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Highlights

- Significant discrimination towards people with a Jewish-Italian name when looking for football club and an apartment, but not when seeking a job
- Discrimination towards people with a Jewish-Italian is geographically unrelated to discrimination towards Jews during the second world war
- Women with Jewish-Italian names are less likely to suffer from discrimination

Examining Discrimination against Jews in Italy with Three Natural Field Experiments*

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Abstract

We use three natural field experiments to examine anti-Semitism in Italy by sending email inquiries to amateur football clubs, landlords, and employers and comparing the response rates to emails sent with Jewish- and non-Jewish-sounding names. Italy is an interesting country as discrimination was heterogeneous and geographically unevenly distributed during World War II. We analyze if today's anti-Semitism in Italy is geographically correlated to the deportations and killings of Jews during the Holocaust. The results show

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significant discrimination when looking for football club and an apartment, but not when seeking a job. We find markedly different results for women. Comparing areas with different societal and economic implications provides us with a more informed perspective about the extent of discrimination.

Keywords: Discrimination, Italy, field experiments, anti-Semitism, labor market

1. Introduction

Fighting discrimination is a major challenge in today's evolving societies. In most countries, discrimination because of gender, race, or religion is prohibited and societies try to reduce it. Still, discrimination is remarkably persistent. Research continuously shows racial and ethnic discrimination in different settings (Verhaeghe, 2022); for example, when looking for a job (Banerjee et al. 2009; Bertrand and Mullainathan 2004; Krause et al. 2012; Lippens et al. 2023), looking for an apartment (Ahmed and Hammarstedt 2008; Auspurg et al. 2019; Bosch et al. 2010), using the sharing economy (Edelman et al. 2017; Ge et al. 2016), joining an amateur football club (Dur et al. 2022; Gomez-Gonzalez et al. 2021), contacting public officials (Kalla et al. 2018), and dating (Jakobsson and Lindholm 2014; Ranzini et al. 2022).

Additionally, there is evidence of discrimination when individuals signal their religious affiliation (Pfaff et al. 2021; Valfort, 2020; Weichselbaumer, 2020; Wright et al. 2013). Most research has focused on the disadvantage Muslims face contacting employers, schools, or housing. We know less about the situation of Jews as experimental research has been largely neglected to date.

Analyzing the contemporary picture of Jews and their daily life interactions is important. The number of Jews in Europe has declined 60% in the last 50 years (European Commission 2021). One reason for that is discrimination: 9 out of 10 Jews say that anti-Semitism has increased in their country, and some 71% of Jews at least occasionally avoid carrying and displaying items that identify them as Jewish (European Commission 2021). The second survey on discrimination and hate crime against Jews from the European Union provides further details about Italy. Some 81% of the survey respondents state that anti-Semitism has increased in Italy over the past five years (Fundamental Rights Agency 2019). Additionally, more than a third of the respondents experienced anti-Semitic harassment, and 73% of those who carry or display Jewish items occasionally avoid doing so for safety reasons (European Union Agency for Fundamental Rights 2019). Apart

from self-reported discrimination, there is no causal evidence. Natural field experiments can help to fill this gap.[1]

In this paper, we contribute to the literature with three simultaneous large-scale natural field experiments in amateur football, the housing market, and the labor market in Italy. We sent applications to some 1,600 amateur football clubs, 4,000 landlords, and 4,000 employers in Italy. Finding a job or an apartment is vital for integration. As such, correspondence studies often focus on the labor and housing markets (Auspurg et al. 2019; Baert 2018). Other daily contexts reflect a different type of interaction. We analyze amateur football clubs since amateur team sports cover all aspects of social interaction (Duarte et al. 2012; Eccles and Tenenbaum 2007) and positively influence social cohesion (Lowe 2021; Mousa 2020).[2]

Although it is impossible to examine anti-Semitism from every angle, the three different areas provide us with a more comprehensive overview about the social effects of being Jewish in Italy. Examining only one area neglects that people behave and evaluate situations differently (Triandis 1989). For example, an employer evaluates an application differently compared to a landlord or an amateur football coach. They have different demands and priorities, and therefore

[1] We follow the definition of a natural field experiment from Harrison and List (2004).
[2] Other leisure groups such as theater/reading groups, scouts, or music bands are also suited for this type of experiment but are unlikely to provide the same number of observations relying on publicly available information.

may respond to an application from an Italian Jew differently. Additionally, these areas have different regulatory frameworks, and social norms and peer effects can differ because of the idiosyncrasies of the selection processes (Falk and Ichino 2006; Schultz et al. 2007).

To understand the current situation, it is also necessary to account for the persistence of cultural traits. Research has shown that anti-Semitism can be extremely long-lived. In the Middle Ages, Jews were blamed for the Black Death (1348–50). The geographic location of the ensuing medieval pogroms correlates with anti-Jewish violence in the 1920s: attacks on synagogues, deportations, and votes for the Nazi Party (Voigtländer and Voth 2012). In contrast to Germany, discrimination toward Jews was far less violent in Italy until 1943 when the country was split up. Deportations and killings of foreign and Italian Jews was geographically unequally distributed after Nazi Germany and the Allied forces occupied Italy. We examine whether discrimination toward Italian Jews is geographically correlated with deportations and killings of Italian and foreign Jews in the 1940s. Additionally, we account for more recent developments. We include anti-Semitic comments from Twitter because current trends might influence the results more than historical data.

Interestingly, the results show remarkably uneven discrimination between the three experiments. We do not find statistically significant discrimination in the labor market experiment. In the other two experiments, however, we find substantial discrimination against people with Italian Jewish-sounding names. Additionally, we find that female applicants with Italian Jewish-sounding names benefit from reverse discrimination in places that were close to deportations or killings in World War II.

