



## **Report<sup>1</sup>**

### **Taste-based versus Statistical Discrimination: Placing the Debate into Context**

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## 1 Introduction

Racial or ethnic discrimination is the unequal treatment of persons or groups on the basis of their race or ethnicity (Pager & Shepherd, 2008). Due to the widespread endorsement of egalitarian attitudes, the waste of human capital resources, and its negative impact on the level of wellbeing and socioeconomic integration of ethnic minorities, discrimination is in most contemporary societies unaccepted and legally forbidden (Dancygier & Laitin, 2014; Quillian, 2006).

Echoing these societal concerns, scholars have employed various methods to study the occurrence of ethnic discrimination in the labour market (Veenman, 2010). One way to do so is using sophisticated statistical methods and large-scale datasets to investigate labour outcomes of various ethnic groups. After controlling for an extensive battery of human capital-related variables, remaining ethnic gaps give an indication of the possible extent of discrimination. Another way to study discrimination is to examine the reported behaviour of (potential) perpetrators or the experiences of (potential) victims of discrimination. A final branch of



research uses experimental designs in a laboratory or in a field setting to investigate the existence of discrimination. Experimental approaches have some great advantages over other approaches because researchers can assess differences in outcomes between truly equally qualified majority and minority job applicants and because findings suffer less from social desirability bias (Pager, 2007). Due to the fact that laboratory experiments often take place in an artificial setting and use unrepresentative samples (e.g. students), field experiments are widely considered to be the gold standard for investigating discrimination (Pager & Shepherd, 2008).

Over time and in many countries, numerous field experiments have been conducted to investigate ethnic discrimination in the labour market (Bertrand & Duflo, 2016; Neumark, 2016; Pager & Shepherd, 2008). As is recently shown in a meta-study by Zschirnt and Ruedin (2016), a large number of field experiments clearly demonstrates the existence of discrimination. In particular, there are almost no studies that find no evidence for discrimination of ethnic minority candidates and generally it appears that minority members need to send 49 percent more applications than their majority counterparts.

After establishing that employment discrimination (still) exists in many societies, an important follow-up question is why it persists. Answering this question is important as it would not only improve our understanding of who is more likely to discriminate against whom and why, but also because these insights may inform policy-makers about possible remedies for discrimination.

Most explanations for discrimination in the literature center around two rivalling theories (Bertrand & Duflo, 2016; Guryan & Charles, 2013): taste-based discrimination theory and statistical discrimination theory. Whereas taste-based discrimination theory argues that interethnic bias is the main determinant of discrimination (Becker, 1971), statistical discrimination theory opposes that interethnic attitudes shape economic transactions and suggests instead that discrimination results from a rational behavioural response to uncertainty. Specifically, in the absence of perfect individual information regarding job applicants' labour performance, group information (e.g. ethnicity, gender, age) is considered to be a cheap source of information to infer individual productivity of applicants and consequently to base selection decisions upon (Arrow, 1971; Baumle & Fossett, 2005; Phelps, 1972). Despite these divergent interpretations and considerable scientific efforts over the past decades, there is no consensus among researchers which model is better in explaining ethnic discrimination in hiring (Guryan & Charles, 2013; Quillian, 2006).

In this review I pay closer attention to this scientific debate. First, I discuss the theoretical fundamentals of taste-based and statistical discrimination theory and take a closer look at the specific assumptions on which these theories rest. Second, I examine the extent to which empirical research finds support for either of these theories. In doing so, I mainly focus on findings of field experiments as they provide the most compelling evidence of discrimination. In some instances, however, I complement these insights with insights from other research



approaches. Finally, I close by summarizing the main contributions to this debate and offering potential directions for future research.

## 2 Theoretical Framework

### 2.1 Taste-based Discrimination Theory

Taste-based discrimination theory emphasizes the role of interethnic attitudes in hiring decisions. In particular, Gary Becker (1971) argued in his seminal work *The Economics of Discrimination* that “tastes for discrimination” are the most important immediate cause of actual discrimination. According to Becker, when an employer discriminates against a minority applicant he or she does so to avoid the non-pecuniary, psychic costs of employing a minority group member (Becker, 1971). In a similar way, he posits models explaining how “tastes for discrimination” of co-workers and customers leads to ethnic discrimination in hiring. The main assumption of taste-based discrimination models is that people (i.e. employers, co-workers, or customers) hold less favourable attitudes toward ethnic minorities, and therefore ethnic minority candidates are less likely to be recruited than majority candidates.

Although Becker’s original formulation provides a simple explanation for the existence of discrimination, it does not address why people have a “taste for discrimination” (Becker, 1971, p. 153). However, psychological and sociological research on the intrapsychic determinants of intergroup bias provides more insights why some persons hold less favourable attitudes towards ethnic minorities than others. Specifically, this research tradition can be distinguished between individual-level explanations and group-level explanations (Fiske, 1998; Pager & Shepherd, 2008). Individual-level explanations emphasize how personal dispositions or early socialization experiences lead to a lifelong development of prejudice and discrimination (Fiske, 1998; Hodson & Dhont, 2015). The authoritarian personality is a classic example of an individual-level theory. In brief, this theory argues that due to strict and punitive parenting styles, people develop repressed aggression and fear in adulthood which eventually will be projected onto outgroups (Fiske, 1998). Examples of more recently developed individual-level theories are social dominance orientation theory (Sidanius, Pratto, van Laar, & Levin, 2004) and the need for closure theory (Kruglanski, Pierro, Mannetti, & De Grada, 2006) suggesting that prejudice is the result of, respectively, a strong desire for group-based inequality and social dominance; or a strong need for structure, order, and certainty in one’s living environment (Hodson & Dhont, 2015). Generally, this branch of research suggests that taste-based discrimination in hiring would stem from personal dispositions or (negative) socialization experiences of hirers.

