



Promoting men and women to management: Putting the glass escalator paradox in the establishment context

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A B S T R A C T

Research around the “glass escalator” demonstrates that men receive promotions faster than women in women-dominated occupations. However, it remains unclear how overall establishment composition affects the glass escalator. We use German longitudinal linked employer-employee data (LIAB) between 2012 and 2019 to examine how occupational and establishment gender composition shape gender differences in promotions to management. Establishment gender composition moderates the glass escalator, meaning women’s mobility disadvantages in women-dominated jobs are most pronounced in men-dominated establishments. We hypothesize that changing occupational status is a central mechanism: When occupations mirror the composition of the establishment, their status increases locally. Higher occupational status offsets lower leadership expectations attributed to women and increases women’s promotion odds relative to their male colleagues.

1. Introduction

Despite noticeable advances, women remain underrepresented in positions of workplace authority (e.g., [Dämmrich and Blossfeld, 2017](#); [Stainback and Tomaskovic-Devey, 2012](#)). Employees often reach positions of authority via promotions in their workplace ([Bidwell and Mollick, 2015](#)). However, access to managerial positions is gender- and context-specific. Prior research on occupational gender composition indicates that men move up faster than their female colleagues – especially in occupations dominated by women. [Williams \(1992\)](#) labeled this paradoxical phenomenon the “glass escalator,” where men in women-dominated occupations ride an invisible glass escalator that channels men into supervisory positions.

Organizational scholars highlight that occupations do not exist in a vacuum but within workplaces. However, we know little about how organizational context affects the glass escalator phenomenon. This paper draws on two closely related theories, relational inequality theory and status characteristics theory, to theorize the effect of establishment composition on the glass escalator phenomenon. Status characteristics theory (e.g., [Berger et al., 1992](#); [Ridgeway, 2011](#)) examines how status characteristics, such as gender and occupation, combine and shape perceptions of competence. Relational inequality theory ([Tomaskovic-Devey and Avent-Holt, 2019](#)) highlights how these interpersonal dynamics translate to workplace-level opportunity hoarding and social exclusion. These organizational power dynamics shape the distribution of leadership positions and the status of different tasks. Informed by such organizational perspectives, this paper examines *how the gender composition of establishments moderates the glass escalator phenomenon*. Put differently, we explore whether establishment composition affects the valuation of women-dominated jobs and how the higher status of women-dominated jobs affects gender gaps in transitions to management.

Our paper tests the effect of occupation and establishment gender composition using the German linked-employer-employee data (LIAB). The LIAB links an annual survey of German establishments with administrative records of all employees in these

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establishments. The combined data allow us to examine how employees' careers unfold in various establishment contexts. Our paper uses the 2012–2019 waves of the LIAB, which include 723,490 non-managerial employees working in 8543 establishments. We employ discrete-time event history analyses to examine the timing of employees' first firm-internal promotion to management.

We find that women's mobility disadvantages in women-dominated jobs diminish in women-dominated establishments. Our finding extends the glass escalator literature by showing that establishment context moderates the glass escalator. We also find that working in a women-dominated establishment does not benefit all women. Instead, women-dominated establishments increase the local status of women-dominated jobs, which benefits the women working in these jobs only. Our findings shed new light on prior firm gender composition literature, which we will discuss further in the conclusion.

2. Background

2.1. Studying gender promotion gaps in the German context

Managerial ranks in Germany include an increasing number of women, yet women are still underrepresented in leadership positions compared to their overall labor force participation. In 2019, women represented 44% of the German workforce but held only 40% of middle management and 26% of chief executive positions (Kohaut and Möller, 2019). In the same year, women's overall representation in management was slightly lower in Germany (29%) than in other OECD countries (34%), including the U.S. (41%) (OECD, 2023).

Regarding the legal landscape, Germany passed anti-discrimination legislation (*Allgemeines Gleichbehandlungsgesetz*) in 2006, prohibiting discrimination based on gender, sexuality, race, ethnicity, religion, age, or disability. Germany also legally mandated a 30% gender quota for executive boards of the 100 largest publicly traded companies in 2016 (BMFSFJ, 2017). Consequently, supervisory and executive boards did recruit more women – especially in firms subject to the quota. These trends, however, were already visible before mandatory quota laws (Kirsch and Wrohlich, 2020).