In the next section, we provide detailed background information about the contemporary historical situation of Jews in Italy. In the third section, we describe the experimental setup, while the fourth section reports the main results from the three experiments and the correlation with historical events. In the fifth section, we interpret the results and discuss the implications for research and policy as well as the limitations of our approach. We conclude the paper by providing details about the ethical guidelines and the preregistration of the experiment.

2. Brief historical background of Jews in Italy, 1848-1945[3]

[3] We focus on the time frame before 1945 as physical attacks against Jews in Italy after 1945 were exceptionally rare. However, that does not mean that anti-Semitism magically disappeared after 1945. Italian (and foreign) Jews faced many social and legal problems that had long-lasting negative effects as well as institutionalized changes that persisted after 1945 (Pavan 2019).

The year 1848 was important for Jews in Italy. At that time, the country consisted of many individual kingdoms which treated Jews quite differently. In Rome, for example, Jews were not allowed to work in areas as diverse as the liberal professions and agriculture. Moreover, Jews had to live in ghettos that separated them from other Italians. Jewish life changed markedly when the Statuto Albertino was declared in the Kingdom of Sardinia in 1848, and citizens were granted the freedom of religion. The expansion of the Kingdom of Sardinia to a united Kingdom of Italy in 1861 and the liberation of Rome in 1870 made freedom of religion universal across Italy.

Italian Jews were no longer confined to specific areas or occupations. The new laws changed not only Jewish life but also how Jews felt toward Italy. Klein (2018) writes: "Italian Jewish enthusiasm for the Kingdom of Italy continued, unabated, into the twentieth century. The Jewish press called Italy the *patria*, the fatherland" (28-29). Italian Jews became an important part of Italian culture. The ability to participate in the flourishing economy in various occupations (Lyttelton, 2004), increasing political participation (Davidson et al. 1996, 227-28), and growing education levels (Klein 2018) heavily influenced the position of Italian Jews in Italian society. To be sure, anti-Semitism was still present in many parts of the society, including in the literature and in the Catholic church (see Gunzberg

1994, 168-84; Canepa 1979).[4] Anti-Semitism was, however, less pronounced than in other European countries (Schächter 2001).

Fascism and the rise of Mussolini in 1922 were associated with a vigorous anti-socialist, pro-business agenda. Most Italian Jews supported or at least did not oppose fascism (Klein 2018, 39-52). It is questionable how advanced anti-Semitism was in Italy between 1922 and 1938. Bosworth (2007) writes: "Like other Europeans, Italians frequently nourished racist assumptions about blacks, Arabs, and 'Slavs' and, though those of Jewish faith and or background were unusually integrated into Italian nationalism, anti-Semitism lurked in a number of Italian minds" (243). Sarfatti (2006, 95-108) examines how anti-Semitic behavior became more prominent in Italy in the 1930s. As late as February 1938, however, the Italian government assured the population that "the Fascist Government has no intention whatsoever of taking political, economic or moral measures against Jews" (Agronsky 1939, 396-97).

A turning point for Italian Jews was the racial laws that came into place during the second half of 1938. Jewish pupils, professors, and teachers were banned from all public schools. Jews were expelled from the government and several other industries. Marriage between Jews and non-Jews was forbidden. Steadily,

[4] For a more detailed discussion of anti-Semitism before 1922, see Schächter (2001, 48-54) or Klein (2018, 36-37).

regulations became harsher. In 1939, capital and property above a certain value had to be transferred to non-Jewish owners. Jewish professionals were no longer allowed to have non-Jewish clients (Klein 2018, 96-97). These regulations resulted in an exceedingly complicated life for Jews in Italy.[5] Additionally, in some cases, Jews were subjected to random physical violence and treated like social outcasts (Hametz 2002, 389-92).

On July 25, 1943, Pietro Badoglio toppled Mussolini, and Jews regained some liberties. These liberties, however, were short-lived as Nazi Germany occupied Italy north of Naples in 1943 and established the Republic of Salò. Most Jews lived in this area. In the Republic of Salò, both German and Italian forces in Northern Italy persecuted Jews (Bosworth 2007, 498-530). Klein (2018, p. 199) writes "Italian authorities were thoroughly involved in the roundup of Jews in Italy" and "Italian government officials were aware that they were sending Jews to their death" (p. 116). The position of Italians, however, was not homogeneous. While a minority actively supported the persecution of Jews, others "took great risks to hide Jews" (Klein, 2018, p. 130).

[5] For a more detailed discussion regarding the specific racial laws, see Livingston (2012, 75-119).

Allied forces occupied the rest of Italy. Map 1 shows the front line and where Italy was split between Allied forces and Nazi occupation. The Allies conquered Rome on June 4, 1944, Florence on August 3, and the rest of Italy in April 1945.

Before the war, most Jews lived in Rome, Milan, Trieste, Turin, Florence, Genoa, Livorno, and Venice (Klein 2018). The Italian administration registered 46,656 Jews living in Italy in 1938. By 1945, 5,969 Jews had been deported and killed in concentration camps (64.3% were Italian Jews, 32.7% were foreign Jews) and 322 Jews were killed in Italy (Picciotto 2005, 34-40). Map 1 shows where Jews lived in Italy in 1931 and where they were killed or deported (and then killed).[6]

[Insert Map 1 near here]

The end of the Republic of Salò did not mean, however, that fascist tendencies disappeared. Neo-fascist movements continued to have a significant influence on Italian politics (Ginsborg, 1990, p. 143 & p. 257) with former supporters of the Republic of Salò actively promoting right wing parties and policies. Similarly, several fascist laws and regulations were never reformed, and many fascists civil servants had a lasting influence as they kept on working in their jobs until they retired (Tarrow, 1989, p.42). A direct and causal link between fascist Italy, the

[6] Some 94.6% of all deportees were killed in Auschwitz.

lasting influence of fascists supporters after the war, and the dominant and ruling right wing party in today's Italy is difficult. Nonetheless, right wing support has been a constant force in Italy with considerable influence even after the devasting results of the second world war.

