Feline Followers and "Umbrella Carriers": Department Chairs' Influence on Faculty Job Satisfaction and Quit Intentions

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ABSTRACT

Management quality at the department level is central to research and teaching performance in universities. This paper investigates the influence of department Chairs (hybrid middle managers) on faculty job satisfaction, satisfaction with job characteristics, and intentions to leave. Using UK and Swedish data, we provide the first evidence that faculty who rate their Chairs as being distinguished researchers report higher overall job satisfaction, satisfaction with job characteristics, and lower quit intentions. The perceived research strength of the Chair has the single largest statistical influence on faculty job satisfaction. This result holds after controlling for a large number of other influences and after employing a range of methods to correct for issues such as a potential single-rater bias. Although the primary contribution of this paper is empirical, we build on the expert leadership literature, appeal to social identity theory, and utilise the newly established concept of "umbrella carrier": we suggest that Chairs who are strong researchers may shelter subordinate faculty from excessive managerial spillovers, and protect academics' research time, thereby creating more favourable job characteristics. The paper's results highlight the benefits of good management in universities at a time when job satisfaction is in decline.

Keywords: hybrid middle manager, expert leadership, "umbrella carrier", job satisfaction, quit intentions, department Chairs, academics, universities.

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1. Introduction

It has long been said that academics are more feline than follower when it comes to being led (Middlehurst, 1993; Deem, 2010). Professionals, such as scientists, doctors, lawyers and architects, are often viewed as being both reluctant leaders and reluctant followers (Clegg and McAuley, 2005; Mintzberg, 1998; Noordegraaf and de Wit, 2012), perceiving themselves to be 'autonomous professionals' [… with] considerable discretion (Deem and Brehony, 2005: 220), who, on the whole, manage themselves (see also Evans, 2008). Administrative support is still necessary; however, management functions should not impinge too directly on professionals (Empson 2017; Maister, 1993).

For a number of years, questions have been raised about the kind of management being applied in universities (e.g. dependence on performance metrics and monitoring, expanded bureaucracy, increased competition). This has been linked to a reported decline in well-being and a rise in stress among university staff (Deem, Hillyard and Reed, 2007; Diefenbach, 2009; Franco-Santos and Doherty, 2017; Franco-Santos et al., 2017; Harley, 2002; Kinman and Court, 2010; Kinman and Wray, 2015; Martin, 2016; Shin and Jung, 2014; Teelken, 2012; Winefield et al., 2002). Good management at the department level has been shown to predict research and teaching performance in universities (McCormack, Propper and Smith, 2014). This highlights the important role of department Chairs, who act as 'hybrid' middle managers 'sandwiched' between departmental staff and senior leaders (Bryman and Lilley, 2009; Gallos, 2002; Montgomery, 2001). A recent study suggests that academics who move into management positions often shield subordinates from a proportion of the managerial spillovers generated by senior administrators, thus acting as "umbrella carriers" who reduce disruption (Gjerde and Alvesson, 2020). There is also growing evidence, from different settings, that middle managers can raise employee well-being and performance, and reduce intentions to leave the firm (Artz, Goodall and Oswald, 2017; Lazear, Shaw and Stanton, 2015).

Against a backdrop of declining job satisfaction in academia, our study provides the first evidence about a characteristic of department Chairs that explains faculty job satisfaction: the Chair's research strength. The aim of our paper is fundamentally empirical, and also practical: to argue that faculty job satisfaction is greatly dependent on making the right middle management appointments. We include two empirical measures of academic well-being derived from survey data on UK and Swedish universities. First, we use a single-item job satisfaction measure to examine academics satisfaction with their overall job; next, as additional evidence, we apply a multi-item measure that assesses satisfaction with eight job characteristics (Hackman

and Oldham, 1975, 1976). Finally, we ask faculty whether they have considered leaving their university.

Our study finds that the perceived research strength of the department Chair has the single largest statistical influence on faculty job satisfaction, and satisfaction with job characteristics, explaining up to 66 percent of the explainable variance. This result holds after controlling for a battery of other influences. The paper conducts a large number of robustness checks, including (i) adding a control for faculty life satisfaction, (ii) running instrumental variable analysis, and (iii) aggregating into larger clusters, to address potential single-rater and common methods biases, and to adjust for measurement error in the assessment of the department Chair. The paper's results are robust to such tests.

Finally, although we see our contribution as predominantly empirical, building on the work of 'expert leadership' (e.g. Goodall, 2009a,b; Goodall, Kahn and Oswald, 2011; Goodall and Bäker, 2015; Jacqmin and Lefebvre, 2016), our paper's hypotheses also draw from social identity theory (Tajfel, 1978) and the recently established concept of "umbrella carriers" (Gjerde and Alvesson, 2020).

2. Background literature

2.1 The climate in universities

Over the last quarter century, universities in several countries have weathered changes (e.g. Australasia, Finland, Netherlands, North America, Sweden, and UK, see e.g. Teelken, 2012, 2015). Subject to new government policies advocating greater efficiency, they have been impelled to use financial targets and internal and external surveillance tied to metrics for research performance and teaching assessment (Deem and Brehony, 2005; Decramer, Smolders, and Vanderstraeten, 2012; Harley, 2002; Martin, 2016; Muller, 2018; Parker, 2013). In following government policies, universities have thus implemented management practices that are viewed as being in conflict with the academic culture of collegiality and autonomy (Deem, 1998; Deem and Brehony, 2005; Deem, Hillyard and Reed, 2007; Lynch, 2015; Middlehurst and Elton, 1992; Rolfe, 2012; Shore, 2008, Teelken, 2012, 2015). In consequence, there is evidence that academics have experienced increased workloads, less autonomy and flexibility, resulting in reduced motivation and well-being, a decline in collegiality and a concomitant rise in individualism driven by targets tied to directive performance management practices (Adler and Borys, 1996; Cardinal, 2001; Deem and Brehony, 2005; Diefenbach, 2009; Eisenhardt, 1988, 1989; Franco-Santos and Doherty, 2017; Franco-Santos et al. 2017; Harley, 2002; Jones

et al., 2012; Kinman and Wray, 2013; MacKay, et al., 2004; Marshall and Morris, 2015; Shin and Jung, 2014; Trowler, 2010).

Other reported changes in universities include an expanded executive in both numbers and powers (Martin, 2016) supported by an enlarged bureaucracy[1]. Of particular relevance to our study, which highlights the importance of department Chairs, is the transfer of power and decision-making towards the centre, which has reduced local school and departmental autonomy (Deem, Hillyard and Reed, 2007; Martin, 2016).

While there were calls for universities to modernize their management, many believe the pendulum may have swung too far (e.g. Deem, Hillyard and Reed, 2007; Diefenbach, 2009; Martin, 2012; Ahlbäck Öberg and Bringselius, 2015; Ahlbäck Öberg et al., 2016). Teelken (2015: 309) describes how the increased managerialism and the associated control exercised over academics' work, is at odds with the traditional emphasis on autonomy, "resulting in a continuing tension between the characteristics of the professional's tasks and the hierarchical nature of the bureaucracy".

2.2 Middle management in universities

The focus of this study is on middle managers - department Chairs - positioned between departmental staff and the university's senior leadership (Bryman and Lilley, 2009). Autonomy at the department level has decreased as managerialism has increased (Martin, 2016); nevertheless, department Chairs still possess discretion in how they manage faculty (Floyd and Dimmock, 2011; Graham, 2016). Bolden, Petrov and Gosling define management within universities as the "operational implementation of institutional strategies and goals through systematic planning and the effective use of resources" (2008: 7). According to this view, management incorporates operational tasks concerned with the implementation of elsewhere generated strategies, goals and regulations. We assume in this paper, that department Chairs - as middle managers who "have to face two directions and deal with *both* superiors *and* subordinates" (Gjerde and Alvesson, 2020: 6) - engage in both management and/or leadership behaviours, contingent on the situation and context.

McCormack, Propper, and Smith (2014) demonstrate how important departments, and therefore department Chairs, are to the research and teaching performance in universities

[1] Times Higher Education (THE) reported in March 2018 that administrative and management staff costs have risen faster than all other costs including academic staff costs (see https://www.timeshighereducation.com/news/admin-and-management-staff-costs-rising-fastest-suggest-data).

(McCormack, Propper, and Smith, 2014). The authors assessed the management practices in 250 academic departments in 100 UK universities, and found that devolved management, where decision-making took place at the department level instead of through centralized functions such as HR, had a far greater influence on research and teaching quality (McCormack, Propper, and Smith, 2014).

