

DISCUSSION PAPER SERIES

IZA DP No. 17304

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Employees Have a Seat in the Boardroom**

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## ABSTRACT

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# Internal Promotion or External Hire? Staffing Management Positions When Employees Have a Seat in the Boardroom

We join the scholarly conversation on the implications of the different configurations of firms' stakeholder coalitions for their employment practices, by investigating how the structural arrangements granting employees a role in firm boards of directors (employee governance representation, EGR) affect firms' propensity to staff management positions through external labor markets rather than internal promotions. The literature has thus far pointed to a possible workers' impact on employment practices primarily through the power mechanism, contingent on the employees' ability to enforce their preferences with regard to hiring and other employment practices. We contribute to this scholarly work by (1) explicating why employees likely prefer firms to rely on internal labor markets (ILM) when hiring new managers and (2) conceptualizing the employees' impact on the staffing of management positions via the efficiency mechanism, related to the positive effects of EGR on the functioning of the ILM. We provide support for our hypotheses, using linked employer-employee data for Danish firms during 2001-2017.

**JEL Classification:** M5

**Keywords:** employee representation, corporate governance, hiring practices, internal labor markets, management jobs

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## Introduction

In filling vacancies, companies have been increasingly reliant on external hiring as opposed to internal mobility (Bidwell 2011, Cappelli and Keller 2014, DeVaro et al. 2019, Keller 2018). This growing importance of external labor markets in hiring and, relatedly, a declining role of internal labor markets (ILM) has been attributed to the increasing needs of firms for employment flexibility and continuous access to new competences (Bidwell and Keller 2014, Cappelli and Keller 2014, DeVaro et al. 2019, Rao and Drazin 2002, Rosenkopf and Almeida 2003). Recent work, however, also notes that the rising deployment of external hiring might be driven by changes in the configuration, power and interests of firms' stakeholder coalitions, in particular the growing power of investors with short-term financial interests (Cobb 2016). Although scholars have pointed to a possible impact of other firm stakeholders (Cobb 2016), we do not know much about why and how firm stakeholders (other than firm owners) might affect the ways firms recruit their (managerial) employees.

Our paper joins this conversation by investigating how the structural arrangements granting employees a representation in firm governance shape firms' propensity to rely on external labor markets rather than internal promotions when hiring (recruiting) new managers. In this paper, we refer to these structural arrangements, specifically, workers' right to appoint their representatives to corporate boards of directors, as employees' representation in governance (in short, employee governance representation, EGR). Most European jurisdictions grant employees the possibility to appoint at least a minority of members to the board of directors in larger firms. Thus far, however, employees' impact on hiring practices has *not* been theorized explicitly, although scholars have previously suggested that employees, when given power, might pressure their employers to hire through ILM (Cobb 2016). We advance this work by (1) explicating employees' preference for hiring management through ILM (the power mechanism) and (2) proposing a new mechanism (efficiency mechanism) behind EGR's impact on hiring, thereby exposing the positive effects of EGR on the information-related comparative advantages of ILM vis-à-vis external hiring.

Our theoretical framework combines the scholarly insights on hiring in organizations (Bayo-Moriones and Ortín-Ángel 2006, Bidwell 2011, Chan 2000), the work on stakeholders' role in employment practices (Battilana et al. 2022, Cobb 2016), and the literature on workers' representation

in corporate governance (Fauver and Fuerst 2006, Freeman and Lazear 1994, see Gregorič 2022 for review). On these academic grounds, we first theorize about the power mechanism, explicating why and how employees might push for the staffing of management positions through ILM rather than external hiring. Acknowledging that employees generally do not hold a dominant power in firms' stakeholder coalitions (Gregorič, 2022), we relate the employees' influence on hiring primarily to their ability to increase the accountability of those in charge of staffing management jobs in cases where an external candidate is selected over an internal one.

Our hypothesis on the efficiency mechanism is motivated by the scholarly insights on the benefits of EGR for information exchange in organizations (Fauver and Fuerst 2006, Freeman and Lazear 1994, Gregorič and Rapp 2019, Young-Hyman et al. 2023). We propose that the firm-level institutions accompanying employee representation in governance provide for additional channels of information exchange between those hiring (i.e., board members and/or other top-level employees) and the employees. These channels, we argue, reduce the information asymmetries in internal promotions and hence reinforce the information advantage of ILM vis-à-vis external labor markets in the recruitment of management. Employee representation in governance also goes hand in hand with practices promoting long-term employee commitment and collaboration, skills and career development (Freeman and Lazear 1994, Gregorič and Rapp 2019), which all contribute to the functioning of ILM.

Based on the outlined mechanisms of efficiency and power, we propose two corollary hypotheses that also help validate the proposed mechanisms. Firstly, it follows from the higher information advantages of ILM (efficiency mechanism) in firms with EGR that the matching between internally promoted candidates and the vacant positions is better in these firms than in conventional shareholder-controlled firms. Secondly, because of the higher accountability of those in charge of hiring in EGR firms (power mechanism) and, generally, the weight of observable characteristics in external hiring (Bidwell 2011), we expect that the externally hired managers in EGR firms are likely more qualified than the externally hired individuals to comparable positions in other (non-EGR) firms.

We test our hypotheses using two-stage fixed effect (FE) and instrumental variable (IV) estimators applied to longitudinal linked employer-employee data (LEED) for the population of Danish firms during 2001-2017. We focus on the recruitment of top-level managers, who are roughly comparable to the top management team or C-class executives in large US firms (Frederiksen and Kato 2018), because this is the level of hiring which is most likely to be affected by the structural arrangements granting employees a role in corporate governance. There are both empirical and theoretical reasons for the use of Danish data. First, Denmark provides researchers with one of the most comprehensive and reliable sets of LEED, containing detailed information on top managers, worker characteristics and board of director composition. Second, it represents an excellent setting for studying the interplay between labor market forces and institutional arrangements securing employees a role in firms' stakeholder coalitions. On the one hand, Denmark's flexicurity model of labor market, combined with the salience of strong shareholders makes Denmark's labor market for top managers closer to the Anglo-American liberal market economy model than to other coordinated market economies in Europe. That is, the Danish model gives employers considerable influence over their employment practices (Kreiner and Svarer 2022). On the other hand, unlike typical liberal market economies, Denmark has an institution of the minority representation of employees on boards of directors; employee-elected representatives are found in about a quarter of Danish firms (Gregorič and Poulsen 2020). This setting is well suited to a study of how the different configurations of stakeholder coalitions affect firm employment practices. Because of its characteristics (flexicurity and EGR in some of the firms), studying the Danish case offers a basis for further discussion of the implications of stronger employee involvement in the governance of 'standard' shareholder corporations, such as the publicly listed firms in the UK and USA. Likewise, the Danish case can provide useful lessons for other coordinated market economies in their explorations of labor market liberalization.

Our paper makes important contributions to the literature. We contribute to previous work pointing to a relationship between the characteristics of firms' stakeholder coalitions and employment practices (Cobb 2016). We contribute to this work by exploring the connection between employees' representation in the stakeholder coalition and firms' employment practices, namely their propensity to rely on external rather than internal labor markets when hiring management. Moreover, we advance

this work by explicating the mechanisms through which employees shape hiring in support of ILM. By pointing to the positive effects of EGR on the functioning and comparative advantages of ILM, we explain the lower propensity to deploy external labor markets in EGR firms through efficiency considerations. With this, we also contribute to work on the trade-offs between recruiting an internal candidate and hiring an external one (Bayo-Moriones and Ortín-Ángel 2006, Bidwell 2013, Chan 2000). While the benefits of hiring through ILM, such as reduced information asymmetries, are well established in the literature, less is known about how such benefits might vary in size across firms. We propose employee board representation as one of the firm-level factors that might affect the efficacy of ILM and, thus, the trade-offs between internal promotions and external hiring.

Finally, by theorizing on the relationship between employee representation in corporate governance and firms' hiring practices, we expand the understanding of the organizational and societal implications of such representation. Scholars have previously looked at how incorporating employees into firm governance affects organizational strategy and performance. In terms of employment practices, the focus has, however, been mostly on layoffs rather than hiring (Gregorič and Rapp 2019, Jäger et al. 2022, Schneider et al. 2018).

### **Theoretical Framework**

When staffing management positions, employers can either recruit through ILM, in the form of internal promotions and lateral transfers, or select from among external candidates (recruitment through external labor markets). Internal promotions are the most common way of recruiting internally and involve current employees moving to jobs of a higher administrative rank, generally followed by increases in pay, status, responsibilities, and task and skill requirements (Bayo-Moriones & Ortín-Ángel 2006, Bidwell 2013, Keller 2018). External hiring refers to the recruitment of individuals that were not previously employed by the firm (ibid).

By recruiting externally, firms hope to get access to new knowledge/ideas, perspectives and practices (Bayo-Moriones and Ortín-Ángel 2006, Bidwell and Keller 2014), acquire rare talents not available internally and gain from such talent's experiences with previous employers (Bidwell and Keller 2014, Rao and Drazin 2002, Rosenkopf and Almeida 2003). The advantages of recruiting internally are reduced information asymmetries (as information about the candidate is revealed

through the course of their employment in the same firm), returns from the firm-specific knowledge that internal candidates accumulate through tenure in the firm and incentive effects created by internal promotion opportunities (Bidwell and Keller 2014, Cappelli and Keller 2014, Chan et al. 1996, DeVaro et al. 2019, DeVaro and Morita 2013, Frederiksen and Kato 2017, Vinkenburg et al. 2011, Yang and Bidwell 2017).

To derive the hypotheses to be tested, we consider two firms, firm A and firm B. Firm A has an effective mechanism of employee representation in governance in place, while firm B does not. For example, in firm A, employees elect a third of the members of the board of directors. The two firms are otherwise identical. Drawing on work on stakeholder power and employment practices (Cobb 2016), work on hiring and ILM (Bayo-Moriones and Ortín-Ángel 2006, Bidwell 2013, Chan 2000), and that on employee representation in corporate governance (Fauver and Fuerst 2006, Freeman and Lazear 1994), we hypothesize that firm A is on average less likely to rely on external labor markets when recruiting management than firm B. We propose two specific channels (mechanisms) through which the hypothesized difference between the two firms might arise. First, firm A is less likely to recruit externally because employee representatives advocate worker preferences, and workers (we argue) prefer ILM. We refer to this channel as the *power mechanism* because the ability to enforce their preference is contingent on the employees' power in the stakeholder coalition of the firm. Secondly, firm A is less likely to recruit externally because the employee representation in governance increases the comparative advantage of ILM in these firms. We refer to this channel as the *efficiency mechanism*. We next elaborate on both mechanisms and the implications for management recruitment in firms with and without EGR.