Contextual-level explanations are more dynamic than individual-level explanations and stress the importance of varying intergroup relations. One prominent theory in this field is conflict theory (Quillian, 1995; Scheepers, Gijssberts, & Coenders, 2002). Conflict theory maintains that (perceived) competition over scarce resources (e.g. jobs, houses, political power)



and/or cultural values between ethnic groups increase feelings of ethnic threat and prejudice. Another dominant theory is contact theory. In contrast to conflict theory, contact theory proposes that under certain favourable circumstances (cooperation, equal status, similar goals and support by authorities), interethnic contacts will not induce but rather reduce negative feelings toward ethnic minorities (Allport, 1954; Pettigrew & Tropp, 2006). In sum, according to contextual-level explanations, the level of taste-based discrimination should vary in accordance with the nature of intergroup relations and attitudes.

In short, taste-based discrimination theory posits that discriminatory behaviour is the result of people's unfavourable attitudes toward ethnic minorities. How people form these unfavourable attitudes toward ethnic minorities is left unanswered in the original formulation of the theory, however psychological and sociological research demonstrates that both stable personal characteristics as well as dynamic intergroup processes may be important in this regard. Consequently, the insights from individual-level and group-level theories may provide testable explanations why employers are more or less inclined to discriminate against ethnic minorities.

## **2.2 Statistical Discrimination Theory**

Statistical discrimination theory was developed in response to taste-based discrimination theory. Instead of agreeing with the premise that emotional, irrational motives underlie ethnic discrimination, scholars in the tradition of statistical discrimination contended that unfair treatment of ethnic minorities can be the outcome of rational actions executed by profit maximizing actors who are confronted with the uncertainties accompanying selection decisions (Arrow, 1971, 1998; Phelps, 1972).

These uncertainties in selection decisions can be traced to two factors (Arrow, 1971; Baumle & Fossett, 2005). One factor that has to be taken in consideration is that hiring the wrong candidate comes with many direct and indirect costs. When companies make wrong hiring decisions, for example, they will waste search and training costs. In addition, unproductive workers may obstruct the production process (e.g. sabotage, workplace friction) or may drive customers away. Lastly, the premature dissolution of an employment contract may lead to unnecessary dismissal costs. A second factor that has to be taken in consideration is that hirers only have a limited amount of information and resources to assess the productivity of job candidates. Résumés offer only a limited amount of relevant information and, moreover, information provided is often highly suspect. Along similar lines, due to a lack of time and monetary resources it is in most instances not possible to arrange an extensive assessment of all job applicants. Hence, in order to arrive at good selection decisions, hirers are encouraged to develop efficient ways to minimize the risk of making wrong hiring decisions.

Following statistical discrimination theory, rational actors respond to these uncertainties by searching for additive sources of information which are highly predictive for labour productivity (Arrow, 1971; Phelps, 1972). In this vein, social category membership –at least, to



the extent group differences in labour productivity are significant and meaningful- is assumed to be a cheap source of information to infer the unobserved skills and work attitudes of individual job candidates (cf. Arrow, 1971, p. 25). Group differences can be used in two ways. First, employers rationally discriminate against job candidates who are a member of a minority group that possesses on average less human capital than the native group of job applicants. Or, as formulated by Edmund Phelps, one of the original thinkers of statistical discrimination theory:

The employer who seeks to maximize expected profit will discriminate against black or women if he believes them to be less qualified, reliable, long-term, etc. on the average than whites and men, respectively, and if the costs of gaining information about the individual applicants is excessive (Phelps, 1972, p. 659).

An alternative approach of statistical discrimination theory is that employers discriminate against job candidates not because they belong to a minority group that possess on average less productivity-related skills but rather because employers know that the variance in the level of human capital is greater within the pool of minority candidates (Aigner & Cain, 1977). In particular, since the variance is greater, the risk of making wrong hiring decisions regarding minority job candidates will also be greater relative to job candidates of other social groups. To sum up, according to statistical discrimination theory, group differences in the average of as well as in the variance in the amount of human capital can be seen as rational explanations why employers would discriminate against ethnic minority job candidates.

A closer examination of statistical discrimination theory teaches us that this theory rests on several important assumptions which can be tested empirically. First, statistical discrimination theory can be seen as a situational theory. Not people's individual motives, but the situational circumstances, that is uncertainties in hiring situations, determine to a large extent whether people discriminate against ethnic minorities. Following this line of reasoning, it can be argued that the level of discrimination against ethnic minorities is linked with the level of uncertainty people are confronted with. Concretely, this implies that the level of discrimination should be lower if the direct and indirect costs involved in hiring the wrong worker are lower; résumés provide more individual information about job applicants; and hirers have more time and monetary resources when making hiring decisions.

Secondly, a key difference between taste-based discrimination theory and statistical discrimination theory lies in the role of interethnic attitudes. Although theorists are divided over the extent to which statistical discriminators may or may not hold unfavourable attitudes toward ethnic minorities (Baumle & Fossett, 2005; Pager & Karafin, 2009), they all agree that people's interethnic attitudes should not influence economic decision-making. More blurry, however, is the boundary between taste-based and statistical discrimination regarding the impact of "tastes for discrimination" of co-workers and customers. Indeed, a telling question to



ask is to what extent it is rational or not for a profit-maximizing employer to disregard the interethnic preferences of his/her workers or customers.

