WORKFORCE DIVERSITY, DIVERSITY CHARTERS, AND COLLECTIVE TURNOVER: LONG-TERM COMMITMENT PAYS

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ABSTRACT: Modern workplaces are becoming increasingly demographically diverse. However, the influence of workforce diversity on organisational outcomes is not fully understood. In this work, we study how and why workforce gender and racial diversity impacts collective turnover at the organisational level, and whether participation in and experience with diversity charters moderate this link. We particularly argue that greater workforce gender and racial diversity leads to greater collective turnover because it prompts social categorisation and negative contagion in organisations. To mitigate these processes, organisations may participate in diversity charters, which are expected to provide support with managing workforce diversity and employee retention. We further argue that the influence of diversity charters follows a trajectory of maturity, so their benefits are magnified as an organisation's experience with them increases. Drawing on a panel of UK universities, we find strong evidence that greater workforce racial diversity is associated with higher levels of collective turnover, but only weaker evidence for the positive link between workforce gender diversity and collective turnover. We further find that diversity charters may attenuate this link, but simply participating in them is not sufficient: instead, organisations must develop experience with charters over time.

KEYWORDS: workforce diversity; gender; race; diversity charters; collective turnover; social identity theory; higher education

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INTRODUCTION

A high level of collective turnover, defined as the number of employee departures that occur within an organisation (Hausknecht and Trevor, 2011), poses significant organisational challenges. For example, it can damage organisational performance by depleting human capital resources; disrupting established patterns of interaction and coordination; and increasing the work demand for remaining employees, which, in turn, delays performance of core activities, lengthens customer wait times, and worsens quality (De Meulenaere *et al.*, 2021; Hausknecht, 2017).[i] Recent evidence suggests collective turnover is on the rise throughout different industries, with some authors noting that a "turnover tsunami" is currently overwhelming organisations (Dennison, 2021). The detrimental impact of high collective turnover makes it a strategic priority for managers, and a clear understanding of its antecedents will help organisations manage and mitigate turnover-related processes. Regrettably, there remains a lack of theoretical and empirical research that examines the factors driving collective turnover (Heavey *et al.*, 2013).

Given that demographic characteristics can influence workplace and life experiences, as well as organisational dynamics, cohesion, and conflict (Heavey *et al.*, 2013; Pelled, 1996; Pfeffer, 1983), there has been growing interest in unravelling the implications of the increasing demographic diversity observed in modern workforces for turnover.[ii] Most studies of turnover, including research in the related employee retention literature (McKay *et al.*, 2007), that adopt the demographic diversity view have been concerned with the role played by the demographics of *individual* employees – such as age, race, and gender – in predicting their inclination to stay or leave the organisation (Heavey *et al.*, 2013; Ward *et al.*, 2021). As part of the turn towards *collective* turnover (Nyberg and Ployhart, 2013), some studies have provided insight at the group level by examining the demographic diversity-turnover relationship in top management teams or business units (Ali *et al.*, 2015; Leonard and Levine, 2006; Wiersema and Bird, 1993). Although theory suggests that workforce demographic diversity should also have important implications

for collective turnover at the organisational level, there is little evidence on whether this is so (Ali *et al.*, 2015; Choi, 2009; Maurer and Qureshi, 2019).

We seek to address this knowledge gap by examining the link between workforce gender and racial diversity and collective turnover. While diversity is a multi-faceted concept (Bouncken *et al.*, 2016; Garcia Martinez *et al.*, 2017; Spickermann *et al.*, 2014; Zouaghi *et al.*, 2020), we study *gender* and *racial* diversity for three reasons. First, gender and racial diversity captures historically disadvantaged categories whose representation modern organisations are striving to increase in their workforces. Second, these two types of diversity are the focus of prominent societal debates and movements, such as the gender pay gap and #BlackLivesMatter, which are actively promoting and pushing for greater gender and racial equality, diversity, and inclusion (Andrevski *et al.*, 2014; Das and Aujla, 2020; Maurer and Qureshi, 2019). Therefore, furthering our understanding of the organisational implications of workforce gender and racial diversity is critical for academics, managers, and society. Finally, gender and racial equality, diversity, and inclusion have been important focuses of organisational and institutional diversity management interventions, so studying them enables us to identify critical boundary conditions unavailable for other diversity categories.

In order to explain how and why workforce gender and racial diversity impacts collective turnover, we draw on the social categorisation perspective (Pfeffer, 1983; Tajfel and Turner, 1986; Turner, 1982). According to this perspective, greater workforce gender and racial diversity triggers social categorisation and negative contagion, which result in intergroup biases, lower levels of social integration, and weaker psychological attachment among employees; these, in turn, reduce job satisfaction and undermine the organisational commitment of both minority and majority employees, thus increasing collective turnover (Choi, 2009; Pelled, 1996). We argue that a diversity charter – a set of principles and objectives to which organisations subscribe on a voluntary basis (Graves *et al.*, 2019; Vertovec, 2012) – can serve as a diversity management

instrument that attenuates these processes and weakens these links. Diversity charters have been increasingly considered as a possible solution to support organisations with managing a diverse workforce and, ultimately, ensure employee retention (Graves *et al.*, 2019), yet we know little about their ability to do so. On the one hand, participation in a diversity charter should foster inclusion in workplaces through signalling a positive organisational stance on gender or race, which, in turn, should prompt changes in the organisational climate and employees' behaviour (Gonzalez and Denisi, 2009; Holmes *et al.*, 2021). On the other hand, as we further argue, this participation follows a trajectory of maturity, so the effectiveness of a diversity charter should depend on the organisation's experience with them (Jonsen and Özbilgin, 2014).

We test our theoretical framework using a panel of UK higher education institutions for two reasons. First, UK higher education has been experiencing a high rate of collective turnover, reaching 16.1% in 2019,[iii] which makes improving our understanding of its antecedents and how to manage it strategically relevant. Second, as UK higher education institutions draw on a highly diverse workforce, they put significant emphasis on addressing gender and racial issues among their academic staff. One crucial approach has been to use diversity charters, such as Advance HE's Athena SWAN Charter (for gender equality) and Advance HE's Race Equality Charter (for racial equality). Therefore, our empirical setting provides a strategically important context to investigate the effectiveness of diversity charters in moderating the link between workforce diversity and collective turnover. According to our results, there is strong evidence that greater workforce racial diversity is associated with higher levels of collective turnover, but only weaker evidence for the positive link between workforce gender diversity and collective turnover. In turn, diversity charters are found to be effective in attenuating this link, but simply participating in them is not sufficient – organisations must develop experience with these charters over time in order to derive practical benefits, such as lower levels of collective turnover due to workforce diversity, from signing up to become a charter member.

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Our study advances existing knowledge in three principal ways. First, we contribute to the literature on the demographic antecedents of collective turnover (e.g., Batt and Colvin, 2011; Hausknecht and Trevor, 2011; Maurer and Qureshi, 2019) by developing theoretical foundations and providing novel empirical evidence on the role that workforce gender and racial diversity plays in fostering collective turnover in organisations. While prior studies have been primarily concerned with the demographic diversity-turnover link in top management teams or business units (Guest, 2019; Martínez-García *et al.*, 2021), we highlight the implications of demographic diversity for turnover at the organisational (collective) level. Second, we respond to the lack of understanding about the effectiveness of diversity charters (see Graves *et al.*, 2019) by creating a theoretical framework that explains how participation in such charters can moderate the link between workforce gender and racial diversity and collective turnover. Finally, we attempt to reconcile competing perspectives on the effectiveness of diversity management interventions (Jonsen and Özbilgin, 2014; Lorbiecki and Jack, 2000; Noon, 2018) by introducing a temporal, experience-acquisition perspective.