*The Power Mechanism.* Why would employees prefer firms to recruit their managers internally rather than through external hiring? Firstly, corporate leadership requires a multitude of skills/abilities. In firms where employees are represented in governance, those in management positions need to have the ability to collaborate effectively with the employees, and to identify and build valuable relationships with them (Freeman and Lazear 1994, Lazear 2009). Because of their tenure in the firm, and firm-specific knowledge, internally recruited candidates are more likely to hold such capabilities than externally hired candidates (Agrawal et al. 2006, Becker 1962, Frederiksen and



Kato 2017). Secondly, because of higher information asymmetries in the recruitment of individuals in external labor markets (Bidwell 2011), firms (employers) generally place more weight on candidates' observable traits and characteristics when recruiting externally. This means that externally recruited candidates with highly visible credentials and networks often receive significantly higher pay than internally promoted ones (Bidwell 2011); this high compensation might increase firm-level wage inequalities and is likely to be opposed by the employees (Cobb 2016). Previous studies also show that, while externally hired candidates obtain higher wages, on average, both their job responsibilities and their starting performance in the position are lower than for those recruited internally (Bidwell 2011, Bidwell and Mollick 2015). On the contrary, the administrative procedures that guide the pricing, allocation and training decisions in ILM are shaped by concerns for appropriate pay differentials across jobs, thereby resulting in lower between- and within-group pay differentials (Cobb 2016). Such practices are therefore likely to be preferred by the employees (Card 2001, Cobb 2016, Heckscher 2013).

Finally, internal promotions are a way to provide incentives through tournaments (Connelly et al. 2014, Lazear 2018, Lazear and Rosen 1981). When a firm expands the tournament by considering external candidates for top positions, it reduces the odds for each of the internal candidates of winning the competition and, with this, their effort (Chan 2000, Lazear and Rosen 1981). That is, the tournament-generated incentives are weakened considerably if each contestant believes that an anonymous outsider could be the ultimate winner. This belief is reinforced when the contestant observes that fewer of the high-performing workers around them are being promoted (Chan 2006, Chan et al. 1996). The reduced incentive effect, due to the larger pool, could be mitigated by an increase in the prize of the tournament (Bognanno 2001, Chan 2000, Eriksson 1999). This, however, would cause an unequal wage structure, resentment on the part of internal tournament contestants, diminished morale, etc., and will be resisted by employees (Chan et al. 1996, Lazear 1989).

*The Efficiency Mechanism.* Why would employee representation in corporate governance (EGR) make it more *optimal* for firms with EGR, compared to other firms, to rely on ILM rather than external markets when hiring management? The hiring firms (employers) generally have incomplete information about the candidates for management vacancies and cannot fully assess how well a

specific candidate will perform in the job, beyond what can be derived from the candidate's observable characteristics (Bidwell and Keller 2014, Bidwell and Mollick 2015). Under the assumption that some of the candidates' skills are unobservable but may be discovered over time, these information asymmetries in the recruitment process will be smaller in the case of internal promotions than in recruitment through external labor markets (Bayo-Moriones and Ortín-Ángel 2006, Bidwell and Mollick 2015). Firms can indeed set in place various mechanisms for observing the performance of internal candidates in their jobs over time and learning about their abilities (Bayo-Moriones and Ortín-Ángel 2006, Bidwell 2011, Bidwell and Keller 2014, Bidwell and Mollick 2015, Doeringer and Piore 1985, Frederiksen and Kato 2017). The opportunities to screen the candidates are higher and the risk of a poor candidate-job match is therefore lower, when recruiting through ILM than when recruiting externally (Bidwell 2011, Waldman 1984).

We propose that these information advantages of ILM vis-à-vis external recruitment are stronger in firms with employee representation in governance (firm A) than in those with conventional governance (firm B). Theoretically, there are a number of reasons why this is likely to be the case. The benefits of ILM are long-term in nature, but often require continuous and significant investments in training, job evaluation and promotion systems (Lazear and Oyer 2004). Because financially oriented owners likely prioritize cost-cutting and short-term performance over building trust and partnerships with employees, they might resist investing in employee training and other practices that would support the functioning of ILM (Bidwell 2013, Lazear and Oyer 2004). This might be less the case when employees have a role in these decisions. Studies show that employee representation in corporate governance increases investment in training and other practices that aim to improve employees' job satisfaction, long-term retention and long-term career opportunities in an organization (e.g., FitzRoy and Nolan 2022). Investments in on-the-job training and skill-upgrading both improve the quality and the size of the pool of internal candidates, but also give the employer more opportunities for evaluating their skills and expertise.

EGR is generally supplemented by other firm-level practices, such as for example, regular meetings between employee representatives on the board, and union representatives, the works council and employees in the firm (Freeman and Lazear 1994). These practices likely strengthen the

exchange of valuable information, including information about the availability and demands of the vacant positions, thereby further reducing the information asymmetries when hiring through ILM (Knocke and Ishio 1994). Work on employee representation in firm governance (Fauver and Fuerst 2006, Freeman and Lazear 1994, Young-Hyman et al. 2023) indeed shows that EGR increases the quantity and quality of information shared between a firm's employees and management (ibid). This information might include suggestions for firm strategy (Fauver and Fuerst 2006) but also valuable insights about the distribution of skills and expertise across the firm, the employees' ambitions regarding their employment, wages (Gregorič and Rapp 2019), and the opportunities for promotion to positions in management. Besides the large-scale empirical evidence (Fauver and Fuerst 2006, Gregorič and Rapp 2019), a few of the more fine-grained qualitative studies involving interviews with employee-elected directors in Nordic firms provide further support for EGR significantly improving communication and information exchange between the employees, the management and the board of directors (Rose and Kvist 2006). By contributing to knowledge exchange in the organization, employee representation in governance therefore reinforces the information advantage of ILM vis-à-vis external recruitment. We therefore expect that the information asymmetries between those making the hiring decisions and the *internal* candidates, regarding the capabilities and expertise of the latter, and regarding the expectations and demands of the management vacancy, will be smaller in firm A than in firm B. The superior information advantage in internal recruitment in firm A means that this firm will be less inclined to recruit through external labor markets, compared to firm B.

Based on both, the hypothesized power and efficiency mechanisms, we propose,

*Hypothesis 1: The propensity to staff management positions through external hiring is, on average, lower in firms with employee representation in governance, than in conventional shareholder-governed firms.*

The efficiency and power mechanisms both imply that firms with EGR (i.e., firms of the same type as firm A) have a lower propensity to recruit their managers through external labor markets. We next hypothesize that the two mechanisms, nevertheless, have different implications for the match quality of externally and internally recruited individuals. Looking at whether the characteristics of the internally and externally recruited candidates follow the theoretical predictions

associated with a specific mechanism can therefore also help us to validate the relevance of each of the mechanisms proposed. Specifically, the efficiency mechanism posits that EGR improves the information exchange within the organization and generally contributes to the functioning of ILM (Freeman and Lazear 1994, Gregorič and Rapp 2019). Those in charge of staffing management positions in firm A have more and better information about internal candidates but can also deploy a variety of channels to communicate about new vacancies and skill demands. This might both increase the pool of internal candidates considered, and the quality of selection, as the candidates' (otherwise) unobserved capabilities are revealed. The superior information about the job demands might help employees understand how they might fit with the demands of the position, which could increase the attractiveness of the position for a larger set of candidates (e.g., Bidwell 2011), and discourage those that are a poorer match from applying. Both the larger size of the pool and the greater information availability improve the match between the vacancy and the individual selected for the position (Bidwell 2011, Keller 2018). In the literature, the quality of a match is measured by the probability that the candidate will exit the position within a year of being appointed to it (Bidwell 2011). We therefore expect that,

*Hypothesis 2: The internally promoted candidates in firms with employee representation in governance are less likely to leave the positions within one year of their appointment, compared to the internally promoted candidates in conventional shareholder-governed firms.*

Note that, if the relationship between EGR and firms' propensity to recruit externally only reflected the workers' preference and pressure for internal recruitment (i.e., power mechanism), we would observe no different or potentially even poorer matches (depending on workers' power) for internally promoted candidates in the EGR firms, than in conventional shareholder firms. Observing a better match for internally promoted candidates in EGR firms than in other firms would thus also corroborate our arguments about the positive effects of EGR on the functioning of ILM.

In most of today's corporations, employees do not have a dominant influence in the firms' governance and decision-making. Taking this into consideration, we in this paper envision the power mechanism primarily through a higher accountability of those in charge of the selection process in firms with EGR (Chan 2000), compared to conventional firms. This, we argue, will reflect in the

observable characteristics of the externally recruited managers in EGR firms, relative to other firms. Specifically, previous studies show that, when selecting through external labor markets, employers primarily rely on observable candidate characteristics, referrals and other resources provided by the firms' social networks (Bidwell 2011). This is different from the case of internal promotions, where recruiters can to a certain extent observe the candidates' behavior through the course of their employment. This entails that, generally, compared to the internal candidates for the same positions, the externally recruited individuals likely hold superior observable indicators of ability, such as education, previous experience and history, and task and occupational human capital (Bidwell 2011, DeVaro et al. 2019). We expect these differences to be even higher in the case of EGR firms. That is, if those in charge of the selection process in EGR firms are more accountable—because they could be potentially confronted by the employees and their representatives—they will place a stronger focus on the candidates' qualifications and experience, when selecting externally. Insights from work on discrimination and biases indeed suggests that the increased accountability of the selectors/recruiters, resulting from them having to explain their decisions, will reduce the biases in selection and increase the quality of the selected candidates (Self et al. 2015; Slaughter et al., 2006). Therefore,

*Hypothesis 3: The qualifications of the externally hired candidates in firms with employee representation in governance are, on average, higher or, at a minimum, not lower than those of the candidates hired to comparable positions in conventional shareholder-controlled firms.*

## **Empirical Analysis**

### **Institutional setting: Employee representation on corporate boards**

We test our hypotheses using data on Danish corporations. The richness of Danish administrative data (LEED), the Danish labor market institutions (flexicurity labor market model and employers' discretion in terms of employment practices) and the corporate governance characteristics (concentrated ownership and minority employee representation on the boards of some Danish firms) provide a unique setting for exploring the implications of the different configurations of stakeholder coalitions for firms' employment practices. Most importantly, because of the nature of the Danish law on employee board representation, both fully shareholder-controlled firms and firms where owners share some of the power with employees can be found in Denmark.