Thirdly and lastly, an important assumption of statistical discrimination theory is that in the absence of perfect information and confronted with uncertainty, people will rely upon group statistics to base selection decisions upon. Three aspects deserve more attention in this respect.

One aspect is that people's perceptions of group differences should not be affected (Aigner & Cain, 1977) by intergroup bias and should be based on actual group differences in productivity-related skills. In this sense, Phelps' original formulation of the core assumption of statistical discrimination theory causes some confusion. Especially the word "believes" gives reasons to think that employers may also rely upon false empirical regularities, a standpoint which seems to be at odds with classic notions of rational choice theory (Midtbøen, 2014). For example, according to Aigner & Cain: "a theory of discrimination based on employers' mistakes is even harder to accept than the explanation based on employers' "tastes for discrimination," because the "tastes" are at least presumed to provide a source of "psychic gain" (utility) to the discriminator. To interpret the "statistical theory of discrimination" as a theory of "erroneous" or "mistaken" behaviour by employers, as have some economists suggested, is therefore without foundation" (1977, p. 177). Nevertheless, probably as a result of a great body of psychological work demonstrating that human beings are "cognitive misers" when it comes to observing group differences (Fiske, 1998, p. 362; Hilton & Von Hippel, 1996), some economist have suggested that statistical discrimination theory can be extended by allowing employers to have biased perceptions of group differences at the outset, that is when employers have few prior experiences with minority workers (e.g. Altonji & Pierret, 2001). Crucially for statistical discrimination theory formulated in this alternative way is, then, that employers should rationally update their initial, biased perceptions of group differences as they obtain more and more insights regarding actual group differences (Altonji & Pierret, 2001; Pager & Karafin, 2009).

A second aspect is that group differences should be meaningful and efficient (Schwab, 1986). This assumption implies that people should only use group statistics if there is a strong, reliable connection between a social category (and group membership) and productivity. When group membership is only a weak predictor of labour performance relative to (individual) information already provided in the résumé even individual-oriented, profit-maximizing operating agents can be expected to favour ethical considerations regarding the negative impact of discrimination over the "benefits" of relying upon a weak signal (Schwab, 1986).

A third aspect to bear in mind is more a logical deduction. Note that although the implicit train of thought appears to be that minority candidates generally face negative discrimination, it can also be true that some minority candidates might not or might even be positively discriminated against if their ethnic groups perform (extraordinary) well in the labour market. Hence, rather than focusing primarily on groups with a negative reputations, it seems worthwhile to also investigate positively stereotyped groups when studying statistical discrimination theory.





In conclusion, this theoretical analysis of statistical discrimination theory gives many suggestions to test the empirical validity of this framework. In particular, research could examine the impact of situational factors that influence the level of uncertainty in hiring situations, research could assess whether people's interethnic preferences really do not significantly affect decisions in hiring, and research could investigate the extent to which there are significant (ethnic) group differences in productivity in society and how and to what degree these group differences influence discriminatory behaviour of hirers.

### 2.3 Unconscious Discrimination

For a long time, scholars have investigated to what extent explicitly reported attitudes of people are associated with discriminatory outcomes. Using all kinds of items and scales, people are typically asked for their interethnic attitudes toward minority groups. However, more recent studies increasingly move away from these explicit measures of interethnic bias because of two important developments (Dovidio & Gaertner, 2010; Greenwald & Banaji, 1995). First, many studies find that explicit attitudes are only moderately related to behavioural outcomes (e.g. Quillian & Pager, 2005). Situational factors and social desirability concerns presumably underlie this result. Second, methodological innovations in research on brain and cognitive processes have made it possible to measure people's underlying mental processes and, more specifically, their implicit attitudes (Greenwald & Banaji, 1995; Greenwald, McGhee, & Schwartz, 1998). As a consequence, instead of (only) examining explicit interethnic attitudes, researchers are increasingly studying implicit interethnic attitudes and how these kind of attitudes affect behavioural outcomes.

There are some important differences between explicit and implicit attitudes. Most importantly, in contrast to explicit attitudes, implicit attitudes are activated unconsciously and operate mostly without people's awareness, they are unintentional and people are generally not able control them (Blommaert, van Tubergen, & Coenders, 2012; Pérez, 2013). Implicit and explicit attitudes are found to be weakly related and appear to predict behavioural outcomes differently: that is, deliberate and controllable behaviours are found to be more associated with explicit attitudes, whereas more complex and spontaneous forms of behaviour are strongly linked with implicit attitudes (Blommaert et al., 2012; see e.g. Dovidio, Kawakami, & Gaertner, 2002).

Despite that scholars are increasingly incorporating implicit measures in their research designs (Bertrand et al., 2005; Greenwald & Banaji, 1995; Pérez, 2013; Quillian, 2006), there is also some growing criticism regarding the usage of these measures. Apart from discussions about how to capture implicit attitudes (Blanton & Jaccard, 2008), there is an ongoing debate about the extent to which implicit attitudes are related to people's personal attitudes or more related to people's knowledge of widely shared cultural stereotypes (Arkes & Tetlock, 2004; Quillian, 2008). This is an important debate in light of the taste-based and statistical discrimination theory discussion. In particular, if implicit attitudes reflect culturally shared





knowledge of stereotypes, then it can be argued that the accurateness of these cultural stereotypes determine whether it is rational or irrational to rely on social cues to base selection decisions upon. Consistent with statistical discrimination theory, therefore, the more accurate cultural stereotypes are, the more rational it is to rely on these stereotypes from a pure rational choice perspective. Although there is only limited social research on the accurateness of cultural stereotypes (Quillian, 2006), the little existing evidence seems to suggest that these stereotypes are often influenced by in- and outgroup biases (Quillian & Pager, 2001, 2010; Sampson & Raudenbush, 2004).