Trowler (2010) argues that department Chairs can engage in soft or hard managerialism. The author suggests that hard managerialism is practiced by Chairs who "impose procedures […,] and sanctions and rewards on staff" (p. 199) and stress their "right to manage" all of which contributes to a more managerialist climate in universities (see also Deem and Brehony, 2005). As has been noted in the previous section, such an environment may result in lower faculty job satisfaction. It might also encourage academics to resist and ignore management requests (Trowler, 2010).

Currently, to our knowledge, there are no studies that examine the relationship between department Chairs and faculty job satisfaction. The determinants of faculty job satisfaction across twelve countries, are studied by Bentley et al. (2013); the authors reveal that institutional resources have a large effect, and having sufficient time for research a slightly smaller effect (with 24% of UK academics reporting insufficient research time). Coates et al. (2010) show, in a study of 18 countries that UK academics are the least satisfied with their senior administrators. Shin and Jung (2014) find that academics in the UK report higher job satisfaction when they experience a shared governance structure (i.e. direct involvement in decision making). Neither of these studies examine factors directly related to leadership or management, though we would argue that department Chairs do have some discretion in protecting "their" academics' research time, using budget to provide institutional resources (Trowler, 2010), and in how they involve their academics.

As there is growing evidence that individual and organisational performance is positively associated with employee job satisfaction (e.g. Bockerman and Ilmakunnas, 2012; Bryson and MacKerron, 2017; De Neve and Oswald, 2012; Edmans, 2011, 2012; Oswald, Proto and Sgroi, 2015), it seems important to understand further the relationship between middle managers (department Chairs) and academics' satisfaction with their job and intentions to leave the university. Our study aims to shed some light on this relationship.

3. Hypotheses development

To set up the study's hypotheses we draw from, and try to build upon, two key research areas: the first is the social identity literature (Tajfel, 1978) as it is expressed through the state of

hybridity and the ensuing identity conflict that is prevalent among professionals who assume management positions (e.g., Chreim et al., 2007; Floyd and Dimmock, 2011; Ibarra, 1999; McGivern et al, 2015; Pratt et al., 2006; Jones et al., 2012; Teelken, 2015). The second field we try to advance is the so-called 'expert leadership' literature. This highlights the statistical importance of core-business expertise held by both institutional leaders and middle managers to organisational performance (Goodall, 2009a,b; Goodall, Kahn and Oswald, 2011; Goodall and Pogrebna, 2015; Goodall, McDowell and Singell, 2017; Li and Patel, 2018; Tasi, Keswani, and Bozic, 2017).

These two research areas are examined in this section followed by the study's hypotheses.

3.1 Department Chairs' identity as "umbrella carrier"

Department Chairs are in a state of hybridity between their identity as an academic and their identity as a manager (e.g., Floyd and Dimmock, 2011). A Chair is recruited from among a department's academic staff – his or her peers, with whom they may have spent a career identifying solely as an academic (Clegg and McAuley, 2005; Deem and Brehony, 2005). By switching to the position of department Chair, he or she may now be viewed, and may also feel, as if they are moving from being 'one of us' to 'one of them'. Academics who become Chairs are now expected to engage in leadership and management tasks as set by senior administrators. Some of these tasks might be congruent with core academic values, and others, such as engaging in performance auditing, might conflict with them (Clegg and McAuley, 2005).

This hybrid middle manager role can create identity conflict (Chreim et al., 2007; Ibarra, 1999; Johansen et al., 2015; Pratt et al., 2006). McGivern and colleagues (2015) suggest that two types of hybrids emerge from this tension: 'willing hybrids', who somewhat realign their identity by integrating their academic self and their manager self, and may include department Chairs who have ambition to move into more senior leadership roles (Floyd and Dimmock, 2011); and 'incidental hybrids' who "use hybrid roles to 'represent', 'protect', and maintain professionalism" (McGivern et al., 2015: 427; also Noordegraaf and de Wit, 2012) and "disassociate themselves from managerialist practices" (Clegg and McAuley, 2005: 25).

In managing the internal conflict resulting from hybridity as academic and manager, social identity theory (Tajfel, 1978) suggests that individuals associate more strongly with one particular identity, and whichever identity is salient will influence one's adopted norms and behaviours (Tajfel, 1978; Ellemers, de Gilder and Haslam, 2004). Ellemers, de Gilder and Haslam (2004: 463) suggest that "people are relatively willing to identify with groups who seem to contribute to a positive sense of self". Strong researchers may be more inclined to identify

with their academic self and less inclined to identify with their manager self, because their scholarly success facilitates positive self-esteem and -worth attached to their academic identity (Swann, 1990). Other *academics,* not other managers, would then be viewed as among their in-group, and therefore would be protected.

Gjerde and Alvesson (2020) build directly on this in a recent study that examines how department Chairs in UK business schools interpret their role. Common among interviewees was the portrayal of their position through the metaphor of "umbrella carrier" acting "as a protector who fends off" and tries to "shield subordinates from off-putting information" so as "not expose them to the full horror of some of the stupidities that senior management in the university gets involved in" (2020: 132). The study argues that the umbrella metaphor is used to signify two representations: first, the Chair who shelters subordinate faculty from a downpour of administration, which fosters more favourable job characteristics for faculty members (Gjerde and Alvesson, 2020; Hackman and Oldham, 1975, 1976; Noordegraaf and de Wit, 2012). Second, the authors find that it is used to protect and maintain the Chairs' *own* sense of self, and perception of the role: "The umbrella-holder identity allows them (Chairs) to uphold a consistent self-view as a collegial academic doing management without becoming a manager or a leader wannabee" (Gjerde and Alvesson, 2020: 139). Thus, the study suggests that the umbrella carrying Chairs perceive their academic identity as more salient than their manager identity, which might help them resolve their internal conflict.

Chairs who identify most closely with their academic self may be more willing to act as an "umbrella carrier" (and forgo research time or suffer increased workloads, Floyd and Dimmock, 2011; Harley, 2002) to protect their perceived in-group. We argue that such umbrella carriers will relate positively to faculty job satisfaction because they protect the research time of their academics, by providing administrative support and guaranteeing academic freedom (Coates et al., 2010). In addition, they may adopt behaviours consistent with the academic norms of autonomy and collegiality (Ellinger et al., 2003; Ellemers, de Gilder and Haslam, 2004; Gjerde and Alvesson, 2020), thereby generating more favourable job characteristics, all of which could contribute to faculty job satisfaction whilst reducing quit intentions (Hackman and Oldham, 1975, 1976). In contrast, a Chair who identifies strongly with the managerial aspect of the position might be more inclined to enact directives and enforce central targets to gain approval from senior university leaders, who may serve as such Chairs' in-group (Gjerde and Alvesson, 2020). While our data do not allow us to show that Chairs who are perceived as strong researchers are also more likely to carry an umbrella, we draw on identity theory to argue that this may be the case.

3.2 Expert leadership

In the context of research-intensive environments including universities, a growing body of evidence suggests that scholarly expertise is a salient characteristic associated with good management and leadership. In early studies of scientific bodies, Andrews and Farris (1967) reported that the best predictor of a researcher's creative performance was their line manager's technical ability as compared with 'managerial' factors. These results were later reproduced by Barnowe (1975). A similar pattern was observed among Chairs of academic departments (Goodall, McDowell and Singell, 2017). Goodall, McDowell and Singell (2017) presented evidence of a longitudinal relationship between a department Chair's own research success as measured through citations, and the subsequent research performance of the department. This pattern has also been found at the top of universities among presidents and vice chancellors (Goodall, 2006; 2009a,b). Breakwell and Tytherleigh (2010) similarly found that the performance of 'old' UK universities (pre-1992) was higher if their vice chancellor had previously been an established researcher.

The research expertise of department Chairs' has been shown to influence the performance of economics departments (Goodall, McDowell and Singell, 2017), but not as yet to predict faculty job satisfaction or quit intentions. Given the decline in faculty job satisfaction, it seems especially timely to examine the role of Chairs' research strength for faculty job satisfaction.

For the above discussed studies on universities and scientific bodies, good middle managers and leaders are those objectively assessed (mainly using citations) to be a strong researcher (Andrews and Farris, 1967; Barnowe, 1975; Breakwell and Tytherleigh, 2010; Goodall, 2009a,b; Hollingsworth, Hollingsworth and Gear, 2011). As suggested above, research strength may be an *identifier* for those academics who will act as "umbrella carriers" when appointed to middle manager positions. Given that "umbrella carriers" protect the research time of their academics, creating positive job characteristics, we assume a positive link between Chairs who 'carry umbrellas' and faculty job satisfaction.