3. Experimental setup

Following the approach of Bertrand and Mullainathan (2004), research often focuses on names as group identifiers in different social contexts (Banerjee et al. 2009; Edelman et al. 2017; Gomez-Gonzalez et al. 2021). Several researchers employed additional methods to signal religious affiliation. For example, in an audit study in France, Valfort (2020) signaled Muslim or Christian religion not just by first and last names, but by names of high schools and being a member of a Muslim or Christian scouting movement. Wright et al. (2013) analyzed labor market discrimination in New England. They stated the religious affiliation of applicants on their CVs. Pfaff et al. (2021) contacted principals at public schools in the US asking for a meeting. They examined whether signaling religious affiliation affects the likelihood of getting a response. The researchers stated the applicant's religion up to three times in the main text of the email and the footer.

In our research, we cooperated with the Center of Contemporary Jewish Documentation (CDEC) in Milan. Six different ways of signaling that the person in question was an Italian Jew were discussed: (1) writing the applicant's name using Latin letters and then, in parentheses, Hebrew letters. (2) Writing a religious phrase in the footer of the application in either Latin or Hebrew. (3) Beginning the document with the Besiyata Dishmaya (בס״ד "with the help of Heaven") in the

top-right corner, which is common in some parts of Jewish culture. (4) Writing religious affiliation on the CV. (5) Mentioning that the applicant is a member of a religious community. (6) Writing the complete religious name of either basic or secondary schools on the CV.

However, the CDEC pointed out that Italian Jews would be unlikely to use any of these methods. Usually, the only way Italian Jewish applicants signal religious background is through their names. Therefore, in collaboration with the CDEC, we created typical Jewish- and Christian-sounding names; all names, of course, were Italian.

In an online survey with respondents from all over Italy, we asked people to state if a name sounds either Jewish, Christian, or does not fit into these two categories. We then checked in a survey in Rome to ensure the results were robust. We chose four names for each group and their respective combination (Jewish, Christian, male, female). We selected only names that were clearly categorized (i.e., scoring at least above 70% in both categories) in the online and local survey. Table S1 in the Appendix shows the final list of names, the results of the surveys, and the names not used.

4. Method overview

The research strategy was to send mock applications to amateur football coaches, landlords, and employers in all 20 regions of Italy. A mock application means that the applicant does not exist (see Butler and Broockman 2011). We used block randomization by region to ensure that applications with Jewish- and Christian-sounding names were equally distributed across regions. We contacted every respondent only once as we wanted to make sure that our applications did not reveal that participants were part of an experiment. We were concerned that repeated applications would lead to a Hawthorne effect.

We sent applications via Gmail (gsuite) accounts. We created one email account for each name with the ending @felabita.net. This ensured that only the names changed but not the email address. For all experiments discussed here, there were four possible responses: positive, positive with further inquiries, negative, or no response. We treat a nonresponse as a rejection, which results in three possible outcomes: (1) negative response (negative or no answer), (2) positive response without further inquiries, (3) positive response with further inquiries. [7]This is in line with previous research in this area (e.g., Dur et al., 2022).

[7] Additionally, negative responses in our settings are rare: 3.6% of all responses in the soccer experiment, 3.4% in the housing market, and 0.25% in the labor market experiment. Excluding non-responses or focusing exclusively on negative responses would provide distorted results.

We include experiment-specific variables, for example, the league in which an amateur club plays or the number of rooms advertised for an apartment. For all experiments, we include geographic-specific variables representing discrimination during the Holocaust and the current level of discrimination toward Italian Jews. It is important to note that our variables for the Holocaust are weak approximations. Thus, the potentially lingering influence of the Holocaust was approximated by counting the number of Jews from a given area that were killed either outside or within the country.[8]

Of course, there were other kinds of anti-Jewish cruelties perpetrated during the war: forced labor, confiscation of personal property, to name just two. Deportations and killings, however, are the most extreme and most present in the public mind. Another type of local information, such as hate crimes and desecrations of synagogues and cemeteries, would also be helpful. However, we can't collect reliable and meaningful data for these variables.

To estimate current anti-Semitism, we used data provided by VOX (Osservatorio Italiano sui Diritti), a newspaper that annually publishes maps of homophobia,

[8] Records show, for example, that 1,039 Jews were deported from Rome and killed between 1943 and 1945, and an additional 79 were killed in Rome. We combined both the numbers for Rome—a total of 1,109.

misogynism, racism, ableism, and anti-Semitism.[9] VOX develops these maps by monitoring the content and location of tweets. Thus each area of the country is assigned a score based on the frequency of its Twitter users' anti-Semitic language.

Finally, several regional or local characteristics might influence the results and the response rates in our experiments. To analyze these effects we include the regional unemployment rate as higher unemployment can result in lower response rate. Additionally, a higher standard of living might influence response behavior as well. Therefore, we include GDP per capita. We also include the share of the women population and the share of religious marriages (as a proxy for the degree of conservatism of a region) to control for different attitudes towards applications from women. Summary statistics are shown in Table 1.

[Insert Table 1 near here]

[9] A research team from three universities (Università degli studi di Milano, Sapienza Università di Roma, and Università delgi studi di Bari Aldo Moro) collaborates with the newspaper.

