

# A Field Study of Age Discrimination in the Workplace: The Importance of Gender and Race. Pay the Gap

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**Purpose:** The study examines whether age intersects with gender and race during the initial stage of the hiring process and affects access to vacancies outcomes and wage sorting.

**Methodology:** In order to answer the research question the study collects data from four simultaneous field experiments in England. The study compares the labour market outcomes of younger White British men with those of older White British men and women, and with those of older Black British men and women. The study concentrates on low-skilled vacancies in hospitality and sales in the private sector.

**Findings:** The results of this study indicate that older White British men and women, as well as older Black British men and women, experience occupational access constraints and are sorted into lower-paid jobs than younger White British men. The level of age discrimination is found to be higher for Black British men and women. In addition, Black British women experience the highest level of age discrimination. These patterns may well be in-line with prejudices against racial minority groups and stereotypical sexist beliefs that the physical strengths and job performance of women decline earlier than they do for men.

**Originality/value:** This research presents for the first-time comparisons of access to vacancies and wage sorting between younger male racial majorities and older male racial majorities, older female racial majorities, older male racial minorities, and older female racial minorities. In addition, the driven mechanism of the assigned differences is explored. Because the study has attempted to minimise the negative employer stereotypes vis-à-vis older employees, with respect to their motivation, productivity, and health, such prejudices against older individuals may be considered Taste-based discrimination.

**Implications:** If prejudices against older individuals are present, then anti-discrimination legislation may be the appropriate response, especially for racial minorities and women. Eliminating age discrimination in selection requires firms to adopt inclusive HR policies at the earliest stages of the recruitment process.

**JEL Codes:** C93, C9, J14, J1

**Keywords:** Age Discrimination; Women; Racial Minorities; Intersectionality; Access to Occupations; Wages

## 1. Introduction

United Nations estimates that the population of people in their 60s will increase in most countries by 2050 (United Nations, 2017a). People may have to work longer and the number of older people seeking work might also increase (Age UK, 2011; Feyer, 2007). Although most countries provide some legal protection against age discrimination<sup>1</sup>, negative stereotypes persist in many areas of life (Ayalon and Tesch-Römer, 2018) leading to the exclusion of older workers from the labour market (Berde and Mágó, 2022; Stypińska and Nikander, 2018) and therefore affecting their security and their overall wellbeing (Woods et al, 2013). A major review study found that ageism is manifested in a plurality of ways, such as obstacles in the hiring process, employability, and the performance evaluation of older workers (Cebola et al., 2021).

The present study explores the extent to which chronological age intersects with other characteristics, such as gender and race, and has an impact on the recruitment process (Neumark et al., 2019; Drydakis et al., 2018a). Although there are studies that examine the role of age or the role of gender and race on employment outcomes, there are only few that try to understand how the three characteristics – age, gender and race – intersect and shape recruitment decisions (Lahey and Oxley, 2020). The present research builds upon previous work by Drydakis et al (2018a) that compared outcomes for young and old Black and White applicants in low skilled positions. This study adds the characteristic of gender in order to better understand employment discrimination on the basis of socially constructed identities. Petersen and Saporta (2004) explain how difficult it is to uncover discrimination<sup>2</sup> during recruitment and therefore, the study suggests that the outcomes of this research will assist policy makers in finding remedies to tackle discriminatory practices such as refusing to hire workers from minority groups or to provide lower wages to workers from minority groups and thus contributing further to pay gaps based on minority characteristics. The present study therefore indicates that measuring intersections is crucial for inclusivity in the workplace (Centre for Ageing Better, 2021a).

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<sup>1</sup> Butler (1975), described age discrimination as “unrestraint, with arbitrary retirement practices and bias against hiring older people for available jobs” (Butler (1975, p. 4). Moreover, ageism as a term was introduced by Butler (1980) who identified three interrelated aspects: attitudes and beliefs towards older people and the ageing process; discriminatory practices in different areas of life for example in employment; and institutional and formalised policies and practices that tend to reproduce negative stereotypes, create barriers to opportunities and affect their personal dignity (Batler, 1980).

<sup>2</sup> It is indicated that “those not hired and possibly discriminated against will rarely know what occurred, and even when they do, it may be impossible to gather the relevant evidence. And those turned down often have applied for other jobs and may have gotten those, in which case the incentives for complaining or filing suits are small, in particular when this kind of discrimination typically requires litigation” (Petersen and Saporta, 2004, p. 860).

Age is the primary focus of this study because the United Nations (2017b) state that age is a critical factor for an individual in being hired or dismissed, offered training, promotion or when salary levels are being decided upon (United Nations, 2017a). Indeed, in 2017 a staggering 70.8 per cent of UK employees revealed that age discrimination is common in their workplace, rising to 85.3 per cent amongst those aged between 55 and 64 years old (CV-Library, 2017). A UK government report published in 2018 showed that despite the existence of anti-age discrimination since 2006, practices based on stereotyped and prejudiced notions about age are still widespread in many workplaces (House of Commons, 2018). Furthermore, a recent Eurobarometer survey (2019), found that age discrimination in the UK is more widespread than gender discrimination, 51% versus 44%, respectively (Eurobarometer, 2019). More importantly, the present study focuses also on gender and race because scarce research indicates that age often intersects with core demographic characteristics (Neumark et al., 2019; United Nations, 2017b). For instance, in the US, older women have been found to experience age discrimination more frequently than older men, in addition to being disadvantaged on the basis of their gender (Neumark et al., 2019). Similarly, in the UK research found that age intersects with race, affecting workplace outcomes (Drydakis et al., 2018a).

This study investigates age discrimination in the labour market during the initial stage of the hiring process. Hard discrimination is associated with matters directly relevant to employment decisions, such as hiring a person (Stypińska and Turek, 2017). To provide direct evidence of potential age discrimination, the present research collects data from four simultaneous field experiments conducted between 2017 and 2018 in England. The purpose of the experiments is to test for age discrimination against older British White and British Black male and female job applicants by researching employer recruitment behaviours: first, access to vacancies and second, wage sorting. This is achieved through employing the correspondence testing technique (Riach and Rich, 2010). Furthermore, this empirical study adopts an intersectional approach in order to gain a better understanding of the multifaceted way labour market experiences are being shaped for older workers (Liu, 2018; Bilge, 2010; Moore, 2009; Holgate et al., 2006)<sup>3</sup>.

Although the study was conducted between 2017 and 2018, age discrimination remains a topical issue in most countries as ageist attitudes persist in the workplace (Axelrad et al., 2022), in the media and society as a whole (Ng, 2021). During the Covid19 pandemic further age-related prejudices were exposed. A World Health Organisation report (World Health Organisation, 2021) notes discriminatory practices against older people accessing health care and other vital services

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<sup>3</sup> Intersectionality as a concept derives from the work of Crenshaw (1989) who evaluated that discrimination is the result of intersections between gender, race and class

while research by the Resolution Foundation found that more older workers (50 to 69 years old) lost their job compared to other age groups (Cominetti, 2021)<sup>4</sup>.