Thus, faculty job satisfaction would be affected by the research strength of their Chair because Chairs' *behaviour* differs depending on whether they predominantly identify with their academic self or their manager self. Their research strength might also influence how faculty perceive them. A Chair who is seen to share a commitment to research, might signal alignment of values and preferences between managers and followers (Baker, 2007), thereby increasing followers' job satisfaction.

3.3 Hypotheses[2]

Our emphasis here is on examining the relationship between the Chair's research strength as rated by subordinate faculty, and faculty overall job satisfaction, satisfaction with a range of job characteristics, and quit intentions. In this study we cannot test the mechanisms behind the relationship (e.g. to show *how* strong researchers may act as "umbrella carriers"). However, we suggest that strong researchers as Chairs, identify as academics and therefore act as umbrella carrier. In doing so, they put effort in to protect the research time of their subordinate academics from administrative spillovers, and thereby create more favourable job characteristics, which result in increased job satisfaction and reduced turnover intention. Put simply, strong researchers may do this, in their sandwiched middle manager role, because they identify more with the faculty in-group than with the university's senior managers.

The hypotheses being tested in this study are:

Hypothesis 1: Job satisfaction overall, and satisfaction with job characteristics, are higher among academics who perceive their department Chair to be a distinguished researcher.

Hypothesis 2: Quit intentions are lower among academics who perceive their department Chair to be a distinguished researcher.

3. Sample and data collection

3.1 Sample

Our sample includes full-time faculty engaged in teaching *and* research (those on teaching-only or research-only contracts are excluded) in two countries: the UK, where we surveyed academics in the so-called 'Russell Group' of 24 universities[3], and a smaller sample from major Swedish universities. Our data include faculty in 9 academic departments (business and management, economics, engineering, English, history, mathematics, physics, politics and

[2] It is important to note in a time when pre-registration of hypotheses is becoming normalised, that the hypotheses presented in this paper were included in a successful Leverhulme Trust research proposal in 2014.

[3] The Russell Group is a club that represents 24 research-intensive universities in the UK. They claim to be the most research-intensive in the country.

psychology). These disciplines were selected because they are common among universities and they represent the sciences, social sciences and humanities.

Our main findings come from 12 Russell Group universities (LSE, Manchester, Newcastle, Nottingham, Oxford, Queen Mary, Queen's U Belfast, Sheffield, Southampton, UCL, York, Warwick). Results from a preliminary survey, run in the remaining 12 Russell Group universities for the same departments, are presented in Table A in the Appendix; these results were gathered before we added an extra question on life satisfaction to our survey questionnaire (to enable us to control for this). Faculty from the previously listed academic departments were also surveyed in universities in Sweden (the majority of responses came from Stockholm University, Lund University, Uppsala University and Karolinska Institute). The survey was completed in 2015.

We hand-collected email addresses from all faculty working in the targeted university departments at the level of (junior) lecturer/assistant professor up to full professor. Our data in the reported analyses include 615 observations (with a further 548 observations in Table A in the Appendix). The largest sample (487) are from the UK; a smaller sample (128) are from Swedish universities[4]. Sweden's population is 15% of the UK's but the universities in both countries have similar organisational structures. Faculty also tend to be fluent and publish in English even though it may not be their first language (of note, 34% of Russell Group faculty are from outside the UK[5]). This allowed us to distribute an identical survey. In addition, our study builds on the work of Teelken (2012, 2015), who studied higher education management in both countries. Sweden, following the UK, adopted performance measures, such as teaching and research evaluation systems (Teelken, 2012), albeit to a somewhat reduced level.

3.2 Data Collection

The data were collected through an online questionnaire using the survey tool Qualtrics. Participants were sent an email with a link to the questionnaire and asked to complete the survey. A pilot study was run in 2014 in a research institute in Norway prior to the full roll out. The survey took approximately 8-10 minutes to complete. Confidentiality was assured (and prior approval by the university ethics committee granted). Two reminders were sent to participants with about a week in-between each.

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[4] Unfortunately, the Qualtrics link failed to work in a number of cases in Sweden which reduced the sample.

[5] HESA 2015/16, https://www.hesa.ac.uk

4. Measures

In this section we describe each of the measures used in the multivariate analyses. Table 1 presents the descriptive statistics.

[INSERT TABLE 1 ABOUT HERE]

4.1 Faculty's perceptions of department Chairs

The perceived research strength (as rated by faculty) of the department Chair acted as our explanatory variable. Faculty were asked to rate their department Chair on a 5-point scale with 1 "my immediate head is a highly-distinguished researcher", 2 "my immediate head is a distinguished researcher", 3 "my immediate head is an averagely able researcher", 4 "my immediate head is not that interested in research" and 5 "my immediate head is not a researcher". Those Chairs judged as "highly-distinguished" or "distinguished" (the first two categories) were categorized as strong researchers. Conversely those who were judged as "averagely able", "not interested" or "not a researcher" were placed in the baseline category. While we were happy with this categorisation of department Chairs' research strength, we hesitated to construe our measure of research strength as a continuous variable. For example, it was not obvious that the difference in research strength between an "averagely able" researcher and someone who is "not that interested in research" would be the same as the difference between a highly-distinguished and a distinguished researcher. In other words, the scale points might not be equidistant. As we were particularly interested in differences between strong researchers and those who were not, but also wanted to explore whether the degree of expertise mattered, we decided to enter the categories of "highly-distinguished" and "distinguished" separately in the empirical analysis via dummy variables. These dummy variables took on the value 1 for respondents with "highly-distinguished" or respectively "distinguished" department Chairs, and 0 otherwise.

A subjective measure of research strength was used for two reasons. First, it seemed important to know whether faculty themselves rated their department Chair as being a strong researcher, and thus belonging to the 'in-group'. Metrics for measuring research were abundant, partly driven by the global rise in performance evaluations such as the Research Excellence Framework in the UK; however, arguably faculty's subjective perceptions of the Chair's research captured the research strength relative to their field. Thus, faculty's subjective views were intrinsically important. Second, full confidentiality was required in our survey. To elicit frank and open answers, it was necessary that the survey be anonymous and that we did not ask for department Chairs' names.

4.2 Job satisfaction

Department Chairs in universities likely influenced the workload of their faculty subordinates, and thereby academics' satisfaction with both their job overall and also their job characteristics. We therefore measured job satisfaction in two ways to enable us to examine satisfaction with their job overall, and a second additional measure, satisfaction with a range of job characteristics. A benefit to adopting this dual approach was that we were able to include in the analyses a single-item measure of overall job satisfaction, and a multi-item measure that picked up job satisfaction via satisfaction with a number of job characteristics (Hackman and Oldham, 1975, 1976).

The survey opened with the *overall job satisfaction* question: "Overall, how satisfied are you with your job?" Answers were recorded on a 6-point Likert scale from 1 "very dissatisfied" to 6 "very satisfied". This single-item measure is commonly used in the literature (e.g. Freeman, 1978; Clark and Oswald, 1996; Wanous, Reichers and Hudy, 1997; Bockerman and Ilmakunnas, 2012); some have suggested it as a superior way to capture job satisfaction compared with a multi-item scale (Scarpello and Campbell, 1983) and as having a higher face-validity (Nagy, 2002). Importantly, Cheung and Lucas (2014) showed that single item measures performed similarly to multiple item ones.

For our second measure, respondents rated their satisfaction with nine job characteristics on a 5-point Likert scale from 1 "Very unhappy" to 5 "Very happy". The job characteristics were "My teaching load", "My independence in choosing what I work on", "The time I have to do research", "The quality of my work colleagues", "The contribution my work makes to society", "The amount of time I spend on managerial processes and administration, "The quality of the administrative support", "My pay", and "The degree to which I am consulted by my immediate head". Explorative factor analysis revealed that all of these items load on one factor with an eigenvalue of 2.53. However, the item on "contribution to society" had a factor loading of only 0.24 and was therefore not included in the composite measure of job satisfaction. All other items had a factor loading higher than 0.4 and were therefore used to calculate faculty job satisfaction. We averaged the values of the eight remaining items to generate our second measure of faculty *job satisfaction (scale)*. Cronbach's alpha of 0.78 demonstrated an acceptable convergent construct validity.

To allow for comparability between the two job satisfaction measures, we z-standardized both measures.