4.1. Econometric approach

In each setting, we estimate the following model:

$$response_i = \beta_0 + \beta_1 \cdot Jewish_i + \mathbf{X_i}\gamma + \varepsilon_i$$

where $response_i$ is a binary variable that takes the value 1 in case of a positive response and 0 in case of a negative response. $Jewish_i$ is a binary variable for an Italian Jewish-sounding name (1) or and an Italian Christian-sounding name (0), $\mathbf{X_i}$ is a vector of control variables, which controls for gender (male or female name), current discrimination (number of anti-Semitic tweets within a radius of 60 kilometers), and historical discrimination (number of Italian or foreign Jews killed or deported in 1943-1945 not further than 60 kilometers divided by total number of inhabitants). The number of tweets are not normalized to the population, but we do control for regions, which would capture some of the size effect. The set of control variables varies by experiment setting; these are discussed in the Results. Standard errors are clustered by regions, as the variation of covariates may be geographically specific and there are a substantial number of observations per region.

We also estimate models with interactions of being $Jewish_i$ with other variables to analyze variations in the size of the effect. For all experiments, the results

tables include the following regression models: the baseline Model 1, Model 2 includes an interaction of our treatment variable with the dummy variable for the gender of the applicant. In Model 3, we interact Italian Jewish-sounding names with anti-Semitic tweets. In Model 4, we interact Italian Jewish-sounding names with the number of Italian or foreign Jews killed or deported between 1943 and 1945 within a 60-kilometer radius normalized by the number of inhabitants in the respective region.[10], and Model 5 with experiment-specific controls.

4.2. Football setting

Following the approach of Nesseler et al. (2019) and Gomez-Gonzalez et al. (2021), we contacted 137 female and 1,435 male amateur football clubs. We have the complete population of amateur female football clubs in our dataset. It is important to note, however, that our analysis for women is underpowered because of the small number of clubs in the population which limits the interpretation of the results for women. In Italy, these clubs typically bring together individuals interested in playing football as a hobby. Players receive no money, and usually gather for training once or twice a week and play a game on the weekend.

[10] The results are robust to the change of radius from 50 to 70 km.

As amateurs, these clubs do not have economic interests and play in the lowest divisions. Players typically live in the vicinity of their club. The federation provides clubs with licenses to participate in the competition. Clubs are obligated to comply with the regulations and directions from the federation, but they have autonomy regarding membership fees and player admissions. An email to the club or coach is the most typical contact method of a player who wishes to join.

Our message is straightforward and only shows an interest in joining a trial practice while refraining from providing further details. The email reads as follows (the original version, in Italian, is available in the Appendix):

> *Hello,*
>
> *Is it possible to come for a trial practice? I have played at a similar level before.*
>
> *Best regards,*
> *Applicant name*

We slightly changed the wording from that used in previous experiments in Italy to avoid the possibility that respondents would guess that they are taking part in an experiment. The last similar experiment in Italy was in 2018 (see Gomez-Gonzalez et al. 2021). Thus, it is unlikely that clubs or coaches would suspect that they were in an experiment.

4.2.1. Results

Table S2 in the Appendix gives an overview of the response rates for each name. Individuals with non-Jewish-sounding names have a response rate of 0.34 ($n = 773$), whereas individuals with Jewish-sounding names have a response rate of 0.25 ($n = 799$). Overall, the response rate is significantly higher for female compared to male clubs. Women have a response rate of 0.61 ($n = 137$), while men have a response rate of 0.26 ($n = 1{,}435$).

Table 2 shows the result of the regression analysis with the response rate as the dependent variable. Model 5 is the same as Model 1 but includes an interaction with the dummies reflecting the level of the league (the top flight league is the omitted category).

[Insert Table 2 near here]

Table 2 shows two main results. First, people with Italian Jewish-sounding names get statistically significantly fewer responses. This result is robust to the specification of the model. This is true for both female and male Italian Jewish-sounding names. Second, neither the variable controlling for historical discrimination nor the variable controlling for current discrimination against Jews

influences the response rate. Third, the level of discrimination is lower in the second and third tier leagues comparing to the top-flight division.

4.3. Housing market setting

We contacted 3,986 landlords through the platforms of multiple Italian long-term housing rental websites with a basic message. Of these messages, 2,041 were signed by a male-sounding name and 1,945 by a female-sounding name. As we focused exclusively on the situation of Italian Jews, we refrained from signaling a specific social status, for example, job status (Bosch et al. 2010) or credit-related information (Hanson and Hawley 2011). Additionally, we gathered information about the type of housing (apartment or house), size, monthly rent, and the number of rooms and bathrooms. The message to the landlords reads as follows (the original version in Italian is available in the Appendix):

> *Hello,*
>
> *I am interested in the announcement. Please contact me if it is still available. Looking forward to your reply.*
>
> *Best regards,*
> *Applicant name*

4.3.1. Results

Table S2 in the Appendix gives an overview of the response rates for each name. Individuals with Italian-sounding names have a response rate of 0.47 ($n = 1{,}991$); individuals with an Italian Jewish-sounding name have a response rate of 0.42 ($n = 1{,}995$). Females have a response rate of 0.46 ($n = 1{,}945$), while males have a response rate of 0.43 ($n = 2{,}041$).

Table 3 shows the results of the regression analysis with the response rate as the dependent variable. Model 5 includes an interaction of our treatment variables with the monthly rent.

As in the case of football clubs (Table 2), we find that people with an Italian Jewish-sounding name have a statistically significantly lower response rate. However, this effect is much lower for female sounding names. As expected, we find that landlords who advertise an expensive apartment or house are more likely to respond. The owners of expensive apartments tend to discriminate less. Model 4 shows that the interaction term between the (normalized) number of Italian or foreign Jews deported or killed in 1943-1945 within a 60-kilometer radius and

Italian Jewish-sounding female names has a significant positive impact on the response rate.