Age discrimination is not easily measured, mainly because surveys of attitudes towards older individuals and employers in the workplace regularly fail to produce accurate responses (Riach and Rich, 2010). Employers may downsize the magnitude of the problem, while the opposite may hold for older employees. The difficulty in measuring age discrimination in the workplace – and especially during the selection process – may limit the knowledge of the actual magnitude of existing discriminatory practices, and the actual causes of age discrimination itself experienced by older individuals during the initial stage of the recruitment process (Riach and Rich, 2010).

The importance and validity of correspondence testing in measuring discriminatory treatments in the labour market have recently been demonstrated by a 2018 Special Issue in the *International Journal of Manpower* (see, for instance, Drydakis et al., 2018b). By utilising correspondence tests, researchers can demonstrate a direct link between different ‘minority/protected’ characteristics and potential discriminatory practices during the process of recruitment by ‘catching’ preferential treatment (Riach and Rich, 2010; Drydakis, 2009).

Correspondence tests are used in US and UK courts of law because of their ability to provide objective and definitive evidence, otherwise unavailable, of discriminatory behaviour (Neumark, 2012; Riach and Rich, 2004). For example, in 2021, the Government of Canada utilized correspondence test outcomes (e.g., Drydakis et al., 2018a) to shape anti-ageism workplace guides (Government of Canada, 2021). In the UK, in 2010, the Department for Work and Pensions (DWP) commissioned research that employed correspondence testing to measure the level of racial discrimination by employers when recruiting staff (Wood et al, 2009). In fact, as noted by Heath and Di Stasio (2019), “field experiments have become the gold standard research method for

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<sup>4</sup> The COVID-19 pandemic has disrupted public health, social interaction, and employment attachments. In the context of the COVID-19 outbreak, societies have seen a surge of negative manifestations of ageism and sexism (Ayalon, 2020; Moen et al., 2020; European Parliament, 2020). In the UK, a major representative study (Office for National Statistics, 2021) found that people aged 50 to 70 years indicated that online applications, age discrimination, and a lack of available help may be barriers to finding work. There were economically inactive or unemployed people aged 50 to 70 years who lost or left their job prior to the pandemic and who were currently searching for a job, but had not returned to work after the pandemic because they had been rejected for jobs - they felt this was because companies were less willing to employ older staff and only wanted to employ younger people with IT skills since the pandemic. In the US, individuals with less than a college degree in their 50s and 60s were more likely to become unemployed (Moen et al., 2020). Importantly, the European Parliament (2020) indicated that since the sectors of the economy which have been most significantly affected by lockdown measures were hospitality, recreation, tourism, and education/childcare are highly feminised, this feature risked unemployment for women, to the extent that the COVID-19 pandemic related economic recession has been dubbed as ‘she-cession’.

establishing risks of discrimination...[and] Britain was one of the pioneers in developing anti-discrimination legislation and was also the pioneer in using field experiments to monitor discrimination” (pp. 1775-1776). Moreover, in 2021, in the UK, leading HR bodies (e.g., the Chartered Institute of Personnel and the Development and the Recruitment and Employment Confederation) and institutions working on ageing (e.g., the Centre for Ageing Better) utilized correspondence test outcomes (e.g., Drydakis et al., 2018a) to shape good recruitment guides for older workers (Centre for Ageing Better, 2021a).

Correspondence testing has been critiqued as a method mainly in terms of ethics; however, according to Zschirnt (2019) well-designed research based on strict principles such as causing the least possible disruption to employers, guaranteeing confidentiality and analysing the data in a way that research participants cannot be identified can overcome such concerns. As Zschirnt (2019) notes, it would in fact be unethical to stop researching discrimination in the labour market using research methods that have been proven to be efficient in measuring discriminatory practices during the recruitment process (Zschirnt, 2019). The present study is based on a careful plan and design and as discussed in detail in Section 5, these strict principles have been observed.

The research findings of this study make a contribution to the literature as this is the first empirical field study that has explored whether gender and race can exacerbate age discrimination within a single experimental setting. Intersectionality as a theoretical approach is widely adopted in social sciences in the study of discrimination; however, it is less common in empirical analysis (Steffensmeier, 2017). Measuring intersections at the recruitment process is therefore crucial for policies to address multifaceted labour discrimination (Centre for Ageing Better, 2021).

Assessing whether discrimination drives inferior labour market outcomes for minority population groups has drawn the attention of social scientists for decades. Based on the Taste for Discrimination theory (Becker, 1957; 1993), employers might want to maintain a physical distance from certain minority groups because they dislike transacting with them. Discrimination incorporates the influence of characteristics unrelated to productivity, such as ageism, racism and sexism. The Statistical Discrimination theory (Arrow, 1973; 1998) indicates that the usage of average group characteristics to predict individual productivity and define employment decisions can incorrectly evaluate the productivity of workers who are atypical of their minority demographic characteristic (Pager and Karafin, 2009). If employers’ uncertainty regarding older people’s productivity and work commitment is strong, they might decide not to employ older people. The theory is grounded in what the employers believe to be valid inferences about productivity, e.g., older people are frequently negatively stereotyped as being less motivated, less willing to change, and more vulnerable to work-family imbalance (Ng and Feldman, 2012).

The present research was able to examine whether potential age discrimination against older individuals is either due to prejudices (Becker, 1957; 1993) or due to stereotypes (Arrow, 1973; 1998). This was carried out by controlling for older individuals' physical capacities and mental flexibility in order to minimise the potential negative influence of stereotypes (Ng and Feldman, 2012). If Taste-based discrimination is the cause of employment prejudices, then anti-discrimination laws could discourage employers from practising it (Becker, 1957; 1993). However, if stereotypes are the cause of workplace bias, employers should better screen applicants in order to minimize the influence of stereotypes (Budd, 2011).

The outcomes of this study show that efforts to extend working lives and to increase participation rates among older people may be undermined by age discrimination due to prejudices in the labour market. The study points to the necessity for developing policies that reduce ageism, sexism<sup>5</sup> and racism<sup>6</sup>.

With regard to the remainder of this paper, in Section 2 empirical patterns on age discrimination are offered. Section 3 presents theoretical insights. Section 4 presents a brief review of correspondence tests based on age while Section 5 discusses the design of the experiments. In Sections 6 and 7, the statistical and econometric results are analysed. Sections 8 and 9, offer a discussion and conclusions.

## **2. Age discrimination in the labour market: Empirical patterns**

Current studies suggest that age discrimination is prevalent in the labour market across different countries (Centre for Ageing Better, 2021a; Marques et al., 2020). In the UK, the Centre for Ageing Better (2021b), found that more than a third (36%) of 50–70-year-olds believed they feel at a disadvantage when applying for jobs due to their age. They felt this at every stage of the recruitment process, from the language in job adverts to interview panels. Moreover, in the same region, the Centre for Ageing Better (2018) found that 14% of over-50 employees believed that, since turning 50, they had been turned down for a job due to their age, while nearly one in five (18%) had considered hiding their age in job applications. In addition, nearly half (46%) thought that their age would disadvantage them in applying for a job and one in five thought that people saw them as less capable due to their age. Moreover, while 40% of employees over the age of 50

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<sup>5</sup> Sexism is defined as individuals' attitudes, beliefs, and behaviours, and organizational, institutional, and cultural practices that either reflect negative evaluations of individuals based on their gender or support unequal status of women and men (Swim and Hyers, 2009).