THEORY AND HYPOTHESES

Linking workforce gender and racial diversity to collective turnover

Existing studies suggest that workforce gender and racial diversity may offer significant opportunities to organisations (Joshi and Roh, 2009). According to the information processing perspective (Tsui and O'Reilly, 1989; Van Knippenberg *et al.*, 2004), greater diversity brings organisations a broader range of knowledge and skills to support decision making and problem solving, facilitates creativity and innovation, and increases the quality of solutions (Joshi *et al.*, 2011; King and Bryant, 2017). Overall, the baseline expectation is that greater workforce gender and racial diversity is associated with better organisational outcomes.[iv]

However, organisations must overcome a variety of challenges to capture the benefits of workforce gender and racial diversity (DiTomaso *et al.*, 2007; Joshi and Roh, 2009; Julian and Ofori-Dankwa, 2017). As the social categorisation perspective suggests (Pfeffer, 1983; Tajfel and Turner, 1986), a high degree of workforce demographic dissimilarity prompts the cognitive processes of social categorisation. This means that employees classify themselves and other employees into distinct groups based on their demographic characteristics, and those of the same gender or race are more attracted to each other and. While demography-based grouping is usually observed within workgroups or departments, we argue it also manifests at the organisational level. For instance, Zenger and Lawrence (1989) find that employees exhibit greater liking of and better communication with colleagues of similar age, both within their own workgroup and in other workgroups spread across the organisation. Ferris *et al.* (1993) argue that demographic characteristics determine the distribution of employees' political skills and information within the organisation. Finally, Kunze *et al.* (2013) show that age-based grouping penetrates the entire organisation and is not restricted to workgroups or departments. It is worth noting that even in mostly homogeneous organisations, the few minority members may still be inclined to interact more with colleagues of the same gender or race from other parts of the organisation, thereby reinforcing social categorisation at the organisational level. Thus, we focus on the organisational level and, specifically, on how workforce gender and racial diversity can stimulate organisation-wide social categorisation processes that, in turn, lead to higher levels of collective turnover.

Social categorisation triggering organisation-wide gender- and race-based sub-grouping can lead to intergroup biases: in particular, a more positive evaluation of one's group, the feeling of superiority over other groups, and discrimination against out-group members (Brewer and Kramer, 1985). It usually results in negative affect, including the sense of favouritism towards in-group members, which facilitates the perception among majority and minority employees of a discriminatory – and, thus, less attractive – organisational climate (Brewer, 1979). Intergroup

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biases can also appear in task or resource allocations when managers favour their gender or race in-group. Finally, negative affect from in-group members interacting with out-group members can cause tensions and create "uneasiness [within organisations] due to expectations of negative consequences associated with group interactions" (Milliken and Martins, 1996; Pelled, 1996, p. 624). Anticipating affective conflict in future encounters, employees can develop cognitive anchors to have more personal and professional interactions with in-group members and fewer with out-group members (Kunze *et al.*, 2013; Reinwald and Kunze, 2020). Taken together, intergroup biases will likely increase strain, anxiety, and frustration among employees; diminish employee job satisfaction; and increase collective turnover (Choi, 2009; Pelled, 1996).

Social categorisation driven by greater workforce gender and racial diversity has also been linked to a reduction in social integration and psychological attachment, which can further exacerbate collective turnover (Chatman and Flynn, 2001; Choi, 2009; Milliken and Martins, 1996). Since employees tend to be less attracted to colleagues of the other gender or another race, social integration in diverse organisations can be weaker, with fewer personal and professional relationships (Tsui *et al.*, 1992). There can also be less satisfaction from workplace employee interactions, so these employees are less motivated to sustain workplace relationships over time (McCain *et al.*, 1983). It is common for individuals to value their workplace relationships, which is a crucial predictor of job embeddedness and retention; hence, by reducing social integration, a high level of workforce gender and racial diversity fosters high levels of collective turnover (Maurer and Qureshi, 2019). Finally, employees in diverse organisations may experience greater alienation and frustration as a result of these processes, which lead them to be less emotionally attached to the workplace. Jointly, lower levels of social integration and weaker psychological attachment will likely reduce job satisfaction and organisational commitment, thus increasing collective turnover.[v]

Negative contagion processes, such as when employees share their frustration and strain with colleagues of the same gender or race, may exacerbate the negative affect and reduce social integration caused by social categorisation and, by spreading throughout organisation, culminate in a shared perception of a hostile organisational environment (Kunze *et al.*, 2013). Even when employees do not experience these issues directly, negative contagion may manipulate their affect to align with colleagues of the same gender or race, reinforcing the negative perception of the organisational environment (Salanova *et al.*, 2005).

In sum, workforce gender and racial diversity can pose challenges for organisations. We argue that one such challenge is higher levels of collective turnover in organisations with greater workforce gender and racial diversity. More diverse organisations are more prone to organisation-wide social categorisation and negative contagion, which lead to intergroup biases, lower levels of social integration, and weaker psychological attachment among their employees. Hence, we expect that:

Hypothesis 1(a): *Workforce gender diversity is positively related to collective turnover.*

Hypothesis 1(b): *Workforce racial diversity is positively related to collective turnover.*

The moderating effect of participation in and experience with diversity charters

To attenuate social categorisation and negative contagion and better capture the benefits of workforce diversity, many organisations have turned to diversity management interventions; however, their effectiveness remains unclear and contested (Dobbin and Kalev, 2018; Noon, 2018). One such intervention that has been increasingly adopted is diversity charters, which can be defined as a set of diversity principles and objectives to which organisations subscribe on a voluntary basis (Vertovec, 2012). We argue that participation in and experience with diversity charters can help organisations mitigate social categorisation and negative contagion and, as such, lower collective turnover.

Diversity charters can attenuate gender- and race-based social categorisation by triggering cultural and behavioural changes within organisations. For example, an evaluation of the Athena SWAN Charter – which aims to advance gender equality in UK higher education – reveals that 93% of the charter's champions acknowledge its positive impact on gender issues (Graves *et al.*, 2019). 78% hold that the charter increases levels of equality and diversity, as well as the career progression of women.[vi] How do diversity charters prompt these changes? First, membership in diversity charters signals to employees that gender- or race-based discrimination is not acceptable, and that the organisation strives to respect and provide equal opportunities to all its employees. Diversity charters can help promote the idea that the diversity of employees' backgrounds is an important source of knowledge for problem-solving, developing new products, and satisfying heterogeneous customer demands (Ely and Thomas, 2001; Gonzalez and Denisi, 2009). These signals should reduce the acceptability of gender or race as a basis for social categorisation within the organisation and encourage interpersonal sensitivity and fairer treatment of all employees (Maurer and Qureshi, 2019). At the individual level, adopting these values in their behaviour can reduce employees' inclination to categorise colleagues according to their gender or race, thus minimising the chances of discriminatory and uncivil behaviour towards them. As a result, it improves the perception of the organisation as gender and racially neutral, fair, and just, and makes it a more attractive workplace (Triana and Garcia, 2009).

Diversity charters can also help integrate employees from different genders and races and, thereby, help organisations capture the benefits associated with workforce diversity. This can be done by encouraging open competition for work positions and a merit-based selection process that enables a fairer representation of both majority and minority employees, as well as by encouraging employees of different genders and races to interact more, both inside and outside of the workplace. Concentrating on the integration of employees from different gender and racial groups can promote productive interactions between minority and majority groups that increase

the social integration and organisational commitment of employees (Pettigrew and Tropp, 2006). Increased interactions can, in turn, give more accurate and less stereotypical information about out-group members using which new, evidence-based attitudes can be developed (Maurer and Qureshi, 2019). An open and merit-based career progression process can lessen the perception of the organisation's climate as hostile and unfavourable, with employees developing the sense of fairness and a "level playing field" when forming their own attitude towards the workplace (Colquitt *et al.*, 2002; Nishii, 2013).