In Danish firms with at least 35 full-time employees, the employees have the right to establish EGR by electing their representatives to the board of directors, a formal body that is most often formally separated from the management board. When they choose to exercise their EGR right, employees elect their representatives from among those employed in the firm or in the business group to which the firm belongs. Employees establish such representation if proposed and supported by at least ten percent of the firms' employees, a majority of employee-elected members of the cooperation council, or a trade union representing at least 10 percent of the employees. Specifically, when the employees decide to install EGR, they have the right to elect one board member for every two members elected by the company's shareholders; when the resulting percent is a decimal, the number is rounded up. In most cases, this results in the employees holding about a third of all board seats in the EGR firms.

In the empirical analysis, we create a dummy variable (EGR) to distinguish between firms in which at least one employee-elected director is present on the board and those where no directors are employee-elected (conventional shareholder-controlled firms). In selected models, mostly for robustness purposes, we use the percentage of employee-elected members on the board as a measure of EGR. This choice is partly driven by the limited variation in the percentage of employee representatives on boards, and the noise in the measurement of this percentage in our data, related to temporary variation due to board members' retirement/replacement.

### **Data and summary statistics**

We test our hypotheses using the LEED from Statistics Denmark's administrative registers for the population of Danish firms during 2001-2017. We combine the employee-level data with firm-level data and then anonymously link this employee-employer matched data with detailed information on the composition of boards of directors (supervisory boards) from the Danish Business Authority. The focus of our study is on managerial positions; individuals working on these positions constitute about 5.4 percent of all employees in the Danish firms, on average. Our starting sample thus consists of all employees employed in managerial (highest-level) positions in Danish firms during 2001-2017. This amounts to a total of 1,586,082 manager-year observations, among which 325,041 observations refer to individuals that were newly hired/appointed to those positions, while 1,261,041 (79.51 percent) of

the observations refer to existing job contracts. In terms of appointments, we distinguish between internal promotions and external hires. We define an internal promotion as a move from a job that was of a lower hierarchical rank within the same organization and an external hire as a move from a prior job outside the organization and, alternatively, any other firm within the same business group. About 54.46 percent of all vacant managerial positions during 2001-2017 were filled through external hiring. However, many of the firms in our starting sample are very young and probably did not have functioning ILM, thus could only hire externally. For this reason, and to construct a group comparable to the firms with employee representation in governance, we restrict our initial sample to private firms (joint stock and limited liability companies) with a board of directors and at least 35 full-time employees. We end up with a total of 465,221 manager-year observations and 4,608 unique companies. About thirty percent of these firms are in the sample for the entire period of analysis (17 years) and they employ about 23 percent of the employees of the entire population of Danish firms.

Due to the properties of our main estimator (two-stage FE model; Friedrich 2020), we make a further restriction of the sample: we exclude firms that, during the period of analysis, filled less than 10 new managerial positions, private limited liability firms and utility sector firms, and appointments that relate to mergers and acquisitions (M&A). These restrictions leave us with a final sample of 1,715 unique firms and 395,751 manager-year observations. Among these, 87,605 (22.14 percent) are new appointments. This percentage is comparable to the one in the starting sample, where new hires represent 21.7 percent of all manager-year observations. We show a few additional summary statistics for the firms in our final sample in Table 1. The average firm employs 364 employees and has been in the sample for 14 years and appointed 52 new managerial personnel in nine of those years, on average.

*Insert Table 1 about here*

Table 2, Panel A, shows the average share of externally hired managers in the firms with and without employee representation in governance (EGR=1; EGR=0). Unless specified otherwise, we define a firm as a firm with EGR if it has had at least one employee-elected member on its board for at least half of the period in which the firm is observed in our sample. Such firms constitute 43 percent of all firms in our sample. The share of externally appointed managers is calculated as the share of

externally hired managers in the entire period of analysis, divided by the total number of people newly appointed to managerial positions during the period. We report two different statistics: in the first (*Externally hired<sub>(g)</sub>*), we consider individuals recruited from other firms within the same business group as external hires; in the second (*Externally hired*), we consider those recruited from other firms in the same business group as internal promotions. Most of our analyses rely on the latter variable. In Panel B, Table 2, we show the same summary statistics as in Panel A, while excluding firms that—during the period of our analysis—fully relied on either external hiring of their managerial employees or internal promotions. In Figures A1 and A2 in the appendix, we also show the kernel density diagram for the share of externally hired managers according to the two definitions and, separately, for firms with and without EGR. Overall, in Table 2 and Figures, we observe that the share of externally hired managerial employees is substantially lower (by 7-8 percentage points) in the firms with employee governance compared to conventional shareholder-governed firms.

*Insert Table 2 about here*

## **Results**

### **OLS regression**

As a first insight into the relationship between employee representation in governance and a firm's propensity to hire managerial talent externally, we estimate a pooled firm-level OLS regression, presented in Table 3. The dependent variable in this regression is the percentage of all externally hired managerial employees among all newly hired managerial employees in year (t). We define externally hired as individuals who (before starting in the position) did not work in the focal firm or any of the firms in the same business group as the focal firm (*Externally hired*). The key explanatory variables in Table 3 are the two variables capturing employee board representation (*EGR*; *EGR percent*).

*Insert Table 3 about here*

To minimize omitted variable bias, we consider a rich set of controls. For example, the EGR variable might be capturing the effect of the use of delayed compensation and related ILM arrangements. Delayed compensation contracts are used to motivate employee investments in firm-specific human capital but also expose employees to post-contractual opportunism by the employer; the employees will, in such cases, want to establish protective safeguarding mechanisms to restrict the employer's



opportunism, such as EGR (Wang, He and Mahoney 2009). The use of delayed compensation might therefore correlate with EGR and would also be consistent with a firm's preference for internal promotion. To control for the prevalence of such arrangements in organizations, we include the firm-level earnings-tenure slopes for tenure and tenure squared *Slope (basic)*, *Slope (squared)* as control variables in all our regressions (Jones et al. 2007, Lazear 2000). To estimate the firm-level earnings-tenure slope, we run a log-wage regression with an individual employee's firm-tenure and tenure-squared and other firm- and individual-level controls generally used in the literature, for all employees in our sample companies during 2000-2017. The beta coefficients on tenure and tenure squared are allowed to vary by firm (that is, we estimate period-level beta coefficients on tenure and tenure squared) and can be interpreted as the firm-specific earnings-tenure and earnings-tenure-squared slopes during the period of our analysis. The estimated coefficients on the slopes of the wage-tenure profiles (*Slope (basic)*) are negative and, for *Slope (basic)* statistically significant. This is in line with our expectations since, theoretically, the use of delayed compensation (higher wage-tenure slopes) is consistent with a higher firm preference for internal promotion and, consequently, lower share of externally hired managers.

In addition to wage-tenure slopes, we control for several other organizational characteristics that might be correlated with EGR and affect the firm's propensity to hire externally. For example, the statistically significant positive coefficient on employee turnover *Turnover (%)* suggests that firms with lower turnover and, likely, better functioning ILM, are less likely to select their managers externally, and vice-versa. Firm size, measured by the logarithm of the total number of firm employees *Ln(employees)*, is also negatively and significantly related to external hiring. Larger firms are more likely to have well-established ILM and hence more inclined to recruit internally than externally. The negative and significant coefficient for the size of the business group (*N firms in group*) suggests that corporate grouping generates group-level ILM with management positions being filled via promotion within the group, including promotion from one firm to another within the group.

Turning to our main result, as shown in column (3), the estimated coefficient on the EGR variable is negative and statistically significant at the one percent level: the share of externally hired managers in the firms with EGR is about 3.3 percentage points lower than that in the firms without

EGR, on average. As such, *Hypothesis 1* is supported by the evidence. As shown in column (4), the statistically significant negative effect of employee representation in corporate governance on the share of externally hired managers is found to be robust to the use of an alternative continuous measure of EGR (*EGR percent*). These results are also robust to using the alternative definition of the dependent variable and when excluding the firms that—during the entire period of analysis—never rely on ILM (Tables A1 and A2 in the appendix, respectively).

### **Two-stage FE estimator**

Except in a few cases, our variable capturing employee representation in governance is time-invariant: many of the firms in our data introduced EGR before the beginning of the period of our analysis and, once it is introduced, EGR is not likely to be discontinued (Gregorič and Poulsen 2020). Therefore, we follow Friedrich (2020) and estimate the EGR coefficient in two stages, using the OLS estimator. We rely on OLS (linear probability model) as a linear approximation of a probit (logit) model (that would normally be used when an indicator variable is the dependent variable). The OLS is easier to interpret and works well also in case when the dependent variable is an indicator variable, when the frequency of external hiring is around fifty percent (Friedrich 2020), which is the case in this study. In the first stage, we estimate a linear probability model with firm fixed effects, region-year and sector-year dummies, for all new appointments to managerial positions during 2002-2017, namely,

$$\text{Externally Hired}_{ijt} = \beta J_{ijt} + Z_{jt}\gamma + u_j + u_{rt} + u_{st} + v_{ijt}$$

where *Externally Hired*<sub>ijt</sub> is a dummy variable that takes a value of 1 if the managerial position *i* at firm *j* in year *t* is filled through external hiring, and 0 if the position is filled via internal promotion. We cluster the standard errors at the firm level and include region-time effects *u<sub>rt</sub>* and sector-time effects *u<sub>st</sub>*; *u<sub>j</sub>* refers to time-invariant firm fixed effects. *J<sub>ijt</sub>* is the rank of the top management position to be filled, defined based on the person's wage in the new position, relative to the wages of other managers in the same firm, where rank 1 labels the employee with the highest wage. *Z<sub>jt</sub>* is a vector of time-variant firm characteristics such as number of employees, total sales and assets, value-added per employee, and number of firms in the group. We also control for the share of employees that leave the firm in a given year (*Exits (%)*), as well as the percentage of individuals working in positions just

below the top-level managerial posts; the latter is used as a proxy for the internal supply of managerial talent within a firm in the specific year (*INT pool (%)*).