<sup>6</sup> Racism is a particular form of prejudice defined by preconceived erroneous beliefs about race and members of racial groups (Hoyt, 2019).

thought that their workplace had a policy related to preventing age discrimination, nearly half (47%) stated that such policies made no difference.

The American Association of Retired Persons career study (AARP, 2014) on older employees suggested that 64% of older employees have witnessed or experienced age discrimination in the workplace. In Europe, Eurobarometer research in 2015 estimated that most respondents believed that age discrimination is widespread in their country, especially for people over 55 years old (Eurobarometer, 2015). In the UK, a series of laboratory experiments conducted by Abrams et al. (2016) showed that over 70% of participants preferred to hire younger employees. The study also found that 50% of the participants preferred to give supervisor positions to younger people. The study concluded that such ageist assumptions present an obstacle for older people when it comes to gaining access to employment or to new roles within organisations (Abrams et al., 2016).

Evidence also suggests that particular groups of older employees experience greater age discrimination than others. For example, a government inquiry in the UK heard that older women tend to experience more discrimination in their employment than men, and this takes the form of pay differences, lack of promotion and having less access to training (House of Commons, 2018). The same inquiry noted that the majority of older women tend to work in public administration, education and health, and these sectors also face challenges in retaining employees. Consequently, older women may be more at risk of becoming unemployed. In addition, there is a recognition in the UK that barriers in the labour market exist for Black and Minority Ethnic groups, from entry through to board level, and these barriers prevent them from reaching their full potential (McGregor-Smith, 2017).

In Table 1, 2017 OECD data for employment levels for the UK reveal that only 63.6% of people aged between 55 and 64 are employed compared to 83.9% of people aged between 45 and 54 who are employed, and 84% of people aged between 35 and 44 who are employed (OECD, 2018). The figures clearly suggest that, after the age of 55, employment levels fall sharply for both men and women. However, it is noteworthy that, in all age categories, employment levels of women are lower than those of men. Qualitatively-comparable patterns are observed for the labour force participation levels. Although the target set by the Europe 2020 Strategy was to reach 75% employment for all Europeans aged 20-64, the aforementioned findings raise serious concerns and call for further research to identify the driving factors of these patterns.

[Table 1]

### **3. Theoretical considerations**

The study is primarily guided by economic theories on discrimination. A substantial literature, starting with Becker's 1957 book *The Economics of Discrimination*, explores the economics of discrimination. The correspondence testing method has been heavily utilized by economists to quantify unlawful discrimination during the hiring stage based on ethnicity, race, health condition, gender, age, religion, and sexual orientation in a wide array of countries around the world (Drydakis, 2009; 2022). In the relevant literature on age discrimination, the great majority of correspondence tests to assess unlawful hiring discrimination based on age are from economists (Carlsson and Eriksson, 2017; Drydakis et al., 2017; Neumark et al., 2016; Riach and Rich, 2006a; 2007). Findings from their research - if considered within different contexts - can help to understand how economic inequalities are being reproduced in our society and what policies can tackle them.

The Taste discrimination framework suggests that if employers have tendencies towards discrimination and are keen to avoid interactions with minorities, then occupational access might be restricted for older individuals and/or older individuals might have access only to lower paid jobs (Becker, 1957; 1993). Therefore, according to the Taste theory, discriminatory behaviours and practices stem from peoples' antipathy towards minority groups.

Statistical discrimination framework-developed in response to the Taste-based framework- posits that discrimination occurs when rational decisions are taken by employers to reject applicants with particular demographic characteristics when they are uncertain about the skills and competencies of applicants (Charles and Guryan, 2008). If there are differences in the motivation and productivity of older and younger individuals, these features may create permanent differentials in older individuals' workplace outcomes (Arrow, 1973; 1998). In this case, discrimination is not the consequence of prejudices or irrational emotions, as claimed by the Taste framework, but the result of rational and profit-maximising behaviour of risk-averse employers.

The Statistical framework suggests that societal stereotypes can lead to incorrect predictions of the productivity of older employees who are atypical of their minority demographic characteristic (Arrow, 1973; 1998; Pager and Karafin, 2009). Indeed, in a recent review paper, Ng and Feldman (2012) identified six common age stereotypes. They suggested that older employees are frequently negatively stereotyped as being less motivated, less willing to participate in training and career development, more resistant and less willing to change, less trusting, less healthy, and more vulnerable to work-family imbalance (Ng and Feldman, 2012). However, after reviewing 418 empirical studies, the authors found that the only stereotype which was consistent with empirical evidence was that older employees are less willing to participate in training and career development activities (Ng and Feldman, 2012).

The case for older individuals could become even more problematic if the information for an average group characteristic is unreliable or wrong (Arrow, 1973; 1998). Research on the topic has

noted that the negative stereotyping of older employees, who are portrayed as a burden on modern workplaces, has often resulted in discrimination against them (Van Dalen and Henkens, 2018; Brownell and Kelly, 2013). The Statistical argument suggests that firms which rely on stereotypes and practice age discrimination will face a competitive disadvantage because they cannot retain good-quality employees (Arrow, 1973; 1998).

Increasingly there is a recognition that discriminatory practices can be better explained by understanding the intersection of different minority characteristics or strands such as gender, age, race or ethnicity. This is not a new concept and as a critical framework it is widely used by academics (Healy, Kirton and Noon, 2011), practitioners, policy makers and other bodies (such as the United Nations or the European Union). Intersectionality offers theoretical insights that differ from unitary approaches which are based on the research and analysis of one primary social category like age or race, or from multiple approaches that analyse dimensions of social inequality by focusing on the additive effect of several categories (Hannock, 2007).

Intersectionality explains the complexities of social inequalities by considering the impact of several social characteristics (for example, age, gender, race, ethnicity, social class, ability sexuality) as mutually reinforcing or constituted phenomena which according to Anthias and Yuval Davis (1983) "... are enmeshed in each other and the particular intersections involved produce specific effects" (Anthias and Yuval Davis, 1983, pp. 62-63). Therefore, in addition to the economic theories of discrimination the experimental design of this study also explores how age intersects with gender and race to shape discriminatory practices during recruitment. Such an approach can better inform an understanding of labour market discrimination.

#### **4. Field experiments on age**

A correspondence test enables researchers to investigate whether discrimination exists in the labour market (Riach and Rich, 2006a). In terms of methodology, the applicants are identical except for the basis of discrimination which the researchers are investigating. These applications are forwarded to job openings and replies from firms are recorded (Riach and Rich, 2006a). Drydakis (2009) extended the aforementioned technique by collecting data on wage sorting. This is feasible by recording the job's wage if a vacancy advertises the relevant information. In doing so, researchers are able to observe whether minorities have access to those occupations which offer lower wages than those of the majorities (Drydakis, 2015).