Finally, many of the organisational changes triggered by diversity charters lead to a more supportive and attractive organisational climate that is beneficial for all employees (Choi, 2009; Graves *et al.*, 2019; Wheatley, 2017). As an example, flexible working practices, work-family programmes, and mentoring schemes are usually adopted because the organisation has chosen to adhere to diversity charter principles. Furthermore, while being stereotypically perceived as targeting mainly female employees, these practices, programmes, and schemes also benefit male employees, who, for instance, are increasingly more child oriented (Gatrell *et al.*, 2014; Miller, 2011). For the case of workforce age diversity, the increased feelings of fairness, trust, and value derived from a diversity-friendly climate are found to facilitate job embeddedness and social integration among all employees (Boehm *et al.*, 2014). This is also evident in the evaluation of the Athena SWAN Charter: 55% of academic staff believe that is has had a positive impact on the professional environment (Graves *et al.*, 2019).

Overall, participation in a diversity charter can be viewed as a signal to all employees that the organisation has a positive view on workforce diversity. By communicating pro-diversity values, prompting changes in the organisational climate and employees' behaviour, and fostering the integration of employees from different social groups, it can reduce the amount of affective conflict, attenuate social categorisation, and, ultimately, offset the negative consequences for collective turnover of workforce gender and racial diversity. Therefore:

Hypothesis 2(a): *Participation in a gender diversity charter weakens the positive relationship between workforce gender diversity and collective turnover.*

Hypothesis 2(b): *Participation in a racial diversity charter weakens the positive relationship between workforce racial diversity and collective turnover.*

While membership of diversity charters can be valuable for gender and racially diverse organisations, there is usually a trajectory of maturity in diversity management interventions (Jonsen and Özbilgin, 2014). We maintain that taking this trajectory into account is important because the benefits of each intervention are likely to depend on the length of experience with that intervention. Initially, the adoption of diversity charter principles may focus on assessing the current situation to identify areas for positive action, so changes to policy or practice tend to be limited at this stage (Graves *et al.*, 2019). If implemented, they will likely have a limited impact, as they need to gather pace before triggering cultural and behavioural changes within the organisation. Over time, however, organisations – through experience – can develop a better understanding of the gender and racial diversity issues on which to design interventions to foster more inclusive work environments, and learn from their prior efforts to design and implement more effective interventions. The effects of interventions likely grow over time as they spread across the organisation and gain legitimacy, exposing more employees to the positive signals regarding the importance of gender and racial diversity to the organisation. Hence, the effects of diversity charters are likely to be maximised when organisations acquire more experience, enabling them to better attenuate social categorisation and intergroup biases and enhance social integration among their employees. We therefore expect:

Hypothesis 3(a): *Greater experience with gender diversity charters weakens the positive relationship between workforce gender diversity and collective turnover.*

Hypothesis 3(b): *Greater experience with racial diversity charters weakens the positive relationship between workforce racial diversity and collective turnover.*

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Figure 1 summarises our conceptual framework.

[INSERT FIGURE 1 HERE]

DATA AND METHODS

Data and sample

Our empirical analysis uses data from UK higher education institutions. Most of our data comes from the Staff Record dataset maintained by the Higher Education Statistics Agency (HESA), the official Government agency for collecting, analysing, and disseminating data about UK higher education. It provides detailed information concerning the personal characteristics of the staff employed by universities (e.g., gender, ethnicity, age) and their employment contracts. We also use the HESA Student Record dataset to obtain information about students registered at universities. Finally, the information about gender and racial diversity charters is extracted from the Athena SWAN Charter and the Race Equality Charter, respectively. These charters exist under the patronage of Advance HE (formerly known as the Higher Education Academy), with the central goal of promoting gender and racial equality in UK higher education. All data sources are linked using "university name" as the identifier.

Our sample contains 125 universities or university colleges observed between 2011 and 2019. To ensure the comparability of the institutions used in our empirical analysis, we excluded from our sample arts and performing arts institutions (e.g., the colleges of arts, music, drama, and dance), non-university colleges, and institutions that had missing data. In total, we dropped 55 out of 180 institutions included in the Staff Record. The observation period is determined by the availability of the necessary data on the HESA official website. A description of all variables and their sources is given in Table 1.

Study variables

Dependent variable. To operationalise *collective turnover*, we follow previous studies (De Meulenaere *et al.*, 2021; Hausknecht and Trevor, 2011) and use the ratio of the total number of academic staff leavers to the average number of academic staff in the given period of time. Both components of the ratio include full-time and part-time academic staff, mainly because this grouping mostly reflects the number of hours allocated to an employee, not the employee's rank, the duration of the employee's contract, or the range of responsibilities assigned to the employee within the organisation. In this sense, part-time staff in academia are different from seasonal or temporary workers, who are hired in periods of high demand. For precisely the opposite reasons, both components of the ratio exclude atypical staff.[vii]

Explanatory variables. As in other studies (e.g., Choi, 2009; Choi and Rainey, 2010), we measure *workforce gender diversity* with Shannon's (1948) entropy index.[viii] For most of the observation period, the HESA Staff Record dataset contains only two gender categories – male and female. In 2017/2018, the "other" category was added to account for staff whose gender aligns with such terms as intersex, androgyne, intergender, ambigender, gender fluid, polygender, and gender queer. Since then, only few universities have reported at least one academic staff member belonging to that category, but we nevertheless keep it when computing the following index:

$$Workforce\ gender\ diversity_{i,t} = \sum_{j=1}^{n} \left(p_{j,t}\ ln\ \frac{1}{p_{j.t}} \right), \tag{1}$$

where n is the number of gender categories ($n = 3$); $p_{j,t}$ is the share of academic staff who belong to Category j in University i (including full- and part-time employees; excluding atypical staff). We interpret higher values of the index as reflecting a more even spread of individuals across gender categories. We standardise the index to have zero mean and unit variance.

Similarly, we use Shannon's (1948) entropy index to measure *workforce racial diversity*. Five racial category groupings are adopted by HESA in its Staff Record: White, Black, Asian, other (including mixed), and unknown. So, we compute the index with the following formula:

$$Workforce\ racial\ diversity_{i,t} = \sum_{j=1}^{n} \left(q_{j,t}\ ln\ \frac{1}{q_{j.t}} \right), \tag{2}$$

where n is the number of racial category groupings ($n = 5$); $q_{j,t}$ is the share of academic staff who belong to Category grouping j in University i (including full- and part-time employees; excluding atypical staff). The index can be interpreted as larger values pointing to a more even spread of individuals across racial category groupings. We also standardise the index to have zero mean and unit variance.

We capture the university's *participation in gender diversity charters* by looking at its membership in Advance HE's Athena SWAN Charter. This was established in 2005 with the aim of encouraging and recognising the commitment of member institutions to advancing the careers of female academics in science, technology, engineering, mathematics, and medicine; in 2015, it was expanded to include such fields as arts, social sciences, business, law, and humanities. The practices that the charter's members have adopted at the organisational level include ensuring that there is no gender discrimination in the recruitment process by using gender-balanced staff recruitment panels as well as allowing flexible working and facilitating working from home to support work-life balance. To become a charter member, an institution must indicate within its application, *inter alia*, how it commits to the charter's principles, and pay an administration fee. The application is considered by a peer review panel, which recommends a decision on awards to Advance HE – the organisation managing the charter. Member institutions are then expected to apply for an Athena SWAN award, at a bronze, silver, or gold level. Each award is valid for four years, after which the institution needs to re-apply or the award will be annulled. Since there is a formal and thorough procedure for becoming a member that requires universities to show

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a high level of ongoing commitment to the charter's principles, we use the number of years since obtaining membership in the charter to capture the university's *experience with gender diversity charters*. Among the advantages of relying on the membership information to capture this type of experience is that we can obtain an external – and, thus, less biased – appraisal of pro-gender diversity practices implemented by universities, which would be much more difficult if a survey-based approach were used.

Similarly, we capture each university's *participation in racial diversity charters* by using its membership in Advance HE's Race Equality Charter. The charter was fully launched in 2016, although some work related to racial equality initiatives commenced in 2015.[ix] The aim of this charter is to improve the representation, progression, and success of ethnic minority staff and students in higher education. Among the practices that member institutions adopt to foster racial equality are implementing an appraisal and promotion process that puts greater emphasis on the career development of underrepresented groups, as well as raising staff awareness of such race-related issues as attainment gap and curriculum diversity. The application process to obtain the charter's membership is very similar to that for the Athena SWAN Charter, with a formal application considered by a peer review panel. Guided by the same logic as the Athena SWAN Charter, we capture the university's *experience with racial diversity charters* by counting the number of years since joining the Race Equality Charter. Unfortunately, there was no information on when member institutions joined the charter on the charter's official website, so we requested it directly from universities via the process set by the UK Freedom of Information Act 2000.