In summary, in addition to explicit interethnic attitudes, research is devoting more and more attention to unconscious attitudes and their relation with discrimination. Although there are still some controversies regarding the measurement and nature of these unconscious, implicit interethnic attitudes, they can be considered as an important determinant for ethnic discrimination (Bertrand et al., 2005; Quillian, 2006).

### 3 Results

After describing the main theoretical assumptions of taste-based and statistical discrimination theory, I now turn to the empirical evidence and examine to what extent these approaches find empirical support. In discussing these findings, I make a distinction between individual-level and contextual-level predictors. More concretely, I first discuss how the characteristics of job candidates and employers influence ethnic discrimination in hiring. Afterwards, it will be addressed how discriminatory outcomes are influenced by characteristics of social contexts.

It is important to note that my goal is not to offer a complete overview of the literature to date. Rather, my goal is more modest as I aim to sketch some of the main findings in the field and to highlight innovative contributions.

As mentioned before, the focus of this review lies on field experiments. Two field designs are commonly used, namely audit and correspondence studies. In audit studies, actors representing a majority or a minority job candidate are sent to employers to examine differences in job offers between both groups. Correspondence studies have been developed in response to criticisms on audit studies stating that it is almost impossible to adequately match job applicants, controlled for demand effects, without making great expenditures. In correspondence studies, researchers apply with fictive résumés to job openings to measure differences in callback rates. This way researchers can be sure that unobserved factors do not influence their results. An important drawback is, however, that this approach can only be used to study the early phases of the hiring process.

Next to findings of field experiments, I try to integrate interesting findings from laboratory experiments, qualitative interviews and survey research to provide a better understanding of the underlying mechanisms behind discrimination. In this regard, it is interesting to note that in more recent publications researchers have been increasingly combining a field experimental



approach with one or even two additional research methods (Blommaert, 2013; Kang, DeCelles, Tilcsik, & Jun, 2016; Midtbøen, 2013; Pager, Bonikowski, & Western, 2009). A development which supports the notion that ethnic discrimination is a phenomenon that should be investigated from different angles.

### **3.1 Individual-level Predictors**

This section describes which characteristics of job applicants and which characteristics of hirers are associated with ethnic discrimination in hiring.

#### **3.1.1 Characteristics of Job Applicants**

Taste-based discrimination theory and statistical discrimination theory provide different explanations why minority job applicants are less likely to be invited for a job interview than majority candidates. To recap, taste-based discrimination theories would receive empirical support if minority job applicants from groups with a lower status are more likely to be discriminated against when their outgroup status is more salient. According to statistical discrimination theory, on the other hand, discrimination is less when minority applicants (seem to) pose less risks to employers.

In general, field experiments are designed to examine only the existence of ethnic discrimination in hiring. However, some field experiments have tried to extend knowledge on the causes of discrimination by manipulating other curriculum vitae characteristics than ethnicity or race. These characteristics can accordingly be linked to either taste-based or statistical discrimination theory. In the following, a number of examples of studies are discussed that developed innovative ideas to test assumptions of taste-based or statistical discrimination theory.

##### **3.1.1.1 Taste-Based Discrimination**

In finding evidence for taste-based discrimination, researchers considered various ways to include signals that are strongly related to “tastes for discrimination” but not related to productivity. A recent field experiment of Weichselbaumer (2016) can be considered as an interesting attempt. Because the labor market of Austria is highly structured, job applicants need to send a large amount of information (e.g. CV, cover letter, school reports, photo) of themselves when applying to a job. Weichselbaumer argued that discrimination should therefore be minimally affected by statistical discrimination. Further, instead of signaling ethnicity primarily by name, this study used pictures that varied skin color. It was found that Serbian, Chinese, Turkish and Nigerian applicants were discriminated against in the Austrian labor market. Interestingly, it appears that Nigerian applicants were discriminated most. Although this study provides some interesting insights regarding the role of skin color, a shortcoming is that skin color was dependent on ethnicity. This effect might therefore be confounded with ethnic origin.



Furthermore, because it is often suggested that discrimination results from “ingroup-love” rather than “outgroup-hate” (Greenwald & Pettigrew, 2014), researchers have tried to develop innovative ways to distinguish between in- and outgroup bias. In a field study conducted in the metropolitan area of Chicago, Jacquemet and Yannelis (2012) investigated differences in callback rates between résumés with white-sounding names, Afro-American sounding names and a group of applications with fictive names (combining elements of various Eastern European surnames). Their main hypothesis stresses the prominence of “ethnic homophily” and contented that discrimination is directed against all non-majority groups, irrespective of social standing and average levels of human capital. The results supported this prediction; the African-American set of résumés as well as the set with fictive names received significantly less invitations for a job interview than the majority set of résumés and, crucially, there were no differences found between the two non-majority groups.