[Insert Table 3 near here]

4.4. Labor market setting

We contacted 3,996 employers. Of these, 2,028 applications had a female- and 1,968 had a male-sounding name. Before the start of the experiment, we contacted labor market agencies in Milan to discuss the type of information that Italian CVs usually include for low-wage jobs. Additionally, the job placement department of the University of Bologna helped us with the final details of the CVs. Following their advice, we decided to use a CV template called Europass, which is frequently used in European countries. An example is available in the Appendix. We changed the email, name, and phone number depending on the applicants. High school education, work experience, hobbies, and language skills were the same for all applicants. However, the applicants' home, high school, and work experience addresses were modified to match their respective region. A high degree of mobility is not expected for entry-level jobs. Therefore, the applicants

always graduated from one of the largest high schools in the regional capital, and lived and had work experience in the regional capital.[11]

Busetta et al. (2020, 621) provide a detailed overview of job market platforms. Based on their review, we used the platforms bakeca.it, helplavoro.it, subito.it, and kijiji.it. We attached the CV to each application and contacted the employer with the following text (the original Italian translation is in the Appendix):

> *Dear sir or madam,*
>
> *In relation to the job offer published on [Name of webpage], I submit my application to your kind attention. I am available immediately and full-time. Your ad caught my attention as the position matches my aspirations. I am attaching my curriculum vitae with more details on my skills.*
>
> *In the hope of having attracted your interest, I remain available for any clarification by email. Thanking you in advance for your attention, I extend my best regards.*
>
> *Kind regards*
> *Applicant name*

Wright et al. (2013) perform an audit study in New England. They compare how signaling different religions (e.g., being Catholic, Muslim, or Jewish) influences the response rate. Interestingly, they find that Jewish applications do not suffer from discrimination. Wallace et al. (2014) perform a similar experiment but in the

[11] Other approaches are also reasonable but do not fit our context. In Valfort (2020), for example, all applicants come from Paris.

American South. In line with Wright et al. (2013) they do not find that Jews suffer from discrimination.

4.4.1. Results

Table S2 in the Appendix gives an overview of the response rates for each name. Individuals with Christian-sounding names have a response rate of 0.15 ($n = 1{,}997$) and individuals with a Jewish-sounding name have a response rate of 0.14 ($n = 1{,}999$). The difference is not statistically significant. Females have a response rate of 0.15 ($n = 2{,}028$), while males have a response rate of 0.14 ($n = 1{,}968$). This difference is also not statistically significant.

Table 4 shows the results of the regression analysis with the response rate as the dependent variable. Model 5 includes an interaction of our treatment variables with the unemployment rate.

In contrast to football (Table 2) and housing (Table 3), we do not find that Italian Jewish-sounding names receive significantly fewer responses in the labor market. The interactions are also not statistically significant. However, when we estimate the model with the interactions of all job dummies without treatment variables,

we find that they are jointly significant (χ^2 =1684.80). Consequently, the level of discrimination depends on the occupation.

[Insert Table 4 near here]

4.5. Comparison of the three natural field experiments

Figure 1 shows the response rates for each experiment. Although the share of positive responses is larger for Christian-sounding names in each experiment, the difference is negligibly small for the labor market experiment. The difference is statistically significant for the other two experiments.

[Insert Figure 1 near here]

In Table 5, Models 1, 2, and 3 display the complete model for all three settings. Additionally, Models 4, 5, and 6 show the influence of an email sent with an Italian Jewish-sounding female name; and Models 7, 8, and 9 include the interaction variable for an email sent with an Italian Jewish-sounding name with the number of Italian or foreign Jews killed between 1943 and1945 normalized by the number of inhabitants. All models include experiment-specific control variables.

In general, we find that female applicants get more positive responses than male applicants. The results show that male applicants with Italian Jewish-sounding names suffer from discrimination in amateur football and in the housing market, but not, however, in the labor market. Female applicants with Italian Jewish-sounding names receive more responses than male applicants in the housing market, but not in amateur football or the labor market. Interestingly, we find that applicants with Italian Jewish-sounding names benefit from applying in the housing and labor market close to places where Jews were deported or killed between 1943 and 1945.

[Insert Table 5 near here]

5. Discussion

We perform three correspondence studies in Italy on amateur football, housing, and labor. We use Typical Italian- and Italian-Jewish-sounding names. The aim of the research is to see if discrimination toward Italian Jews in Italy is present and how it changes depending on the field. Additionally, we examine whether historical and current discrimination, among other control variables, influences the results.

The results show that Italian Jews suffer from discrimination in amateur football and the housing market. The gap is 7 and 5 percentage points, respectively. Both women and men with Italian Jewish-sounding names suffer from discrimination in the amateur football context. This result is consistent with Baldini and Federici (2011), who find that ethnic discrimination in the Italian rental housing market is more pronounced for men than for women. In line with previous research in this area (Wallace et al., 2014; Wright et al., 2013) we find no discrimination in the labor market.

Our evidence about causal mechanisms is limited, so we can only offer limited ad-hoc interpretations of the results. One possible explanation is the regulatory framework. According to the Workers' Statute of the Italian Constitution and several other European regulations it is unlawful to discriminate in hiring or admission to the workplace because of sex, race, language, religion, or political opinion (De Matteis et al. 2023), which makes discrimination in this context less likely. Similar anti-discrimination regulations apply to the housing market. Such anti-discrimination regulations do not apply to football clubs.