Control variables. We control for other factors that may influence collective turnover. First, we control for the effects related to the *size*, *age*, and *research intensity* of universities and the characteristics of academic staff. In particular, we account for *workforce average pay*, calculated as the average contract salary received by academic staff (excluding atypical), due to evidence suggesting that pay is negatively linked to collective turnover (Hausknecht and Trevor,

2011).[x] Next, we control for *workforce average age* and *workforce age diversity*: our expectation is that universities with an older workforce may experience higher levels of collective turnover because more academic staff retire; in turn, greater workforce age diversity may foster social categorisation among different age groups (Kunze *et al.*, 2013). We also control for *new staff appointments*. In the UK, new academic staff members are usually appointed on a probationary basis (Smith, 2010): during the probation period (typically one to three years), their fit to the role and performance are assessed, and, when deemed unsatisfactory, the contract is terminated. As this provides less security to academic staff starters, it may result in higher levels of collective turnover. Finally, we control for workload characteristics that could influence turnover using the *student-to-staff ratio*, as higher workloads likely increase collective turnover. Recognising that the pressure from the demand side may influence the university's willingness to retain its existing academic staff, we control for the *growth rate in the number of admitted students*.

[INSERT TABLE 1 HERE]

Econometric strategy

Our data is organised as a balanced panel of 125 U.K. universities observed during 2011-2019. To obtain parameter estimates, we use the ordinary least squares method adapted for panel data in order to account for the fact that observations and error terms are likely to be correlated across years (Wooldridge, 2010; e.g., the "xtreg" command in Stata). This method effectively consists of minimising the sum of squared residuals to reduce the error between the fitted curve and the sample data. We use a random effects model specification, largely due to low variability of workforce gender and racial diversity within each university over time. De Meulenaere *et al.* (2016) detected a very similar (i.e., low intra-organisational variability) pattern for workforce age diversity when studying its effect on labour productivity. In such cases, as Bell and Jones (2015) indicate, a random effects model specification – rather than fixed effects – should be preferred. Having these considerations in mind, we proceed with a random effects model specification as

baseline, thus predominantly relying on the cross-sectional variation to identify diversity-related effects. In addition, we also cluster standard errors at the university level to allow for arbitrary heteroskedasticity and intra-group correlation. We lag all explanatory variables by one year to minimise simultaneity bias. The assumption here is that the effects associated with underlying conditions (captured by exploratory and control variables) should be temporally close: in other words, employees respond to changes in an organisation in a reasonably short period of time.

RESULTS

Tables 2 and 3 present summary statistics and the correlation matrix, respectively. On average, 16.8% of the academic staff leave their employment within the given period, with one university where collective turnover at one point reached 82.9%.[xi] While 76.2% of the universities included in our sample have membership in the Athena SWAN Charter, the average participation rate for the Race Equality Charter is only 26.7%. The average experience with the Athena SWAN Charter is four years, with some universities having much longer experience – up to 14 years. In turn, the average experience with the Race Equality Charter is well under one year, though some universities have been involved in it for approximately five years. The correlation matrix shows that some of our variables are significantly correlated (e.g., workforce racial diversity and workforce average age). To make sure that our findings do not suffer from multicollinearity, we calculated variance inflation factors (see Wooldridge, 2010), and this revealed no issues.

[INSERT TABLES 2 AND 3 HERE]

Tables 4 and 5 present the results of our regression analysis for workforce gender and racial diversity, and participation in and experience with diversity charters. It should be noted, that the Race Equality Charter was officially launched in 2016, although few selected universities joined it earlier as participants of a pilot (see the Data and Methods section for more details).

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As a result, the sample in Table 5 for racial diversity charters is restricted to the period 2015-2019 and, therefore, contains fewer observations.

Model 1 contains control variables only and is included in the analysis for calibration. It reveals that collective turnover is negatively associated with the intensity of research activities in universities, workforce average pay, workforce average age, and the growth rate in the number of admitted students, and positively associated with greater workforce age diversity and academic staff starters. The first set of hypotheses suggests that the association between collective turnover and both workforce gender (*H1a*) and racial (*H1b*) diversity should be positive. As predicted by *Hypothesis 1(a)*, greater workforce gender diversity is associated with higher levels of collective turnover, but the association has weak statistical significance (Model 2: $\beta = 0.019$; $SE = 0.011$; *p-value* = 0.070). Similarly, workforce racial diversity is positively associated with collective turnover (Model 2: $\beta = 0.079$; $SE = 0.017$; *p-value* = 0.000), which supports *Hypothesis 1(b)*. Overall, we can conclude that in more diverse organisations – be this gender or racial diversity – collective turnover is greater than that in less diverse organisations. Our conclusion is consistent with predictions of the social categorisation perspective, which emphasises the costs of greater diversity, including those related to social fragmentation and affective conflict.

[INSERT TABLES 4 AND 5 HERE]

The second set of hypotheses suggests that participation in a gender diversity charter (*H2a*) and a racial diversity charter (*H2b*) weakens the positive association between workforce gender and racial diversity and collective turnover. We assess participation in the Athena SWAN Charter as the main (Model 3) and moderating (Model 4) effects. Our analysis reveals that there is neither a statistically significant main effect of participation in the Athena SWAN Charter (Model 3: $\beta = -0.042$; $SE = 0.030$; *p-value* = 0.167), nor a statistically significant moderating effect of this participation on the link between workforce gender diversity and collective turnover (Model 4: $\beta = -0.010$; $SE = 0.013$; *p-value* = 0.435). Similarly, the results for participation in

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the Race Equality Charter show that it has no statistically significant main effect on collective turnover (Model 7: $\beta = 0.047$; *SE* = 0.030; *p-value* = 0.112) and no moderating effect on the link between workforce racial diversity and collective turnover (Model 8: β = -0.033; *SE* = 0.046; *p-value* = 0.481). This analysis leads us to the conclusion that participation in diversity charters alone does not attenuate the negative consequences of workforce gender and racial diversity for collective turnover, thus not supporting *Hypotheses 2(a)* and *2(b)*.

Finally, the third set of hypotheses suggests that organisations' experience with a gender diversity charter (*H3a*) and a racial diversity charter (*H3b*) weakens the positive association between workforce gender and racial diversity and collective turnover. Indeed, experience with the Athena SWAN Charter does attenuate the positive association between workforce gender diversity and collective turnover (Model 6: β = -0.004; *SE* = 0.002; *p-value* = 0.091), which provides support for *Hypothesis 3(a)*. However, experience with the Race Equality Charter is not found to weaken the association between workforce racial diversity and collective turnover (Model 10: β = -0.013; *SE* = 0.027; *p-value* = 0.626), so *Hypothesis 3(b)* is not supported.

To obtain further insights and ease the interpretation of the interaction term for experience with the Athena SWAN Charter, we calculate marginal effects for different levels of workforce gender diversity and years of experience with the charter (see Figure 2). This analysis shows that universities with more years of experience with the Athena SWAN Charter have lower levels of collective turnover so long as their workforce gender diversity levels are higher; otherwise, more of such experience reinforces the positive association between workforce gender diversity and collective turnover. We thus conclude that longer experience with gender diversity charters – unlike mere participation in them – can attenuate the negative consequences of workforce gender diversity for employee retention.