4.3 Quit intentions

In addition to job satisfaction, we also elicited an item on quit intentions (Hom, Griffeth and Sellaro, 1984; Tett and Meyer, 1993), capturing whether an employee had thought about leaving. Quit intentions strongly relate to job satisfaction (Hom et al., 1984; Tett and Meyer, 1993). We thus saw using inverse quit intentions as an alternative dependent variable, as implementing a robustness check to our main specification predicting faculty job satisfaction. Both measures relate strongly to actual turnover (Hom et al., 1984). The second question in the survey was thus: "Have you considered leaving your organisation?" Respondents answered on a 5-point scale, from 1 "yes, in the last month" to 5 "no". To allow for comparability with the two job satisfaction measures, we z-standardized our measure for quit intentions.

4.4 Control variables

Many factors might influence an academic's job satisfaction and quit intentions. We therefore included control variables. At the level of the individual, we adjusted for respondents' life satisfaction, age, gender, number of years in their current university position, discipline (natural sciences, social sciences, humanities), and position (professor, senior lecturer or lecturer). Given that the job characteristics of autonomy and pay may depend on academics' rank, we expected to find a relationship between job position and job satisfaction. We controlled for the discipline because job characteristics might have differed[6], and thus affected job satisfaction. Also, the number of job vacancies might depend on the discipline, making it an important control variable when predicting quit intentions. The number of years that employees were in their current position would, we hoped, adjust for any likelihood of higher job satisfaction being reported soon after starting a new job (the honeymoon phase, Ziller, 1965). Furthermore, we included respondents' age, because it relates to life-time satisfaction (see e.g. Blanchflower and Oswald, 2011). Also, when nearing retirement, thoughts of finding a new job may decline. Note that Table 1 showed a moderate correlation between job position and age, indicating that estimated effects of age and job positions were likely to be confounded. Finally, we included a measure for respondents' life satisfaction (Rammstedt and John, 2007) as this might have influenced all survey answers, and especially ratings of job satisfaction. We elaborate on this in the methods section.

[6] The popularity of disciplines can change, and this may have an effect on resources and other factors.

Concerning the department Chair, we included a control for gender; tenure was measured as approximate years that the department Chair had been in the current leadership position (Respondents reported this information about their department Chair). The longer a department Chair had been in a leadership position, the more leadership and management skills s/he might have had acquired.

Lastly, a dummy variable "Sweden" was included, which took the value 1 for observations from Sweden, and 0 otherwise.

5. Methods

We examined the relationship between the department Chair's research strength and employee overall job satisfaction, satisfaction with job characteristics, and inverse quit intentions. The main method used was Ordinary Least Squares (OLS) regressions. As a robustness check, we also ran Ordered Logit regressions, because overall job satisfaction and quit intentions were collected via Likert items, which are ordinal scales.

Both the explanatory variable and the dependent variables were collected within the same survey. In certain circumstances this could result in common method bias. When designing the survey questionnaire, we therefore followed Podsakoff et al. (2003) to reduce the risk of such bias. First, to reduce the possibility of common methods bias resulting from item context (see Podsakoff et al. 2003), we placed the items on job satisfaction and quit intentions at the start of the questionnaire, well-separated from the much later item on the department Chair's research strength. Second, when eliciting research strength, we applied a semantically different response format to the questions on job satisfaction and quit intentions (see Podsakoff et al. 2003). Lastly, we also collected data on the most likely source of common method bias, in our case, respondents' "inherent cheerfulness", which might potentially have influenced both the ratings of job satisfaction and the ratings of department Chairs' research strength. To capture respondents' innate level of cheerfulness, or how satisfied they were with their life (Judge and Watanabe, 1994), we elicited life satisfaction scores via a 5-item scale by Rammstedt and John (2007). We then z-standardized the life satisfaction score and controlled for it when predicting job satisfaction and quit intentions. This should have adjusted for background levels of cheerfulness of respondents and should have gone a considerable way to rule out a possible source of a common method bias.

A potential concern came from the (required) anonymity of respondents. Some of the faculty who responded to our survey would inevitably work within the same university department. Hence some, when giving an assessment of their department Chair's research expertise, would

have reported on the same department Chair. That would mean that such observations were not statistically independent. As respondents were anonymous with respect to their departmental affiliation, we could not apply clustering at the level of the department Chair in the conventional way. To overcome the possible statistical problem on the standard errors (although our coefficient estimates themselves remained unbiased), we used an aggregative approach, and re-ran the regressions on groups of individuals and groups of department Chairs. More precisely, we generated 'clusters' of department Chairs using the country and discipline of the respondent (natural science, social science, humanities), and the gender (male, female) and tenure in position of the department Chair (3 categories).

For example, consider all respondents who stated that they worked in the UK, in the discipline of natural science, and had a male department Chair who had been in office for 2 years. They were assigned to the same cluster. We used these classification clusters to correct the standard errors. With this aggregate approach, we obtained 36 clusters, 32 of which were non-empty (Table B in the Appendix shows the distribution of the 615 observations across clusters). This was likely to be an overly conservative estimate of the number of independently assessed Chairs in our dataset, given that we collected data from more than 20 institutions and in 9 academic departments.

Single-rater bias could exist when relying on the individual academic rating of the department Chair's research strength instead of averaging over the judgment of several raters to obtain a more objective assessment of the Chair. We addressed a potential single-rater bias in three different ways. First, we averaged the expertise ratings across respondents in the same cluster. Second, we conducted instrumental variable (IV) regressions, a conventional way to correct for measurement error. Single-rater bias was equivalent to measurement error (a happy person tends to look through rose-tinted spectacles at his or her Chair). We implemented the IV approach by instrumenting Person i's assessment of the research strength of the department Chair by the average assessment of the department Chair's' research strength within the cluster. Note that this procedure required us to discard three observations because they were each in a cluster by themselves. Thus, in this robustness test, we relied on 29 clusters. Third, as a further robustness test, we ran an OLS regression of the individually rated job satisfaction on the average assessment of the research strength per cluster but excluding the focal respondent's rating of the department Chair. In other words, in this particular kind of robustness check, Person i was viewed as reliably assessing their own job satisfaction score but not necessarily reliably assessing the Chair. Therefore, Person i's view of the Chair was then omitted from the information – coming from many others – that was used to create the assessment of the Chair.

To generate an average rating of whether the representative department Chair per cluster was a highly distinguished researcher, we calculated the research strength of Person i's Chair by summing up the values of the dummy variable "highly-distinguished Chair" over all respondents *j in a cluster* but excluding Person *i*, and divided this sum by the number of respondents in the cluster minus one (i.e. minus the observation of Person i). Equation 1 depicts this procedure. Note that, by excluding the focal respondent's evaluation of the department Chair (which is 0 or 1), within each cluster there were two values for the aggregated rating that might have resulted.

$$\text{Avg hi-dist rating}_c = \sum_{j \neq i;\, \in c} \text{hi\_dist}_j / (\#\text{ of respondents in cluster} - 1) \quad (1)$$

We applied the same procedure to generate an average rating per cluster on whether the department Chair was a 'distinguished Chair'. The variable 'Avg hi-dist rating' ranged between 0 and 0.67, and the variable 'Avg dist rating' ranged between 0 and 1. We used these variables to predict job satisfaction and inverse quit intentions, thereby taking an aggregation approach to avoid biases.

Given that we had little information on the *actual* clusters (e.g. we constructed our clusters using data on the respondent and the department Chair), our aggregated expertise measure was only an approximation of the actual average research strength rating that department Chairs have acquired. We therefore presented an extraordinary challenge for the data. Thus, any relationship we were still able to identify, between the explanatory variables and dependent variables, was likely to represent an actual relationship, instead of a statistical artefact.

6. Results

What is the relationship between the perceived research strength of a department Chair and faculty job satisfaction, satisfaction with job characteristics, and quit intentions?

Table 2 shows the unstandardized beta coefficients resulting from the OLS regressions. Column 1 refers to our overall measure of job satisfaction as the dependent variable. Next, in column 2, we ran an important check to ensure that the innate cheerfulness of respondents, which we captured via their life satisfaction, did not in an illusory way drive our result. We therefore ran the job satisfaction regression again controlling for life satisfaction. In columns 3 and 4, we ran the same regression models with our composite measure of job satisfaction via satisfaction with job characteristic. Lastly, in columns 5 and 6, we estimated the relationship

between having a strong researcher as Chair and employees' *inverse quit intentions (not having thought of leaving)*[7].