Despite a similar legal landscape and trends in managerial representation compared to other OECD countries, we expect Germany to be a conservative testing ground. Even after substantial declines in unionization, collective bargaining agreements still cover about half of all German workplaces (OECD, 2022; Schnabel, 2013). Additionally, Germany's occupational training system is more institutionalized than other in OECD countries (e.g., DiPrete et al., 2017; Müller and Gangl, 2003; Shavit and Müller, 1998), meaning many positions are limited to holders of occupation-specific degrees. These institutional constraints leave us with a conservative test of how establishment composition affects the glass escalator because prevailing institutional regulation likely limits supervisors' discretion over promotions compared to less regulated environments, such as the U.S.

2.2. The glass escalator

Below, we review existing research on the composition of occupations and workplaces. When referring to literature on occupational gender composition, we use the term “occupation” to describe bundles of tasks such as nursing or marketing. When referring to occupations in a specific establishment context, we use the term “job” to indicate that we are looking at establishment-occupation cells. Moreover, when referring to literature on firm gender composition, we use the term “firm” to describe entire work organizations, while we use the term “establishment” when discussing our linked-employer-employee data. Establishments are regionally and economically separate units; a single firm can have several establishments.

Moreover, we define managers as employees who supervise at least one employee or make strategic or budgetary decisions for their company (Paulus and Matthes, 2013). Like prior research (e.g., Dämmrich and Blossfeld, 2017; Jaffee, 1989; Malin and Wise, 2018), our definition of managerial jobs includes all positions with workplace authority, ranging from frontline supervision to middle and upper management in blue-, pink-, and white-collar occupations.

Research has long investigated how occupational gender composition affects employees' access to workplace authority. The glass escalator literature is at the heart of this research and examines men working in occupations numerically dominated by women, such as nursing, teaching, or social work (Williams, 1992, 2013). Clients, coworkers, and supervisors perform gender by encouraging men in these occupations to pursue higher-status supervisory or administrative positions. Ethnographic work observed that peers and supervisors gave men more decision-making tasks while stigmatizing men who preferred carework with children and the sick (Williams, 1992). Additionally, as male supervisors were often in the minority, they eagerly mentored new male employees, greatly accelerating men's careers in these occupations.

At the other end of the occupational spectrum, the “glass stepstool” literature found that women in men-dominated occupations, such as programming, were pushed into managerial positions (e.g., Alegria, 2019). The reversal illustrates how perceptions of managerial tasks shift depending on the environment. In women-dominated jobs, employees primarily see managerial jobs requiring leadership responsibilities and perceive management as stereotypically male-typed work. The same managerial positions were seen as

more appropriate for women in men-dominated jobs because supervision involves working with people and social skills, i.e., stereotypically feminine tasks. Quantitative studies using population data replicated qualitative results across national contexts and the full spectrum of occupations: Gender promotion gaps widen the more women work in an occupation (e.g., EU: [Dämmrich and Blossfeld, 2017](#); USA: [Jaffee, 1989](#); [Maume, 1999a](#); Israel: [Kraus and Yonay, 2000](#); Germany: [Malin and Wise, 2018](#)).¹

While the connection between occupational gender composition and gender gaps in promotions is well established, we know less about how establishment context affects this relationship. Establishment context matters because promotions are a critical organizational resource subject to organizational dynamics. As [Reskin et al. \(1999\)](#) point out: “Occupations [...] do not employ workers [...]. Instead,] establishments are both actors in employment decisions and the settings in which workers perform” (p. 336). Consequently, unique combinations of local policies, practices, and meanings can mute or amplify gender disparities in specific establishments ([Acker, 2006](#); [Tomaskovic-Devey and Avent-Holt, 2019](#)).