[INSERT FIGURE 2 HERE]

DISCUSSION AND CONCLUSION

In this study, we have explored the link between workforce gender and racial diversity and collective turnover, with a particular focus on the moderating effect of diversity charters. Drawing on the social categorisation perspective, we have theorised that workforce gender and racial diversity prompts social categorisation and negative contagion, leading to higher levels of collective turnover due to intergroup biases, lower social integration, and weaker psychological attachment among employees. We have further theorised that diversity charters can help curb the harmful social categorisation and negative contagion in organisations that do have a diverse workforce, so that the organisations' participation in and experience with such charters is crucial for reducing diversity-driven collective turnover. Using longitudinal data on UK universities, we have found strong evidence that workforce racial diversity has a positive association with collective turnover; we have also found weaker evidence that workforce gender diversity has a positive association with collective turnover. Finally, our results have revealed that simply participating in diversity charters does not curb social categorisation and negative contagion. Rather, it is longer-term experience with such charters that generates organisational benefits, including lower levels of collective turnover.

These results lead us to three general conclusions. *First*, while racial differences provide a substantial basis for social categorisation and negative contagion in modern workforces, this is less the case for gender differences. One explanation is the greater maturity of gender diversity interventions within UK higher education. For example, the Athena SWAN Charter, concerned with gender equality, was established in 2005, whereas the Race Equality Charter was not fully launched until 2016. Therefore, universities' focus and policy on gender equality, diversity, and inclusion are likely to be more mature and potentially more effective in attenuating the gender-related effects that would drive collective turnover. Recognising that progress on gender and racial diversity issues may differ across sectors or contexts, there is value in testing our theory

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in other settings. Importantly, however, our results suggest that the social categorisation and negative contagion triggered by workforce racial diversity are likely to weaken over time.

Second, it should be recognised and emphasised that the influence of diversity charters and other diversity management interventions matures over time within organisations (Jonsen and Özbilgin, 2014). Initially, organisations may concentrate on assessing the current situation to identify areas for positive actions, so policy or practice changes are likely to be limited at this stage (Graves *et al.*, 2019). Over time, however, more substantial structural changes in policy and/or practice may be implemented to address diversity, equality, and inclusion issues; such changes may gain legitimacy and spread throughout the organisation to create a more inclusive climate enhancing social integration. Furthermore, organisations may learn from their efforts and, in turn, design more effective interventions. As organisations acquire more experience with diversity charters, they become more effective in attenuating social categorisation and negative contagion, which results in lower levels of collective turnover.

Third, and consistent with our maturity argument, we do not reveal any turnover-related benefits from participation in or experience with the Race Equality Charter. We suggest that this non-finding could be due to the shorter time this charter has been in place and, hence, the lesser maturity of race-focused interventions within our empirical context. Most universities are likely to be still at the initial stage, merely assessing the current situation and identifying how to create a more race-inclusive workplace. Hence, we expect that as the race-focused interventions mature within universities, we should see similar benefits to those of the Athena SWAN Charter.

Theoretical implications

A principal contribution of this study consists in developing a theoretical framework that links workforce gender and racial diversity to collective turnover and explains how diversity charters can moderate this link. Our framework has important novel features. Unlike previous

research, which has been primarily concerned with the diversity-turnover link at the level of top management teams or business units (Ali *et al.*, 2015; Leonard and Levine, 2006; Wiersema and Bird, 1993), our framework stresses the turnover implications of diversity at the organisational (workforce) level – an important and distinct level of analysis. In addition to workforce gender diversity (Ali *et al.*, 2015; Maurer and Qureshi, 2019), it also integrates workforce racial diversity and articulates its implications for collective turnover. Hence, it offers a more holistic perspective on how the growing diversity trend in modern organisations can affect organisational outcomes.

Importantly, our theoretical framework draws attention to the role played by diversity charters in creating more inclusive workplaces. Diversity charters have quickly gained popularity as a diversity management tool (Graves *et al.*, 2019) and are often used to signal a positive stance of subscribing organisations on gender or race; in turn, their principles and practices can help organisations prompt changes in their internal climate and employees' behaviour (Gonzalez and Denisi, 2009; Holmes *et al.*, 2021). At the same time, participation in such charters is a process that has a trajectory of maturity (Jonsen and Özbilgin, 2014), so their effects on organisations evolve over time. Although initially the effects are limited, as organisations acquire experience with diversity charters, they develop a better understanding of the underlying gender and racial diversity issues and learn from their experience to design more effective interventions, while the interventions have time to gain legitimacy and spread throughout the workforce to foster positive change. Therefore, this part of our framework extends existing theory by teasing out the mechanisms via which diversity charters affect organisations and introduces the temporal dimension of experience with diversity charters as a crucial boundary condition.

Our temporal dimension is a novel element in the broad diversity management literature. Prior research has focused on the scale and scope (e.g., the number of implemented policies and practices) of diversity management interventions in investigating their effects on organisations (Choi, 2009; Ali *et al.*, 2015; Holmes *et al.*, 2021), without directly accounting for the length

of experience of organisations with these interventions. The theoretical framework we propose refines our understanding of the debated effectiveness of diversity management interventions (Noon, 2018; Dobbin and Kalev, 2018) by highlighting that interventions do not provide short-term gains to organisations, but rather require longer-term organisational commitment to induce the desired positive changes. This suggests that to reconcile the competing predictions on their effectiveness, scholars need to account for the length of organisations' experience with diversity management interventions.

Practical implications

Our findings suggest that corporate managers in gender diverse and, especially, racially diverse organisations have to watch for and monitor the presence of social categorisation and negative contagion (e.g., in-group favouritism, out-group discrimination), as these can foster higher levels of collective turnover. To do this, corporate managers could conduct regular surveys gauging employees' perceptions of gender- and race-related biases and provide open anonymous channels for reporting discrimination. While diversity charters are seen as a potential solution to attenuating these harmful processes within diverse workforces, our results suggest that merely participating in a diversity charter is not sufficient. Instead, the rewards of diversity charters in curbing the processes that increase collective turnover manifest only over time, once a charter's influence on organisational policy and practice has matured. The fact that the value of diversity charters appears only over longer term can pose a significant risk because corporate managers typically look for immediate solutions to pressing problems. As a result, although they may join a diversity charter with good intentions, they may give up if the rewards do not manifest quickly enough. Our findings indicate that diversity charters are not a short-term solution to creating a more inclusive climate in diverse organisations. Rather, there is a temporal dimension to take into account when subscribing to diversity charters, so corporate managers should concentrate

on longer-term strategies and engagement to foster an inclusive organisational climate demanded by employees, stakeholders, and society.

Limitations and future research

As with all research, ours has limitations. *First*, we focus on the quantitative aspect of collective turnover, thus omitting its qualitative aspect. Future studies could examine whether workforce gender and racial diversity – and diversity charters – affects the retention of certain categories of employees. For example, we are not able to distinguish between full-time and part-time employees in our analysis. As these categories may be affected by social categorisation differently, future studies could explore this interesting avenue. *Second*, demographic diversity is a multi-faceted concept (Garcia Martinez *et al.*, 2017; Spickermann *et al.*, 2014), with the intersectional perspective elaborating how different demographic characteristics and identities can interact (Tatli and Özbilgin, 2012). Therefore, broadening the types of diversity considered (e.g., to include age, culture, etc.) and adopting the intersectional perspective could be a fruitful avenue for future studies. *Third*, while we have offered important insights into the organisation-wide effects of workforce diversity, there is often some degree of variation across departments and subject areas within universities. Future studies could consider lower organisational levels of analysis (e.g., faculty, school, department) to improve our understanding of the theorised processes. *Fourth*, despite using various methods and techniques to control for different sources of endogeneity (e.g., adding control variables, lagging the explanatory variables), we are unable to completely rule out the possibility that endogeneity affects our results. For example, there is a probability that higher levels of collective turnover create more opportunities for universities to recruit women and racial minorities (i.e., reverse causality). However, we are unable to use such econometric techniques as instrumental variables analysis because it is difficult to find an instrument that does not violate the exclusion restriction in our case. Future studies could attempt to resolve this problem.

