

# Discrimination in the hiring process – state of the art and implications for policymakers

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Diversity and  
Inclusion: An  
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## Abstract

**Purpose** – Despite the increasing heterogeneity of the organizational workforce – as a consequence of major worldwide socioeconomic trends – a considerable number of studies shows how traditionally underrepresented groups still face significant barriers in entering the labor market. Literature has highlighted several grounds for discrimination: ethnicity, age, gender, religion, social status, sexual orientation, etc., and while some of these are extensively investigated (e.g. ethnicity), other fields are still gaining evidence (e.g. social status).

**Design/methodology/approach** – In the current paper, we aim at providing a review of current experimental studies aimed at detecting discrimination in hiring and the possible interventions to reduce bias. Then, we offer a point of reflection for policymaking, analyzing whether such issue should be addressed at the level of the individual (i-frame) or rather at a more systemic level (s-frame).

**Findings** – The paper provides substantial evidence that discrimination in hiring still exists, despite the never greater pressure for firms' social sustainability. Further, existing interventions appear to have an overall limited impact in reducing bias. Hence, we suggest that the issue of discrimination in hiring should be tackled at a systemic level, by means of s-frame interventions.

**Originality/value** – The paper offers a comprehensive understanding of the phenomenon by systematizing the existing body of knowledge deriving from empirical research and offering a broad perspective onto policy implications.

**Keywords** Inequality, Diversity, Inclusion, Resumes, Hiring, Policymaking

**Paper type** General review

## Introduction

Organizations are becoming more and more heterogeneous, increasing the so-called workforce diversity – a term used to describe the differences that exist across people within the organizational labor force (Jackson and Joshi, 2010; Mor Barak and Travis, 2013).

The increasing diversity in the organizational workforce is the consequence of major socioeconomic trends: for example, advances in human, woman's, and civil rights contribute to increase labor participation from traditionally underrepresented groups; along the same lines, technological developments and globalization have reduced barriers and increased the interconnectedness across markets, favoring the free flow of human resources across geographic boundaries (Roberson, 2019). Furthermore, it has been suggested that diversity in the workforce may have beneficial effects for organizations (e.g. Martin, 2014; Gassmann, 2001).

Despite these socioeconomic trends and the possible beneficial effects that diversity can bring to organizations, several empirical studies suggest that traditionally discriminated groups still face considerable barriers to enter the labor market, as opposed to members of majority groups (Lippens *et al.*, 2022; OECD, 2020; Quillian *et al.*, 2017). Importantly, this underutilization of talents may bring about a negative impact on firms and society. From an organizational standpoint, it has been long suggested that discrimination in the workforce



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may threaten business viability in the long-run, by means of undermined competitiveness; [Pager \(2016\)](#) investigated the relationship between observed discrimination and firm longevity, showing that employers who engage in hiring discrimination are less likely to remain in business six years later, because of their inability to remain competitive in the market and keep access to valuable human resources. Furthermore, from a macro-economic perspective, it has been suggested that increasing migrant diversity has a positive impact on countries' economic prosperity, increasing GDP per capita ([Alesina et al., 2016](#)); hence, increased race/ethnicity diversity has a positive effect on countries' economic wealth. Further, while diversity has no significant impact on wages for low-skilled jobs, it appears to yield a positive impact on salaries in high-skilled-high-income jobs requiring high-level problem-solving ([Cooke and Kemeny, 2017](#)). Hence, overall evidence seems to suggest that diversity has a positive impact on the macro-economic growth of countries, thus, limiting it may determine a huge economic and societal cost ([OECD, 2020](#)).

The aim of the current paper is to critically revise the, by now abundant, experimental literature investigating various forms of discrimination in firm hiring (see, e.g. [Adamovic, 2020](#); [Lippens et al., 2022](#)), highlighting which groups are mostly confronted with hiring discriminations, and trying to understand the severity of the labor market's inaccessibility for each category. Additionally, the paper revisits existing interventions to reduce discrimination and draws some implications for policymaking.

### **The current state of discrimination in hiring**

Research on discrimination in the labor market has focused for a long time on non-experimental approaches to isolate the impact of discrimination on employees' wages. For example, discrimination in hiring practices has been investigated by means of interviews, surveys, or comparisons across salaries of majority vs minority groups ([Pager, 2007](#); [Paradies, 2006](#); [Zhang, 2008](#)). While these approaches have the merit of providing initial insights into the experiences and in raising awareness regarding salary differences faced by discriminated groups, on the other hand, these methods tend to neglect possible biases – as the effect of social desirability of the majority group in answering surveys and interviews – while salary differences are not able to capture the complexity of the phenomenon. Hence, overall, these limitations make it difficult to truly evaluate the extent of labor discrimination.