Besides the study of Jacquemet and Yannelis, other studies devoted attention to differences between various ethnic groups. In particular, inspired by work on ethnic hierarchies (Hagendoorn, 1995), these studies attempted to find paralleling patterns in the level of discrimination between ethnic groups. More specifically, according to this thesis, culturally less distinct ethnic minority groups should experience less discrimination than ethnic minority groups who are more culturally distinct from the majority group. Evidence in favor of this ethnic hierarchy-explanation for discrimination is mixed (Zschirnt & Ruedin, 2016). Some find support for the existence of ethnic hierarchies (Booth, Leigh, & Varganova, 2012; Pager et al., 2009), others do not (Andriessen, Nievers, Dagevos, & Faulk, 2012; McGinnity & Lunn, 2011).

### ***3.1.1.2 Statistical Discrimination***

One often used strategy to investigate statistical discrimination is to vary the amount of information provided on résumés. The underlying idea is that providing more individuating information reduces uncertainty among employers regarding job applicants’ productivity. A study of Kaas and Manger (2012) on the chances of native German and Turkish students to get an internship is an excellent example of this strategy. In this field experiment, the researchers created one set of fictive applications providing two reference letters from prior employers and one set of applications without any letter. Although Kaas and Manger find that Turkish applicants are 14% less likely to receive a callback, this gap reduces and becomes insignificant when providing additional information. The researchers interpret this as evidence in favor of statistical discrimination.

Bertrand and Mullainathan (2004) examined racial discrimination in the labor markets of Boston and Chicago. They find that résumés with Afro-American names are less likely to receive a callback than résumés with typical white-sounding names. Apart from race they varied the quality of résumés (low versus high). It appears that although whites with higher quality résumés were more likely to get an invitation for a job interview than whites with lower quality résumés, this effect was not found among Afro-American candidates. So, despite that African-American job applicants indicated to have better skills, they were not similarly rewarded for



possessing these skills as white applicants are. As such, this finding suggest that more information regarding minority applicants' skills does not always reduce racial discrimination.

In a slightly different way as was done in Bertrand and Mullainathan's study, others considered the interaction between ethnicity/race and a negative signal of productivity and work attachment. Consistent with earlier findings of Bertrand and Mullainathan, a criminal record does not seem to hurt White job applicants relative to African-American job applicants; strikingly, white job applicants with a criminal record were more likely to get a job offer than Afro-American job applicants without a criminal background (Pager, 2003; Pager et al., 2009). A recent Norwegian field experiment, furthermore, does not reveal a significant interaction between ethnicity and unemployment spells, suggesting that unemployed minorities (here, Pakistani) face "additive" rather than "multiplicative" disadvantage in the labor market (Birkelund, Heggebø, & Rogstad, 2016).

A different way to investigate statistical discrimination is by considering groups that pose less risks to companies than others. For instance, qualitative research often finds that recruiters express strong concerns regarding the language skills of ethnic minorities (Midtbøen, 2014; Moss & Tilly, 2001; Oreopoulos & Dechief, 2011), skills which are generally very difficult to assess on the basis of résumé information. If statistical discrimination theory were true, employers should favor job candidates belonging to groups that possess, on average, more language skills over candidates of groups with only few language skills. Yet, the empirical evidence seem to reject this claim. A study of Oreopoulos (2011) in Toronto (Canada), for example, demonstrates that Indian, Pakistani, Chinese and Greek applicants listing more language skills do not fare better than immigrant applicants who do not mention any additional language skills. Along similar lines, Carlsson (2010) compared callback rates between native Swedish and first- and second generation Middle Eastern immigrants. Following statistical discrimination theory, employers should discriminate less against second generation immigrants because, on average, this group is more socially and economically integrated in Sweden than first generation immigrants. Carlsson's study, however, does not provide any empirical support for this idea as he observes no significant differences between first and second generation immigrants.

### ***3.1.1.3 Other Findings***

To end, I highlight two studies where it is more difficult to pinpoint whether they can be grouped under taste-based or statistical discrimination theory. First, informed by the stereotype content model (Fiske, Cuddy, Glick, & Xu, 2002; Lee & Fiske, 2006), Agerström, Björklund, Carlsson, and Rooth (2012) investigated in Sweden whether Arab applicants are less discriminated against when they stress social and/or productivity skills in their résumés. According to the stereotype content model, most people hold stereotypes which classify outgroups on the basis of widely shared beliefs of competency (i.e. whether an outgroup has the capabilities to compete with the ingroup) and warmth (i.e. whether an outgroup is considered to be friendly or in competition with the ingroup) (Fiske et al., 2002). By "compensating" for a



lack of perceived competency or warmth, outgroup members are expected to overcome negative outgroup images. The findings of Agerström and colleagues seem in line with this contention; by stressing social skills or competency, but in particular by stressing both dimensions in résumés, Arab job applicants significantly increase the likelihood to be invited for a job interview relative to Swedish applicants.

Second, in the Netherlands, a team of researchers of the Netherlands Institute for Social Research conducted a field experiment wherein they delved deeper into the reasons why, in this case, job applicants of Moroccan and Hindustani origin, are discriminated against. In doing so, they created two original conditions. In the first condition minority job applicants expressed their commitment to Dutch society, in the second condition minority applicants were given two years of additional work experience and a paragraph that mentioned people's additional courses and a text on people's commitment and motivation. The analysis demonstrates that discrimination against Hindustani job candidates was reduced to zero in the first condition and slightly decreased in the second condition. Discrimination against Moroccan candidates, by contrast, was reduced to zero in the second condition and decreased minimally in the first condition. The authors conclude that cultural distance plays a stronger role for Hindustani job candidates while economic concerns play a more pivotal role for Moroccan candidates. Hence, this study highlights that both cultural tastes and risk perceptions matter differently for different ethnic groups.