Another interpretation has to do with the preferences of respondents. Some individuals do not mind sharing the workplace with Jews but prefer not to have contact with them in a football club. In the labor market, additional stereotypical

considerations may be at play. Perhaps respondents think that they would benefit from Jews in their workplace (cf. Sharabi 2012, 825). The notion that Jews are "greedy" and "good with money" is among the oldest Jewish stereotypes and continues to impact perceptions of Jews today (Berinsky and Mendelberg 2005, 845). Amateur football clubs and landlords cannot benefit from this assumed greediness. Employers, however, might want to exploit it.

Another explanation is that the review process of applications is different. In amateur football, it is usual that one coach or one manager reads emails and makes decisions. The process of handling applications is more heterogeneous in the housing market, where respondents can include agencies and individuals. In agencies, some decisions must be discussed in groups, where peer effects (Falk and Ichino 2006) and social norms (Schultz et al. 2007) should make discrimination based on religion less likely. Hence, discrimination should be the lowest in the labor market, where the admission process is transparent and involves multiple individuals often from different departments within an organization.

Our results are also consistent with Kahneman's (2007) two-system view on reasoning and intuition, as our three settings require different types of tasks. Considering the request of an individual who sends an email to join a social club

typically require fast and associative operations, while dealing with housing and job applications requires more effortful tasks, which are monitored and controlled. Therefore, the influence of unconscious biases should be less persistent in the housing and labor markets.

Finally, the experiments differ in what they signal. In the labor market experiment, employers know more regarding the background of the applicants, for example, where the applicants live and studied. These additional credentials and information could potentially reduce the negative influence of an Italian Jewish-sounding name (cf. volunteering activities of immigrants; Baert and Vujić 2016).

An important finding is that discrimination differs across areas. We find discrimination in amateur football and the housing market but not in the labor market. According to the Italian national strategy for combating antisemitism, considering various contexts where discriminatory behavior can emerge is essential (Presidency of the Council of Ministers, 2020). Our results highlight the importance of performing multiple experiments to validate results (Fryer Jr. et al. 2015) as focusing only on one area can result in biased policy recommendations. For example, generalizing the results from the labor market experiment would have given a wrong impression of the attitude toward Italian Jews.

The scope of this project was limited, among other reasons, for the sake of statistical power to just one minority group: Italian Jews. However, other minorities in Italy might suffer from similar or even worse discrimination. Additionally, we studied only Italy. Results from other countries, like Germany or France, could provide further insights regarding historical discrimination. Other studies have used similar methods in fields that are equally relevant (e.g., in the sharing economy or when contacting local politicians). It would be interesting to examine how responses differ in the same setting but within a larger variety of experiments. Finally, signaling religion more explicitly could lead to different results. Using only the name as a signal does not necessarily imply close affiliation with a religion.

6. Ethical committee, debriefing, data anonymization, and experiment registration

We received ethical approval from the Human Subjects Committee of the Faculty of Economics (IRB Approval Number 2021-028). In accordance with the ethics committee of our university, we debriefed participants for the housing and the labor market after the experiment. We provided them with an overview of the experiment and the contact details of the lead researcher.

We agreed with the ethical committee that we wanted to minimize the workload of the football experiment and responded if we got a positive response: “Thank you very much for your response. Unfortunately, I am no longer interested.”

The data was not anonymized in the beginning. However, individual names were not included in the dataset, nor was any other data gathered about individuals. This ensured that individual responses could not be traced. We kept, however, information regarding the region of the respondent. Before uploading the final dataset at Harvard Dataverse, we deleted observations if the region was small enough to identify individual responses.

This study is registered in the AEA RCT Registry (DOI:10.1257/rct.8258-1.0).

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Map 1. Italian Jews living in Italy 1931; Italian Jews killed in Italy or deported (and killed), 1943-1945.

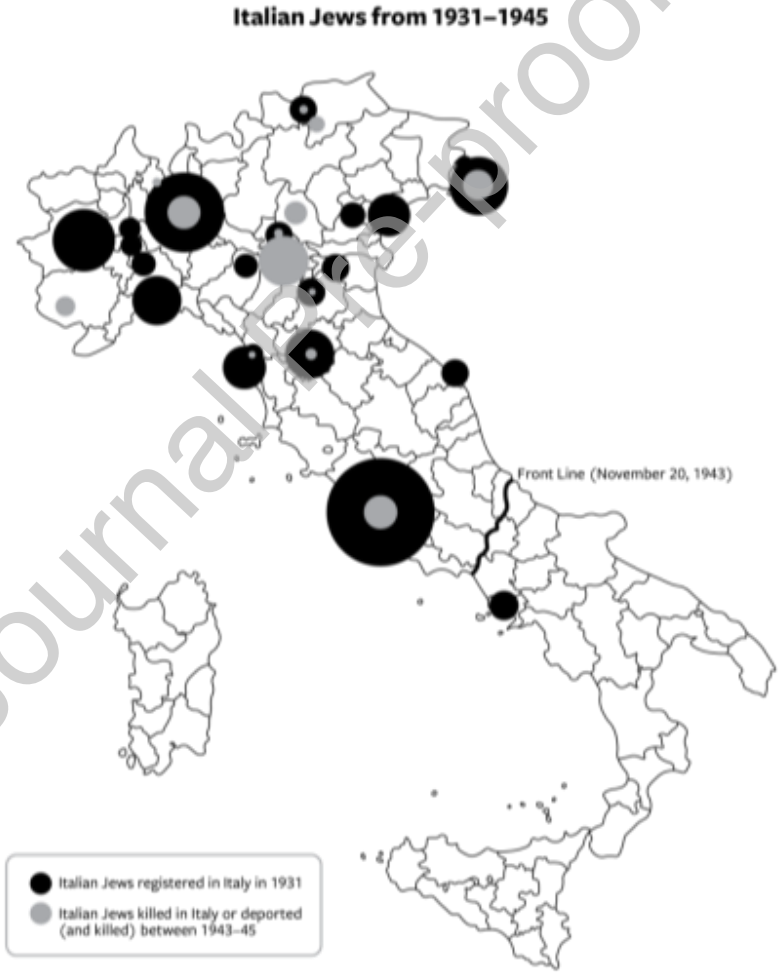

Table 1. Summary statistics.