The publication of the work by [Bertrand and Mullainathan \(2004\)](#) has exerted a considerable impact in the study of discrimination in the workforce by means of correspondence experiments (also known as audit or resumes' studies), wherein resumes are sent to organizations in order to evaluate the extent of subsequent positive callbacks. Crucially, resumes are experimentally manipulated to compare applicants from majority and minority groups: CVs are identical in every respect, with the only exception of the specific characteristic under investigation (i.e. female vs male, Black-sounding name vs White-sounding name etc.). Resumes are then sent to large numbers of firms as spontaneous applications, or to respond to specific job openings, and after a specified period of time differences across the percentages of positive callbacks (i.e. calls to set an interview) are examined across the fictional candidates of minority and majority groups (for a revision on the methods see [Adamovic, 2020](#)). This method is currently considered the gold-standard for evaluating discrimination in the labor market, because by estimating and comparing the percentage of callbacks, it is possible to draw causal interpretations underlying the results and because, by observing real recruiters' decisions, it is also characterized by higher external validity ([Baert, 2018](#); [Neumark, 2018](#); [Verhaeghe, 2022](#)). There have been also critiques to resumes' studies – such as the famous Heckman and Siegelman critique ([Heckman, 1998](#); [Heckman and Siegelman, 1993](#)) – which suggest that group differences in the variance of unobservable determinants of productivity still can generate spurious

evidence of discrimination in either direction. Nonetheless, the number of correspondence/resumes' studies has increased considerably over the recent years.

### *Ethnicity*

One of the most researched grounds for discrimination is related to race, ethnicity, and national origin. A recent study conducted in the Dutch labor market found that applicants from migrant origin show a much lower percentage of positive callbacks as compared to equally qualified people of native-majority origin (Thijssen *et al.*, 2021), replicating the findings of another extensive study conducted almost 30 years ago (Bovenkerk *et al.*, 1995), hence suggesting that ethnic discrimination has not reduced over time. A relatively recent meta-analysis by Zschirnt and Ruedin (2016) has found evidence of discrimination across OECD countries, showing that minority groups receive on average 49% lower callback rates as compared to the majority groups. Importantly, no systematic difference has been observed between first- and second-generation applicants, hence suggesting that discrimination is taste-based, rather than rooted on doubts regarding the quality of candidates' qualifications (Larsen and Di Stasio, 2021; Zschirnt and Ruedin, 2016). Furthermore, the meta-analysis also shows some evidence of decreasing discrimination over time; nonetheless, EU anti-discrimination directives do not appear to have exerted a substantial impact overall. Finally, the meta-analysis found support for the existence of differences across minority groups in their hiring outcomes, thus supporting the existence of some sort of ethnic hierarchy across minority groups (Thijssen *et al.*, 2021; Vernby and Dancygier, 2019; Zschirnt and Ruedin, 2016). These findings have also been supported by a more recent meta-analysis that shows that ethnic minorities face on average 29% less positive responses to a job application as compared to the majority group, with Arabs/Middle Eastern (41% reduction), Eastern Asian/South-Eastern Asian (37% reduction) and Southern European (33% reduction) being amongst the most discriminated ones (Lippens *et al.*, 2022).

With respect to the possible interventions that can impact upon the reduction of bias against ethnic minorities, a recent study tested the effect of two interventions: (1) a culture-general assimilator (i.e. a series of cross-cultural incidents presenting a problem or misunderstanding between members of the majority and minority group) and (2) structured free recall intervention (i.e. asking to recall positive memories of vignettes showing information about a target person from a certain ethnic group). Results showed that less positive evaluations of applicants from minority groups, as compared to majority ones, were reduced shortly after both training interventions; nonetheless, such stereotyped evaluations resurfaced again 3 months later for both interventions (Deros *et al.*, 2021). On a more systemic level, the meta-analysis by Zschirnt and Ruedin (2016) suggests that increasing the amount of information available to evaluate candidates has an impact against discrimination, along with anti-discrimination regulations. Indeed, they report evidence of less discrimination in German speaking countries in the public sector – where non-discriminatory hiring practices are often explicitly sought, and extensive applications packs are commonly used – as compared to the private sector.

### *Gender*

Several studies have also explored the role of gender in workforce discrimination. The results of these studies are more complex to interpret. The meta-analysis by Lippens *et al.* (2022) indicates that females show a higher probability of positive callbacks (~4% more than males), while Galos and Coppock (2023) using a meta-analytic average treatment found weak support for a pro-female bias overall. Further, this study also shows that discrimination is a function of the gender composition of the industry: females are discriminated against in male-dominated industries, while Schaefer *et al.*'s (2023) meta-analysis found that females are discriminated

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against in both male-dominated and gender-balanced industries; conversely, both meta-analyses found that males are discriminated against only in female-dominated ones. Importantly, Galos and Coppock (2023) also show that wages across industries are not equivalent, and that while males are advantaged in higher-paying occupations, females are favored in lower-paying industries. Further, extrapolation data suggest that to the extent that higher ranks are dominated by males, it is possible to expect bias against females also in promotions (i.e. vertical segregation). Nonetheless, over time, outcomes for females appear to have improved in male-dominated or gender-balanced occupations; conversely, males applying for female-dominated occupations are not facing such progress (Schaerer *et al.*, 2023). Additionally, hiring practices do not appear to correct imbalances in gender composition, but rather to reinforce them (Galos and Coppock, 2023). On a final note, Correll *et al.* (2007) found that females face an additional disadvantage as a consequence of parenthood; indeed, while mothers appeared to be penalized on a series of measures (e.g. perceived competence and starting salary), fathers not only were not penalized for, but rather benefited from being a parent.