Finally, we control for the percentage of all management positions made up of newly hired managers (*Newly appointed (%)*), to account for the differences in the firms' demand for managerial employees in the specific year. While our data are rich and comprehensive in general, as in the case of most LEED, the level of granularity concerning specific jobs within a given job level is not sufficiently high for us to identify the lateral mobility of managers within a firm. Specifically, in our data, every external hire can be identified as a new appointment, regardless of whether the external candidate was recruited from a management position or a lower position in another firm. However, any lateral move, i.e. from one management position to another within the same firm, cannot be captured as a new appointment due to the insufficient granularity. Considering that we are looking at top-level positions, such lateral transfers within the same firm are probably not very common. Moreover, one could argue that, in the case of external hiring, all recruitments are comparable to promotions, even when the hired candidate already works in a management position. That is, it is probably safe to assume that, in most cases, highly qualified individuals already working in management positions only move to new jobs when they represent an upward move in their career. Finally, an omission of lateral transfers would cause an issue empirically if one expects EGR and non-EGR firms to differ, on average, in their propensity to rely on internal lateral transfers to fill openings at the management level. There does not appear to be a compelling theoretical case for the differential use of lateral transfers between EGR and non-EGR firms.

Nonetheless, we conduct two robustness tests regarding the issue of lateral transfers. We re-estimate our main models by (1) controlling for whether the candidate (when hired externally) was working in the same position in another firm and/or (2) excluding all the externally hired candidates who were previously working in management jobs (external lateral transfers). In robustness (2), we thus compare only the internally promoted and externally hired candidates who (before the appointment) were not working as managers. Reassuringly, we find that our key results change little under these alternative specifications (these robustness test results are available from the corresponding author upon request).

We report the results of the first-stage regression in Table 4. We use two alternative measures of the dependent variable: (1) *Externally hired*<sub>(g)</sub> = 1 if a new manager is hired from outside of the focal firm, and 0 otherwise; (2) *Externally hired* = 1 if a new manager is hired from outside of the focal firm and also not from any other firm within the same business group, and 0 otherwise. We observe significant dispersion in the firms' hiring strategies, as captured by the estimated firm fixed effects; such variation is necessary for this type of estimator (Friedrich 2020). Specifically, we draw on various methods from the literature (Chetty et al. 2014) to account for sampling error, and estimate the standard deviation of the firm fixed effects to be in the range 0.2235-0.2538.

*Insert Table 4 about here*

In the second stage, we regress the firm fixed effect  $\hat{u}_j$  (that we obtained from the first-stage regression in Table 4) on the set of variables capturing employee representation in governance (EGR), and a vector of selected firm-level controls,  $x_j$ , namely,

$$\hat{u}_j = \theta EGR_j + x_j \beta + \varepsilon_j \quad (2)$$

We show the results in Table 5. We measure employee governance representation by (1) a dummy for the presence of employee-elected members on the corporate board during more than half of the entire firm-specific sample period, EGR (Table 5, Panel A), (2) the share of years during which a firm has employee-elected directors, out of the entire period during which the firm is observed in the sample (Table 5, Panel B) and (3) the average (unweighted) percentage of employee-elected directors on corporate board during the period (Table 5, Panel C). Models (1)-(4) within each panel all include sector and regional fixed effects but differ in terms of the number of control variables included in the second-stage regression. We include these control variables (i.e., average firm size and age during the period, average value added per employee, family firm dummy, wage-tenure profile slopes) in the second stage either because we are interested in their steady-state equilibrium effects or to further address the endogeneity problem. We use unweighted values for these variables as the controls. For robustness, Table A3 in the appendix provides the estimates for the Panel B model, using the weighted averages of the control variables. Moreover, we in all specifications show the results for the variable *Externally hired*, although the results are broadly robust to using the alternative definition of the dependent variable (*Externally hired*<sub>(g)</sub>, results not reported for sake of space).

*Insert Table 5 about here*

The coefficients for EGR (regardless of the measure adopted and controls added to the regressions) confirm a negative, statistically significant correlation between employee representation in governance and the probability that a newly appointed manager is hired externally. The relationship between EGR and the probability that a management position is filled through external hiring remains negative and significant when including other controls, including the controls for ILM arrangements (wage-tenure profile slopes as covariates). Concerning the latter, we observe that the wage-tenure profile slopes are negatively associated with the probability that a management position is filled through an external hire, which is in line with theoretical predictions and previous findings in the literature.

In relation to endogeneity concerns, we calculate the delta (the ratio capturing the importance of unobservables relative to observables for which the treatment effect would become zero) using the estimated R-squared multiplied by 1.3 as  $R\text{-squared}_{(\max)}$  (Oster 2017). Reassuringly, the resulting delta for the  $R\text{-squared}_{(\max)}$  of 0.3 is around 2.5, far exceeding the critical value of one. As such, Oster's delta suggests the robustness of our estimates to the threat of omitted variable bias. However, the validity of this conclusion depends on our assumption regarding the share of total variance explained by the unobservable and observable covariates ( $R\text{-squared}_{(\max)}$ ). To corroborate our results, we next re-estimate our main regressions using IV estimation.

#### **IV estimation**

For the IV approach to be valid, we need to find instruments that (1) can explain the variability of employee representation in governance, EGR (or specifically, employee representation on the board of directors), across firms and (2) do not affect the outcome of interest, beyond their influence through EGR. In our setting, the choice of the instrument requires an understanding of the economic mechanisms and institutions that determine the presence of employee-elected directors in the boardroom (e.g., Angrist and Krueger 2001). Our first instrument is therefore a dummy variable that we assign the value one for firms that were established at least three years before 1982, *Pre(1979)*. Previous studies point to an important political change around 1982, which reduced the support provided to industrial democracy (that characterized the seventies, when Denmark also adopted the

Codetermination Law). Accordingly, firms established before 1979 are significantly more likely to have employee board representation, due to the positive institutional climate, compared to those established later (Gregorič and Poulsen 2020). Conditional on company age, being established before (after) 1979 (our instrument) is not likely to play a role in the firm's current decision on how to recruit their managerial talent. We thus assume that this year dummy will affect the firms' propensity to recruit externally but it surely will not affect it beyond its effect through EGR. One could question this assumption as this year also corresponds to an increase in institutional investor ownership in the US (Davis 2009) and, consequently, in the rest of the world; institutional owners are likely less supportive of ILM and will prefer external recruitment. To address this concern, we compare the percentage of institutional ownership in firms established 5 (10) years before and after 1980. In both tests, we find no significant differences in the share of institutional ownership.

Our second instrument is the share of employees with a social (social-democratic) political orientation. We expect that employees with a social (social-democratic) political orientation are more likely to support employee representation on corporate boards. Although we do not have information about each employee's political orientation, we can observe (for the period 2001-2017) the distribution of political votes in the municipalities in which each of the firms' employees reside. Thus, we construct a firm-level variable equal to the weighted average share of votes won by the social democrats in the municipalities in which the employees reside (weighting each municipality based on the number of employees from that municipality employed in the firm). To provide further reassurance as to the validity of the instrument and isolate the eventual impact of the newly recruited managers, in selected specifications, we construct the variable by only considering workers employed at non-expert and non-managerial levels (i.e., middle-level, qualified and non-qualified blue-collar workers), or only those that have been with the firm for longer than a year.

We report the results in Table 6 and Table 7. Since our instruments are period-averages for each firm, we estimate a firm-level regression, where the dependent variable is the percentage of externally hired managers among all newly appointed managers during the entire period of analysis. For comparison, we first, in column (1), Table 6, show the estimates of simple OLS regression. In column (2), Table 6, we report the corresponding estimates for the IV regression, where we

instrument our EGR dummy with (i) the average share of votes gathered by social democrats in the municipalities where firm employees (of tenure greater than one year) reside (*Soc dem support*) and (ii) a dummy separating the firms established before 1979, *Pre(1979)* from other firms. In column (3), we show the results for the first-stage regression. In column (4), Table 6, we report a rough check of instrument validity, by re-running model (1) while including both instruments, in order to verify that, indeed, our instruments have no impact on the dependent variable, beyond what can be explained through EGR.

In Table 7, we report a few additional IV estimates as robustness checks. In model (1), we use the same instruments as in Table 6 but exclude from the sample all firms that—during the entire period—either did not hire externally or only hired externally. In model (2), we calculate our instrument based on political support by considering only the middle- and lower-level employees (thus excluding the managerial employees and the pool of internal candidates for management positions). In model (3), we define the instrument by considering only low- and middle-level employees and all votes given to any left-oriented political party. In model (4), we reproduce model (2) from Table 6, while using only one instrument, thereby excluding the *Pre(1979)* variable. The results overall uphold our previous conclusions and *Hypothesis 1*.

*Insert Tables 6 and 7 about here*

The first-stage results of the IV regression (available from the authors upon request) confirm that employee representation in governance (EGR) is positively related to the proposed IVs. To address the concern about weak instruments, we calculate the percentage of the variation in our endogenous variable that is explained by the instruments, after partialing out the exogenous variables, and the corresponding F-statistics. The associated F-test results (see Tables 6 and 7) are overall highly significant and allow us to reject the null hypothesis of weak instruments with a bias below ten percent (five percent). The Sargan test confirms that the over-identifying restrictions (instruments) are valid.

As a final note, we compare the IV and OLS estimates for EGR variable. As shown in Tables 6 and 7, the IV regression results confirm that employee representation in governance (EGR) has a negative and statistically significant impact on the firms' propensity to staff management positions

externally. As is often the case for IV regression, the size of the effect is (in absolute terms) significantly larger than the corresponding OLS estimates: depending on the specification, the estimates are about 6-8 times larger than the OLS estimates. This size difference raises concerns about the strength of the instruments, and heterogeneous responses. That is, the IV estimate might reflect only the behavior of a group that responds to the instruments, i.e., those firms where the installment of employee governance emerged as a response to the institutional environment and employees' political orientation. To address this problem, Ciacci (2021) proposes a formal test that compares the size differences between OLS and IV estimates by (following Oster 2019) calculating the ratio between the variance explained by unobservable and observable characteristics that would need to be met to obtain the coefficient reported by the IV regression. In our case, the delta value is between 1.1 and 1.9 (depending on the assumed R-squared max and the EGR measure). This value is not very high, thereby supporting the validity of the IV estimates and *Hypothesis 1*.