### **3.1.2 Characteristics of Hirers**

Although much research focuses on the supply-side in the hiring process (i.e. characteristics of job seekers), the demand-side has received far less scholarly attention. The main reason for this is presumably related to the fact that employers are generally not inclined to participate in research examining discrimination in hiring. Although there are some exceptions (as is discussed below), studies considering the intentions of employers commonly rely on laboratory or vignette studies or in-depth interviews with employers among non-representative samples. One important challenge for future research is therefore to find ways to research a representative sample of employers.

In the following, I start with discussing some findings which are associated with taste-based discrimination theory. Afterwards, I highlight attempts to investigate statistical discrimination among employers.

#### **3.1.2.1 Taste-Based Discrimination**

Taste-based discrimination theory predicts that interethnic preferences of employers are the most prominent determinant of ethnic discrimination. A number of studies have tried to find indirect and direct support for this contention. First, studies investigating indirect effects study the impact of either personal dispositions or (perceptions of) intergroup relations. By using a laboratory experiment, Blommaert, Coenders, and van Tubergen (2014) examined, for example, the role of perceived intergroup conflict and interethnic contact. Specifically, they find that



feelings of ethnic threat were strongly positively associated with ethnic discrimination in selection decisions, whereas the quality (not the quantity) of contact was negatively related to discriminatory outcomes. Furthermore, their analysis shows that the lower educated, people with lower educated parents, church members and males were more likely to unequally treat Arab job candidates. Although they discussed other explanations, one interpretation of Blommaert and colleagues was very much in line with conflict theory suggesting that aforementioned social categories were more likely to experience competition between themselves or fellow ingroup members and Arab minority group members and therefore were more likely to discriminate. Notably, in this vein, is that the gender effect was also found in a Swedish field experiment that was able to link discriminatory outcomes with recruitment data (Carlsson, 2010).

Second, many studies considered how discrimination is affected by people's negative interethnic attitudes. Although this relationship sounds straightforward, findings do not provide overwhelming support for this notion. In fact, although some research does find significant associations (Deros, Ryan, & Serlie, 2014), others find this association only for some outcomes (Blommaert et al., 2012), and many others do not find any significant relationship at all (Deros, Nguyen, & Ryan, 2009; Son Hing, Chung-Yan, Hamilton, & Zanna, 2008). Illustrative, in this regard, are the results in a study of Rooth (2010) in Sweden. That research shows that explicit anti-Arab attitudes of recruiters do not predict unequal outcomes between Arab and native Swedish job applicants. Besides measuring recruiters' explicit interethnic attitudes, Rooth was able to assess people's implicit interethnic attitudes. Noteworthy, the analysis demonstrates that recruiters holding more negative implicit interethnic attitudes towards Arab immigrants were more likely to discriminate against Arab job candidates. Hence, Rooth's findings but also those from other studies (Blommaert et al., 2012; Deros et al., 2009; Son Hing et al., 2008) indicate that discrimination research would benefit from investigating explicit as well as implicit interethnic attitudes.

### ***3.1.2.2 Statistical Discrimination***

Because situational factors play a dominant role in statistical discrimination theory, there are only few attempts to investigate this theory among employers. A number of qualitative studies examined to what extent employers' perceptions of productivity of ethnic minorities were based on personal experiences or mainly shaped by prejudicial feelings. Generally, it appears that although employers' perceptions might be informed by true observations of group differences, they are also likely to be biased by their own interethnic preferences (Midtbøen, 2014, 2015; Moss & Tilly, 2001). What is more, it appears that even in cases where employers do have minority workers or have positive experiences with this group, they are not inclined to change their attitudes. Rather, they consider their (working) relationships with minority groups as exceptional and do not change their general opinion towards that group as a whole, as such suggesting a process which is called by psychologists as "subtyping" (Pager & Karafin, 2009).





In my search for studies directly examining statistical discrimination at the individual-level, I found almost no quantitative studies. One exception is a laboratory study of Baert and De Pauw (2014) wherein they tried to operationalize taste-based and, interestingly, also statistical discrimination theory using items that measures, respectively, people's own, co-worker and customer tastes for discrimination and, furthermore, people's perceptions regarding group differences in productivity and risk with items like "This person belongs to a group who, on average, perform well in the labor market" or "This candidate will be often on sick leave". Although this was a noble attempt, their approach has some important shortcomings. First, as more laboratory and vignette studies, this research investigated a nonrepresentative research population, namely students. In the absence of real-life consequence, it is questionable whether students may really act as employers in hiring situations. Another drawback is that Baert and De Pauw did not examine whether people high on prejudice scored also high on items measuring statistical discrimination. Accordingly, it can be true that the effect of statistical discrimination overlaps with that of taste-based discrimination. Despite these shortcomings, this research might inspire more researchers to develop better ways to operationalize the "statistical discriminator".

### **3.2 Contextual-level Predictors**

Social contexts shape behavior by influencing people's attitudes and constraining or enabling whether people can translate their attitudes into behavior. As a result, it seems evident that social contexts have an influence on the likelihood that employers will act in discriminatory ways. A starting observation is that field research to date has studied ethnic discrimination in only one or a few settings, let alone across countries. Consequently, I only have limited empirical insights into how contextual factors impact discriminatory outcomes. Therefore, I mainly address interesting theoretical ideas developed in other branches of research and try to link these with taste-based or statistical discrimination theory.