With respect to the possible interventions to mitigate gender bias, the systematic review by Isaac *et al.* (2009) suggests that providing proof of competence and past performance excellence seems to be effective. Along similar lines, providing raters with research results confirming women's competence in male-dominated tasks also appeared to reduce the bias. Nonetheless, Isaac *et al.* (2009) also suggest that females who clearly show competence in male-stereotyped roles are subject to negative evaluations as their ability violates norms of stereotyped female behavior (Isaac *et al.*, 2009). Importantly, despite the idea that diversity training and equity policies may improve females' outcomes in hiring procedures, the results of the study suggest that they do not ensure gender equity in hiring (Isaac *et al.*, 2009). Finseraas *et al.* (2016) found that despite positive information increases females' evaluations, these improved assessments did not change the actual extent of discrimination. On the other hand, intense collaborative exposure to females reduces discriminatory attitudes.

### *Religion*

Substantial research has also been conducted to test the discrimination in the labor market based on religious grounds, in particular toward Muslims, while only few studies have evaluated the effect of other religious beliefs. A recent study conducted across five European countries has found extensive levels of anti-Muslims discrimination across all of them (Di Stasio *et al.*, 2021). Similarly, in the French labor market, Muslim candidates had 2.5 less chance to receive a positive callback compared to their Christian counterpart (Adida *et al.*, 2010). In South America, revealing one's own religious affiliation has been reported to decrease the chance of a positive callback by 26%. Muslims, pagans, and atheists were those mostly discriminated against, while Jews appeared to receive a preferential treatment (Wallace *et al.*, 2014). Yemane (2020) has tried to disentangle the combined effect of ethnic background, religious affiliation, and phenotype showing that a single signal of otherness is enough to generate strong negative biases. Overall, these results are also confirmed by the meta-analysis by Lippens *et al.* (2022) showing that hiring discrimination on religious grounds is mostly driven by anti-Muslims biases.

Regarding possible interventions, to the best of our knowledge, no studies have been conducted to specifically address discrimination on religious grounds. Most of the studies seem to subsume religion in ethnic origin rather than treating it separately.

### *Age*

With respect to discrimination on age grounds, an important premise is in order: a major confounding effect exists in age studies; indeed, age is often regarded by employers as a proxy for experience, and building credible CVs of older candidates with the same level of

experience of younger ones (and vice versa) represents a complex challenge, which makes it difficult to conduct studies on discrimination on age grounds. A recent meta-analysis (Batinovic *et al.*, 2023), focusing specifically on discrimination against older candidates, shows consistent evidence in favor of discrimination: older people receive from 11% to 50% less positive callback rates compared to 29–35 years old candidates, depending on the specific age group (40s, 50s, or 60s). Discrimination against older candidates appears to exist regardless of the study design, although within-subjects studies appear to report larger effects. Similarly, the meta-analysis by Lippens *et al.* (2022) reports overall more robust effects with respect to discrimination toward older applicants, while no unanimous support is shown for discrimination against younger candidates. Finally, some studies report how age discrimination interacts with gender: Neumark *et al.* (2019) found age discrimination for older females but not for older males, while Petit (2007) reports hiring discrimination against young women applying for high-skilled administrative jobs.

Regarding the possible interventions to reduce negative evaluations of older candidates, Gringart (2003) showed that using a cognitive dissonance treatment (i.e. arguing that not hiring older candidates may be counter-productive in cases where the best person for the job happens to be older) along with fact sheets (i.e. presenting misconceptions about older workers contrasted with empirical data) reduced negative evaluations of older candidates, although these two treatments appeared to be ineffective on their own. Further, a recent scoping review, investigating four thematic categories of interventions ((1) de-biasing; (2) brief attitudinal interventions; (3) age diversity workshop; (4) structural or contextual interventions) suggests that most studies were only able to demonstrate improvements in explicit measurements of attitudes toward older adults, immediately following the intervention, hence, their validity and applicability in real-life settings and the extent of their duration for a longer time frame are yet to be demonstrated (Sinclair *et al.*, 2024).

### *Disability*

Disability – both mental and physical – represents another important ground for discrimination, nonetheless, it should be noted that extensive differences exist across studies in the definition of what falls under the umbrella of disability, making the interpretation of the evidence particularly difficult (e.g. some of the categories investigated under the “disability” umbrella may be better described by some form of stigma, or by discrimination based on attractiveness). In addition, the risk of confounds is considerable, given that certain types of physical or mental disability may correlate with actual or hypothesized alterations of performance on the job, which may cause recruiters to have doubts about the employability of these subjects. For example, Bjørnshagen (2021) and Hipes *et al.* (2016) found that disclosing a history of mental illness (without specifying which kind of mental illness) determines a drop in positive callbacks. Ameri *et al.* (2018) compared mental and physical disability (i.e. Asperger syndrome and spinal cord injury) reporting a 26% decrease in probability of receiving a positive response for people with disability – both physical and mental. Focusing on physical disabilities, wheelchair users were found to be discriminated against regardless of the need for close customer contact. High rates of discrimination (i.e. 82.6–97.8% for males and 81.6–98.8% for females) was found in the Greek labor market for applicants who voluntarily disclose of being HIV positive (Drydakakis, 2010), a condition that, however, we find hard to classify as “disability”, being more similar to a stigma. In line with these findings, a meta-analysis confirmed the presence of discrimination based on mental or physical disability, despite the large variations present across studies with respect to the definition of the physical one and despite the great heterogeneity of possible medical conditions falling under this category, which makes the current results hardly generalizable (Lippens *et al.*, 2022).