### **EGR and the characteristics of newly hired managers**

Theoretically, we have explained the relationship between EGR and a firm's propensity to recruit externally by (1) the positive impact of EGR on the information advantages of ILM (efficiency) and (2) the employees' preferences for ILM and their ability to enforce these preferences by increasing the accountability of those in charge of recruitment (power). We have argued that these two mechanisms entail (1) a better match of internal candidates to vacant positions in EGR firms, compared to in conventional shareholder-governed firms (*Hypothesis 2*), and (2) superior qualifications of externally hired candidates in EGR firms, relative to those recruited to similar positions in conventional shareholder-governed firms (*Hypothesis 3*). To test these hypotheses, we first, in Table 8, show summary statistics for the internally promoted and externally hired managerial employees in terms of their ability, prior position (for externally hired candidates), and probability of leaving their current position within one year following their appointment (i.e., match quality). As an estimate of a person's ability, we rely on time-invariant individual effects in a log-wage regression, following Abowd et al. (1999), with fourth-order polynomials in experience and age, and a second-order polynomial in firm tenure, for all individuals employed in managerial positions at some point between 2000 and 2017.



*Insert Table 8 about here*

The summary statistics indicate that, compared to in conventional shareholder firms (*Firms with no EGR*), those internally promoted to management position in firms with EGR (*Firms with EGR*) are less likely to leave the position within one year of the appointment. Those hired externally in these firms (see Panel C) are, on average, more likely to hold prior management experience and have overall higher ability, compared to those recruited externally by conventional firms. These results are in line with *Hypotheses 2* and *3*, respectively. To corroborate both hypotheses, we proceed with a two-step FE model estimation as above. Table 9 tests *Hypothesis 2*: the dependent variable of interest is the probability that the newly appointed manager leaves the position in the subsequent year. We estimate this model only for the internally promoted candidates. In the first stage (results available from the authors), besides the controls from Table 4, we also include individual characteristics that affect a worker's propensity to change jobs, such as age, wage change, wage rank in the new position, estimated ability and whether the employee is a woman.

We observe a significant negative relationship between EGR and the (second-stage FE residual for the) probability that an internally promoted individual leaves the new management position within one year after the appointment. The results hold regardless of how we define employee representation in governance (compare columns (1)-(3), Table 9). Overall, these results support *Hypothesis 2*, thereby suggesting that EGR leads to better matches between the internally promoted candidates and management vacancies. To corroborate this efficiency hypothesis, we further check whether the firms with EGR are also more likely to promote from lower-level positions (medium- and lower-qualified candidates), compared to conventional shareholder firms. If EGR improves the information exchange across the organizational layers, those recruiting for top positions might be able to detect qualified candidates from beyond the 'standard' pool of candidates for those jobs. In line with *Hypothesis 2*, the correlation between EGR and the firm's probability of recruiting from among the pool of medium- and lower-qualified candidates is higher than in other firms, although the relationship is not statistically significant across the various specifications (results not reported for sake of space).

*Insert Table 9 about here*

Finally, we run a two-stage FE regression to test whether—when hiring externally—the EGR firms tend to recruit employees of higher ability, compared to those hired by conventional shareholder firms. We report the results in Table 10: the dependent variable in the first stage (not reported) is the estimate of individual ability; the regression is estimated for external hires only. Table 10 reports the second stage, with firm FE residuals from the first stage as the dependent variable. The results show that EGR is positively and significantly related to the estimated ability of externally hired managers. The coefficients for EGR remain positive but only marginally significant or statistically insignificant (depending on the specification) when adding the individual's wage change as an additional control in the first-stage regression. Overall, these results suggest that, when recruiting externally, the firms with EGR on average select at least as equally qualified individuals as other firms and compensate for the superior ability similarly to the conventional shareholder firms. These results uphold *Hypothesis 3*.

#### **Alternative explanations**

One could argue that, rather than being due to employee preferences and efficiency, the reported negative relationship between EGR and the firms' propensity to externally staff their management jobs derives from the fact that the EGR firms find it harder to attract external candidates. For example, external candidates might fear greater wage compression in EGR firms, and resist applying for positions in those firms. The summary statistics in Table 8 do not support this alternative explanation: the externally recruited candidates in the firms with employee representation in governance are, on average, better qualified and more experienced than those recruited by comparable shareholder-controlled firms. To corroborate this conclusion, we run a two-stage FE regression to check whether the firms with EGR (need to) pay significantly higher wages to externally recruited candidates than the conventional shareholder firms. The EGR coefficient in the second stage is positive but not statistically significant, suggesting that EGR firms do not face greater constraints than non-EGR firms when hiring externally (results not reported for sake of space, and available from the corresponding authors upon request).

As a final test, we re-estimate the basic model from Table 3, augmented with an interaction term between the EGR variable and a time-dummy capturing the years of the Great Recession of 2008-2010. If the lower propensity to recruit externally in EGR firms has to do with such firms

finding it harder to attract external managerial talents, we would expect the negative relationship between EGR and external hiring to be weaker during the Great Recession of 2008-2010. The Great Recession cut down the availability of jobs, including management jobs, drastically; the EGR firms would hence have been able to take advantage of the availability of management candidates who would not be interested in EGR firms under normal labor market conditions. We find no such evidence: the estimated coefficients on the interaction term between EGR and the Great Recession dummy are negative (i.e., the negative relationship between EGR and external hiring is reinforced rather than weakened) but statistically insignificant (these robustness test results are available from the corresponding author upon request).

## **Discussion**

Inspired by the recent studies pointing to firm-specific differences in hiring and other employment practices (Cobb 2016, Friedrich 2020), in this paper, we investigate whether and how employee representation in corporate governance (EGR) shapes firms' hiring practices. Specifically, in terms of firm employment practices, the literature distinguishes between the external (market) and internal (organizational) orientations (Cobb 2016, Jacoby 2005). The former is characterized by a stronger firm reliance on external labor markets in hiring (recruitment), flexible and short-term employment, and external labor market driven criteria for allocation and pay. The internally oriented practices rely more strongly on internal promotions (ILM) and lateral transfer in staffing vacancies, and on internal rules and procedures of pricing, allocation and training of employees (Cobb 2016, Doeringer and Piore 1971, Jacoby 2005). We join this scholarly work by exploring the variation in firms' preferences for staffing management positions by hiring external candidates rather than promoting candidates internally. Scholars have previously noted that firms' orientation towards one or the other type of practices might depend on the characteristics of firms' stakeholder coalitions (Cobb 2016). However, what characteristics specifically, and how exactly the different stakeholders might affect the firms' recruitment practices, is poorly understood. Our paper addresses this gap in the literature by theorizing on the relationship between employee representation in the governing stakeholder coalition (empirically measured by employee representation on the corporate board of directors), and the ways firms staff their top-level positions.

Our interest in the relationship between employee representation in corporate governance and employment (hiring) practices is motivated by two contemporaneous trends. Firstly, academics and practitioners have increasingly been focusing on the role of stakeholders (other than shareholders) in today's corporations, underscoring the need for a redesign of governance structures towards, among other things, a stronger participation of employees in firm decision-making (Battilana et al. 2022). Employee representation in corporate governance is a common feature in many European corporations and has been gaining some attention from academics and policy makers in the UK and US as well (Gregorič 2022). We believe that providing an understanding of the broader implications of an organizational redesign that provides for employee representation in decision-making could help and motivate new firms to transition to more employee-friendly governance forms.

Simultaneously, scholarly works point to a decreasing role of ILM in firm recruitment, observing that the trend away from ILM might not be fully due to the superiority of the talent supply in external labor markets but, possibly, also a general decline in firms' investments in developing and maintaining ILM. This calls for further research on the factors that might reinforce firms' interest in ILM, not least because of the established importance of ILM for motivation, attraction and maintenance of talent (Yang and Bidwell 2017), and because the way firms match individuals to jobs shapes the level of income inequality in a society (Cobb 2016).

As our main contribution, we propose and explicate a link between employee representation in firm governance (EGR) and firms' propensity to recruit their managers through external labor markets rather than promoting them internally. To establish the relationship between EGR and firms' propensity to hire externally (promote internally) and the underlying mechanisms, we combine the scholarly work on employee board representation, the literature on hiring and the rich theoretical insights on the functioning and role of ILM in organizations. Specifically, the mechanisms we propose in this study build on (1) insights on the functioning of employee representation in corporate governance, including the fact that, in most modern corporations, workers do not have a dominant influence in the stakeholder coalition; (2) the higher weight of observable candidate characteristics in the recruitment through external labor markets; and (3) lower information asymmetries when hiring through ILM as well as the established relevance of ILM in motivating employee efforts and firm-

specific expertise. On these premises, we model the relationship between EGR and a firm's propensity to recruit externally through the power and efficacy mechanisms. The power mechanism is theorized primarily in the form of those in charge of hiring being more accountable to the employees (employee representatives) in EGR firms, while the efficacy mechanism assumes an indirect (unintended) link between EGR and the information advantage of deploying ILM when hiring top-level employees. To validate these mechanisms, we theorize on their implications for the quality of externally and internally recruited candidates in EGR and non-EGR firms.

The insights of this paper advance the literature on employment practices (hiring through ILM), as well as the literature on corporate governance. First, we complement previous studies that model firms' choices between internal promotions and external recruitment as rational decision-making, where those in charge of recruitment trade off the costs and benefits of deploying ILM rather than external markets (Bayo-Moriones and Ortín-Ángel 2006, Bidwell and Keller 2014, Chan et al. 1996, DeVaro et al. 2019). Theoretically, our paper enriches this trade-off by introducing the stakeholder (shareholder) coalition as a source of additional costs and benefits in the competition between internal promotions and hiring on external labor markets. Future work could explore these issues further by, for example, studying the impact of the different recruitment choices on labor costs, inclusion and diversity in firms. Empirically, we provide new large-scale evidence on the ways firms staff their management positions. With this, we respond to the recent calls for more evidence in support of the competition between internal and external labor markets, and on the firm-level factors that explain the heterogeneity in firm recruitment practices (e.g., Bidwell and Keller 2014, Friedrich 2020). We are confident that our work provides important empirical foundations for future theory developments in the field.