Due to data limitations, most studies on occupation-specific promotions cannot account for establishment context (except [Huffman 1995](#)). Most ethnographies focus on one or two workplaces, making it challenging to disentangle occupation and establishment effects. Likewise, quantitative research on occupational mobility often relies on household surveys, which typically lack workplace information. Thus, it is unclear how the demographic composition of establishments affects women’s mobility penalties in women-dominated jobs. Using employer-employee-linked data, we overcome prior data limitations and disentangle occupational dynamics in their establishment context.

2.3. Theorizing how establishment composition moderates the glass escalator

We draw on two closely related theories to predict how establishment composition affects the glass escalator phenomenon: Relational inequality theory ([Tomaskovic-Devey and Avent-Holt, 2019](#)) and status characteristics theory ([Berger et al., 1972](#); [Ridgeway, 2011](#)). These theories highlight two critical aspects regarding our research question: 1) People hold multiple status characteristics, and the effect of one characteristic may depend on another. 2) Establishment context changes the value of work tasks.

2.3.1. The glass escalator and the intersection between gender and job status

At the core of status characteristics theory are categorical distinctions between people – such as their gender or occupation. Once individuals sort people into categories, they often assign status to categories (e.g., [Berger et al., 1985, 1972](#)). Status distinctions shape performance expectations and provide a script for social interactions.

In this paper, we examine the intersection between two status characteristics: gender and occupational status. Gender (like race and age) is a primary status category and typically one of the first characteristics people will identify in social interactions. Cultural beliefs assign men higher diffuse social status and task-specific leadership competence than women, much of which happens non-consciously (e.g., [Moore et al., 2019](#); [Ridgeway, 2011](#); [Smith et al., 2019](#); [Wagner and Berger, 1997](#)).

Like gender, employees’ occupation also signals status and leadership competence. When men and women concentrate in specific occupations, status perceptions spill over to the occupation (e.g., [Berger et al., 1972](#); [England et al., 2007](#); [Webster et al., 1998](#)). Thus, [Freeland and Harnois \(2020\)](#) show that participants perceived individuals in men-dominated occupations as more competent. They found that perceived competency (“potency”) mediated the effect of occupational gender composition on average earnings. Consequently, working in women-dominated occupations conveys attributions of lower status and poorer leadership skills.

Multiple status characteristics are not simply additive (e.g., [Berger et al., 1992](#); [Pugh and Wahrman, 1983](#)). Instead, status expectations can be “sticky,” especially for high-status groups. When experimenters revealed low-status information, the status of (initially) high-status actors decreased less than that of initially low-status actors ([Burrill, 2021](#); [Paustian-Underdahl et al., 2014](#)). In contrast, when experimenters revealed high-status information about initially low-status participants, respondents fully incorporated the additional information to increase status expectations ([Burrill, 2021](#)). Findings are consistent with research on gendered “double standards,” where performance standards are more lenient for men (i.e., high-status actors) than for women (e.g., [Foddy and Smithson, 1999](#); [Foschi, 2000, 1996](#)).

Thus, we expect that higher occupational status increases promotion odds – particularly for women. Conversely, working in a lower-status occupation also amplifies women’s mobility disadvantages, meaning women are particularly unlikely to enter management when working in women-dominated occupations. Consequently, the intersection of gender and occupational status is consistent with the pattern captured by the glass escalator ([Williams, 1992](#)) and the broader phenomena of women encountering more mobility disadvantages in women-dominated occupations ([Dämmrich and Blossfeld, 2017](#); [Jaffee, 1989](#); [Kraus and Yonay, 2000](#); [Malin and Wise, 2018](#); [Maume, 1999a](#)). Casting the glass escalator phenomenon as the intersection of status characteristics helps us theorize how establishment context affects this intersection.

H1. (glass escalator): Women’s mobility disadvantages (relative to male colleagues) increase the higher the share of women in an occupation.

¹ Only a few studies suggest that women’s relative mobility chances are higher in mixed-gender occupations ([Hultin, 2003](#)) or women-dominated occupations ([Budig, 2002](#); [Huffman, 1995](#); [Huffman and Cohen, 2004](#)). Some of these studies use cross-sectional data ([Huffman, 1995](#); [Huffman and Cohen, 2004](#)) and thereby measure the representation of women in supervisory positions rather than mobility events. Other studies use longitudinal data, but they operationalize promotions by looking at occupational prestige ([Hultin, 2003](#)), earnings ([Maume, 1999b](#)), or they examine promotions into any jobs, including non-managerial positions ([Budig, 2002](#)).