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With reference to the possible interventions that may be effective in improving employment outcomes of people with disability, a recent review of the literature has attempted to investigate which one may be beneficial across few broad categories (anti-discrimination legislation, quota system, part-time sick leave, graded return to work and wage subsidy schemes). The results suggest that anti-discrimination law appears to be ineffective in the improvement of employment opportunities for people with disabilities; quota systems and wage subsidy schemes, on the other hand, have shown mixed results. Conversely, sick leave or graded return to work appear to be the most effective interventions for improving work outcomes of people with disability (Derbyshire *et al.*, 2024).

#### *Attractiveness*

Another ground for discrimination is the one based on attractiveness (some studies treat facial disfigurement or obesity as disability). A meta-analysis by Hosoda *et al.* (2003) found that attractive people obtain better results in a variety of job-related outcomes, and the effect appears consistent across studies providing different amount of information of candidates (i.e. it is not attributable to statistical discrimination). Despite some studies report such discrimination being more severe in females than males (e.g. Campos-Vazquez and Gonzalez, 2020; Rooth, 2012), the meta-analysis shows similar effects across candidates of both genders, and the effect seems to have decreased over time (Hosoda *et al.*, 2003).

No studies, to the best of our knowledge, have addressed the issue of reducing discrimination on attractiveness ground.

#### *Sexual orientation*

With respect to discrimination based on sexual orientation, the literature is more complex and results are less unanimous, also due to the differences across studies (Lippens *et al.*, 2022). A recent meta-analysis focusing on sexual-orientation discrimination has found evidence for discrimination in OECD countries (Flage, 2020). At the initial stage of recruitment, openly homosexual applicants have 40% less odds of a positive outcome as compared to heterosexual candidates. Importantly, such results vary based on the type of job and candidates' gender: discrimination appears significantly lower for high-skilled jobs, while it is more pronounced for low-skilled jobs; as for the gender, heterosexual males are twice as likely to obtain a positive callback as compared to homosexual ones, while homosexual females receive 31% less positive callbacks compared to heterosexual ones. Importantly, the effect of discrimination seems to vary also as a function of the amount of information provided in the CV, hence suggesting that employers need to be "reassured" to mitigate the effect.

In order to reduce bias toward people's sexual orientation, Aksoy *et al.* (2023) tested the effect of basic information treatments showing that participants who received information about the economic costs of sexual orientation discrimination for society were significantly more willing to support equal employment opportunities. Nadler *et al.* (2014) report evidence of the effectiveness of accountability on ratings of homosexuals and heterosexual job applicants in reducing negative evaluations; no differences were observed between the two categories in the condition wherein people were told they would have to explain their ratings (i.e. accountability condition), while homosexuals receive more negative evaluations in the non-accountable condition. Gould *et al.* (2024) in their scoping review found evidence of legal and policy interventions to improve labor force outcomes for LGBTQIA+ individuals.

#### *Social/cultural status*

Finally, another ground for discrimination that is receiving attention, despite studies being still scarce and results heterogeneous, is social/cultural status and wealth/income. This

discrimination ground is often complex to examine, as it poses difficulties in its definition, and currently it does not represent a category explicitly protected by antidiscrimination laws. In line with such complexity, studies largely vary in the way in which social/cultural status is manipulated. Many studies manipulate information related to candidates' neighborhood/place of residence, in otherwise identical CVs. In one of these studies, [Spencer \*et al.\* \(2020\)](#) found lower percentage of positive callbacks from applicants from a low-income neighborhood compared to high-income ones in Jamaica. Similarly, [Bunel \*et al.\* \(2016\)](#) in France found that a good address triples the chances of a positive feedback. Conversely, [Tunstall \*et al.\* \(2014\)](#) in UK did not find such effect of low- vs high-income neighborhoods in candidates' selection. [Carlsson \*et al.\* \(2018\)](#), in Sweden, found that the neighborhood exerted an effect only in conjunction with a foreign background, hence determining a 42% decrease in positive feedbacks; additionally, a neighborhood requiring a commuting time larger than 90 min, also determined a drop in the number of positive callbacks ([Carlsson \*et al.\*, 2018](#)). Other studies conducted in India test the effect of low- vs high-caste applicants. [Siddique \(2011\)](#) found that low-caste candidates need to send 20% more resumes in order to get the same rate of positive callback as the high-caste ones; additionally, the study found variations across different kind of organizations: high-caste candidates are favored in firms with small-scale operations, while low-caste ones are favored in firms with large-scale operations. Conversely, [Banerjee \*et al.\* \(2009\)](#) found no evidence of discrimination between low- and high-caste candidates in the software industry, while differences were observed in call-centers' jobs. Finally, a very limited number of studies manipulate background of origin by means of cultural capital ([Bourdieu, 1984](#)): [Thomas \(2018\)](#), in a study conducted in the US, found that cultural signals of high social-class favor females but not males. Conversely, [Rivera and Tilcsik \(2016\)](#) found that US law firms tend to favor high-class males, compared to high-class females, who have the same positive callbacks as low-class males and females; follow-up interviews revealed that high-income males are perceived as better fits with the organizational elite culture, while such evaluation is not extended to females, as they are impacted by a biased view of not being committed to full-time jobs. Overall, the results regarding social status in labor discrimination is not conclusive: indeed, the meta-analysis from [Lippens \*et al.\* \(2022\)](#) found modest evidence, due to the limited amount of research.