We also add to the understanding of the broader implications of employee representation in corporate governance. While it is well established in the literature that, when given a role in firms' governance, employees will resist employment reductions and other decisions that worsen the work environment (Gregorič and Rapp, 2019; Jäger et al. 2022, Schneider et al. 2018), little is known about how employee representation in governance affects hiring at the highest levels of organizations. By theorizing on the impact of EGR on the functioning of ILM (efficiency mechanism), we are also the

first to point to the possible indirect (secondary) effects of EGR in organizations. That is, we argue that, although they are established with the primary aim of facilitating employee representation in strategic decision-making, the practices and institutions that support such representation create additional channels of information exchange, which also improve the functioning of the ILM. Our empirical evidence on the quality of the matches made through internal promotions in EGR firms provide support to this claim. Further studies could explore this in more detail by, for example, investigating the interactions between employee representation on the board of directors and other institutions of employee voice in an organization (e.g., works councils, union representatives, etc.), or by (theoretically and empirically) investigating other secondary effects of employee representation in corporate governance on the behavior of firms with EGR, their competitors, their employees and other stakeholders.

The insights of this paper also carry more general implications for the corporate governance literature. Thus far, this literature has mostly focused on the relationship between firm governance and the selection of the CEO (see for example, Bennedsen et al. 2007, Tian et al. 2011). However, the implementation of firm strategy is shaped by a broader set of managers, beyond the CEO. This implies that, on average, the differences in firms' corporate governance play a role in the selection of managers beyond the CEO position. By broadening the spectrum of influences that a firm's governance carries for organizations, we hope to motivate other scholars in the field of corporate governance to explore how a firm's corporate governance shapes the selection, motivation and commitment of the employees beyond the corporate managers.

Our results also have important practical implications. Based on the efficiency argument proposed in this study, in firms with EGR, relying more strongly on ILM might also be optimal from the perspective of the firm owners. This is because the organizational processes and practices that generally accompany employee governance increase the efficiency of ILM, and the quality of the matches made between candidates and management vacancies. Our work also suggests that, from the perspective of the employers (owners), installing some form of employee representation in firm governance and decision-making might be beneficial, if the aim is to improve the functioning of ILM. Because of the characteristics of the Danish setting (flexicurity and EGR in some firms), our insights

moreover offer a basis for further discussion about the implications of stronger employee involvement in the governance of 'standard' shareholder corporations, as well as useful lessons for other coordinated market economies in their explorations of labor market liberalization.

### **Conclusion**

We investigate how the structural arrangements granting employees representation in firm decision-making affect firms' propensity to recruit their management talent externally vis-à-vis promoting such talent internally. We theorize and empirically verify that firms with employee representation in corporate governance are less likely to recruit their managers externally. We attribute these differences to employee preferences for the deployment of ILM in the recruitment of managers, and the higher efficiency (information advantage) of ILM in EGR firms. In support of the two mechanisms, we show that, when recruiting externally, the EGR firm, on average, tends to select candidates with higher (observable) qualifications, compared to those recruited in conventional shareholder-controlled firms. In line with the hypothesized higher efficiency of ILM, we also show that the matching between the internally promoted candidates and the vacant management positions is superior in the firms with employee representation in corporate governance, compared to that in the conventional shareholder-controlled firms.

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## Tables

Table 1: New managerial appointments: Summary statistics

	N	Mean	Std.Dev.
Number of employees	1715	364.32	1146.924
N years the firm is observed in sample	1715	14.293	4.125
N of newly appointed in period	1715	53.017	152.432
N newly appointed in period excluding M&A	1715	51.876	149.501
N of years with app	1715	9.126	3.775
N of years with at least 1 new appointment	1715	9.051	3.768

Table 2: Share of externally appointed during the period

<b>Panel A</b>			
All companies	Obs	Mean	Std.Dev.
Externally hired <sub>(g)</sub>	1715	56.036	20.91
Externally hired	1715	54.084	20.921
<hr/>			
EGR=1	Obs	Mean	Std.Dev.
Externally hired <sub>(g)</sub>	730	51.918	20.504
Externally hired	730	49.886	20.212
<hr/>			
EGR=0	Obs	Mean	Std.Dev.
Externally hired <sub>(g)</sub>	985	59.088	20.694
Externally hired	985	57.194	20.903
<hr/>			
<b>Panel B</b>			
EGR=1	Obs	Mean	Std.Dev.
Externally hired <sub>(g)</sub>	728	51.786	20.377
Externally hired	728	49.749	20.068
<hr/>			
EGR=0	Obs	Mean	Std.Dev.
Externally hired <sub>(g)</sub>	967	58.74	19.934
Externally hired	967	56.811	20.121

Note: We assign the firm a value 1 for EGR if the firm has employee-elected directors in at least half of the period for which the firm is observed in the sample. In calculating Externally hired<sub>(g)</sub>, we consider the appointments of individuals from other firms within the same business group as external recruitments. In calculating Externally hired, we consider the appointments from other firms in the same business group as internal promotions.

Table 3: Determinants of the share of externally hired among those newly appointed

	Externally hired as % of all newly appointed in year (t)			
	(1)	(2)	(3)	(4)
Slope (basic)	-127.569 (35.737)***	-159.100 (38.038)***	-175.692 (38.155)***	-176.976 (37.960)***
Slope (squared)	-5.396 (4.728)	-8.088 (5.052)	-9.883 (5.194)*	-9.812 (5.142)*
Ln(firmage) <sub>t-1</sub>	-0.019 (0.489)	-0.451 (0.506)	-0.131 (0.508)	-0.110 (0.508)
Ln(employees) <sub>t-1</sub>	-3.941 (0.476)***	-4.954 (0.506)***	-4.477 (0.552)***	-4.477 (0.544)***
(VAemployee) <sub>t-1</sub>	0.540 (0.740)	0.420 (0.806)	0.508 (0.801)	0.483 (0.801)
Family firm <sub>t</sub>	2.448 (1.013)**	2.032 (1.036)*	1.262 (1.057)	1.155 (1.056)
N firms in group <sub>t</sub>	-0.464 (0.103)***	-0.471 (0.103)***	-0.465 (0.100)***	-0.463 (0.100)***
Newly appointed (%) <sub>t</sub>		-0.320 (0.021)***	-0.323 (0.020)***	-0.324 (0.020)***
INT pool (%) <sub>t-1</sub>		0.040 (0.032)	0.049 (0.031)	0.049 (0.032)
Exits (%) <sub>t</sub>		0.129 (0.079)	0.118 (0.075)	0.118 (0.075)
Turnover (%) <sub>t</sub>		0.079 (0.019)***	0.078 (0.019)***	0.078 (0.019)***
EGR <sub>t</sub>			-3.334 (1.070)***	
EGR percent <sub>t</sub>				-0.092 (0.027)***
$R^2$	0.13	0.16	0.16	0.16
$N$	12849	12849	12849	12849

EGR is a dummy that is given the value 1 for firms with employee representation in governance, and 0 otherwise. EGR percent is the percentage of employee-elected directors on the board. VAemployee is the value added per employee (in million DKK). Slope basic is the firm-level estimate of the earnings-tenure slope for tenure (Slope) and tenure squared (Slope squared). N firms in group is the number of companies in the firm's business group. Newly appointed (%) is the percentage of newly appointed managers among all managers, INT pool (%) is the percentage of all individuals working in just below management jobs (as % of employees, at t-1). Exits (%) is the percentage of employees leaving the firm in a given year; Turnover (%) is the difference between entries and exits in a given year, measured as a percentage of the employees at t-1. When defining the dependent variable, those recruited from other companies within the same business groups are considered as internally promoted.

Year-industry and sector-industry fixed effects included. Constant not reported. Standard errors (reported in brackets) and clustered at the firm level. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01

Table 4: Fixed effect regression, first stage, newly appointed managerial employees

First stage FE	Externally hired <sub>(g)</sub>	Externally hired
	(1)	(2)
Ln(individual wage rank) <sub>t</sub>	-0.053 (0.002)***	-0.060 (0.002)***
Ln(employees) <sub>t-1</sub>	-0.055 (0.010)***	-0.066 (0.010)***
(VAemployee) <sub>t-1</sub>	0.015 (0.008)*	0.010 (0.008)
Exits (%) <sub>t</sub>	0.001 (0.000)**	0.001 (0.000)***
Turnover (%) <sub>t</sub>	0.001 (0.000)***	0.001 (0.000)***
Ln(Assets) <sub>t-1</sub>	0.008 (0.008)	0.027 (0.008)***
Ln(Sales) <sub>t-1</sub>	0.007 (0.003)**	0.007 (0.003)**
Number of companies in group <sub>t</sub>	-0.002 (0.000)***	-0.001 (0.000)
INT pool (%) <sub>t-1</sub>	0.000 (0.000)	0.000 (0.000)
Newly appointed (%) <sub>t</sub>	-0.006 (0.000)***	-0.006 (0.000)***
$R^2$	0.32	0.33
$N$	56253	56253

Individual wage rank is calculated based on the basic salary of the employee, once appointed to the position, with the employee with the highest salary (among the executives) having rank 1. For other definitions, see Table 3.

Firm fixed effects regression. Constant not reported. Sector year and region year time effects included. Standard errors (reported in brackets) and clustered at the firm level.