[INSERT TABLE 2 ABOUT HERE]

There was evidence of a robust pattern across all six columns. *First*, the two dummy variables representing a department Chair who was perceived as a strong researcher were each highly significant and positive (see the numbers 0.709 and 0.479 in Column 1). This indicated that respondents who view their department Chair as an expert researcher were overall more satisfied with their job (Column 1) and their job characteristics (Column 3), and this held true also when controlling for respondents' innate cheerfulness as captured by a life satisfaction variable (Columns 2 and 4). Notably, the coefficients on the Chair's research strength dummy variables in predicting overall job satisfaction vs. satisfaction with job characteristics were very similar. These academics were also less likely to think about leaving their organisation (Columns 5 and 6)[8].

The research strength of the department Chair was important in explaining the variance of all three dependent variables. It explained about 7 percentage points (Δ adj. R-squared) of the variance in overall job satisfaction, about 5 percentage points in overall job satisfaction when controlling for life satisfaction, about 7 (5) percentage points in satisfaction with job characteristics (when controlling for life satisfaction) and about 4 (3) percentage points in quit intentions (when controlling for life satisfaction). The importance of the Chair's research strength became particularly clear when comparing the variance in our outcome measures *that was explained by research strength* with the *total explained variance*. This exercise showed that Chair's research strength explained about 55 (overall) to 66 (scale) percent of the variance in job satisfaction of academics that we were able to explain. When controlling for life satisfaction (Columns 2 and 4), this share of explained variance dropped to 16 (overall) to 22 (scale) percent, due to the high (and expected) correlation between life satisfaction and job satisfaction.

Second, having a perceived highly-distinguished researcher as department Chair had a larger coefficient than having a perceived distinguished researcher as department Chair. For example,

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[7] In an effort to save space, we did not run hierarchical regression analysis, displaying first the results when including the control variables only. Instead, we offer the most relevant information on how including our two explanatory variables changes the adjusted R-squared in the text.

[8] Table C in the Appendix shows that this is true in both countries but also reveals some country differences. Table D in the Appendix contains regression results when controlling for respondent's number of peer-reviewed publications published in the last four years (4 categories: 1-2, 3-5, 6-10, More than 10) as it might be that better departments (with stronger researchers as Chairs) simply consisted of better researchers, who were inherently more satisfied with their job. The results for research strength dummy variables were robust to this inclusion.

in Column 1 of Table 2 the coefficient on having a distinguished Chair was 0.479, whereas the coefficient on having a highly-distinguished Chair was 0.709, and thus larger. The latter coefficient translates into a job satisfaction level that was greater by about 70 percent of a standard deviation in overall job satisfaction for respondents who perceived their department Chair as a highly-distinguished researcher. Importantly, the results continued to hold when controlling for life satisfaction. Hence, it was not merely that intrinsically positive people were also more likely to rate highly the research strength of their department Chair, and do the same for their job satisfaction, thereby creating an artificial relationship between the two. Columns 5 and 6 revealed that the research strength of the department Chair also positively related to faculty's reduced quit intentions.

Few of the demographic controls in Table 2 had sizeable effects. As predicted, there was a rise in the level of job satisfaction from lecturers, the reference category, who were the least satisfied, up to professors. Swedish faculty members tended to report higher overall job satisfaction scores compared with those in the UK, but showed no differences in satisfaction measured with the scale. Interestingly, for quit intentions, respondents' academic positions had no effect, whereas age did have an effect. Academics in Sweden had on average lower quit intentions. Lastly, life satisfaction related positively to job satisfaction, as expected.

To check the robustness of our results, we replicated the analysis conducted in Table 2 *with data collected before we decided to include a survey question (control) for life satisfaction*. Our preliminary survey (without the life satisfaction question) went out to 12 universities in the UK (n=548). The results in Table A in the Appendix show the relationship between Chairs' research strength and employee job satisfaction to be qualitatively identical in both survey samples.

In a next step, we clustered standard errors to account for respondents potentially reporting on the same department Chair. As explained above, we generated clusters of department Chairs using the country and discipline of the respondent, and the gender and tenure in position of the Chair. This resulted in 36 clusters (2 countries x 3 disciplines x 2 department Chair genders x 3 categories of department Chair tenure in position). Of these 36 clusters, 32 were non-empty. This number of clusters was a lower bound of actual clusters or department Chairs rated. The results in Table 2 were robust to using these 32 clusters to correct the standard errors. In all six models specified in Table 2, our research strength variables were significant at the 1% level. Coefficients were unaffected.

Table 2 is subject to the objection that the respondent was reporting both his or her job satisfaction and an assessment of his or her department Chair's research strength (note: at different ends of the survey). Ideally, we would like an independent assessment of the

department Chair to match with each employee's reported level of job satisfaction. To achieve the equivalent to this (and avoid single-rater bias), in a next step we ran instrumental variable analysis. We instrumented the focal Person i's assessment of the department Chair (divided into two dummy variable categories: highly-distinguished Chair, distinguished Chair) with the average assessment by all employees in that cluster (two continuous variables). If all faculty in a cluster were reporting on the same department Chair, their assessment of the Chair would be highly correlated with the focal Person i's assessment of the department Chair. Here the approach was relying on averaging, to address a potential single-rater or common method bias. At the same time a test of endogeneity suggested our variables not to be endogenous for predicting job satisfaction or when controlling for life satisfaction when estimating turnover intention. Even though this finding implied that we might not have needed to run IV regressions, the second stage IV regression results, depicted in Table 3, strengthened our confidence in the estimated positive relationship between Chairs' research strength and subordinate faculty job satisfaction. At least one of the instrumented measures of having a (highly)-distinguished Chair was significant (and positive) in predicting job satisfaction (overall, scale) and quit intentions in every estimation model.

[INSERT TABLES 3 AND 4 ABOUT HERE]

Lastly, and similarly to the IV regression, we provide an additional form of check in Table 4. It provides unstandardized coefficients resulting from OLS regressions in which Person i's job satisfaction (overall, scale) or inverse quit intentions were regressed on the assessment of the Chair's research strength of *everyone else* in Person i's cluster (see Equation 1 in the Methods section for the exact procedure). In Table 4, Person i's assessment of the department Chair was therefore deliberately dropped in the regression that explains Person i's level of satisfaction or quit intentions.

Even with this rather conservative aggregation approach, a very high perceived research strength of the department Chair as evaluated by others was a positive predictor of researchers' overall job satisfaction and inverse quit intentions. Given that we only had 29 clusters, this placed strong restrictions on our data. The fact that nevertheless there continued to be a significant link, and a positively-sloped one, between Chair research strength and subordinate job satisfaction suggested that the pattern is meaningful.

7. Discussion

This paper examines the important relationship between departmental faculty and their Chairs at a time when the reported well-being of university staff has declined (Deem, Hillyard, Reed, 2007; Diefenbach, 2009; Franco-Santos and Doherty, 2017; Kinman and Court, 2010; Kinman and Wray, 2015; Martin, 2016; Shin and Jung, 2014; Teelken, 2012; Winefield, et al., 2002). The results point to the profound influence of department Chairs on subordinate faculty's overall job satisfaction, satisfaction with job characteristics and intentions to leave the university. Importantly, our study starts to identify the kinds of Chairs more likely to have a positive influence on academics' satisfaction with their job.

Our results support hypotheses 1 and 2: we find that faculty members are more satisfied in their job if they perceive their department Chair to be a strong researcher. Specifically, those who rate their department Chair as a highly distinguished researcher report job satisfaction scores that are 70% to 80% of a standard deviation higher than the satisfaction of those with Chairs perceived to be average researchers or below. The perceived research strength of the Chair has the single largest statistical influence on overall job satisfaction and satisfaction with job characteristics, explaining up to 66 percent of the explainable variance. This result holds after controlling for a large number of other influences. The paper's findings are robust to a variety of checks, including controlling for the life satisfaction levels of academics, and instrumental variable estimation.

An equivalent and valuably consistent result emerges from data on the quit intentions of faculty members. Those who perceive their departmental Chair to be highly distinguished are substantially less likely to say they have thought about leaving their organisation. The size of the measured effect on quit intentions is approximately half of a standard deviation (see Table 2, columns 5 and 6).

7.1 Implications for theory

We see our contribution as overwhelmingly an empirical one – to robustly establish that there is a positive association between faculty job satisfaction, satisfaction with job characteristics, and intentions to leave, with a department Chair (middle manager) being perceived by subordinate faculty to be a strong researcher. This builds directly on earlier expert leadership studies examining leadership in universities (e.g. Goodall, 2009a,b; Goodall, McDowell and Singell, 2017). Our data do not make it possible for us to test the mechanisms behind our findings; however, we can draw from the arguments in social identity theory, and recently from

the concept of "umbrella carriers", to discuss how the findings might be explained. This also opens the way for future empirical work.