2.3.2. Establishment context and occupational status

Relational inequality theory examines organizational processes in the light of status differences embedded in social relationships. Higher status enables actors to claim resources and sway organizational decisions. Therefore, status differences on the interpersonal level allow more powerful groups to engage in opportunity hoarding and social exclusion on the establishment level. Power dynamics shape what is considered valuable and who can claim valuable resources (Tilly, 1998; Tomaskovic-Devey and Avent-Holt, 2019).

While aggregated occupational prestige is relatively stable over time (Ganzeboom and Treiman, 1996; Treiman, 1977), workplace characteristics can change local job hierarchies (e.g., Kellogg, 2011; Nelsen and Barley, 1997; Vallas, 2006). Avent-Holt, Hällsten, and Cort (2019a) suggest that the gender composition of establishments is a characteristic able to impact jobs' local status. Specifically, using Swedish employer-employee data to examine pay differences, the study found that "men appear to bid up their occupational status when they dominate in the workplace" (Avent-Holt et al., 2019a, p. 8).² Thus, a numeric majority may allow women to redefine systems of meaning in favor of women-dominated jobs and to the disadvantage of men-dominated jobs.

More broadly, jobs may increase in status when they match the composition of the establishment as a whole. Two additional studies suggest that demographic similarity with their establishment increases jobs' relative status. Reichel et al. (2009) conducted an international survey of human resource (HR) departments in 1500 organizations across 17 countries. The organizational power of HR departments, measured via seats on the board, did not depend on the gender composition of the department or establishment alone. Instead, seats on the board increased with the demographic similarity between the department and the establishment. Likewise, examining workplace harassment, Repchuck and Young (2023) found that U.S. employees in jobs dissimilar from their establishments' gender composition reported more harassment than employees in jobs mirroring the establishment's gender composition. Workplace harassment often indicates relational power in organizations as more powerful groups harass less powerful ones (e.g., Rainey and Melzer, 2021). Together, these studies suggest that similarity between jobs and establishment – especially regarding a characteristic as salient as gender – can increase jobs' position in the local status hierarchy.

H2. (variable occupational status): The higher the percentage of women in an establishment, the more often employees in women-dominated transition to managerial positions.

We arrive at our final hypothesis by combining these two pieces. When jobs match the establishment composition, they receive a status boost. Higher local status, in turn, improves the jobs' ability to offset the attribution of lower status to women. Therefore, we expect women's mobility penalties in women-dominated occupations will weaken in establishments that employ more women. Consequently, the glass escalator should weaken in women-dominated establishments because the penalty attached to women-dominated jobs wanes, thereby disproportionately lifting women in these jobs.

H3. The higher the percentage of women in an establishment, the smaller women's mobility disadvantages (relative to male colleagues) in more women-dominated jobs.

By focusing on the role of establishment gender composition, our research differs from related work examining female managers' roles. Women-dominated establishments typically employ more women in managerial positions (e.g., Chambliss and Uggen, 2000; Taylor et al., 2019). Current women in management may act as "agents of change" and lift other women into managerial ranks (e.g., Cohen et al., 1998; van Hek and van der Lippe, 2019). We hypothesize that establishment gender composition influences gendered patterns of career mobility above and beyond gender composition of management, and we will use one of our robustness checks below to evaluate this claim more specifically.

Similarly, gender differences in promotions may be an artifact of differences between mothers and fathers (Ochsenfeld, 2012). Mothers are more likely than fathers to take parental leave or work part-time – especially in Germany, where tax and family policies facilitate traditional gender division of care labor (Aisenbrey et al., 2009; Musick et al., 2020). Motherhood penalties arise because taking parental leave or working part-time violates the ideal worker norm, resulting in fewer managerial promotions (e.g., Beham et al., 2020; Williams et al., 2013). In the robustness checks, we assess how much our effects are due to gender or motherhood.