Since 2006, at least ten field experiments have been conducted to examine age discrimination (Carlsson and Eriksson, 2017). In all cases, older individuals were found to receive fewer invitations for interviews or to have less access to vacancies. However, such research has not focused on whether age discrimination is moderated by gender and race in a single experimental

setting; moreover, studies concerning either age discrimination and gender or age discrimination and race are scarce. For instance, Drydakis et al. (2017) and Neumark et al. (2016) indicated that age discrimination might be stronger for women than for men of the same race. In addition, Drydakis et al. (2018a) estimated that age discrimination might be higher for racial male minorities than for racial male majorities. At the same time, there is currently no available experimental research on wage sorting based on the inter-correlation between age, gender and race. Partial evidence is offered in the study of Drydakis et al. (2018a), who estimated that older male racial minorities might be pointed towards vacancies that offer lower wages more so than older male racial majorities.

Utilising correspondence tests reveals the existence of age discrimination across countries, which demonstrates the magnitude of the problem. In France and Spain, Riach and Rich (2006a; 2007a) showed the presence of age discrimination against older male waiters. In Britain, Riach and Rich (2007b) found that age discrimination existed for older female graduates (in a variety of fields) and for older male waiters. In England, France, Germany and Spain, Riach (2015) found age discrimination against older male waiters.

In Sweden, Ahmed et al. (2012) discovered that older male waiters and sale assistants experienced age discrimination. In addition, in Sweden, where Carlsson and Eriksson (2017) suggested that older women in a variety of occupations, including administrative assistants, chefs, and cleaners, experience higher age discrimination than older men. In the same region, Carlsson and Eriksson (2019) found that age discrimination starts at the age of 40 and becomes more prevalent for workers close to the retirement age, especially for women relative to men. The study found that employer stereotypes about the ability to learn new tasks, flexibility, and ambition seem to be an important explanation for age discrimination.

In the UK, Drydakis et al. (2017) estimated age discrimination for men and women in office, factory and sales jobs. The latter study postulated that age discrimination is present even in firms where HR departments exist and provide equal opportunities. Moreover, the study suggested that age discrimination is higher for women than for men. Drydakis et al. (2018a) also estimated that older Black British people experience higher age discrimination than older White British individuals in office, factory and sales jobs.

In the US, Neumark et al. (2016) found that age discrimination in retail, security, cleaning and building maintenance was higher for older women than older men. In the same region, Neumark et al (2019) found similar evidence of age discrimination in hiring against older women, especially those near retirement age. The authors attributed this to the stereotypical belief about the inverse relation between employees' physical capacities and health problems with age (Neumark et al., 2017).

In Hungary, Berde and Mágó (2022) found that younger job seekers in office assistant and economic analyst positions, were invited to interviews more often than the older seekers. The study estimated that employers evaluated the skills of older applicants at only 45–67% of their actual skills.

The correspondence tests results are designed to indicate the causal effect of age on employment outcomes. This is mainly because information concerning the most important characteristics of productivity-relevant individuals which are observed by firms is controlled for (Carlsson and Eriksson, 2017). This is not the case with administrative data, where unobserved heterogeneity does not allow for causality inferences (Riach and Rich, 2010).

## **5. Experiments' structure**

In order to answer the study's research questions, the study collected data from four simultaneous field experiments between 2017 and 2018. The study followed the required procedures for securing ethics approval. In 2017, the study obtained approval from the ethics committee of Anglia Ruskin University, UK.

In Experiment 1, the research team sent 190 pairs of matched applications from a fictitious 28-year-old White British male and from a fictitious 50-year-old White British male. In Experiment 2, the research team sent 221 pairs of matched applications from a fictitious 28-year-old White British male and from a fictitious 50-year-old White British female. In Experiment 3, the research team sent 184 pairs of matched applications from a fictitious 28-year-old White British male and from a fictitious 50-year-old Black British male. Similarly, in Experiment 4, the research team sent 209 pairs of matched applications from a fictitious 28-year-old White British male and from a fictitious 50-year-old Black British female.

The applications stated that the younger applicants had 9 years of work experience in the specific occupation. On the other hand, the older applicants stated that they had 31 years of work experience in the specific occupation. In all experiments, it was ensured that the applicants were currently in employment so that all applicants had current working experience; the purpose of this was to reduce fears that older applicants had time for skills to deteriorate.

In this study, if positive preferences are found for younger applicants with 22 years less experience, that would indicate a significant level of workplace bias against older applicants (Riach and Rich, 2010). However, if positive preferences for the older applicants are observed, this will be interpreted as a rational response to working experience and specialisation superiority, rather than bias against youth (Riach and Rich, 2010). In all cases, if older women and Black British people experience higher levels of age bias than older men and White British people, then sexism and racial prejudices might be in play (Drydakis et al., 2017; 2018a; b).

The applications consisted of three parts: email communication, attachment of an application letter, and a CV. In the opening email, a short message informed firms that the applicants were applying for the vacant job opening and that an application letter and a CV were attached. The application letter stated that the applicants had seen the announcement for the job opening and were interested in obtaining the position. CVs were prepared in conjunction with advice from relevant HR departments. The CVs contained information about the applicants' demographic characteristics and work experience. They included the applicants' year of birth, gender (female/male), ethnicity (White British/Black British), marital status (married, one child), previous employment and education (both applicants had completed school to Year 11), hobbies (sports and cinema) and contact information (email). The postal addresses were in comparable socio-economic districts, approximately one mile apart in each region. Working with HR departments, the research team conducted internal pre-tests to ensure that emails, application letters, and CVs would elicit preferences. However, in order to control for the possibility that the style of an application influences a firm's response, the different application styles were allocated equally, in a pair, among the two applicants. The applications were posted simultaneously within one day of the appearance of the advertisement. In anyone posting, half of the enquiries emanated from the younger applicants, and half from the older applicants.

The study concentrated on low-skilled jobs in the private sector as this group was expected to be more at risk of age discrimination (Drydakis et al., 2017; 2018a; b). Pairs of applications were sent to employers with a variety of job openings for restaurant-café employees, and sales assistants in England, with no higher education requirements. This profile of workers is seen as more at risk of experiencing biased treatments than better-skilled workers (OECD, 2019). Moreover, the study indicates that the public sector is more weakly constrained by profitability requirements than in the private sector and biases might be lower (Laurent and Mihoubi, 2012; Kara, 2006; Hoffnar and Greene, 1996). In the literature, it is indicated that a focus on less-educated population groups in the private sector shall merit consideration in experimental studies (Drydakis, 2009; 2011). Furthermore, in this study, it was important to choose job openings where it was realistic to expect that job applications would come from individuals many years apart in age. In this study there was an attempt to rule out investigating jobs with a career hierarchy (i.e., managers, directors).

The applications were sent to vacancies where there was demand for employment of eight hours a day, five days a week. These vacancies were identified through a random sample of advertisements appearing on leading newspaper websites. Applications were sent only to companies that accepted applications via email. Whenever firms invited the applicants for an interview, it was recorded as a call-back. Invitations to interviews were politely declined so as to minimise the inconvenience to the firms. In addition, as in Drydakis' (2009) study, if a vacancy advertised the

job's wage, this was recorded. Job openings for restaurant-café employees and sales assistants have fixed pay scales.