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Finally, our research concentrates on UK higher education, which, while advantageous because it is a sector where much progress on diversity charters has been made, may limit the generalisability of our findings. For example, as noted earlier, the longer-term focus has been on gender-related issues in higher education, thus possibly explaining our stronger findings on the Athena SWAN Charter. Equally, while higher education is considered to be a "meritocratic" environment, recent studies suggest that there are substantial structural gender- and race-based inequalities (Treviño *et al.*, 2018) that could intensify the processes we have described and lead to higher levels of collective turnover in diverse workforces within higher education than in contexts with fewer or different structural inequalities. Moreover, UK higher education suffers from the paradox of diversity in leadership (Bebbington and Özbilgin, 2013): that is, successful implementation of diversity initiatives draws on leadership support and commitment; however, diversity in leadership in UK higher education is lacking, which can hinder the implementation of those initiatives. This can particularly influence the effectiveness of diversity charters in our context or represent a crucial boundary condition for future studies. Overall, while our context reveals much, there is value in examining other contexts that have different or fewer structural inequalities, different diversity management trajectories, and more diverse leadership teams.
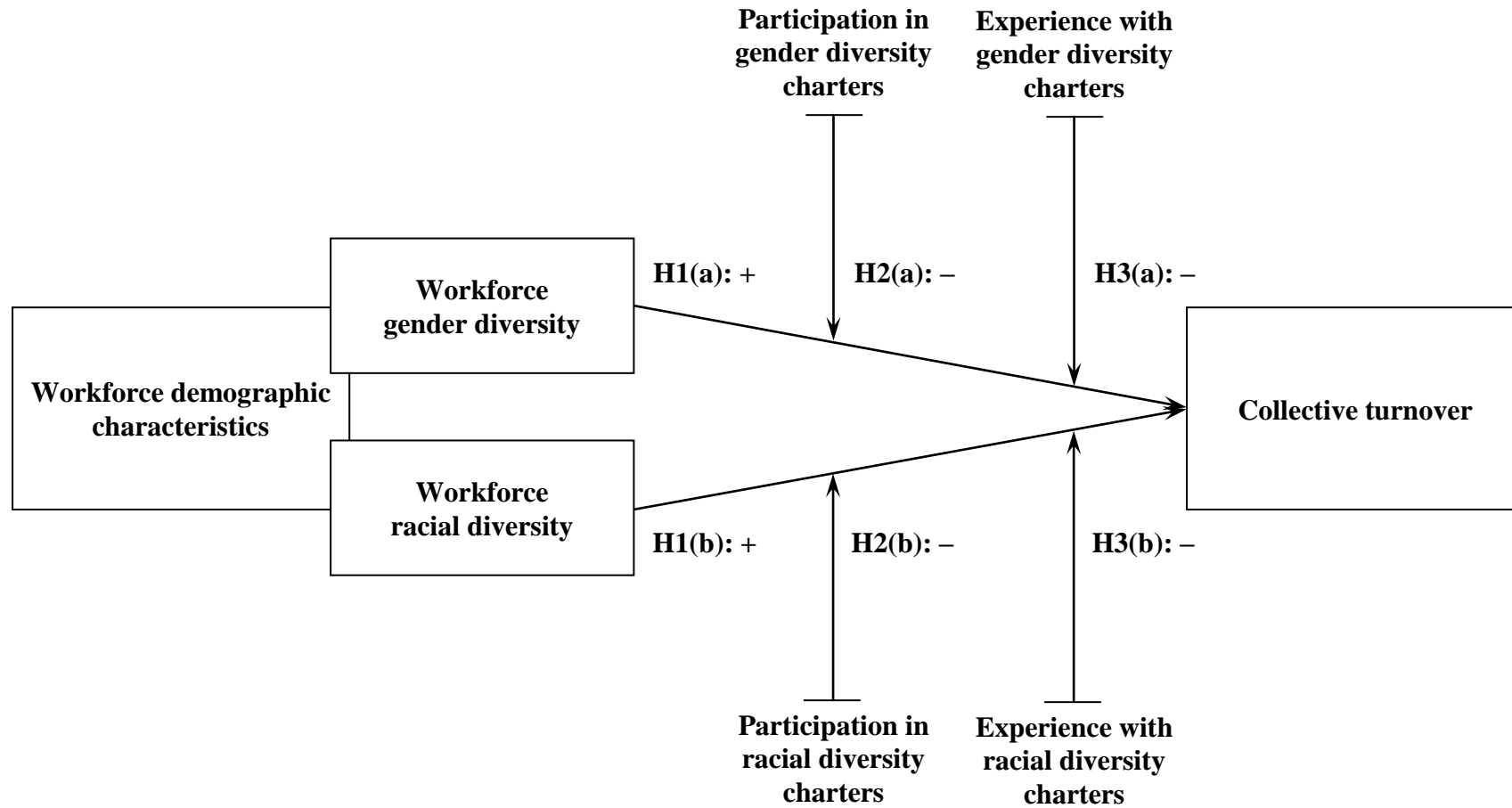
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Figure 1. Conceptual framework

Table 1. Study variables and data sources

Name	Description	Source
Dependent variable		
Collective turnover	The number of academic staff leavers over the average number of academic staff.	HESA Staff Record: Table 22
Explanatory variables		
Workforce gender diversity	The diversity of the gender of academic staff across three gender category groupings. It is calculated as Shannon's (1948) entropy index.	HESA Staff Record: Tables 2a/Table 2
Workforce racial diversity	The diversity of the race of academic staff across five racial category groupings. It is calculated as Shannon's (1948) entropy index.	
Participation in gender diversity charters	A dummy variable that equals one if the university is a member of the Athena SWAN Charter, and zero otherwise.	The Athena SWAN Charter
Experience with gender diversity charters	The number of years since joining the Athena SWAN Charter.	
Participation in racial diversity charters	A dummy variable that equals one if the university is a member of the Race Equality Charter, and zero otherwise.	The Race Equality Charter
Experience with racial diversity charters	The number of years since joining the Race Equality Charter.	
Control variables		
University size	A natural logarithm of the average number of students.	HESA Student Record: Table 2
University age	The number of years since university status was granted (e.g., by receiving a royal charter or by being granted taught-degree awarding powers).	Universities' official web-sites
University research intensity	The proportion of academic staff with research responsibilities in the total number of academic staff.	HESA Staff Record: Tables 6/7
Workforce average pay	A natural logarithm of the average contract salary of academic staff across six salary ranges (the mean for interval data is calculated).	HESA Staff Record: Tables 11/17
Workforce average age	The average age of academic staff (for 2018 and 2019, the mean for interval data is calculated).	HESA Staff Record: Tables 2a/2
Workforce age diversity	The diversity of the age of academic staff across ten age category groupings. It is calculated as Shannon's (1948) entropy index.	
New staff appointments	The number of academic staff starters over the average number of academic staff.	HESA Staff Record: Table 22
Student-to-staff ratio	The total number of students over the total number of academic staff.	HESA Student Record: Table 2; HESA Staff Record: Tables 2a/2
The growth rate in the number of admitted students	The total number of students at the end of the period minus the total number of students at the beginning of the period over the total number of students at the beginning of the period.	HESA Student Record: Table 2

Note. Most of these definitions were adapted from HESA (see https://www.hesa.ac.uk/support/definitions/). All academic staff measures include both full-time and part-time staff, exclude atypical staff, and are for the given period. Student numbers are based on FTEs and counted across all levels of study. If there is a name change of the source table in a HESA dataset, both old and new names are provided in the "old name/new name" format.

Table 2. Descriptive statistics

No.	Variables	Observ.	Mean	SD	Min	Max
1	Collective turnover	1250	0.168	0.064	0.030	0.829
2	Workforce gender diversity	1250	0.000	1.000	-7.537	2.219
3	Participation in gender diversity charters	1250	0.762	0.426	0.000	1.000
4	Experience with gender diversity charters	1250	4.102	3.889	0.000	14.000
5	Workforce racial diversity	1250	0.000	1.000	-2.657	2.591
6	Participation in racial diversity charters	750	0.267	0.443	0.000	1.000
7	Experience with racial diversity charters	750	0.416	1.023	0.000	5.000
8	University size†	1250	9.388	0.701	6.727	11.266
9	University age	1250	69.932	138.971	0.000	923.000
10	University research intensity	1250	0.734	0.190	0.000	1.050
11	Workforce average pay†	1250	10.725	0.088	10.059	11.128
12	Workforce average age	1250	44.878	2.617	38.754	53.270
13	Workforce age diversity	1250	0.000	1.000	-3.995	1.923
14	New staff appointments	1250	0.183	0.067	0.033	0.833
15	Student-to-staff ratio	1250	14.787	5.315	1.053	35.125
16	The growth rate in the number of admitted students	1250	0.014	0.068	-0.230	1.025

Note. In the regression analysis, the number of observations is lower than what is reported in this table because explanatory variables are lagged by one year.