3. Data, measurement, and analytical strategy

3.1. Data

We use linked employer-employee data (LIAB) from the German Institute for Employment Research (IAB) (Ruf et al., 2021) to examine how job and establishment composition shape men's and women's access to managerial ranks. The LIAB is a longitudinal and representative panel of German establishments (Bechmann et al., 2021). Each year, the IAB conducts survey interviews with participating establishments (typically with the head of HR or other leadership). Response rates for returning establishments are around 75%.

The LIAB then links the establishment-level survey with detailed social security records for all employees in participating establishments as of June 30 each year. Employee information includes age, gender, citizenship, education, detailed occupation, part-time status, and daily gross pay. Employee data is linked across years via a unique person identifier (Ruf et al., 2021). The LIAB represents the universe of German establishments that employ at least one employee subject to payroll taxes. Because the LIAB generates

² Similar trends for education or nationality did not reach significance.

employee-level information based on social security records, our data excludes the following establishment types that are not subject to social security contributions: Establishments run by a sole proprietor or a partnership of self-employed individuals, establishments that only employ workers on marginal contracts (<450 Euro/month), or that only employ civil servants.

We restrict our analyses to managerial promotions between 2012 and 2019 because these waves use the 2010 German occupational classification system (KldB-2010). The KldB 2010 identifies managers and supervisors across all occupations, including blue-collar and trade occupations (Paulus and Matthes, 2013). Similar to other organizational studies (e.g., Tomaskovic-Devey and Melzer, 2020), we exclude establishments with less than 20 employees because indicators of gender composition are less reliable in smaller establishments. Our final analysis examines 723,490 non-managerial employees working across 8543 establishments for 2,063,760 person-years.

3.2. Measurements

3.2.1. Dependent variable

Our key outcome is the employees' first transition to management. Like Malin and Wise (2018), we code this variable as "1" when employees transition from a non-managerial position to management. We use the employees' occupational code to determine whether employees have workplace authority. The KldB-2010 sets the fourth occupational digit to a "9" when employees supervise others or make major budgetary or strategic decisions (Paulus and Matthes, 2013). Managerial jobs captured by this scheme include positions such as supervisors in metal-making, managers in schools of general education, or managers in advertising and marketing. Additionally, we code the following occupations as managerial: managing directors and executive board members (code 7110), legislators (code 7121), and senior officials of special interest organizations (code 7122). This coding scheme identifies anyone with workplace authority across the occupational spectrum (similar to Dämmrich and Blossfeld, 2017; Huffman and Cohen, 2004; Malin and Wise, 2018). Since the LIAB relies on establishments to update occupational codes on administrative records, we likely underidentify managerial transitions.

3.2.2. Central explanatory variables

We use three central explanatory variables. *Employees' gender* is based on administrative records, which only record employees' legal gender as men or women during our observation period. *Gender composition of jobs* measures the percentage of women in a specific occupation-establishment cell based on 36 two-digit occupational groups.³ *Gender composition of establishments* measures the percentage of women in an establishment. We calculated job and establishment gender composition each year by aggregating employee-level administrative records within each establishment. Both composition measures are lagged by a year to measure the gender composition before employees move into management.⁴

3.2.3. Control variables

Our control variables include employee-, job-, and establishment-level characteristics. The employee-level control variables include demographics and human capital measures. We control for country of *citizenship* (Germany, South Europe and Balkan, Central/Northern Europe and North America, East Europe, and countries in Africa, Asia, Oceania, or South America), *age*, and *age squared*. We use two measures for educational attainment. The variable *upper secondary degree* is coded "1" for respondents who completed an upper secondary degree ("Abitur"), meaning they graduated in 12th or 13th grade. The measure is "0" for employees who completed a lower secondary degree ("Hauptschule" or "Realschule") or dropped out. Additionally, we group employees' highest *occupational degrees* into three categories: no occupational degree, vocational training, or university degree. We follow Fitzenberger et al. (2005) and use employees' educational information in earlier or later years to replace missing education in specific waves.

We include employees' years of *establishment tenure* and assess their potential labor market experience at hire by subtracting years of education from their age at establishment entry (minus six years). Our analyses further control for employee's *part-time* and *temporary* employment status.