	Football		Housing market		Labor market	
	N	Mean (SD)	*N*	Mean (SD)	*N*	Mean (SD)
Any response to email inquiry*	1,568	0.29 (0.45)	3,986	0.45 (0.50)	3,996	0.14 (0.35)
Of these, negative response	1,110		2,204		3,432	
Positive response	111		1,771		564	
Positive responses with further inquiries	347		11			
Emails with Italian Jewish-sounding name	799		2,000		1,999	
Emails with female-sounding name	137		1,949		2,028	
Number of anti-Semitic tweets (in thousands) located within 60 km distance	1,568	3,374 (2,742)	3,986	1,911 (2,485)	3,996	3,538 (3,072)
Number of Italian or foreign Jews killed or deported in 1943-1945 within 60 km by number of inhabitants	1,568	0.21 (0.35)	3,986	0.07 (0.20)	3,996	0.14 (0.28)
Football-specific variable						
Control for amateur football leagues	1,568	2.55 (0.67)				
Housing-specific variables						
Apartment/house m^2			3,986	88.28 (51.14)		
Monthly rent			3,986	802.15 (609.81)		
Number of rooms			3,986	3.12 (1.51)		
Number of bathrooms			3,986	1.36 (0.66)		
House			3,986	0.05 (0.21)		
Labor-specific variables						
Job advertisement for						
Babysitter					62	
Barista					115	

Call center	76
Cashier	68
Cleaning services	268
Manufacturer	69
Promoter	91
Real estate	194
Receptionist	101
Sales	277
Secretary	218
Shop assistant	191
Vendor	68
Waiter	323
Warehouse worker	119
Other	1756

* We control for the 20 regions in Italy.

Table 2. Results for amateur football.

Dependent variable: all positive responses = 1, negative response = 0					
	Model				
	1	2	3	4	5
Email sent with an Italian Jewish-sounding name	-0.07***	-0.07***	-0.12***	-0.07***	-0.22***
	(0.01)	(0.00)	(0.01)	(0.01)	(0.06)
Email sent with a female name	-0.09***	-0.08	-0.08***	-0.09***	-0.07***
	(0.01)	(0.07)	(0.01)	(0.01)	(0.01)
Anti-Semitic tweets in region	0.01***	0.01***	-0.01**	0.01***	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Italian or foreign Jews killed in 1943-1945	0.07***	0.07***	0.07***	0.08***	0.07***
	(0.00)	(0.00)	(0.00)	(0.02)	(0.00)
GRP per capita in region	-0.33	-0.33	-0.16	-0.35*	-0.35**
	(0.21)	(0.20)	(0.19)	(0.20)	(0.17)
Unemployment rate in region	-0.01***	-0.01***	-0.01***	-0.01***	-0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Share of religion marriage	-0.00**	-0.00**	-0.00**	-0.00**	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Share of female population	-2.32***	-2.32***	-2.33***	-2.32***	-2.25***
	(0.04)	(0.04)	(0.05)	(0.04)	(0.05)
Email sent with an Italian Jewish-sounding female name		-0.02			
		(0.04)			
Email sent with an Italian Jewish-sounding name × Anti-Semitic tweets in region			0.03		
			(0.05)		

Dependent variable: all positive responses = 1, negative response = 0					
	Model				
	1	2	3	4	5
Email sent with an Italian Jewish-sounding name × Italian or foreign Jews killed in 1943-1945				-0.03	
				(0.04)	
Email sent with an Italian Jewish-sounding name × second top league					0.17***
					(0.06)
Email sent with an Italian Jewish-sounding name × third top league					0.15***
					(0.04)
League controls	Yes	Yes	Yes	Yes	Yes
Region controls	Yes	Yes	Yes	Yes	Yes
Constant	1.75***	1.75***	1.77***	1.75***	1.79***
	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)
R^2	0.13	0.13	0.14	0.13	0.14
Adj. R^2	0.09	0.09	0.10	0.09	0.09
Num. obs.	1572	1572	1572	1572	1572

Note: Standard errors in parentheses* p < 0.10, ** p < 0.05, *** p < 0.01

Table 3. Results for experiment in housing market.

Dependent variable: all positive responses = 1, negative response = 0					
	Model				
	1	2	3	4	5
Email sent with an Italian Jewish-sounding name	-0.05***	-0.08***	-0.05***	-0.05***	-0.08***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
Email sent with a female name	0.04**	0.01	0.04**	0.04**	0.04**
	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)
Anti-Semitic tweets in region	0.01***	0.01***	0.01**	0.01***	0.01***
	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)
Italian or foreign Jews killed in 1943-1945	-0.08***	-0.07***	-0.08***	-0.11**	-0.08***
	(0.020)	(0.020)	(0.020)	(0.044)	(0.020)
GRP per capita in region	286.04***	283.44***	287.01***	286.88***	285.51***
	(18.26)	(17.99)	(18.32)	(18.27)	(18.59)
Unemployment rate in region	0.20***	0.20***	0.20***	0.20***	0.20***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Share of religion marriage	0.04***	0.04***	0.04***	0.04***	0.04***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Share of female population	27.13***	26.84***	27.24***	27.22***	27.05***
	(2.14)	(2.11)	(2.15)	(2.14)	(2.19)
Email sent with an Italian Jewish-sounding female name		0.06***			
		(0.01)			
Email sent with an Italian Jewish-sounding name × Anti-Semitic tweets in region			0.01		
			(0.02)		