As discussed in the previous sections, the most commonly-held stereotypes regarding older employees are that they are less motivated than younger employees, do not exhibit positive behaviours around training and career development, have weak social relationships, and are characterised by a lack of mobility (Ng and Feldman, 2012). To address the aforementioned negative stereotypes, in the older applicants' cover letter the following positive information was introduced: *"I am a motivated employee who loves my job. I enjoy interacting with customers and create a cheerful environment for my customers and colleagues. I regularly receive exceptional ratings on service quality and communication from customers and I closely collaborate with my supervisors to meet our targets. I am passionate about technology and I constantly undertake customer-orientated training using technological applications. In my spare time I enjoy cycling and mountain-biking with my family and friends and visiting new places to explore new customs."* The applications and statements were reviewed by the HR personnel. They were asked to comment on whether such kinds of statements are expected from employees with decades of work experience in customer services. No concerns regarding the statement were raised. Finally, on the older applicants' CVs, information regarding history of training was included. The appendix provides short versions of the applications.

## **6. Statistics**

### *6.1 Access to Vacancies*

Table 2 summarises the data and the results of Experiment 1. The study presents the results for firms which did not respond to either of the applicants; firms which responded positively to at least one applicant; firms which responded positively to both of the applicants; firms which responded positively only to the younger 28-year-old applicant; and firms which responded positively to only the older 50-year-old applicant. The results are presented for the total sample, and by occupation. The last row shows the aggregated results and, as can be seen in the second column, applications were sent for 190 job openings. The third column shows that, in 119 cases, neither individual was invited for interview. In 71 cases, at least one applicant was invited. In 33 cases, both applicants were invited; in 34 cases, only the younger White British male applicant was invited, and in 4 cases only the older White British male applicant was invited. The net difference for the older White British male applicant can be seen in the last two columns and represents 30 cases (or, 42%). In other words, the younger White British male applicant, despite having 22 years less work experience, is approximately 8.5 times more likely than the older White British male

applicant to receive an invitation for a job interview. The outcome is statistically significant at the 1% level.

[Table 2]

Table 3 presents the results of Experiment 2. In 44 cases, only the younger White British male applicant was invited, and in 5 cases only the older White British female applicant was invited. Hence, the net difference against the older White British female applicant is 50%, or the younger White British male applicant is 8.8 times more likely than the older White British female applicant to receive an invitation for a job interview. The outcome is statistically significant at the 1% level. If Experiments 1 and 2 are compared, it can be seen that among White British applicants the magnitude of age discrimination is stronger for women.

[Table 3]

Table 4 presents the results of Experiment 3. As can be seen, in 44 cases only the younger White British male applicant was invited for an interview, and in 3 cases only the older Black British male applicant was invited. The net difference against the older Black British male applicant is 59%, or the younger White British male applicant is 14 times more likely than the older Black British male applicant to receive an invitation for a job interview. The outcome is statistically significant at the 1% level. If Experiments 1 and 3 are compared, it can be seen that among male applicants the magnitude of age discrimination is stronger for Black British than for White British.

[Table 4]

Table 5 presents the results of Experiment 4. In 63 cases, only the younger White British male applicant was invited, and in 2 cases only the older Black British female applicant was invited. The net difference against the older Black British female applicant is 64%, or the younger White British male applicant is 31 times more likely than the older Black British female applicant to receive an invitation for a job interview. The outcome is statistically significant at the 1% level. If Experiments 2 and 4 are compared, it can be seen that, among female applicants, the magnitude of age discrimination is stronger for Black British than for White British. In addition, if Experiments 3 and 4 are compared, it is observed that among Black British applicants the magnitude of age discrimination is stronger for women than men. In addition, it is observed that in all cases, age discrimination is higher in sales than in restaurant and café jobs.

[Table 5]

## 6.2 Wage sorting

The experiments record the entry-level annual wages, i.e., salaried work, of the vacancies if the job openings featured this information. If older applicants were invited for an interview in firms offering statistically significant lower entry-level annual wages than the wages experienced by

younger applicants, this indicates a pattern of wage sorting into lower-paid jobs due to age (Drydakís, 2009; 2011; Drydakís et al., 2017; Drydakís et al., 2018a).

Table 6 presents the annual wages for those who received invitations for interviews. In Experiment 1, although younger White British male applicants have 22 years less work experience, they are sorted in jobs offering annual wages that are, on average, higher than those that are offered to older White British male applicants: £19,863 versus £17,552. The age-wage difference disadvantages older White British male applicants by approximately £2,311 per year (or, 13%). The outcome is statistically significant at the 1% level.

Similarly, in Experiment 2, younger White British male applicants are sorted in jobs offering annual wages that are higher than those that are offered to older White British female applicants. The age-wage difference negatively affects older White British female applicants by £2,454 per year (or, 14%). The outcome is statistically significant at the 1% level.

In Experiment 3, younger White British male applicants experience higher annual wages than older Black British male applicants by £2,572 per year (or, 14%). The outcome is statistically significant at the 1% level.

Moreover, in Experiment 4, younger White British male applicants face higher annual wages than older Black British female applicants by £2,937 per year (or, 17%). The outcome is statistically significant at the 1% level.

[Table 6]

Comparing Experiments 1 and 2, it appears that older White British male and female applicants experience approximately the same annual wage sorting penalty. The same holds in Experiment 3 for older Black British male applicants. However, in Experiment 4, older Black British female applicants experience the highest wage sorting penalty in this study. It is indicated that the combination of a minority racial background and being a woman exacerbates the age-wage sorting penalty. Finally, a consistent pattern between sectors in relation to wage sorting is not observed. In Experiments 1, 2 and 4, with regard to restaurant/café jobs, the age-wage sorting penalty is higher than in sales jobs. In Experiment 3, the age-wage sorting penalty is higher in sales than in restaurant/café jobs.

## **7. Estimations**

### *7.1 Access to vacancies*

In Table 7, the probit results regarding access to vacancies are reported. The marginal effects are offered (Wooldridge, 2010). In all experiments, the reference category is younger White British men. Moreover, all empirical specifications control for occupation, application type and

sending order. Experiment 1 shows that older White British men have a 15.8% lower chance of receiving an invitation for interview than younger White British men. Experiment 2 shows that older White British women have a 17.7% lower chance of receiving an invitation for interview than younger White British men.

In addition, Experiment 3 shows that older Black British men have a 22.3% lower chance of receiving an invitation for interview than younger White British men. Furthermore, Experiment 4 shows that older Black British women have a 29.2% lower chance of receiving an invitation for interview than younger White British men. In all cases, the outcomes are statistically significant at the 1% level. In addition, in all cases, neither occupation heterogeneity nor the study's controls have any impact. Based on the magnitude of age discrimination in relation to access to vacancies, the estimates suggest that Black British men and women and White British women are worse off than White British people and men.