Table 3. Correlation matrix

No.	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Collective turnover	1.000															
2	Workforce gender diversity	**0.086**	1.000														
3	Participation in gender diversity charters	0.048	0.004	1.000													
4	Experience with gender diversity charters	0.006	-0.052	**0.591**	1.000												
5	Workforce racial diversity	**0.248**	**-0.071**	**0.293**	**0.317**	1.000											
6	Participation in racial diversity charters	0.036	**0.096**	**0.224**	**0.417**	**0.161**	1.000										
7	Experience with racial diversity charters	0.032	**0.076**	**0.164**	**0.361**	**0.127**	**0.699**	1.000									
8	University size	0.025	**0.254**	**0.330**	**0.348**	**0.263**	**0.206**	**0.162**	1.000								
9	University age	0.034	**-0.069**	**0.184**	**0.255**	**0.255**	**0.156**	**0.153**	**0.155**	1.000							
10	University research intensity	**-0.255**	**-0.251**	0.033	**0.065**	0.046	-0.003	0.009	0.013	**0.184**	1.000						
11	Workforce average pay[†]	**-0.140**	**-0.203**	**0.165**	**0.361**	**0.130**	**0.276**	**0.246**	-0.076	0.046	**0.309**	1.000					
12	Workforce average age	**-0.133**	**0.236**	**-0.326**	**-0.393**	**-0.414**	**-0.125**	**-0.106**	**-0.149**	**-0.445**	**-0.152**	-0.059	1.000				
13	Workforce age diversity	**0.295**	**0.163**	**0.210**	**0.159**	**0.276**	**0.105**	**0.085**	**0.256**	-0.073	**-0.449**	**-0.195**	**-0.135**	1.000			
14	New staff appointments	**0.277**	**0.072**	**0.067**	**0.109**	**0.291**	**0.075**	0.044	0.015	**0.106**	**-0.287**	**-0.219**	**-0.328**	**0.418**	1.000		
15	Student-to-staff ratio	-0.035	**0.281**	**-0.388**	**-0.480**	**-0.342**	**-0.151**	**-0.131**	0.004	**-0.507**	**-0.174**	**-0.160**	**0.744**	-0.054	**-0.228**	1.000	
16	The growth rate in the number of admitted students	0.020	-0.034	-0.041	0.050	-0.027	0.050	0.028	-0.040	0.038	**-0.082**	**-0.084**	**-0.164**	0.000	**0.090**	-0.054	1.000

Note. The table shows Pearson's pairwise correlation coefficients for study variables. The coefficients in bold are those that are significant at the 5% level or lower.

Table 4. Workforce gender and racial diversity: The case of the Athena SWAN Charter

| Explanatory variables	Dependent variable = ln(Collective turnover $_{i,t}$)					
	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
Workforce gender diversity $_{i,t-1}$		**0.019***	**0.020***	**0.026****	**0.019***	**0.032****
		(0.011)	*(0.011)*	*(0.011)*	*(0.011)*	*(0.013)*
Workforce racial diversity $_{i,t-1}$		**0.079****	**0.080****	**0.080****	**0.079****	**0.077****
		(0.017)	*(0.017)*	*(0.017)*	*(0.017)*	*(0.017)*
Participation in gender diversity charters $_{i,t-1}$			-0.042	-0.042		
			(0.030)	*(0.030)*		
Workforce gender diversity $_{i,t-1}$ × Participation in gender diversity charters $_{i,t-1}$				-0.010		
				(0.013)		
Experience with gender diversity charters $_{i,t-1}$					0.0010	0.0002
					(0.0046)	*(0.0048)*
Workforce gender diversity $_{i,t-1}$ × Experience with gender diversity charters $_{i,t-1}$						**-0.004***
						(0.002)
University size $_{i,t-1}$	-0.032	**-0.058****	**-0.051****	**-0.051****	**-0.060****	**-0.061****
	(0.022)	*(0.024)*	*(0.024)*	*(0.024)*	*(0.026)*	*(0.026)*
University age $_{i,t-1}$	**0.0002***	0.0001	0.0001	0.0001	0.0001	0.0001
	(0.0001)	*(0.0001)*	*(0.0001)*	*(0.0001)*	*(0.0001)*	*(0.0001)*
University research intensity $_{i,t-1}$	**-0.274****	**-0.280****	**-0.288****	**-0.290****	**-0.279****	**-0.283****
	(0.088)	*(0.086)*	*(0.086)*	*(0.086)*	*(0.089)*	*(0.090)*
Workforce average pay $_{i,t-1}$	**-0.860****	**-0.944****	**-0.905****	**-0.894****	**-0.959****	**-0.920****
	(0.172)	*(0.167)*	*(0.172)*	*(0.175)*	*(0.195)*	*(0.200)*
Workforce average age $_{i,t-1}$	**-0.018****	-0.011	**-0.011***	**-0.012***	-0.011	-0.011
	(0.008)	*(0.007)*	*(0.007)*	*(0.007)*	*(0.007)*	*(0.007)*
Workforce age diversity $_{i,t-1}$	**0.107****	**0.091****	**0.094****	**0.094****	**0.091****	**0.091****
	(0.019)	*(0.020)*	*(0.019)*	*(0.019)*	*(0.020)*	*(0.020)*
New staff appointments $_{i,t-1}$	**0.498****	**0.375****	**0.350****	**0.346****	**0.369****	**0.367****
	(0.197)	*(0.175)*	*(0.175)*	*(0.174)*	*(0.173)*	*(0.172)*
Student-to-staff ratio $_{i,t-1}$	-0.003	-0.002	-0.004	-0.004	-0.002	-0.002
	(0.004)	*(0.004)*	*(0.004)*	*(0.004)*	*(0.004)*	*(0.004)*
The growth rate in the number of admitted students $_{i,t-1}$	**-0.504****	**-0.455****	**-0.458****	**-0.459****	**-0.456****	**-0.459****
	(0.169)	*(0.164)*	*(0.168)*	*(0.168)*	*(0.161)*	*(0.163)*
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R-sq: between/overall	0.56/0.33	0.63/0.37	0.64/0.37	0.64/0.37	0.63/0.37	0.64/0.37
Number of clusters	125	125	125	125	125	125
Number of observations	1,125	1,125	1,125	1,125	1,125	1,125

* 10% significance; ** 5% significance; *** 1% significance. Standard errors (in parentheses) are clustered at the university level. A constant is included in all models but not reported.