No studies have been conducted – to the best of our knowledge – targeting interventions to reduce discrimination based on the social or cultural background of applicants. This may be due to the relatively recent and still limited investigation of such discrimination ground in the extant literature, on the one hand, and by the lack of antidiscrimination laws, on the other. We deem social class discrimination an especially important one to tackle, also in the light of evidence suggesting that, at least in contexts like the US, race can be used as a proxy for social class, with the results that black people may, at least in part, be discriminated against not for skin color in itself but because they are believed to come from a lower social class background ([Harris, 1999, 2001](#); [St John and Bates, 1990](#); [Kawachi \*et al.\*, 2005](#); [Malik, 2009](#); [Taub \*et al.\*, 1984](#); [Williams, 1999](#)).

### *Summary*

In general, the evidence revised highlights that hiring practices are still affected by major shortcomings as far as favoring workforce diversity is concerned despite the never greater pressure of major worldwide trends, such as globalization and social sustainability, as well as the increasing adoption of protection policies.

In terms of interventions targeting discrimination in hiring practices, the results are rather mixed. Additionally, it is important to note that few studies test interventions in real settings or target actual recruiters, hence, the generalizability of such findings may be limited. Furthermore, especially for individual interventions (as compared to systemic ones)

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it is not clear whether the changes in attitudes are long-lasting or only confined to a limited time frame. A recent systematic review of the literature on interventions (Treffers *et al.*, 2024) has found evidence of effectiveness of interventions involving structuring communication documents, procedures, or interactions for targeting bias against disabled, ethnic, and sexual minorities. Interventions building on similarities between majority and minority groups are suggested as effective for reducing bias against disability and age. This latter appears to be reduced also by providing additional information or raising awareness about biases. Finally, exposure interventions leveraging interactive experiences across majority and minority groups appear effective for age, ethnic, and sexual minorities.

### **Implication for policymakers**

In light of the evidence revised in the previous section, it is crucial to understand how the issue of inequality and diversity in the workplace can be addressed. A point of reflection in the matter is whether such issues should be addressed at the level of the individual, or rather at a more systemic level. On the one hand, it is tempting, and in line with an established research tradition in behavioral economics, to suggest that the solution to the problem would consist in modifying individual behaviors, i.e. those of the recruiters; this approach has been labeled in the reference literature as “i-frame”, as opposed to “s-frame”, which has the aim of modifying the system in which the individuals operate (Chater and Lowenstein, 2022).

In the last two decades, in fact, behavioral economics has overwhelmingly adopted the “i-frame” perspective (Camerer *et al.*, 2003) for its policy recommendations; in particular, several lines of investigations (e.g. the whole “nudging” literature deriving from the seminal contributions of Thaler and Sunstein, 2009) have suggested that many societal problems derive from individual limitations (e.g. reliance on simple heuristics, pervasiveness of biases in judgment and decision making, etc.) rather than from systemic distortions. Hence, i-frame policies do not have to aim at big systemic changes, but rather at introducing subtle adjustments to help “fallible” individuals not fall prey to their own limitations (Chater and Lowenstein, 2022). The distinction between i-frame and s-frame perspectives is not always clear. To better clarify the distinction, the authors employ the following analogy: “*seeing individual cognitive limitations as the source of society’s problems is like seeing human physiological limitations as the key to the problems of malnutrition or lack of shelter. Humans are vulnerable to cold, malnutrition, disease, predation, and violence. An i-frame perspective would focus on tips to help individuals survive in a hostile world*” (Chater and Lowenstein, 2022, p. 2). As the analogy suggests, i-frame public policy interventions alone cannot be effective and can even be counterproductive, albeit being consistent with an individualistic approach that limits state interference and, as such, may shield from accusations of paternalism or similar (Chater and Lowenstein, 2022). An example of i-frame intervention in the public policy domain, among many, is the introduction of the well-known macabre labels on cigarette packages with the goal of disincentivizing smoking. Despite the initial worldwide enthusiasm, recent studies are showing that such interventions are quite ineffective, or when they are, their impact is modest at best. An example of an s-frame intervention in this case, and quite an extreme one, could be represented by an outright ban on smoking which, however, would have its own limitations such as creating an inevitable black market and, on more philosophical terms, limiting individual freedom in a way that many would find unacceptable. Other forms of s-frame intervention could be milder and compromise between respecting individual freedom while advancing public health and saving lives. Discussions on how to solve the difficult tradeoff between individual liberties and state impositions gained momentum during the recent COVID-19 pandemic and the consequent decisions of many governments to impose lockdowns, which showed the emergence of hardly reconcilable views. The choice, in most cases, is at the end a political one. Further,