Social identity theory (Tajfel, 1978) suggests that in situations where an individual is required to adopt more than one identity - for example being a professional and also a manager – one identity will present as salient (Ellemers, de Gilder and Haslam, 2004; Tajfel, 1978). Which identity becomes prominent will depend on the perceived benefits of associating with the respective groups (Ellemers, de Gilder and Haslam, 2004). The salient identity determines which group is perceived as the 'in-group' and thus should be protected.

Drawing from Gjerde and Alvesson's (2020) study of department Chairs in UK business schools, we suggest that Chairs who align most strongly with their academic self, may also seek to act as an "umbrella carrier", who protect faculty from the full flow of managerial demands passed down from senior administrators. Assuming a connection between research strength and having a salient academic identity, we propose that a possible identifier for "umbrella carriers" may be a Chair's research strength.

How might we interpret this further? What is it that "umbrella carriers" are protecting? Chairs who shelter their faculty from some administrative burden may make it possible for academics to focus on other areas of their job, for example more satisfying tasks, and they may protect subordinate academics' research time (Gjerde and Alvesson, 2020). Of the eight items we include in our satisfaction with job characteristics measure, six items might be viewed as particularly relevant for umbrella carrying Chairs - "My independence in choosing what I work on", "The time I have to do research", "The amount of time I spend on managerial processes and administration", "The quality of the administrative support", "The degree to which I am consulted by my immediate head" and "My teaching load" (albeit the latter factor is often determined at the School level). Hackman and Oldham's (1975, 1976) Job Characteristics Model proposes five "core" job characteristics (skill variety, task identity, task significance, autonomy, and feedback) that the authors suggest affect five work-related outcomes, among them employee motivation, performance and turnover. We provide evidence that academics' satisfaction with their tasks ("The time I have to do research", "My teaching load", "The amount of time I spend on managerial processes and administration", "The quality of the administrative support" and "My independence in choosing what I work on") are all factors that are rated more positively if they also perceive their Chair as a strong researcher. Thus, by linking Chairs' research strength with academics' satisfaction with these job characteristics, and their overall job satisfaction and low intention to leave, we provide supportive evidence that is suggestive of the proposition that a strong researcher as department Chair may act as "umbrella carrier".

While it is not possible to know whether individual Chairs assign greater weight to their identity as an academic or as a manager (confidentiality prohibited Chair identification) or whether they see themselves as an "umbrella carrier", our empirical findings support our hypotheses that the research strength of department Chairs, as assessed by their faculty, predicts employee job satisfaction and quit intentions.

8. Study limitations

Our study is subject to some limitations. First, we chose to survey participants about their own job satisfaction and perceptions of their department Chair's research strength. We believe this to be an appropriate approach because (i) Artz et al. (2017) found the subjective rating of a boss's competence to correlate with whether the same boss worked his or her way up the organisation or started it (a measure of boss competence and success) or whether their boss could perform the job of the employee (a measure of boss technical competence). Thus, there is some reason to believe that employees' subjective assessments of their boss's technical competence is valid. (ii) Offering full anonymity to respondents was vital. Therefore, we could not ask the name of the academic's department Chair; had we obtained this information, we could have assessed each department Chair's research output objectively (as e.g. in Goodall, McDowell and Singell, 2017).

Second, we use cross-sectional data, and therefore it is prudent to be cautious about implications of causality. An ideal approach would be to test the effect of different kinds of department Chairs on job satisfaction using a scientifically controlled trial, in which the experimenter somehow randomly assigns Chairs (expert and non-expert researchers) to departments. However, distinguished Chairs are experts precisely *because* they have spent many years honing their competency and expertise (Ericsson, Krampe and Tesch-Römer, 1993). This knowledge cannot easily be approximated in tests using standard kinds of laboratory participants such as students; thus, external validity in such an experiment would likely be low. A field setting would be preferable, although challenging.

Finally, it was not possible for us to know whether any of the Chairs who were assessed in our study had ever had training in management or leadership. This type of training for department Chairs has been on offer, at least in the UK, in only relatively recent times; those leaders who have received management training may be viewed more positively by employees.

9. Conclusion

Governments have pushed universities towards the adoption of centralised and more controlled systems of organising, employing metrics, targets and monitoring. Directive performance measures are negatively associated with faculty well-being (Franco-Santos and Doherty, 2017). A culture of self-interest and risk-aversion may have been created resulting in, for example, publishing in safe areas rather than selecting a topic like the climate crisis that might take many years to fruition,[9] or only publishing in a small number of journals[10]; also, collegiality may reduce as academics adjust their behaviour to tick a set of boxes (Martin, 2016; Franco-Santos and Doherty, 2017; Franco-Santos et al. 2017).

The finding in this paper is both potentially timely and important for our further understanding of the middle manager position of department Chair in universities. It provides some of the first evidence about the kind of department Chair that seems to promote favourable job conditions for academics at a time when well-being appears to be in decline (Franco-Santos and Doherty, 2017; Franco-Santos, et al. 2017; Kinman, Jones, and Kinman, 2006; Kinman and Court, 2010; Winefield, et al., 2002). Our results might be viewed as a call to action for hiring committees charged with appointing department Chairs, to search out those who are distinguished researchers. The findings are also pertinent to Organisation Development officers, who must ensure that leadership training programmes are targeting and reaching research active faculty.

[9] A criticism of the UK Research Excellence Framework is that academics were required to produce 4 papers over 5/6 years which is a relatively short time to develop new areas. Hence there has been an expansion in the number of articles though not necessarily in the quality of scientific knowledge.

[10] The San Francisco Declaration on Research Assessment emerged as a response to this issue. Its aim is for research to be assessed based on its quality not the journal it is published in.

Table 1: Descriptive Statistics and Correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 Highly-distinguished Chair	0.20	0.40	-																	
2 Distinguished Chair	0.42	0.49	-0.42***	-																
3 Job satisfaction (overall)	4.48	1.20	0.17***	0.10**	-															
4 Job satisfaction (scale)	3.27	0.69	0.21***	0.09**	0.59***	-														
5 Quit Intentions (inverse)	2.99	1.46	0.17***	0.01	0.39***	0.43***	-													
6 Age 26 to 40	0.32	0.47	0.02	0.07*	-0.01	0.00	-0.09**	-												
7 Age 41 to 55	0.46	0.50	-0.09**	0.03	-0.07	-0.07*	-0.07*	-0.63***	-											
8 Age 56 to 65	0.20	0.40	0.09**	-0.11***	0.06	0.07*	0.15***	-0.34***	-0.45***	-										
9 Female respondent	0.35	0.48	0.04	-0.05	-0.09**	-0.14***	-0.05	0.07*	-0.00	-0.04	-									
10 Respondent tenure in position	7.02	6.35	0.03	-0.06	0.05	0.06	0.09**	-0.44***	-0.11***	0.53***	-0.16***	-								
11 Social Science	0.38	0.49	-0.05	-0.01	0.05	0.09**	0.03	-0.02	-0.01	0.01	0.12***	-0.01	-							
12 Humanities	0.14	0.35	0.14***	-0.04	-0.06	-0.05*	0.00	-0.00	-0.05	0.08*	0.10**	0.05	-0.31***	-						
13 Senior Lecturer	0.27	0.44	-0.04	0.00	-006	-0.05	-0.05	0.02	0.04	-0.05	0.04	-0.07*	-0.00	-0.02	-					

14 Reader	0.07	0.26	0.04	-0.05	0.04	0.07 *	0.02	-0.02	0.09 **	-0.08 *	-0.04	-0.10 **	-0.13 ***	-0.04	-0.17 ***	-			
15 Professor	0.39	0.49	0.00	-0.05	0.20 ***	0.12 ***	0.10 **	-0.43 ***	0.12 ***	0.28 ***	-0.15 ***	0.28 ***	0.03	-0.05	-0.48 ***	-0.23 ***	-		
16 Sweden	0.21	0.41	-0.12 ***	-0.10 **	0.05	-0.01	0.08 **	-0.19 ***	0.06	0.13 ***	-0.06	0.05	0.11 ***	-0.04	0.26 ***	-0.14 ***	0.07 *	-	
17 Female Chair	0.16	0.37	-0.00	-0.05	-0.05	-0.02	0.01	0.02	-0.06	0.06	0.05	0.02	0.10 **	0.24 ***	0.02	-0.07 *	-0.01	0.01	-
18 Chair tenure in position	3.72	3.88	0.03	-0.08 **	0.02	0.00	0.02	-0.06	-0.01	0.05	0.04	0.03	-0.08 *	-0.13 ***	0.02	0.10 **	0.06	0.13 ***	-0.10 **
19 Life satisfaction	23.72	6.58	0.11 ***	0.01	0.53 ***	0.53 ***	0.35 ***	-0.05	-0.03	0.05	-0.09 **	0.09 **	0.09 **	-0.12 ***	-0.02	-0.01	0.18 ***	0.11 ***	-0.09 **

Note: *** p<0.01, ** p<0.05, * p<0.1.