Table 5. Workforce gender and racial diversity: The case of the Race Equality Charter

Explanatory variables		Dependent variable = ln(Collective turnover $_{i,t}$)			
		Model 7	*Model 8*	*Model 9*	*Model 10*
Workforce gender diversity $_{i,t-1}$		0.024	0.025	0.026	0.026
		(0.017)	*(0.017)*	*(0.017)*	*(0.017)*
Workforce racial diversity $_{i,t-1}$		**0.073*****	**0.078*****	**0.073*****	**0.075*****
		(0.022)	*(0.022)*	*(0.023)*	*(0.024)*
Participation in racial diversity charters $_{i,t-1}$		0.047	0.057		
		(0.030)	*(0.038)*		
Workforce racial diversity $_{i,t-1}$ $\times$ Participation in racial diversity charters $_{i,t-1}$			-0.033		
			(0.046)		
Experience with racial diversity charters $_{i,t-1}$				0.0087	0.0138
				(0.0184)	*(0.0238)*
Workforce racial diversity $_{i,t-1}$ $\times$ Experience with racial diversity charters $_{i,t-1}$					-0.013
					(0.027)
University size $_{i,t-1}$		**-0.062****	**-0.062****	**-0.058****	**-0.057****
		(0.024)	*(0.025)*	*(0.026)*	*(0.025)*
University age $_{i,t-1}$		0.0001	0.0002	0.0002	0.0002
		(0.0001)	*(0.0001)*	*(0.0001)*	*(0.0001)*
University research intensity $_{i,t-1}$		**-0.355****	**-0.359****	**-0.354****	**-0.358****
		(0.157)	*(0.163)*	*(0.153)*	*(0.150)*
Workforce average pay $_{i,t-1}$		**-0.689*****	**-0.690*****	**-0.677*****	**-0.678*****
		(0.227)	*(0.225)*	*(0.229)*	*(0.229)*
Workforce average age $_{i,t-1}$		**-0.015***	**-0.015***	**-0.016***	**-0.016***
		(0.009)	*(0.009)*	*(0.009)*	*(0.009)*
Workforce age diversity $_{i,t-1}$		**0.097*****	**0.096*****	**0.096*****	**0.095*****
		(0.023)	*(0.023)*	*(0.023)*	*(0.023)*
New staff appointments $_{i,t-1}$		0.380	0.360	**0.394***	**0.389***
		(0.234)	*(0.266)*	*(0.221)*	*(0.227)*
Student-to-staff ratio $_{i,t-1}$		-0.003	-0.003	-0.003	-0.003
		(0.005)	*(0.005)*	*(0.005)*	*(0.005)*
The growth rate in the number of admitted students $_{i,t-1}$		**-0.585****	**-0.564****	**-0.577****	**-0.568****
		(0.266)	*(0.263)*	*(0.266)*	*(0.269)*
Year fixed effects		Yes	Yes	Yes	Yes
R-sq: between/overall		0.52/0.35	0.52/0.35	0.52/0.35	0.52/0.35
Number of clusters		125	125	125	125
Number of observations		625	625	625	625

* 10% significance; ** 5% significance; *** 1% significance. Standard errors (in parentheses) are clustered at the university level. A constant is included in all models but not reported.

Figure 2. Marginal effects for the experience with the Athena SWAN Charter
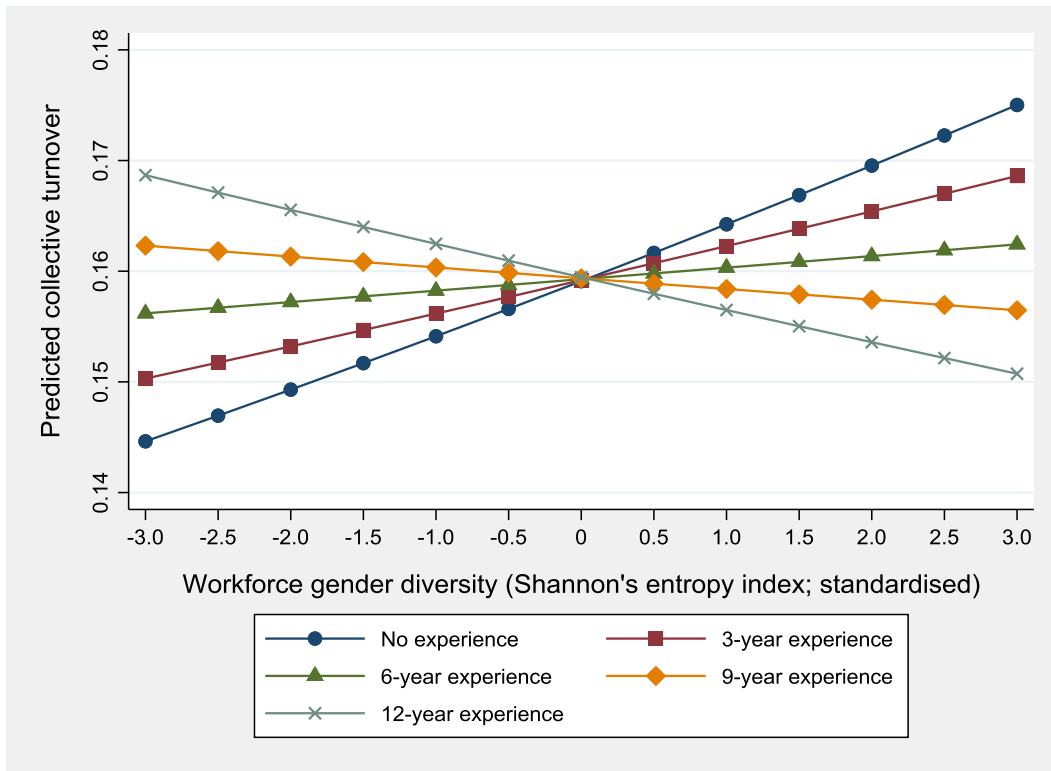
Note. Based on Model 6 in Table 4. All marginal effects are significant at the 1% level or better.

NOTES

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[i] While most studies highlight negative consequences of higher levels of collective turnover, some research points to potentially positive impacts, including the removal of poorly performing or simply less efficient employees, which contributes to performance increases (Park and Shaw, 2013).

[ii] While we focus on the effects of demographic diversity on collective turnover, given its high levels in modern workforces as well as its significant negative consequences for organisations, a growing body of research has also investigated the effects of gender and racial diversity on organisational performance, labour productivity, and innovation, amongst other areas (e.g., Østergaard *et al.*, 2011; Richard *et al.*, 2020).

[iii] The figure is calculated based on the HESA Staff Record dataset.

[iv] This relationship is not always clear cut. For example, Østergaard *et al.* (2011) identify no relationship between racial diversity and innovation performance. In turn, Julian and Ofori-Dankwa (2017) find that firm performance is negatively related to racial diversity. Finally, Richard *et al.* (2007) reveal a U-shaped relationship for short-term performance and an inverted U-shaped relationship for long-term performance. Most diversity studies note the importance of boundary conditions when investigating whether and how workforce diversity influences organisational outcomes.

[v] Conversely, Maurer and Qureshi (2019) argue that increasing gender diversity – and, specifically, increasing the representation of women – will be associated with higher job embeddedness and, as such, lead to a decrease in collective turnover.

[vi] For more information about diversity charters, see the Data and Methods section.

[vii] The HESA designates as "atypical" staff those individuals whose contracts involve working arrangements that are not permanent, involve complex employment relationships, and/or involve work away from the supervision of the normal work provider (see https://www.hesa.ac.uk/support/definitions/staff).

[viii] As Harrison and Klein (2007) note, diversity can be captured with either Shannon's index or Blau's index. The properties of the indexes are qualitatively similar, so researchers sometimes use one as a robustness check for the other (see Campbell and Mínguez-Vera, 2008). When we used Blau's index to capture workforce gender and racial diversity, we found no notable differences to the results produced with Shannon's index, thus confirming out findings.

[ix] Several universities joined the Charter as part of a pre-launch pilot project, including De Montfort University; King's College London; Kingston University; Royal Holloway, University of London; Staffordshire University; the University of Hertfordshire; the University of Manchester; the University of St Andrews; and University College London. Their membership year was set to the year when the pilot started.

[x] Since all academic staff contract salaries are grouped into six salary ranges in the HESA Staff Record dataset, we calculate the mean for grouped data. That is, for each salary range, we first determine its midpoint, then multiply that by the range's weight (which is the ratio of the number of academic staff who receive the salaries included in this range to the total number of academic staff), and, finally, sum the products in order to derive the university's academic staff average pay. It should be noted that the upper and the lower limit of each range are aligned with salary spine points used in the JNCHES Pay Spine and are, thus, adjusted on the yearly basis.

[xi] This high level of collective turnover was reported by Ulster University in 2018. Only 0.4% (or 5 out of 1,250) of all observations have a collective turnover level above 50%.