additional considerations regarding the adoption of i-frame vs s-frame policies is related to the feasibility and cost of implementation, which naturally favors i-frame interventions over s-frames ones. However, leaving political considerations apart and judging solely based on efficiency, Chater and Loewenstein argue that several i-frame interventions that have been implemented in various domains of public policy have proven largely ineffective.

In the specific case of hiring, a recent study reveals that, despite the effort devoted by technology companies to actively institutionalize diversity and inclusion training to help evaluators recognize their unconscious biases, the technology workforce does not appear more diverse than it used to be; furthermore, evaluators appear to assess applicants' potential on the basis of industrial, organizational and individual fit, which, albeit a reasonable selection criterion on paper, often translates into social-class biases in practice (Chua and Mazmanian, 2020). We argue that the resistance of recruiters to interventions aimed at eliminating biases in hiring cannot be explained by individual "irrationality" alone, but it needs to be addressed by more society-oriented analyses of power distribution and conflict within a society. It is widely recognized, in fact, that many discriminatory attitudes and prejudices toward discriminated groups are developed often unconsciously by individuals very early in their lives being grounded in institutions such as family and school, and are supposed to be means by which dominant groups (wealth or power-wise) end up perpetuating their privileges at the expense of dominated ones (see, e.g. Bourdieu, 1984, 2002; more recently, Rivera, 2015). Indeed, while biases may act unconsciously, they are nonetheless grounded in convictions and emotions which are ex-post rationalized into deliberate hiring decisions (e.g. *"females are less keen to certain job positions than males"*) which translates in the intentional act of judging a candidate fitter to a job based on a certain trait. In other words, since biases emerge from the interplay of emotions and deliberate and unconscious actions deeply rooted in one's most inner beliefs and sense of self, interventions aimed at "correcting" them may not only be ineffective but bear the risk of provoking a backlash. Hence, here we suggest that inequality and diversity issues in hiring should be tackled by means of an s-frame approach, namely, by public policies aimed at changing the system of rules, norms, beliefs, and behaviors that produce discriminations at different levels of society, such as school, work, media, public opinion, etc.

In addition, when analyzing discrimination at a more disaggregated level, it is worth pointing out that the above review of the literature has highlighted that discrimination is not at all ubiquitous, neither country-wise nor industry-wise. Furthermore, results differ greatly as a function of the specific trait object of discrimination. Finally, in some cases discrimination goes in the opposite direction compared to what one would expect, as in the case of gender in some female-dominated industries. It appears sensible, therefore, to design and apply policy interventions where the evidence shows they are necessary and formulated to eliminate or reduce the source of each specific bias, which differs on a case-by-case basis. We advance a few suggestions in the form of examples of s-frame interventions in the following, limiting ourselves to Europe and the US context, with which we are more familiar, and to some of the discriminated groups previously mentioned. Furthermore, Table 1 includes a list of potential s-frame measures that can mitigate discrimination in hiring, distinguishing across the organizational level and the public policy level; naturally, this list is not exhaustive, but rather intended as a point of reflection on the matter.

In the case of gender bias, the evidence accumulated shows a mixed picture: on the one hand, women are disproportionately disadvantaged compared to men when several factors contribute to potential discrimination. On the other, when women are not discriminated against, or even advantaged, the reason often lies in the phenomenon of gender segregation (i.e. horizontal discrimination), namely, the general tendency within society to consider some occupations as traditionally female, and others more traditionally male (Charles and Grusky, 2005). Importantly, many times such "feminine" jobs correspond to less prestigious and less