The variation of firm FE (standard deviation) is between 0.2235 and 0.2538, depending on model specification. \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

Table 5: Fixed effect regression, second-stage results

Dependent variable: First-stage FE residual for the probability of the new manager being hired externally				
Panel A	(1)	(2)	(3)	(4)
EGR	-0.061 (0.012)***	-0.035 (0.012)***	-0.046 (0.013)***	-0.049 (0.013)***
(VAemployee <sub>t-1</sub> ) <sub>av</sub>			-0.006 (0.014)	-0.005 (0.015)
Ln(firmage <sub>t-1</sub> ) <sub>av</sub>			-0.004 (0.007)	-0.008 (0.007)
Ln(employees <sub>t-1</sub> ) <sub>av</sub>			0.025 (0.006)***	0.027 (0.006)***
Family firm <sub>(av)</sub>			0.032 (0.018)*	0.029 (0.018)
Slope (basic)				-1.575 (0.501)***
Slope (squared)				-0.075 (0.073)
Panel B	(1)	(2)	(3)	(4)
EGR <sub>av</sub>	-0.062 (0.013)***	-0.032 (0.012)**	-0.044 (0.014)***	-0.049 (0.014)***
(VAemployee <sub>t-1</sub> ) <sub>av</sub>			-0.007 (0.014)	-0.005 (0.015)
Ln(firmage <sub>t-1</sub> ) <sub>av</sub>			-0.005 (0.007)	-0.008 (0.007)
Ln(employees <sub>t-1</sub> ) <sub>av</sub>			0.025 (0.006)***	0.027 (0.006)***
Family firm <sub>(av)</sub>			0.033 (0.018)*	0.029 (0.018)
Slope (basic)				-1.585 (0.503)***
Slope (squared)				-0.076 (0.073)
Panel C	(1)	(2)	(3)	(4)
EGR percent <sub>av</sub>	-0.002 (0.000)***	-0.001 (0.000)**	-0.001 (0.000)***	-0.001 (0.000)***
(VAemployee <sub>t-1</sub> ) <sub>av</sub>			-0.007 (0.014)	-0.006 (0.015)
Ln(firmage <sub>t-1</sub> ) <sub>av</sub>			-0.005 (0.007)	-0.009 (0.007)
Ln(Nemployees <sub>t-1</sub> ) <sub>av</sub>			0.025 (0.006)***	0.026 (0.006)***
Family firm <sub>av</sub>			0.033 (0.018)*	0.030 (0.018)*
Slope (basic)				-1.565 (0.501)***
Slope (squared)				-0.072 (0.072)
R <sup>2</sup>	0.01	0.21	0.22	0.23
N	1603	1603	1602	1464

“av” stands for period average. For other variable definitions, see Table 3. Constant not reported. Second-stage firm fixed effect regression. Sector FE included. Robust SE in brackets. \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

Table 6: Instrumental variable regression

	Externally hired (period)		First stage	Validity
	(1)	(2)	EGR	Externally hired (period)
	(1)	(2)	(3)	(4)
EGR	-3.115 (1.242)**	-18.844 (8.989)**		-2.677 (1.247)**
Slope (basic)	-139.066 (45.895)***	-197.947 (60.297)***	-3.338 (0.993)***	-144.050 (46.312)***
Slope (squared)	-9.727 (6.735)	-15.142 (8.737)*	-0.286 (0.146)*	-10.454 (6.911)
Ln(firmage)	-0.672 (0.613)	0.967 (1.082)	0.035 (0.019)*	0.243 (0.870)
Ln(employees)	-3.079 (0.595)***	-0.419 (1.606)	0.166 (0.012)***	-3.116 (0.594)***
VAemployee	1.956 (1.574)	2.099 (1.610)	0.013 (0.031)	1.852 (1.556)
Family firm	4.707 (1.546)***	0.590 (2.981)	-0.261 (0.030)***	4.819 (1.530)***
N firms in group	-0.761 (0.147)***	-0.713 (0.150)***	0.003 (0.003)	-0.771 (0.147)***
INT pool (%)	0.014 (0.045)	0.060 (0.053)	0.003 (0.001)***	0.013 (0.045)
Exits (%)	0.165 (0.046)***	0.076 (0.058)	-0.005 (0.002)***	0.164 (0.044)***
Turnover (%)	0.010 (0.010)	0.006 (0.008)	-0.000 (0.000)	0.009 (0.010)
Newly appointed (%)	0.216 (0.059)***	0.165 (0.068)**	-0.004 (0.001)***	0.225 (0.060)***
Soc dem support			0.016 (0.005)***	-0.327 (0.219)
Pre(1979)			0.149 (0.034)***	-1.992 (1.582)
Industry FE	yes	yes	yes	yes
Regional FE	yes	yes	yes	yes
Sargan (p-value)		(0.67)		
F		15.41		
R <sup>2</sup>	0.12	0.02	0.35	0.13
N	1459	1453	1453	1453

Pre(1979) is a dummy for firms that were operating before 1979. Soc dem support is the average share of votes given to social democrats in the municipalities in which the firm employees reside; in calculating this share, we exclude newly hired employees. For definitions, see Table 3. All variables are calculated as period-firm-level averages. Constant not reported.

Robust SE in brackets. \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .



Table 7: Instrumental variable regression

Instrumental variable regression	Excluding those with only external or no external hires in period	Using social dem votes in municipalities for low and middle level employees	Using all social/left parties in municipalities for low and middle level employees as instruments	One instrument (social democrats' support in municipalities for all employees with tenure above 1)
Dependent variable: Externally hired (period)	(1)	(2)	(3)	(4)
EGR	-20.182 (8.902)**	-20.021 (8.631)**	-26.860 (9.052)***	-25.394 (15.518)
Slope (basic)	-223.602 (63.737)***	-219.516 (62.104)***	-245.950 (66.562)***	-243.821 (84.262)***
Slope (squared)	-20.658 (9.658)**	-19.870 (9.366)**	-22.712 (10.380)**	-22.869 (12.036)*
Ln(firmage)	1.103 (1.058)	0.886 (1.036)	1.494 (1.086)	1.576 (1.595)
Ln(employees)	-0.138 (1.586)	-0.136 (1.556)	1.029 (1.647)	0.744 (2.674)
VAemployee	1.600 (1.566)	1.604 (1.562)	1.658 (1.636)	1.648 (1.627)
Family firm	0.270 (2.934)	0.048 (2.865)	-1.848 (3.013)	-1.187 (4.621)
N companies in group	-0.665 (0.149)***	-0.672 (0.149)***	-0.652 (0.158)***	-0.649 (0.159)***
INT pool (%)	0.072 (0.054)	0.065 (0.053)	0.083 (0.055)	0.086 (0.066)
Exits (%)	0.060 (0.059)	0.061 (0.058)	0.021 (0.065)	0.031 (0.093)
Turnover (%)	0.005 (0.008)	0.006 (0.008)	0.005 (0.008)	0.005 (0.008)
Newly appointed (%)	0.164 (0.068)**	0.158 (0.067)**	0.134 (0.069)*	0.146 (0.084)*
Industry FE	Yes	Yes	Yes	Yes
Regional FE	Yes	Yes	Yes	Yes
F	15.69	16.49	17.89	11.26
Sargan (p-value)	(0.65)	(0.50)	(0.10)	(0.35)
N	1439	1445	1445	1439

Constant not reported. Robust SE in brackets. \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ . For variable definitions, see Table 3.

Table 8: Summary statistics for newly appointed managerial employees

<b>Panel A: All new hires</b>			
<i>Firms with no EGR</i>	Obs	Mean	Std.Dev.
Estimate of unobserved ability	30885	.079	.329
Externally recruited	32377	.546	.498
Leaves within 1yr of appointment	30023	.06	.237
<i>Firms with EGR</i>	Obs	Mean	Std.Dev.
Estimate of unobserved ability	52585	.071	.314
Externally recruited	55228	.434	.496
Leaves within 1yr of appointment	52122	.046	.209
<b>Panel B: Internal promotions</b>			
<i>Firms with no EGR</i>	Obs	Mean	Std.Dev.
Lower-level hire	13364	.643	.479
Estimate of unobserved ability	14342	.079	.332
Number of different positions in same firm	10426	2.612	1.021
Leaves within 1yr of appointment	13798	.044	.206
<i>Firms with EGR</i>	Obs	Mean	Std.Dev.
Lower-level hire	29166	.508	.5
Estimate of unobserved ability	30532	.047	.309
Number of different positions in same firm	21736	3.078	1.168
Leaves within 1yr of appointment	29634	.036	.187
<b>Panel C: External hires</b>			
<i>Firms with no EGR</i>	Obs	Mean	Std.Dev.
Estimate of unobserved ability	16543	.078	.326
Same position	15501	.385	.487
Same industry	15384	.489	.5
Leaves within 1yr of appointment	16225	.073	.26
<i>Firms with EGR</i>	Obs	Mean	Std.Dev.
Estimate of unobserved ability	22053	.105	.318
Same position	21270	.444	.497
Same industry	20991	.437	.496
Leaves within 1yr of appointment	22488	.058	.234

Table 9: Second-stage FE regression for the probability of leaving within 1 year (internally promoted)

	First-stage firm FE residual for the probability of leaving within 1 year (N=1251)		
	(1)	(2)	(3)
EGR	-0.010 (0.006)		
EGR <sub>av</sub>		-0.013 (0.007)**	
EGR percent <sub>av</sub>			-0.000 (0.000)***
Slope (basic)	-0.201 (0.249)	-0.215 (0.250)	-0.233 (0.249)
Slope (squared)	-0.037 (0.042)	-0.038 (0.042)	-0.038 (0.042)
(VAemployee <sub>t-1</sub> ) <sub>av</sub>	-0.019 (0.007)***	-0.019 (0.007)***	-0.019 (0.007)***
Ln(firmage) <sub>av</sub>	-0.003 (0.005)	-0.003 (0.005)	-0.003 (0.005)
Ln(employees <sub>t-1</sub> ) <sub>av</sub>	0.004 (0.002)*	0.005 (0.002)**	0.005 (0.002)**
Family firm <sub>av</sub>	-0.006 (0.010)	-0.007 (0.010)	-0.008 (0.010)
<i>R</i> <sup>2</sup>	0.35	0.35	0.35

Constant not reported. Second-stage firm fixed effect regression. Sector FE included. Robust SE in brackets. For other variable definitions, see Table 3. \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

Table 10: Second-stage FE reg. for the ability of the externally hired managers (external hires only)