[Table 7]

## 7.2 *Wage sorting*

Table 8 presents the results regarding the logged net annual wages, i.e., salaried work, offered where applicants received an invitation to interview. In all experiments, the reference category is younger White British men. In addition, all empirical specifications control for occupation, application type and sending order.

In Experiment 1, it is observed that older White British men are invited to interviews for vacancies that offer 11.5% lower wages compared to younger White British men. Experiment 2 shows that older White British women are invited to interviews for vacancies that offer 12.4% lower wages compared to younger White British men.

Experiment 3 shows that older Black British men are invited to interviews for vacancies that offer 13.3% lower wages compared to younger White British men. In Experiment 4, it is observed that older Black British women are invited to interviews for vacancies that offer 14.6% lower wages compared to younger White British men. In all cases, the outcomes are statistically significant at the 1% level. Moreover, in all cases, neither occupation heterogeneity nor the study's controls have an impact on wages. It is observed that the level of age discrimination for wage sorting is slightly increased for Black British men and women, and White British women.

[Table 8]

Before offering a discussion and policy implications based on the assigned patterns, it is highlighted that the aforementioned results should be evaluated while considering the characteristics of the experiment, the applicants' profiles, occupation, country, and the time period. This study examined only two occupations (i.e., restaurants and cafes, and sales) and used

applicants with no higher educational level, all of whom resided in only one country; thus, firm generalisations cannot be offered. In addition, the research has focused on the recruitment stage and has ignored potential discrimination that could arise later on during the actual interview, and if actual employment starts. Future research should certainly consider a variety of profiles, occupations, and regions.

## **8. Discussion**

### *8.1 Outcomes evaluation*

In order to eliminate age discrimination in the labour market, the UK implemented European Union legislation in the Employment Equality (Age) Regulations 2006. These were superseded by the Equality Act 2010, which came fully into effect in 2012. Despite the existence of legislation, the outcomes of the present study suggest that age discrimination persists. Older White and Black British men and women experience significant occupational access constraints and are sorted in lower paid jobs than younger White British men. Based on these outcomes, it can be suggested that (older) age affects workplace outcomes for both older men and women, as well as for both older majority and minority racial groups. These patterns highlight that the prevalence of age stereotypes and a history of bias against older people cannot be easily reversed by passing legislation (Drydakis et al., 2017). The outcomes of the present study are in line with the evidence from the EU and US field experiments reviewed in this paper (Riach and Rich, 2006a; 2007a; Ahmed et al., 2012; Riach, 2015; Neumark et al., 2016; Carlsson and Eriksson, 2017).

Moreover, the results of this study revealed that the level of age discrimination in access to vacancies and wage sorting is higher for Black British men and women. In addition, the highest age discrimination was observed for Black British women. These outcomes might be in line with stereotypical beliefs that the physical strengths and job performance of women decline earlier than for men (Böhm et al., 2013; Colin and Loretto, 2004), as do general and persistent racial prejudices (Drydakis, 2012; Drydakis et al., 2017). Older women regularly feel scrutinised about their looks (Bisom-Rapp and Sargeant, 2016; House of Commons, 2018; Calasanti, 2005) and racial minorities constantly experience discriminatory treatment in the labour market (McGregor-Smith, 2017). The outcomes of this study suggest that the complexity of age discrimination on multiple grounds, such as gender and race, should be approached within the framework of intersectionality (Crenshaw, 1989; Moon, 2006). Social class, gender and race are considered core elements as they shape both socialisations and exclusions within different processes, such as during the hiring stage (Dannefer and Settersten, 2010).

In this study, the experiments attempted to minimise the negative typical stereotypes against older individuals with respect to their motivation and productivity. Hence, the prejudices against

older individuals might be the case of Taste discrimination (Becker, 1957; 1993). Given the design of this study, it is suggested that organisations might experience discomfort whenever they have to screen an application from an older individual; indeed, this is unrelated to her/his motivation and productiveness. Older applicants may not receive invitations for an interview, or they may receive invitations to interview for lower-paid jobs; the reason for this might be because employers want to equalise the unit costs of labour after factoring in the distaste towards them (Becker, 1957; 1993).

The outcomes of this study show how much work is still needed to address age discrimination in the labour market. If prejudices against older individuals are in play, then anti-discrimination legislation may be the appropriate response. Based on the Taste theory, in the long run, competition can eliminate biased treatment. So long as employers discriminate and policy makers penalise them through fines, labour will cost more than it does for non-discriminatory employers (Becker, 1957; 1993; Charles and Guryan, 2008). It is suggested that fair employment laws can raise the cost of discrimination and discourage employers from practising discrimination (Becker, 1957; 1993; Charles and Guryan, 2008).

The study's patterns suggest that older women and people from minority racial backgrounds are sorted in lower-paid jobs, and thus there might be a need for policy evaluation through a pluralist lens (Drydakis, 2018). Feminist (Bergmann, 1986) and Labour Market Segmentation (Edwards et al., 1975) theories can provide insights. Feminist theories suggest that being a minority racial woman might lead to segregated into low-paid jobs as a result of sexism and racism, which leads to wage differentials between equally-skilled jobs (Bergmann, 1986). Feminist theory indicates that in economies where males and racial majorities dominate females and racial minorities, the opportunities of the latter are restricted, it is not surprising that women and racial minorities experience inferior labour market outcomes (Weichselbaumer and Winter-Ebmer, 2005; Drydakis, 2012; Drydakis et al., 2017). Feminists fight for the abolition of dominance over minorities, should positively affect their labour market outcomes (Bergmann, 1986).

Moreover, based on the Labour Market Segmentation framework (Edwards et al., 1975), sexism and racism are practised so as to divide employees for profitable purposes. In lower-status/lower-paid jobs where employers' power is stronger, minorities' lower wages are perceived as a labour cost-reduction strategy. Employers are able to reap higher profits from a gendered and racially-divided working population than from a united one. The theory suggests that in order for a society to achieve equality in wages and for equally-skilled employees, power relations leading to segmentation in societies must be abolished (Edwards et al., 1975).

## *8.2 Policy implications*

The existence of age, gender and racial discrimination in the workplace could have serious consequences for the society as a whole and the individuals affected. The outcomes of the present study have shown that older individuals might have to spend more time, effort and resources than younger individuals to obtain an interview for a lower-paid vacancy. In the UK, one often-suggested solution is to encourage older employees to remain and/or return in the labour force. The current outcomes suggest that simply encouraging older people to re-enter the labour force may not guarantee that they will be able to find jobs in a timely manner, if at all.

If policies to increase working lives and boost labour force participation rates among older individuals are to be successful, it is not sufficient to adapt HR policies to accommodate the ageing of only existing employees. As discussed in Drydakis et al. (2017), anti-discrimination and inclusion policies should be designed in order to create a cycle in which unbiased selection would promote inclusive practices, which, in turn, would re-promote a greater diversity of people drawn to join firms' workforce. Lievens et al. (2012) suggested that firms should not only actively solicit applications from older individuals but also ensure that they are fairly considered once received. Naegele and Walker (2011) proposed that policy makers should require firms to implement ageing-at-work policies which have to explicitly address all stages of the recruitment process. Indeed, age discrimination in recruitment should not be considered in isolation but must be seen in the context of other characteristics, such as ethnicity, race, gender, sexual orientation and disability (Drydakis, 2012; 2014).