## EDI

paid positions (e.g. female nurses vs male doctors) (Galos and Coppock, 2023; Gedikli, 2020). The pervasiveness of gender discrimination and stereotypes, despite much progress in the woman's condition worldwide in the last century, points at the persistence of "patriarchal" values within many cultures, which keep downplaying the role of women in society and to perpetuate rigid sex roles despite the apparent advancement of women in many managerial and power roles (e.g. de Beauvoir, 1949; Bourdieu, 2002, within an enormous literature). Dealing with sex-based discrimination, therefore, as convincingly argued by Bohnet (2016), requires being aware that the source of such bias is multidimensional and goes well beyond "simple" ingroup favoritism, such as that highlighted by psychological theories on social or group identity (e.g. Tajfel, 1978; Turner, 1987). Hence, i-frame interventions that aim to reduce gender bias in hiring must be accompanied by s-frame interventions at a macro level aimed to change the underlying cultural values in the direction of eliminating gender stereotypes and female oppression in all domains of life, from the family to the workplace. Examples of the former types of interventions are introducing "gender-blind" resume practices, employing AI-based systems of recruiting, and/or introduce policies for gender protection, etc (Agrawal *et al.*, 2020; Hofeditz *et al.*, 2022; Vivek, 2022). Examples of the latter may include imposing gender quotas, as well as actions aimed at the family and school levels, where gender inequality often is first transmitted across generations. Many studies indeed show that gender stereotypes are formed very early in life (e.g. Maccoby, 1990; Martin *et al.*, 1990) and tend to create path-dependent series of irreversible decisions whereby women too often shy away from competition and from high rewarding careers, preferring domains traditionally considered more "feminine", which are also typically less remunerated (Galos and Coppock, 2023; Sutter and Glätzle-Rützler, 2015). Investing at the family level is therefore necessary to change a society's culture in the medium to long run. Along these lines, for example, imposing paternity leave for fathers could have the beneficial effect of releasing the burden of mothering, as well as promoting equality between parents in offspring care and hence undermining the "woman = caregiver" stereotype. On the side of hiring discrimination, this kind of policy may have the beneficial impact of leveling the field across female and male candidates; indeed, evidence shows that mothers are disadvantaged in hiring, compared to fathers (Correll *et al.*, 2007), possibly due to the fact that children's care is disproportionately burdening females over males, hence forcing them to keep their career on hold. Recent empirical studies show that, at the corporate level, gender bias on idea evaluation seems milder than one would expect (Sutter and Glätzle-Rützler, 2015). These findings suggest that, once women reach power positions, they can be as influential as men. Hence, besides promoting diversity and inclusion initiatives at corporate levels, more attention should be devoted to public investments aimed at assuring women of all classes equal access to economic independence and higher education, alongside educating younger generations to recognize and combat sexist stereotypes.

Regarding discrimination based on religious creed, the literature so far has highlighted the overall prevalence of a strong anti-Muslim bias, while biases against other religions seem

**Table 1.**

Overview of s-frame interventions to mitigate discrimination in hiring, distinguishing between the organizational level of intervention and the public-policy level of intervention

Organizational level	Public-policy level
Gender-age-ethnicity-blind resumes	Quota system
AI-based screenings of resumes	Mandatory paternity leave
Standardization of application pack limiting/excluding information that may represent sources of bias (e.g. cultural taste)	Faster recognition of foreign qualifications and certifications
Increased the information required for application packs	Easier (or less restrictive) access to naturalization and citizenship procedures (i.e. increase integration)

negligible. Several surveys conducted both in the US and Europe in the last twenty years revealed the presence of strong anti-Muslim prejudices associated with a diffuse negative stereotyping of Muslims (Strabac *et al.*, 2014; Strabac and Listhaug, 2008). While the anti-Muslim prejudice in Europe is ancient, dating back to the centuries immediately following the birth of Islam itself (Malik, 2009; Strabac *et al.*, 2014), it has also regained momentum in recent decades because of international politics. The bias, in fact, is partly due to the appearance of Radical Islam at the forefront of the international scene (starting from the September 11th attacks in NY) along with the parallel establishment of enclaves of radical Muslim immigrants in the suburbs of many European cities, where Islamic law (Sharia) is often imposed (Berger, 2018; European Parliament, 2017). Media representation of Muslims, often mentioned only in association with terrorist acts, also contribute to negative stereotyping and diffuse societal anti-Muslim prejudice (Cinnirella, 2012; Hatton and Nielsen, 2016; Ogan *et al.*, 2014; Shaver *et al.*, 2017). Cultural factors contribute to the bias too, as Islam is considered by many incompatible with the most fundamental principles of Western democracies. In this intricated context where history, culture, religion, and contemporary political tensions (the example of the ongoing Israel–Palestine conflict is a case in point) interact in non-obvious ways with individuals’ deep-seated political beliefs, i-frame interventions aimed at eliminating biases in recruiting appear especially irrelevant and counterproductive. It would be futile on our part to suggest solutions to a problem that has ancient roots, being somewhat akin to the anti-Jews prejudice that affected Europe for centuries and which occasionally resurfaces. It suffices to point out that the reduction of anti-Muslim biases in recruiting cannot be defeated without extensive s-frame interventions aimed at facilitating full integration of Muslims into Western countries; for such integration to succeed, in our view it should aim at a difficult balance between assuring the respect of different cultures and defending the principles of Western secularized societies.