Table 2: Regression Equations for z-Standardized Employee Job Satisfaction (overall, scale), and z-Standardized Quit Intentions (Inverse)

	Job Satisfaction (overall)[a]		Job Satisfaction (scale)[b]		Quit Intentions (inverse)[c]	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Highly-distinguished Chair[d]	0.709***	0.574***	0.790***	0.687***	0.592***	0.496***
	(0.115)	(0.104)	(0.111)	(0.103)	(0.112)	(0.107)
Distinguished Chair[d]	0.479***	0.397***	0.466***	0.398***	0.281***	0.223***
	(0.0895)	(0.0837)	(0.0911)	(0.0833)	(0.0870)	(0.0857)
Age 26 to 40	0.193	0.222	0.117	0.205	-0.589**	-0.569**
	(0.248)	(0.238)	(0.305)	(0.287)	(0.269)	(0.264)
Age 41 to 55	-0.143	-0.0257	-0.117	0.0550	-0.543**	-0.460*
	(0.223)	(0.224)	(0.280)	(0.266)	(0.237)	(0.236)
Age 56 to 65	-0.0967	-0.0193	-0.0255	0.115	-0.177	-0.122
	(0.215)	(0.221)	(0.263)	(0.254)	(0.221)	(0.218)
Female respondent	-0.0906	-0.0388	-0.227***	-0.171**	-0.0817	-0.0450
	(0.0795)	(0.0703)	(0.0872)	(0.0800)	(0.0863)	(0.0826)
Respondent tenure in position	0.00424	0.00235	0.00455	0.00222	-0.00670	-0.00803
	(0.00835)	(0.0073)	(0.00842)	(0.00746)	(0.0084)	(0.00815)
Social Science	0.149*	0.0463	0.231***	0.138*	0.0547	-0.0177
	(0.0855)	(0.0788)	(0.0884)	(0.0828)	(0.0892)	(0.0872)
Humanities	-0.0709	-0.0178	-0.129	-0.0722	-0.0365	0.00106
	(0.137)	(0.111)	(0.134)	(0.113)	(0.139)	(0.124)
Senior Lecturer	0.269**	0.196*	0.190*	0.137	-0.0657	-0.117
	(0.119)	(0.104)	(0.113)	(0.101)	(0.119)	(0.112)
Reader	0.626***	0.520***	0.604***	0.512***	0.181	0.106
	(0.152)	(0.144)	(0.153)	(0.143)	(0.174)	(0.169)
Professor	0.691***	0.525***	0.426***	0.286***	0.0574	-0.0594
	(0.115)	(0.0992)	(0.120)	(0.109)	(0.118)	(0.115)
Sweden	0.224**	0.279***	0.0630	0.103	0.258**	0.297***
	(0.109)	(0.103)	(0.113)	(0.105)	(0.104)	(0.0986)
Female Chair	-0.0812	0.0251	0.00368	0.0994	0.0328	0.108
	(0.113)	(0.101)	(0.107)	(0.0946)	(0.121)	(0.114)
Chair tenure in position	-0.00247	-0.00398	-0.00252	-0.00299	-0.000528	-0.00160
	(0.0113)	(0.0106)	(0.0107)	(0.00955)	(0.0100)	(0.00960)
Life satisfaction (Z-standardized)	-	0.434***	-	0.418***	-	0.307***
		(0.0412)		(0.0389)		(0.0395)
Constant	-0.771***	-0.697**	-0.610*	-0.620*	0.222	0.274
	(0.288)	(0.275)	(0.352)	(0.330)	(0.310)	(0.307)
Observations	615	615	583	583	615	615
R-squared	0.155	0.318	0.149	0.301	0.086	0.167

Note: *** p<0.01, ** p<0.05, * p<0.1. OLS estimation is used. Unstandardized beta coefficients displayed. Robust standard errors in parentheses. The reference category for the disciplines is "natural sciences"; for age it is "over 65"; the one for current position is "lecturer".

[a] "Overall, how satisfied are you with your job?" on a scale from 1 to 6.

[b] Average happiness on a scale from 1 to 5 with the items "My teaching load", "My independence in choosing what I work on", "The time I have to do research", "The quality of my work colleagues", "The amount of time I spend on managerial processes and administration, "The quality of the

administrative support“, “My pay“, and “The degree to which I am consulted by my immediate head“.
[c] “Have you considered leaving your organisation?” “Yes, in the last month”, “Yes, in the last 6 months”, “Yes, in the last year”, “Yes, but not for a long time”, “No” on a scale of 1 to 5.
[d] The base category here aggregates the respective other survey responses on the Chair. The question itself was: “Please mark the appropriate answer: My immediate head is... a highly-distinguished researcher, a distinguished researcher, an averagely able researcher, not that interested in research, not a researcher, other (please specify)._____”.

Table 3: Instrumental-Variable Regression Equations where "Highly-distinguished Chair" and "Distinguished Chair" are Instrumented by the Average Chair Rating for that Cluster

	Job Satisfaction (overall)		Job Satisfaction (scale)		Quit Intentions (inverse)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Instrumented: Highly-distinguished Chair	1.080 ***	0.634 *	0.815	0.340	1.610 ***	1.141 ***
	(0.376)	(0.330)	(0.586)	(0.559)	(0.394)	(0.385)
Instrumented: Distinguished Chair	0.674	0.694 **	0.952 ***	1.043 ***	-0.334	-0.313
	(0.426)	(0.333)	(0.359)	(0.230)	(0.685)	(0.619)
Controls as before	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.949 ***	-0.858 ***	-0.847 *	-0.869 **	3.500 ***	3.596 ***
	(0.233)	(0.252)	(0.447)	(0.424)	(0.585)	(0.592)
Observations	612	612	580	580	612	612

Note: *** p<0.01, ** p<0.05, * p<0.1. Unstandardized beta coefficients displayed. Clustered standard errors in parentheses. The dependent variables are z-standardized. [Three single-person clusters are, for this table, omitted from the data set.]

Table 4: Regression Equations Using Average Colleagues' Ratings (Excluding the Focal Person) of Chairs' Research Expertise in Job Satisfaction and Quit Intentions (Inverse)

	Job Satisfaction (overall)	Job Satisfaction (scale)	Quit Intentions (inverse)
Average colleagues' ratings: Highly-distinguished Chair *("Avg hi-dist rating")*	0.845**	0.422	0.862***
	(0.336)	(0.515)	(0.271)
Average colleagues' ratings: Distinguished Chair *("Avg dist rating")*	0.211	0.388	-0.446
	(0.379)	(0.374)	(0.452)
Controls as before (model 1)	Yes	Yes	Yes
Constant	-0.617**	-0.388	0.573
	(0.225)	(0.391)	(0.355)
Observations	612	580	612
R-squared	0.087	0.068	0.050

Note: *** p<0.01, ** p<0.05, * p<0.1. OLS estimation is used. Unstandardized beta coefficients displayed. The dependent variables are z-standardized. Clustered standard errors in parentheses.