Panel A	First-stage firm FE residual for individual ability (N=1406)		
	(1)	(2)	(3)
EGR	0.018 (0.010)*		
EGR <sub>av</sub>		0.024 (0.010)**	
EGR percent <sub>av</sub>			0.001 (0.000)**
Slope (basic)	1.445 (0.367)***	1.468 (0.367)***	1.474 (0.367)***
Slope (squared)	0.133 (0.039)***	0.135 (0.039)***	0.134 (0.039)***
(VAemployee <sub>t-1</sub> ) <sub>av</sub>	0.016 (0.011)	0.015 (0.011)	0.016 (0.011)
Ln(firmage) <sub>av</sub>	0.012 (0.005)**	0.011 (0.005)**	0.011 (0.005)**
Ln(employees <sub>t-1</sub> ) <sub>av</sub>	-0.011 (0.005)**	-0.012 (0.005)**	-0.012 (0.005)**
Family firm <sub>av</sub>	-0.040 (0.013)***	-0.038 (0.013)***	-0.038 (0.013)***
R <sup>2</sup>	0.34	0.34	0.34
Panel B: Wage change as additional control in first stage, coefficients for control variables not reported for sake of space			
EGR	0.006 (0.011)		
EGR <sub>av</sub>		0.010 (0.012)	
EGR percent <sub>av</sub>			0.000 (0.000)
<i>Controls</i>	Yes	Yes	Yes
R <sup>2</sup>	0.42	0.42	0.43
N	1338	1338	1338

“av” stands for period average. Constant not reported. Second-stage firm fixed effect regression. Sector FE included. Robust SE in brackets. For other variable definitions, see Table 3. \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

## APPENDIX

Table A1: Determinants of the share of externally hired among those newly appointed, OLS

	External hires as % of all newly appointed in year (t), those recruited from other firms in business groups counted as being recruited externally			
	(1)	(2)	(3)	(4)
EGR			-3.003 (1.059)***	
EGR percent				-0.081 (0.027)***
(VAemployee) <sub>t-1</sub>	0.457 (0.715)	0.271 (0.814)	0.351 (0.805)	0.327 (0.805)
Ln(firmage) <sub>t-1</sub>	0.177 (0.485)	-0.213 (0.504)	0.075 (0.506)	0.087 (0.507)
Ln(employees) <sub>t-1</sub>	-4.145 (0.466)***	-5.113 (0.496)***	-4.684 (0.541)***	-4.692 (0.534)***
Family firm <sub>t</sub>	2.285 (0.990)**	1.875 (1.014)*	1.182 (1.031)	1.102 (1.031)
Slope (basic)	-159.700 (35.124)***	-194.782 (38.106)***	-209.724 (38.117)***	-210.552 (37.964)***
Slope (squared)	-9.755 (4.636)**	-12.661 (5.111)**	-14.277 (5.257)***	-14.182 (5.211)***
N firms in group <sub>t</sub>	-0.105 (0.094)	-0.116 (0.094)	-0.110 (0.093)	-0.110 (0.093)
Newly appointed (%) <sub>t</sub>		-0.315 (0.021)***	-0.319 (0.020)***	-0.319 (0.020)***
INT pool (%) <sub>t-1</sub>		0.051 (0.031)*	0.058 (0.030)*	0.058 (0.031)*
Exits (%) <sub>t</sub>		0.134 (0.089)	0.124 (0.085)	0.124 (0.085)
Turnover (%) <sub>t</sub>		0.101 (0.025)***	0.101 (0.025)***	0.101 (0.025)***
R <sup>2</sup>	0.13	0.16	0.16	0.16
N	12849	12849	12849	12849

EGR is a dummy that is given the value 1 for firms with employee representation in governance, and 0 otherwise. EGR percent is the percent of employee elected directors on board. VAemployee is the value added per employees (in mio DKK). Slope is the firm-level estimate of the earnings-tenure slope for tenure (Slope) and tenure squared (Slope squared). N firms in group is the number of companies in the firms' business group. Newly appointed (%) is the percentage of newly appointed managers among all managers, INT pool (%) is the percentage of all individuals working on just below top-level managerial posts (as % of employees). Exits (%) is the percentage of employees exiting the firm in a given year; Turnover (%) is the difference between entries and exits in a given year, measures as percentage of employees at (t-1).

Year-industry and sector-industry fixed effects included. Constant not reported. Standard errors (reported in brackets) are clustered at firm level. \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

Table A2: Determinants of the share of externally hired among those newly hired (excluding the firms that only rely on internal promotions or external hiring)

	External hires as % of all newly appointed in year (t), restricted			
	(1)	(2)	(3)	(4)
EGR			-3.318 (1.071)***	
EGR percent				-0.091 (0.027)***
Ln(firmage) <sub>t-1</sub>	0.077 (0.489)	-0.370 (0.506)	-0.057 (0.509)	-0.036 (0.509)
Ln(employees) <sub>t-1</sub>	-3.883 (0.476)***	-4.908 (0.507)***	-4.435 (0.553)***	-4.435 (0.544)***
(VAemployee) <sub>t-1</sub>	0.537 (0.741)	0.390 (0.805)	0.477 (0.799)	0.452 (0.800)
Family firm <sub>t</sub>	2.429 (1.017)**	2.016 (1.039)*	1.252 (1.061)	1.146 (1.060)
Slope (basic)	-138.271 (35.847)***	-171.648 (38.243)***	-188.862 (38.615)***	-190.104 (38.368)***
Slope (squared)	-8.449 (4.810)*	-11.675 (5.187)**	-13.708 (5.439)**	-13.624 (5.368)**
N firms in group <sub>t</sub>	-0.458 (0.103)***	-0.465 (0.103)***	-0.458 (0.101)***	-0.457 (0.100)***
Newly appointed (%) <sub>t</sub>		-0.321 (0.021)***	-0.325 (0.020)***	-0.325 (0.020)***
INT pool (%) <sub>t-1</sub>		0.044 (0.032)	0.052 (0.031)*	0.052 (0.031)*
Exits (%) <sub>t</sub>		0.126 (0.078)	0.115 (0.074)	0.115 (0.073)
Turnover (%) <sub>t</sub>		0.078 (0.020)***	0.078 (0.019)***	0.078 (0.019)***
<i>R</i> <sup>2</sup>	0.13	0.16	0.16	0.16
<i>N</i>	12772	12772	12772	12772

EGR is a dummy that is given the value 1 for firms with employee representation in governance, and 0 otherwise. EGR percent is the percent of employee elected directors on board. VAemployee is the value added per employees (in mio DKK). Slope is the firm-level estimate of the earnings-tenure slope for tenure (Slope) and tenure squared (Slope squared). N firms in group is the number of companies in the firms' business group. Newly appointed (%) is the percentage of newly appointed managers among all managers, INT pool (%) is the percentage of all individuals working on just below top-level managerial posts (as % of employees at t-1). Exits (%) is the percentage of employees exiting the firm in a given year; Turnover (%) is the difference between entries and exits in a given year, measures as percentage of employees at (t-1).

Year-industry and sector-industry fixed effects included. Constant not reported. Standard errors (reported in brackets) and clustered at the firm level. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01

Table A3: Second stage FE regression with weighted controls

	First stage FE residual for the probability of a new manager being hired externally			
	(1)	(2)	(3)	(4)
EGR <sub>av</sub>	-0.062 (0.013)***	-0.032 (0.012)**	-0.045 (0.014)***	-0.050 (0.014)***
(VAemployee <sub>t-1</sub> ) <sub>av</sub>			-0.005 (0.014)	-0.003 (0.015)
Ln(firmage <sub>t-1</sub> ) <sub>av</sub>			-0.004 (0.007)	-0.007 (0.007)
Ln(Employees <sub>t-1</sub> ) <sub>av</sub>			0.025 (0.006)***	0.026 (0.006)***
Family firm <sub>(av)</sub>			0.031 (0.018)*	0.027 (0.018)
Slope (basic)				-1.585 (0.502)***
Slope (squared)				-0.076 (0.073)
R <sup>2</sup>	0.01	0.21	0.22	0.23
N	1603	1603	1602	1464

EGR is the share of years during which a firm has employee-elected directors on board, out of the entire period during which the firm is observed in the sample. VAemployee is the value added per employees (in mio DKK), calculated as the weighted period average. Family firm <sub>(av)</sub> is the share of years during which a firm is controlled by a family (as the main owner), out of the entire period during which the firm is observed in the sample. Slope basic is the firm-level estimate of the earnings-tenure slope for tenure (Slope) and tenure squared (Slope squared).

Second stage firm fixed effect regression Constant not reported. Robust SE reported in brackets. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01

Figure 1A: Kernel density diagram for the share of externally hired managerial employees in period: hiring from other firms in the business group considered as external hire

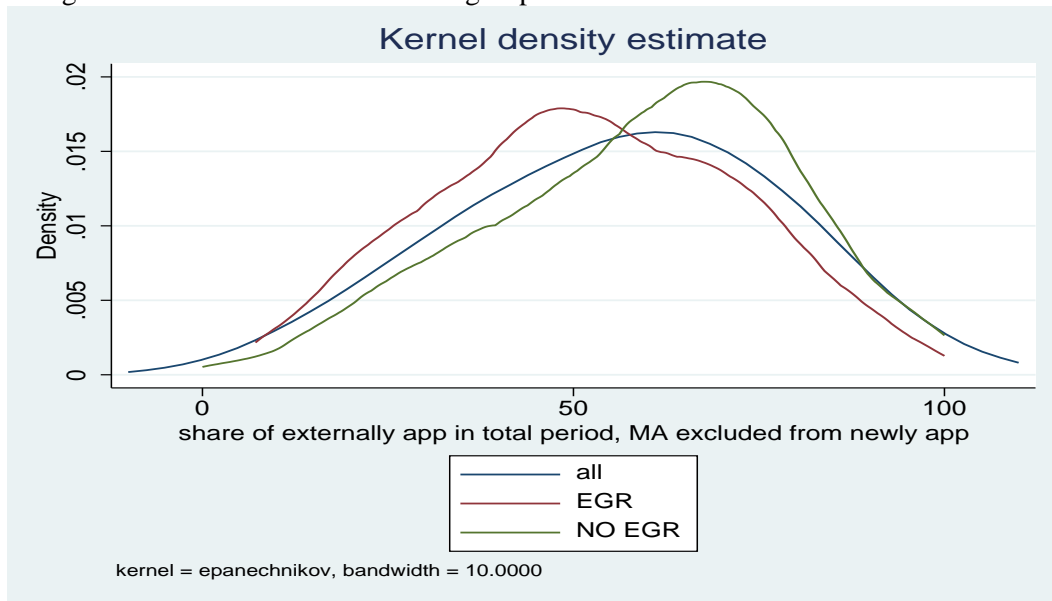


Figure 1B: Kernel density diagram for the share of externally hired managerial employees in period; recruitment from other firms in business group considered as internal promotions