In structuring this section, I first consider organizational and sectoral dynamics, and, thereafter, sketch how characteristics of regions and countries may influence the extent to which people act in line with either taste-based or statistical discrimination theory.

#### **3.2.1 Characteristics of Organizations and Sectors**

Research on the impact of organizations and sectors is dominated by explanations of taste-based discrimination and therefore I devote more attention to this kind of explanation. Taste-based discrimination theory assumes that people discriminate as a result of their interethnic preferences. Organizations and sectoral processes can influence this relationship directly and indirectly.

Research provides suggestive evidence that organizations can directly influence whether hirers, irrespective of their own attitudes, discriminate against minority job applicants. Qualitative research demonstrates, for example, that employment agencies receive request from





employers to send only majority candidates. Partly this request results from prejudiced attitudes of organizations, partly this stems from concerns regarding the (negative) effect of ethnic diversity at the work floor (Nievers & Andriessen, 2010). In addition, an experiment by Brief, Dietz, Cohen, Pugh, and Vaslow (2000) demonstrates that when people were assigned to a condition wherein an official of the organization mentioned to have a (strong) preference for majority workers, people are significantly more likely to discriminate than in a condition wherein no signal was given. Moreover, this research indicates that this effects holds particularly for people holding more negative attitudes toward minority groups suggesting that people's attitudes and social context are closely related in explaining discrimination. In a similar vein, a meta-study by Zschirnt and Ruedin (2016) shows that discrimination seems to be lower in the public sector than in the private sector. It would be interesting to see whether this result is driven by a greater endorsement of egalitarian norms in the public sector or stricter anti-discrimination legislation.

A number of field experiments investigated one of Becker's main hypothesis maintaining that in occupations where customer or client contact is more important, discrimination is more likely to occur. In this sense, negative attitudes of customers would prompt employers to discriminate against minority applicants. Generally, however, studies report no significant or mixed effects (Andriessen et al., 2012; Andriessen, Van der Ent, Van der Linden, & Dekker, 2015; Bertrand & Mullainathan, 2004; Blommaert, Coenders, & van Tubergen, 2014a; Booth et al., 2012; McGinnity & Lunn, 2011; Weichselbaumer, 2016).

Apart from customer-based discrimination, research has devoted attention to differences in the level of discrimination between a labor market situation with a strong and weak demand for labor. By using a field experiment in the Flemish (Belgium) labor market, Baert, Cockx, Gheyle, and Vandamme (2015) discovered that for vacancies which are difficult to fill in, ethnic minority applicants are equally invited for a job interview as majority candidates. However, discrimination does occur for vacancies where job pressure is high and employers can be more selective in their hiring decisions.

Besides directly impacting the relationship between the attitudes of individuals, organizations and sectors affect this relationship in an indirect way (Petersen & Saporta, 2004; Reskin, 2000). In this vein, Reskin (2000, p. 320) strongly argues that "the proximate cause of discrimination" is whether and how personnel practices in organizations affect people's implicit interethnic attitudes. More specifically, Reskin suggests that by constructing ethnically diverse selection committees, creating interdependence between in- and outgroup members, reducing the salience of the ethnic signal and focusing on formal qualifications in hiring situations, and by making people accountable for their actions, discrimination may decrease. Although this is a crude indicator, these reasons are often mentioned to explain why smaller companies would be more inclined to discriminate. In particular, due to a lack of financial resources and time, smaller companies do not have the financial means to develop standardized application procedures and establish a human resources division which is responsible for hiring candidates.



This, but also many of the other aforementioned theoretical expectations, still await rigorous empirical testing.

As mentioned before, there is little research that directly investigates the contextual impact of uncertainty. To the extent that stereotypes possess a kernel of truth, there is an interesting study of Lee, Pitesa, Thau, and Pillutla (2015) that attempts to combine the content of stereotypes (i.e. positive versus negative performance stereotypes) and the nature of cooperation (competition or collaboration) of the hirer with a job candidate in one model in order to explain variation in discriminatory outcomes. In particular, this model suggests that in case a recruiter has to collaborate (respectively, compete) with a job applicant at the work floor, people are more (respectively, less) likely to select the positively stereotyped job applicant resulting in positive (respectively, negative) discrimination. In a series of experiments the authors find significant support for this model.

To end, I want to close this section with a methodological note. In studying the impact of characteristics of occupations and sectors, and especially if one would like to link these characteristics to taste-based or statistical discrimination theory, it is pivotal to ascertain that unobserved variables do not influence the effects of occupational or sectoral characteristics (e.g. Baert et al., 2015). To wit, although the effect of ethnic discrimination might not be affected by confounders due to random assignment in field experiments, researchers have less control over the specific-characteristics of the organizational or sectoral traits. As such, having sufficient knowledge on the labor market situation seems to be crucial when interpreting the estimates of organization or sectoral characteristics. By having more insight into the labor market, researchers can collect relevant information in order to control for a large set of confounding influences. Alternatively, researchers can focus on certain sectors wherein either taste-based or statistical discrimination mechanisms are most or least likely to occur (see for an application in research on anti-immigrant attitudes Malhotra, Margalit, & Mo, 2013).