Finally, specific considerations must be reserved to social class bias, one of the least investigated empirically so far, but probably one of the most pervasive if one considers that race bias in some contexts may partly be a social class bias in disguise (Harris, 1999, 2001; St John and Bates, 1990; Kawachi *et al.*, 2005; Malik, 2009; Taub *et al.*, 1984; Williams, 1999). It has to be pointed out that “social class” is a multidimensional construct, which in the public sphere is often reflected in publicly visible “signals” of class: besides obvious indicators such as residence in high-income neighborhoods, many of these signals pertain to the domain of “taste”. It is by now widely established within an immense sociological literature that indicators of a taste for highbrow or lowbrow culture, are widely perceived to reflect individuals’ social class backgrounds (Bourdieu, 1984; Coleman *et al.*, 1978; Lizardo and Skiles, 2016; Turner *et al.*, 2017). Cultural appreciation and knowledge of classical and jazz music (especially if accompanied by years of study of a musical instrument at a professional level), fine arts, opera, and the practice of specific sports such as sailing, horse-riding, and tennis, are all considered, on average, indicators of high social class background. Conversely, appreciation of pop and country music, commercial art, commercial TV shows, e.g. reality shows and soap operas, as well as sports like soccer and baseball, are generally associated with lower social class backgrounds. Hence, if class itself can still be defined as one’s endowment of economic capital, or as a combination of economic and cultural capital in varying proportions (Bourdieu, 1984) which as such may not be immediately evident to others, highbrow cultural tastes are generally considered a visible expression of high social class background, and when included in a resume they can make a difference especially when seeking access to elite professions (Jewel, 2008). Possessing competence in highbrow cultural domains has been demonstrated to provide an advantage as early as in primary school, where children possessing traits of highbrow culture, whose parents can afford to pay for such high class education, are often granted higher rewards and advantages compared to children who do not possess this form of cultural capital (Calarco, 2011;

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Dumais, 2002; Lareau and Weinger, 2003). Whether and to what extent these advantages carry over to the job market is an open question, but mounting evidence seems to show that such advantages persist, at least in some domains (McCall, 2001). Concerning the job market, in fact, class bias is more or less evident depending on whether the market is for middle/low-level jobs, or for elite/high-paying positions. In the former case, the bias, when emerging, seems related to a stereotype that associates highbrow cultural tastes to certain personality traits such as a “polish” attitude – namely, the display of an upper-middle-class style of self-presentation and interaction characterized by sophistication as defined by Thomas (2018) – as a consequence, the bias seems to favor women, for whom such traits are judged as more relevant than for men, and in customer-facing job positions (Thomas, 2018). In elite positions in the highest-paying and prestigious companies (e.g. law, consulting, and finance), class discrimination seems to be widespread and, contrary to the previous case, to favor men over women (Rivera and Tilcsik, 2016). The issue is especially relevant considering that social class is widely considered as one of the most reliable predictors of economic success in the US (Thomas, 2018), and even more so in European countries showing a low social mobility level across generations (Bukodi *et al.*, 2020). In summary, class discrimination in hiring needs to be further investigated considering several dimensions of class background beyond cultural tastes, to assess its real importance especially in relation to gender bias, and to differentially assess its importance in different labor markets, namely those for middle-class jobs and those for elite positions. Policy recommendations for class discrimination cannot but embrace more macro-level political issues attaining the distribution of wealth and opportunities within a society. We consider it would be of little help to recommend “i-frame” policies addressing single recruiters, since it is a characteristic of economic elites to act in the direction of restricting external access to their own privileges. Further, it has been argued that it is social class differences that generate social group preferences and such preferences emerge as early as in 4–5 year-old children (Horwitz *et al.*, 2014). Therefore, treating class discrimination as a “simple” example of individual bias would be of little effect as it would not act on the underlying causes but only on the effects. Likewise, it would be of no aid to recommend that working-class individuals be helped, for example through public funding, in achieving the cultural capital needed to access elite jobs, since it has been demonstrated that once a particular cultural trait becomes mainstream, the elite finds novel traits to use as signals of distinction (Bourdieu, 1984; Lizardo and Skiles, 2012). In summary, we can suggest no easy solutions to reduce class bias, as the issue is evidently political. We deem it important, however, to investigate and denounce the existence and ubiquity of class discrimination especially since it is the discrimination apparently receiving the least attention of all, which appears even more problematic in the case of self-proclaimed “meritocratic” societies.

## Conclusions

Despite organizations becoming increasingly heterogeneous, advances in woman’s and humans’ civil rights have contributed to a more diverse workforce, and the emphasis on diversity and inclusion practices in organizations has never been greater, discrimination in hiring procedures is still overwhelmingly present. The evidence revised – necessarily incomplete highlights – how gender, race, sexual orientation, social status, and disability still represent staggering barriers to enter the job market.

Here we propose that discrimination in hiring practices cannot be solved by i-frame policies alone, as we have shown how certain prejudices are deeply rooted in collective, societal structures, and acquired extremely early in life; hence, any policy that aims at obtaining true and durable results cannot rely exclusively on the individual ability to refrain from automatic and biased categorizations. On a final note, it is worth mentioning that – in

line with the current discussion – Harvard’s Faculty of Arts and Sciences has recently announced that they will stop requiring a diversity, inclusion, and belonging statement as part of its faculty hiring process, following the lead of MIT which has just made a similar announcement (Robinson and Shah, 2024); such recent decisions suggest the ineffectiveness and potentially harmful backlash effects of such practices, and highlight the urge to find more impactful ways to increase D&I in organizations. Thus, overall, evidence suggests that collective and systemic changes are necessary for a more diverse and less discriminated labor market.

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