The Centre for Ageing Better (2021) has developed a guide setting out five key actions, designed to help firms to become a more age-inclusive employer. It suggests that workplaces should (i) include a short diversity statement in job adverts emphasising age-inclusivity, (ii) regularly collect and scrutinise age data from the recruitment process to analyse the age profile of the current workforce as well as job applicants to evaluate whether job adverts are attracting candidates of all ages, (iii) emphasise employer benefits that might appeal to older workers, such as flexible working, (iv) structure job interview process using multiple decision-makers, predefined questions and scoring mechanisms and (v) ensure that staff are aware of how best to reduce bias and avoid discrimination in the interview process, avoid making assumptions about older workers on the basis of stereotypes, and recognise the importance of age-inclusivity and build a workplace culture that acknowledges the contribution of people of all ages (Centre for Ageing Better, 2021). Beyond that, workplaces should implement effective practices that promote age-diverse work environments, and employees of all ages should be provided the apprenticeship opportunities they need to thrive in the workplace as they age (Suh, 2021). Importantly, access to job-protected paid sick leave or paid family leave will help older employees stay employed during the current health and economic recession (Suh, 2021).

The success of inclusive policies lies in ensuring that within firms both employers and employees can present their interests and, through social dialogue, arrive at practices which are beneficial for all. It is suggested that social dialogue should be a critical part of the process of changing attitudes and establishing more inclusive employment, as it gives participants the chance to raise issues and negotiate solutions (Drydakis et al., 2017).

The role of trade unions is important both at national and European level as they are involved in the social dialogue process and seek to influence both state and European policies. Paraskevopoulou and McKay (2015) identified a range of initiatives for tackling age discrimination which were developed by trade unions across Europe. These include campaigning and raising awareness of older individuals and employees; negotiating collective agreements for protecting older employees nearing retirement; and establishing NGOs in order to support older employees. The UK has relied solely on unions as the channel for employee representation (Euwema et al., 2015). However, the UK is characterised by a low level of formal employee representation at firm level, and especially for the low-skilled occupations that make up the sample of the present study (Martinez-Lucio and Keizer, 2015). One challenge is to cultivate an effective employee representation at firm level (Euwema et al., 2015). Developing cooperative relations and social dialogue requires investments by both employers and employees (Euwema et al., 2015), while the pressures of population ageing make actions quite imperative.

## **9. Conclusions**

Through an experimental design for the labour market in England, the study offered comparisons on access to vacancies and wage sorting between younger male racial majorities and older male racial majorities, older female racial majorities, older male racial minorities, and older female racial minorities. In all cases, older individuals were found to experience adverse employment outcomes. It was also found that age discrimination is moderated by gender and race. Women and racial minorities were more negatively affected by age discrimination than men and racial majorities, and the highest penalty was experienced by female racial minorities. The design of the study suggested that age discrimination might be the result of prejudices for older individuals which, unfortunately, have not been reduced by the introduction of anti-discrimination legislation. Cooperation between firms and employees might be essential for an inclusive workplace environment, as this would allow arguments for reducing ageism, sexism and racism within the labour force to be presented, and solutions developed. These policies should be accompanied by effective laws which can raise the cost of discrimination and discourage employers from practising discrimination. An active older population enjoying equal treatment in the labour market will be better able to help build the social and economic capital of their regions.

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**Table 1. Percentages of Employment and Labour Force Participation Levels in 2017 for the UK**

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	All	Men	Women
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Employment levels			
55-64 years of age	63.6	69.2	58.3
45-54 years of age	83.9	88.1	79.8
35-44 years of age	84.0	90.9	77.3
25-34 years of age	82.8	89.2	76.5
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Labour Force Participation levels			
55-64 years of age	65.9	72.0	60.1
45-54 years of age	86.0	90.3	81.8
35-44 years of age	86.7	93.3	80.2
25-34 years of age	86.4	93.1	79.8

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*Notes: Data set: OECD (2018) Statistics. On-line data set. Paris: OECD.*

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**Table 2. Access to occupations. Experiment 1. Younger White British Men vs Older White British Men**

Outcomes Jobs	Jobs	Neither Invited	At least one invited	Both invited	Only younger White British men were invited	Only older White British men were invited	Net difference	$\chi^2$ test	
			(1)		(2)	(3)	(2)-(3) [(2)-(3)]/(1) %		
Restaurants and cafes	89	52	37	18	17	2	15	40.5	11.8*
Sales	101	67	34	15	17	2	15	44.1	11.8*
Total	190	119	71	33	34	4	30	42.2	23.6*

Notes: The null hypothesis is “Both applicants are treated unfavourably equally often,” that is, (2) = (3). \*Statistically significant at the 1% level.

**Table 3. Access to occupations. Experiment 2. Younger White British Men vs Older White British Women**

Outcomes Jobs	Jobs	Neither Invited	At least one invited	Both invited	Only younger White British men were invited	Only older White British women were invited	Net difference	$\chi^2$ test	
			(1)		(2)	(3)	(2)-(3) [(2)-(3)]/(1) %		
Restaurants and cafes	116	79	37	12	22	3	19	51.3	14.4*
Sales	105	64	41	17	22	2	20	48.7	16.6*
Total	221	143	78	29	44	5	39	50.0	31.0*

Notes: The null hypothesis is “Both applicants are treated unfavourably equally often,” that is, (2) = (3). \*Statistically significant at the 1% level.

<b>Table 4. Access to occupations. Experiment 3. Younger White British Men vs Older Black British Men</b>									
Outcomes	Jobs	Neither Invited	At least one invited	Both invited	Only younger White British men were invited	Only older Black British men were invited	Net difference		$\chi^2$ test
			(1)		(2)	(3)	(2)-(3)	[(2)-(3)]/(1) %	
Restaurants and cafes	95	62	33	12	20	1	19	57.5	17.1*
Sales	89	53	36	10	24	2	22	61.1	18.6*
Total	184	115	69	22	44	3	41	59.4	35.7*

Notes: The null hypothesis is “Both applicants are treated unfavourably equally often,” that is, (2) = (3). \*Statistically significant at the 1% level.

<b>Table 5. Access to occupations. Experiment 4. Younger White British Men vs Older Black British Women</b>									
Outcomes	Jobs	Neither Invited	At least one invited	Both invited	Only younger White British men were invited	Only older Black British women were invited	Net difference		$\chi^2$ test
			(1)		(2)	(3)	(2)-(3)	[(2)-(3)]/(1) %	
Restaurants and cafes	96	47	49	14	33	2	31	63.2	27.4*
Sales	113	68	45	15	30	0	30	66.6	30.0*
Total	209	115	94	29	63	2	61	64.8	57.2*

Notes: The null hypothesis is “Both applicants are treated unfavourably equally often,” that is, (2) = (3). \*Statistically significant at the 1% level.