### **3.2.2 Characteristics of Regions and Countries**

There are a number of characteristics of regions and countries which might be related to either taste-based or statistical discrimination in the labor market. In the remainder, I provide some examples. In doing so, I begin with sketching explanations related to taste-based discrimination theory.

First, worsening economic circumstances may increase ethnic discrimination because of at least two reasons. One reason relates to conflict theory and, more specifically, implies that worsening economic circumstances increase discrimination due to increased ethnic threat among employers, co-workers or customers. A second reason is that in a slackening economy, employers can be more selective because of a great supply of potential workers (Midtbøen, 2015). Yet, in spite of these theoretical ideas, findings regarding the effect of unemployment rates are inconclusive (Zschirnt & Ruedin, 2016). On the one hand, the results of a field experiment by Blommaert, Coenders, and van Tubergen (2014a) in the Netherlands suggest



that the level of ethnic discrimination was higher in a period with weaker economic circumstances. Studies focusing on the regional-level, however, do not indicate a significant association between regional unemployment rates and the level of discrimination (Blommaert, 2013).

Second, in a Swedish study, Carlsson and Rooth (2012) investigated the extent to which the level of discrimination varies across regions. In particular, they predicted and found in accordance with taste-based discrimination theory, that in regions where anti-foreigner attitudes were more widespread, the level of discrimination was also significantly higher.

Hitherto, there is little research that investigates the assumptions of statistical discrimination across regions and countries. There are, however, some interesting exceptions. In the first place, the consequences and thus the risks of making wrong hiring decisions may vary across countries. Specifically, it can be expected that in countries with weaker labor protection, the costs of hiring a wrong person are lower and, following statistical discrimination, the risks of hiring ethnic minority applicants should consequently be less likely to play a role in hiring decisions (Becker, 1971; Kogan, 2006).

In the second place, recall that statistical discrimination posits that people's usage of average group differences stems from the lack of individuating information regarding the productivity of job applicants. Accordingly, one of the main findings in the meta-study by Zschirnt and Ruedin (2016) is that discrimination appears to be lower in German-speaking countries. One interpretation of the authors is that in these countries there is less room for (statistical) discrimination since job applicants need to send a great amount of information about themselves, including school reports, certificates, and reference letters.

## **4 Conclusions and Directions for Future Research**

For decades there has been a lively debate among social scientist as to whether ethnic discrimination in hiring can be better explained by taste-based or statistical discrimination theory. In this review, I set out to describe the main theoretical assumptions on which these theories rest and to examine the extent to which empirical findings are more in line with taste-based or statistical discrimination theory.

This review of the literature reveals that both of these theories find mixed empirical support. In line with statistical discrimination theory, information deficiencies in the hiring process seem to play a significant role in explaining discriminatory outcomes. In countries where job applicants need to include more personal information in their application materials, minority candidates are less likely to be discriminated against. Similarly, it was found that providing more information regarding individual productivity seems to increase the chances of ethnic minorities to be invited for a job interview.

Despite these results, other findings are at odd with statistical discrimination theory and fit with taste-based discrimination. In particular, field experiments demonstrate that even when



minority candidates possess better credentials and work experience, stress their language skills, or belong to groups that possess on average more country-specific capital, they still face unfair barriers in their search for work. Furthermore, accumulated evidence in experimental and qualitative research indicates that employers (explicit and implicit) interethnic attitudes are indirectly and/or directly related to discrimination. Employers' perceptions of intergroup differences are to a great extent biased by negative interethnic attitudes and employers find it hard to update their negative views even if they personally have positive experiences with individual minority workers. Likewise, employers' negative interethnic attitudes appear to be directly related to the likelihood to discriminate against ethnic minority candidates. Hence, there is also clear support of the claim that unequal treatment of minority job candidates might be the result from people's conscious or unconscious tastes for discrimination.

In light of the empirical evidence presented earlier, a tentative conclusion is that although both theoretical accounts find some empirical support, the balance seems to be more in favour of taste-based discrimination theory. Yet, it is important to stress a number of caveats. First, the theoretical assumptions of statistical discrimination theory have been subject to less extensive testing. Generally, research has tried to test statistical discrimination theory by investigating whether providing more personal information in résumés reduces discrimination. However, apart from information deficiencies, statistical discrimination is likely to be driven by situational factors such as the direct and indirect costs of hiring and the magnitude of ethnic group differences in human capital. Second, it is surprising that little research has tried to test statistical discrimination and taste-based discrimination theory in concert. In point of fact, only by testing statistical discrimination and taste-based explanations simultaneously, researchers are able to examine whether these accounts can explain ethnic discrimination in similar conditions and assess the relative importance of both theories.

Based on this review, I identify two major directions for future research. A first suggestion is that future research should shift away from the original formulations of taste-based and statistical discrimination theories and should extend these frameworks with insights from psychological, organizational and sociological research. This way it should be possible to find more accurate individual and contextual determinants of discrimination in hiring. Besides theoretical innovations, the findings of this review suggest that future research would benefit from methodological innovations. One important avenue for future research is to search for new, creative manipulations of résumés to simultaneously test taste-based and statistical discrimination theory. A second important way for research could be to find new ways to study the behaviour and attitudes of employers on a large scale. Indeed, the lack of employer data can be considered as a crucial missing link in the discrimination-literature. Finally, instead of focusing on a couple of cities or regions, researchers are encouraged to invest in large-scale field experimental designs to increase the external validity of their findings. A promising way to extend our understanding of discrimination would therefore be to set-up an international field experiment to compare the level of discrimination across countries.



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