complex with electric gate, park of the complex	Apartment with enclosure	Within a private gated community with security
Other relevant characteristics	Include photos	Include photos	Include photos	Easy access to main roads. Include photos	Close to health centers and hospitals. Include photos	Close to shopping centers Include photos

Table A3: Women Trial in Quito: Property and Candidates' Profiles

Trial	Women		Women		Women	
Nudge	No		No		Yes	
Property Code	V04	V04	V05	V05	V06	V06
No. Profile	P7	P8	P9	P10	P11	P12
Number of applicants	2	2	1	1	1	1
Name of main applicant	Cristina Sánchez	Sebastián Chiriboga	Carlos Rosero	Valeria Vega	Rodrigo Serrano	Carmen Jijón
Name of secondary applicant	Mariana Vega	Guillermo Rosero	-	-	-	-
Age of main applicant	33	33	52	50	46	47
Age of secondary applicant	31	34			-	-
Nationality of main applicant	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian
Identification of main applicant	National Identity Document	National Identity Document	National Identity Document	National Identity Document	National Identity Document	National Identity Document
Nationality of secondary applicant	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian
Are you a couple?	No	No	-	-		
Marital status of main applicant	Single	Single	Single	Single	Divorced	Divorced
Gender of main applicant	Female	Male	Male	Female	Male	Female
# dependents	0	0	0	0	2 children—8 years old, 10 years old	2 children—7 years old, 9 years old
Minority	No	No	No	No	No	No
Papers	Guarantor	Guarantor				

Table A4: Sexual Orientation Trial in Quito: Property and Candidates' Profiles

Trial	**Sexual orientation**		**Sexual orientation**		**Sexual orientation**	
Nudge	No		No		Yes	
Property code	V07	V07	V08	V08	V09	V09
No. Profile	P13	P14	P15	P16	P17	P18
Number of applicants	2	2	2	2	2	2
Name of main applicant	Roberto Villarroel	David Coloma	Clara Cárdenas	Sofía Fernández	Daniel Andrade	Gabriel Ortiz
Name of secondary applicant	Jaime Herrera	Cecilia Ruiz	Javier Chacón	Carla González	Carla Arellano	Luis Jara
Age of main applicant	36	35	44	45	51	50
Age of secondary applicant	33	32	42	41	48	47
Nationality of main applicant	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian
Identification of main applicant	National Identity Document	National Identity Document	National Identity Document	National Identity Document	National Identity Document	National Identity Document
Nationality secondary applicant	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian
Are you a couple?	Yes	Yes	Yes	Yes	Yes	Yes
Marital status of main applicant	Married	Married	Domestic partnership	Domestic partnership	Domestic partnership	Domestic partnership
Gender of main applicant	Male	Male	Female	Female	Male	Male
# dependents	0	0	0	0	0	0
Minority	Yes, LG	No	No	Yes, LG	No	Yes, LG
Papers	Guarantor	Guarantor	Guarantor	Guarantor	Guarantor	Guarantor

Table A5: Women Trial in Guayaquil: Property and Candidates' Profiles

Trial	**Women**		**Women**		**Women**	
Nudge	**No**		**No**		**Yes**	
Property code	VC04	VC04	VC05	VC05	VC06	VC06
No. Profile	P7	P8	P9	P10	P11	P12
# of applicants	1	1	1	1	1	1
Name of main applicant	Fernanda Vega	Hugo López	Alberto Alvarado	María Isabel León	Laura Méndez	Esteban Salazar
Name of secondary applicant	-	-	-	-	-	-
Age of main applicant	39	38	48	49	42	41
Age of secondary applicant	-	-	-	-	-	-
Nationality of main applicant	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian
Identification of main applicant	National Identity Document	National Identity Document	National Identity Document	National Identity Document	National Identity Document	National Identity Document
Nationality of secondary applicant	-	-	-	-	-	-
Are you a couple?	-	-	-	-	-	-
Marital status of main applicant	Divorced	Divorced	Single	Single	Single	Single
Gender of main applicant	Female	Male	Male	Female	Female	Male
# dependents	1 child—11 years	1 child—13 years	-	-	-	-
Minority	No	No	No	No	No	No
Papers	Guarantor	Guarantor	Guarantor	Guarantor	Guarantor	Guarantor

Table A6: Sexual Orientation Trial in Guayaquil: Property and Candidates' Profiles

Trial	**Sexual orientation**		**Sexual orientation**		**Sexual orientation**	
Nudge	No		No		Yes	
Property code	VC07	VC07	VC09	VC09	VC08	VC08
No. Profile	P13	P14	P17	P18	P15	P16
# of applicants	2	2	2	2	2	2
Name of main applicant	Julissa Arias	Martha Reinoso	Javier Fernandéz	Leonardo Ojeda	Luisa Torres	Ana Lucía Ávila
Name of secondary applicant	Cecilia Aguirre	Pedro Ordoñez	María Augusta Jiménez	Marcelo Sevilla	Carlos Hernández	Carolina Arcos
Age of main applicant	32	32	35	36	48	47
Age of secondary applicant	30	31	38	37	52	50
Nationality of main applicant	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian
Identification of main applicant	National Identity Document	National Identity Document	National Identity Document	National Identity Document	National Identity Document	National Identity Document
Nationality of secondary applicant	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian	Ecuadorian
Are you a couple?	Yes	Yes	Yes	Yes	Yes	Yes
Marital status of main applicant	Domestic partnership	Domestic partnership	Married	Married	Domestic partnership	Domestic partnership
Gender of main applicant	Female	Female	Male	Male	Female	Female
# Dependents	-	-	-	-	-	-
Minority	Yes, LG	No	No	Yes, LG	No	Yes, LG
Papers	Guarantor	Guarantor	Guarantor	Guarantor		