**Table 6. Wage sorting**

Experiment 1.				
	Younger White British men	Older White British men	Difference	t-test
Restaurants and cafes	19,629.4 (17)	17,336.3 (11)	2,293.0 (28)	2.2**
Sales	20,073.6 (19)	17,790.1 (10)	2,283.6 (29)	2.7**
Total	19,863.8 (36)	17,552.3 (21)	2,311.5 (57)	3.5*
Experiment 2.				
	Younger White British men	Older White British women	Difference	t-test
Restaurants and cafes	19,872.7 (22)	17,228.5 (14)	2,644.1 (36)	3.4*
Sales	19,860.1 (25)	17,625.1 (12)	2,235.1 (37)	2.8*
Total	19,865.9 (47)	17,411.5 (26)	2,454.4 (73)	4.5*
Experiment 3.				
	Younger White British men	Older Black British men	Difference	t-test
Restaurants and cafes	20,057.1 (21)	17,569.2 (13)	2,487.9 (34)	3.1*
Sales	19,861.7 (17)	17,118.6 (8)	2,743.1 (25)	3.6*
Total	19,969.7 (38)	17,397.6 (21)	2,572.1 (59)	4.7*
Experiment 4.				
	Younger White British men	Older Black British women	Difference	t-test
Restaurants and cafes	19,912.1 (25)	16,872.7 (11)	3,039.2 (36)	4.1*
Sales	20,093.1 (29)	17,290.1 (10)	2,803.1 (39)	3.6*
Total	20,009.2 (54)	17,071.43 (21)	2,937.8 (75)	5.5*

*Notes: Observations are given in the parentheses. \*Statistically significant at the 1% level. \*\*Significant at the 5 % level.*

<b>Table 7. Access to vacancies estimates; Probit, marginal effects</b>				
	Experiment 1	Experiment 2	Experiment 3	Experiment 4
	Older White British men vs Younger White British men	Older White British women vs Younger White British men	Older Black British men vs Younger White British men	Older Black British women vs Younger White British men
Older White British men <sup>a</sup>	-0.158 (0.045)*	-	-	-
Older White British women <sup>a</sup>	-	-0.177 (0.039)*	-	-
Older Black British men <sup>a</sup>	-	-	-0.223 (0.043)*	-
Older Black British women <sup>a</sup>	-	-	-	-0.292 (0.042)*
Restaurants and cafes <sup>b</sup>	0.068 (0.046)	-0.026 (0.030)	-0.024 (0.044)	0.066 (0.045)
Application format	0.015 (0.046)	0.002 (0.031)	-0.034 (0.044)	0.017 (0.045)
Sending order	0.023 (0.046)	0.020 (0.031)	0.048 (0.044)	0.027 (0.044)
LR $\chi^2$	14.55	22.80	27.18	47.01
Prob> $\chi^2$	0.005	0.000	0.000	0.000
Pseudo R <sup>2</sup>	0.036	0.046	0.066	0.092
Observations	380	442	368	418

Notes: <sup>a</sup>The reference category is younger White British men. <sup>b</sup>The reference category is sales. Standard errors are given in the parentheses. \*Statistically significant at the 1% level.

<b>Table 8. Logged annual wages estimates (OLS)</b>				
	Experiment 1	Experiment 2	Experiment 3	Experiment 4
	Older White British men vs Younger White British men	Older White British women vs Younger White British men	Older Black British men vs Younger White British men	Older Black British women vs Younger White British men
Older White British men <sup>a</sup>	-0.115 (0.032)*	-	-	-
Older White British women <sup>a</sup>	-	-0.124 (0.028)*	-	-
Older Black British men <sup>a</sup>	-	-	-0.133 (0.028)*	-
Older Black British women <sup>a</sup>	-	-	-	-0.146 (0.07)*
Restaurants and cafes <sup>b</sup>	-0.026 (0.030)	-0.011 (0.026)	0.013 (0.028)	-0.006 (0.024)
Application format	0.002 (0.031)	-0.020 (0.027)	0.011 (0.027)	-0.037 (0.024)
Sending order	0.020 (0.031)	0.034 (0.027)	-0.006 (0.029)	-0.014 (0.025)
F	3.50	5.76	5.64	8.67
Prob> F	0.013	0.000	0.000	0.000
Adj R <sup>2</sup>	0.151	0.201	0.242	0.263
Observations	57	73	59	75

Notes: <sup>a</sup>The reference category is younger White British men. <sup>b</sup>The reference category is sales. Standard errors are given in the parentheses. \*Statistically significant at the 1% level.

## Appendix

<p>Older applicants Cover Letter Dear Sir/Madam, Please find attached my Curriculum Vitae for your kind consideration for the vacancy as it was advertised in.... My name is...and I have 31 years of experience working in the sector. I am very interested in the advertised job, and I would appreciate the opportunity to speak with you in person to further discuss my experience, business objectives, and the talent that I can bring to your organisation. I am a motivated employee who loves my job. I enjoy interacting with customers and create a cheerful environment for my customers and colleagues. I regularly receive exceptional ratings on service quality and communication from customers and I closely collaborate with my supervisors to meet our targets. I am passionate about technology and I constantly undertake customer-orientated training using technological applications. In my spare time I enjoy cycling and mountain-biking with my family and friends and visiting new places to explore new customs. I look forward to hearing from you soon. In the meantime, please do not hesitate to contact me if you require further information. Yours sincerely, Name and surname</p> <p>CV Curriculum Vitae First Name: Last Name: Sex: Male/Female Ethnicity: White/Black British Marital Status: Married, one child Date of Birth: .../.../1967 Current Address: Location Telephone: Mobile</p>	<p>Younger applicants Cover Letter Dear Sir/Madam, Please, consider my application for the advertised post, in which I am very interested. I have 9 years of relevant work experience and I have acquired the ability to work in teams and to communicate well with customers. The job you are offering matches both my personal and professional interests. I am looking forward to hearing from you. Yours sincerely, Name and surname</p> <p>CV Curriculum Vitae First Name: Last Name: Sex: Male/Female Ethnicity: White/Black British Marital Status: Married, one child Date of Birth: .../.../1989 Current Address: Location Telephone: Mobile</p>
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<p>E-mail</p> <p>Work experience:</p> <p>2011- to the present: Sale assistant/Waiter, Brand Name, Location</p> <p>2008-2011: Sale assistant/Waiter, Brand Name, Location</p> <p>2000-2008: Sale assistant/Waiter, Brand Name, Location</p> <p>1992-2000: Sale assistant/Waiter, Brand Name, Location</p> <p>1988-1992: Sale assistant/Waiter, Brand Name, Location</p> <p>1986-1988: Sale assistant/Waiter, Brand Name, Location</p> <p>Education: High School diploma, duration of studies and location</p> <p>Trainings: Name of the courses, duration, year, and location</p> <p>Hobbies: Sports, cinema</p>	<p>E-mail</p> <p>Work experience</p> <p>2011- to the present: Sale assistant/Waiter, Brand Name, Location</p> <p>2008-2011: Sale assistant/Waiter, Brand Name, Location</p> <p>Education: High School diploma, duration of studies and location</p> <p>Hobbies: Sports, cinema</p>
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