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Appendix

Table A: Regression Equations for z-Standardized Employee Job Satisfaction and Quit Intentions (inverse) for the Preliminary Sample (prior to the collection of the data used in the main body of the paper)

	Job Satisfaction (overall)[a]		Job Satisfaction (scale)[b]		Quit Intentions (inverse)[c]	
	Model A	Model B	Model A	Model B	Model A	Model B
Highly-distinguished Chair[d]	0.498 ***	0.546 ***	0.807 ***	0.841 ***	0.531 ***	0.456 ***
	(0.118)	(0.176)	(0.104)	(0.155)	(0.170)	(0.171)
Distinguished Chair[d]	0.269 **	0.326 **	0.457 ***	0.530 ***	0.369 ***	0.378 ***
	(0.104)	(0.141)	(0.0893)	(0.118)	(0.140)	(0.140)
Age 26 to 40	-0.175	n.a.	-0.383 ***	n.a.	n.a.	-0.268
	(0.125)		(0.116)			(0.192)
Age 41 to 55	-0.221 *	0.182	-0.429 ***	0.119	-0.152	-0.194
	(0.117)	(0.157)	(0.107)	(0.137)	(0.142)	(0.154)
Age 56 to 65	n.a.	0.431 **	n.a.	0.480 ***	0.0374	n.a.
		(0.196)		(0.177)	(0.172)	
Female respondent	-0.154 *	-0.283 **	-0.259 ***	-0.336 ***	-0.272 **	-0.328 **
	(0.0922)	(0.139)	(0.0843)	(0.128)	(0.129)	(0.136)
Respondent tenure in position	-	-0.102	-	-0.138 **	-	-0.207 ***
		(0.0691)		(0.0646)		(0.0704)
Social Science	-	0.131	-	0.0584	-	-0.0236
		(0.132)		(0.127)		(0.141)
Humanities	-	0.0734	-	0.247	-	0.188
		(0.192)		(0.172)		(0.193)
Female Chair	0.202 *	0.260 *	0.290 ***	0.343 **	0.180	0.222
	(0.117)	(0.149)	(0.106)	(0.139)	(0.152)	(0.162)
Chair tenure in position	-	0.0972	-	0.126*	-	0.152*
		(0.0725)		(0.0699)		(0.0778)
Constant	-0.0849	-0.410*	-0.0382	-0.446*	-0.123	0.294
	(0.128)	(0.247)	(0.113)	(0.230)	(0.159)	(0.326)
Observations	548	279	548	279	283	278
R-squared	0.044	0.080	0.133	0.177	0.056	0.098

Note: *** p<0.01, ** p<0.05, * p<0.1. OLS estimation is used. Unstandardized beta coefficients displayed. Robust standard errors in parentheses. The reference category for the disciplines is "natural sciences"; for age it is "over 65". Job position was not elicited. We only asked respondents at Birmingham, Bristol, Cambridge, Cardiff/Business School, Durham/Business School, Edinburgh, Exeter and Glasgow (N=283 of the 548 observations in column 1) for quit intentions, scientific discipline, tenure in position of respondent and tenure in position of department Chair. Respondent tenure in position was categorized into

"<2 years", "2-5 years", "5-15 years", ">15 years"; department Chair tenure in position was categorized into "<2 years", "2-5 years", "5-10 years", ">10 years", "I don't know".
[a] "Overall, how satisfied are you with your job?" on a scale from 1 to 6.
[b] Average happiness on a scale from 1 to 5 with the items "My teaching load", "My independence in choosing what I work on", "The time I have to do research", "The quality of my work colleagues", "The amount of time I spend on managerial processes and administration, "The quality of the administrative support", "My pay", and "The degree to which I am consulted by my immediate head".
[c] "Have you considered leaving your organisation?" "Yes, in the last month", "Yes, in the last 6 months", "Yes, in the last year", "Yes, but not for a long time", "No" on a scale of 1 to 5.
[d] The base category here aggregates the respective other survey responses on the Chair. The question itself was: "Please mark the appropriate answer: My immediate head is... a highly-distinguished researcher, a distinguished researcher, an averagely able researcher, not that interested in research, not a researcher, other (please specify)._____".

Table B: Number of Observations per Cluster

Cluster Number	*Number of Observations*	Cluster Number	*Number of Observations*
1	*3*	17	*24*
2	*3*	18	*3*
3	*20*	19	*124*
4	*8*	20	*72*
5	*8*	21	*29*
6	*16*	22	*3*
7	*64*	23	*4*
8	*41*	24	*4*
9	*18*	25	*14*
10	*5*	26	*14*
11	*6*	27	*3*
12	*2*	28	*43*
13	*6*	29	*19*
14	*16*	30	*1*
15	*15*	31	*1*
16	*25*	32	*1*

Table C: Regression Equations for Employee Job Satisfaction and Quit Intentions (Inverse) – *testing for country differences*

	Job Satisfaction (overall)[a]		Job Satisfaction (scale)[b]		Quit Intentions (inverse)[c]	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Highly-distinguished Chair	0.816 ***	0.674 ***	0.845 ***	0.730 ***	0.609 ***	0.506 ***
	(0.122)	(0.110)	(0.120)	(0.112)	(0.124)	(0.120)
Highly-distinguished Chair x Sweden	-0.800**	-0.667*	-0.407	-0.256	-0.0325	0.0642
	(0.368)	(0.357)	(0.339)	(0.284)	(0.292)	(0.237)
Distinguished Chair	0.501 ***	0.444 ***	0.481 ***	0.434 ***	0.322 ***	0.281 ***
	(0.104)	(0.0959)	(0.105)	(0.0934)	(0.0986)	(0.0964)
Distinguished Chair x Sweden	-0.0257	-0.154	-0.0336	-0.144	-0.184	-0.277
	(0.201)	(0.194)	(0.220)	(0.208)	(0.215)	(0.208)
Controls as before	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.747 ***	-0.705 **	-0.591	-0.638 *	0.186	0.217
	(0.289)	(0.279)	(0.360)	(0.338)	(0.310)	(0.305)
Observations	615	615	583	583	615	615
R-squared	0.165	0.325	0.152	0.302	0.087	0.170

Note: *** p<0.01, ** p<0.05, * p<0.1. OLS estimation is used. Unstandardized beta coefficients displayed. Robust standard errors in parentheses.

[a] "Overall, how satisfied are you with your job?" on a scale from 1 to 6.

[b] Average happiness on a scale from 1 to 5 with the items "My teaching load", "My independence in choosing what I work on", "The time I have to do research", "The quality of my work colleagues", "The amount of time I spend on managerial processes and administration, "The quality of the administrative support", "My pay", and "The degree to which I am consulted by my immediate head".

[c] "Have you considered leaving your organisation?" "Yes, in the last month", "Yes, in the last 6 months", "Yes, in the last year", "Yes, but not for a long time", "No" on a scale of 1 to 5.

[d] The base category here aggregates the respective other survey responses on the Chair. The question itself was: "Please mark the appropriate answer: My immediate head is... a highly-distinguished researcher, a distinguished researcher, an averagely able researcher, not that interested in research, not a researcher, other (please specify)._____".

Table D: Regression Equations for Employee Job Satisfaction and Quit intentions (Inverse) – *Controlling for Number of Publications*

	Job Satisfaction (overall)[a]		Job Satisfaction (scale)[b]		Quit Intentions (inverse)[c]	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Highly-distinguished Chair	0.703 ***	0.560 ***	0.825 ***	0.713 ***	0.617 ***	0.516 ***
	(0.117)	(0.106)	(0.111)	(0.104)	(0.112)	(0.108)
Distinguished Chair	0.468 ***	0.386 ***	0.460 ***	0.391 ***	0.280 ***	0.222 **
	(0.0903)	(0.0845)	(0.0919)	(0.0842)	(0.0873)	(0.0859)
Respondent's # of peer-reviewed publications	0.0693 (0.0430)	0.0401 (0.0407)	-0.0164 (0.0446)	-0.0378 (0.0417)	-0.0428 (0.0469)	-0.0636 (0.0457)
Controls as before	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.971 ***	-0.818 ***	-0.599	-0.548	0.329	0.438
	(0.317)	(0.306)	(0.384)	(0.356)	(0.341)	(0.334)
Observations	610	610	578	578	610	610
R-squared	0.163	0.326	0.156	0.307	0.089	0.171

Note: *** p<0.01, ** p<0.05, * p<0.1. OLS estimation is used. Unstandardized beta coefficients displayed. Robust standard errors in parentheses. The reference category for the disciplines is "natural sciences"; for age it is "over 65"; the one for current position is "lecturer".

[a] "Overall, how satisfied are you with your job?" on a scale from 1 to 6.

[b] Average happiness on a scale from 1 to 5 with the items "My teaching load", "My independence in choosing what I work on", "The time I have to do research", "The quality of my work colleagues", "The amount of time I spend on managerial processes and administration, "The quality of the administrative support", "My pay", and "The degree to which I am consulted by my immediate head".

[c] "Have you considered leaving your organisation?" "Yes, in the last month", "Yes, in the last 6 months", "Yes, in the last year", "Yes, but not for a long time", "No" on a scale of 1 to 5.

[d] The base category here aggregates the respective other survey responses on the Chair. The question itself was: "Please mark the appropriate answer: My immediate head is... a highly-distinguished researcher, a distinguished researcher, an averagely able researcher, not that interested in research, not a researcher, other (please specify). _____".