Dependent variable: all positive responses = 1, negative response = 0					
	Model				
	1	2	3	4	5
Email sent with an Italian Jewish-sounding name × Italian or foreign Jews killed in 1943-1945				0.07***	
				0.01	
Email sent with an Italian Jewish-sounding name × Monthly rent					0.05***
					(0.02)
Apartment controls	Yes	Yes	Yes	Yes	Yes
Region controls	Yes	Yes	Yes	Yes	Yes
Constant	-25.51***	-25.24***	-25.61***	-25.59***	-25.43***
	(1.89)	(1.86)	(1.90)	(1.89)	(1.93)
R^2	0.04	0.04	0.04	0.04	0.04
Adj. R^2	0.04	0.04	0.04	0.04	0.04
Num. obs.	3986	3986	3986	3986	3986

Note: Standard errors in parentheses* p < 0.10, ** p < 0.05, *** p < 0.01

Table 4. Results for labor market.

Dependent variable: all positive responses = 1, negative response = 0					
	Model				
	1	2	3	4	5
Email sent with an Italian Jewish-sounding name	-0.00	0.00	-0.03	-0.00	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.04)
Email sent with a female name	0.01	0.01	0.01	0.01	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Anti-Semitic tweets in region	0.00***	0.00***	-0.00	0.00***	0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Italian or foreign Jews killed in 1943-1945	-0.06***	-0.06***	-0.06***	-0.06***	-0.06***
	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
GRP per capita	6.79***	6.81***	6.80***	6.80***	6.79***
	(0.59)	(0.60)	(0.58)	(0.56)	(0.59)
Unemployment rate in region	-0.01***	-0.01***	-0.01***	-0.01***	-0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Share of religion marriage	0.00***	0.00***	0.00***	0.00***	0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Share of female population	-1.59***	-1.59***	-1.60***	-1.59***	-1.59***
	(0.13)	(0.14)	(0.13)	(0.13)	(0.13)
Email sent with an Italian Jewish-sounding female name		-0.01			
		(0.60)			
Email sent with an Italian Jewish-sounding name × Anti-Semitic tweets in region			0.01		
			(0.58)		
Email sent with an Italian Jewish-				0.01	

Dependent variable: all positive responses = 1, negative response = 0					
	Model				
	1	2	3	4	5
sounding name × Italian or foreign Jews killed in 1943-1945				(0.56)	
Email sent with an Italian Jewish-sounding name × Unemployment rate					-0.00 (0.02)
Occupation controls	Yes	Yes	Yes	Yes	Yes
Region controls	Yes	Yes	Yes	Yes	Yes
Constant	-25.51***	-25.24***	-25.61***	-25.59***	-25.43***
	(1.89)	(1.86)	(1.90)	(1.89)	(1.93)
R^2	0.03	0.03	0.03	0.03	0.03
Adj. R^2	0.02	0.02	0.02	0.02	0.02
Num. obs.	3858	3858	3858	3858	3858

Note: Standard errors in parentheses* p < 0.10, ** p < 0.05, *** p < 0.01

Table 5. Results for all three field experiments

	Dependent variable: all positive responses = 1, negative response = 0								
	Model 1			Model 2			Model 3		
	Amateur football	Housing market	Labor market	Amateur football	Housing market	Labor market	Amateur football	Housing market	Labor market
	1	2	3	4	5	6	7	8	9
Email sent with an Italian Jewish-sounding name	-0.07*** (0.01)	-0.05*** (0.01)	-0.01 (0.02)	-0.07*** (0.01)	-0.08*** (0.01)	0.00 (0.02)	-0.07*** (0.01)	-0.05*** (0.01)	-0.00 (0.02)
Email sent with a female name	-0.09*** (0.01)	0.04*** (0.01)	0.01 (0.02)	-0.08 (0.07)	0.01 (0.02)	0.01 (0.02)	-0.09*** (0.01)	0.04*** (0.01)	0.01 (0.02)
Anti-Semitic tweets in region	0.01*** (0.00)	0.01*** (0.00)	-0.08*** (0.01)	0.01*** (0.00)	0.01*** (0.00)	0.00*** (0.00)	0.01*** (0.00)	0.01*** (0.00)	0.00*** (0.00)
Italian or foreign Jews killed in 1943-1945	0.07*** (0.00)	-0.08*** (0.02)	0.33*** (0.03)	0.07*** (0.00)	-0.07*** (0.02)	-0.06*** (0.00)	0.08*** (0.02)	-0.11** (0.044)	-0.06*** (0.01)
Email sent with an Italian Jewish-sounding				-0.02 (0.04)	0.06*** (0.01)	-0.01 (0.60)			

female name									
Email sent with an Italian Jewish-sounding name × Italian or foreign Jews killed in 1943-1945							-0.03 (0.04)	0.07*** 0.01	0.01 (0.56)
Experiment-specific variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	1.75*** (0.04)	-25.51*** (1.89)	-25.51*** (1.89)	1.75*** (0.04)	-25.24*** (1.86)	-25.24*** (1.86)	1.75*** (0.04)	-25.59*** (1.89)	-25.59***(1.89)
R^2	0.13	0.04	0.03	0.13	0.04	0.03	0.13	0.04	0.03
Adj. R^2	0.09	0.04	0.02	0.09	0.04	0.02	0.09	0.04	0.02
Num. obs.	1572	3986	3858	1572	3986	3858	1572	3986	3858

Note: Standard errors in parentheses* p < 0.10, ** p < 0.05, *** p < 0.01

Figure 1. Response rates for Italian- and Italian-Jewish-sounding names by experiment.