Our analyses indicate *employment gaps* with the current employer before the current observation. For instance, we may observe an employment spell for several years, but the individual does not appear as an employee for one or more years. Gaps come about for many reasons, such as when employees temporarily switch to a different branch, change employers, or become independent contractors. Notably, women have such gaps when they take statutory maternity leave. We control for gaps in our analysis because the LIAB does not record reasons for gaps, even though factors leading to gaps are gendered.

The job-level control variables include *job holders' average education*, which measures the average years of schooling of all individuals working in the same occupation and establishment. We include two measures to assess the numerical power of a job vis-à-vis other jobs: The continuous *percent of the workforce employed in an employee's job* and a dichotomous variable that is "1" when respondents are *employed in the job with the most employees in the establishment*. These variables account for the idea that the numerical dominance of occupations varies between industries and establishments.

³ In additional analyses, we used the gender composition of the occupation across the entire labor market (instead of establishment-occupation cells). Results were substantively the same.

⁴ In additional analyses, we also tested for non-linear effects and grouped job and establishment composition into three categories: 0–30% women, 31–70% women, and 71–100% women. Effects still approached linearity, meaning mixed jobs and establishments always fell between women- and men-dominated jobs and establishments.

We account for three sets of establishment-level controls. First, establishment demographics include twelve *industry* dummies, sixteen *federal state* dummies, and six *establishment-size dummies* (20–49, 50–99, 100–199, 200–499, 500–999, 1000+ employees subject to social security contributions). We also control for *the relative change in establishment size*, *establishment age* (0–4, 5–10, 10–20, 20+ years), and establishment's *legal form*. Legal forms include individually owned firms, partnerships, limited partnerships, capital corporations, public corporations, and other forms.

Second, we account for personnel practices and other institutional arrangements using the following dummy variables: Whether the establishment has an *employee council*, whether a *collective bargaining contract* is in place, and whether the establishment is a member of the *Chamber of Trade*, *Chamber of Commerce*, or *another chamber* (i.e., organizations representing industry interests). We further control for formalized employment practices based on six questions regarding written rules and plans for organizational development, staffing needs, job descriptions, hiring procedures, employee goal setting, and performance reviews. We count how many procedures establishments formalized and break the index into four categories (0, 1–3, 4–6 written policies, and missing information).

Third, we attempt to disentangle the effect of establishment gender composition from other closely related variables, such as job segregation and managerial intensity (Taylor et al., 2019). Consequently, we include a *dissimilarity index*, which measures gender job segregation in each establishment. Our models also include *managerial intensity*, which is the percentage of employees in the establishment holding managerial positions, and the *percentage of women in management*. We lagged all three composition variables by a year. Finally, all models include *year fixed effects*.

3.3. Analytical strategy

The LIAB only collects employee data annually without recording the exact date when employees move positions. Consequently, we employ discrete-time event history models to examine the effect of job- and establishment-level gender composition on managerial transitions. More precisely, we estimate logistic regression models for the probability that an employee receives a promotion at a particular time, given that they have not yet been promoted to management. This conditional probability is the discrete-time hazard rate.

Table 1

Sample descriptives: Employee and job characteristics.

Variable	Men		Women	
	Share /Mean	Std. Dev.	Share /Mean	Std. Dev.
Promotions to management	2.00%	–	0.90%	–
Job gender composition				
% Women in job (continuous)	23%	24.5	66%	24.6
% Women in job (categorical)				
0–24% Women	66%	–	9%	–
25–49% Women	17%	–	16%	–
50–74% Women	11%	–	29%	–
75–100% Women	6%	–	46%	–
Employee characteristics				
Years of establishment tenure	5.9	5.2	5.2	4.8
Age	38.8	10.7	39.7	11.1
Country of citizenship				
Germany	91%	–	93%	–
South Europe/Balkans	5%	–	3%	–
Central/North Europe and North America	1%	–	1%	–
East Europe	2%	–	2%	–
Africa, Asia, Oceania, South America	1%	–	1%	–
Secondary degree				
Drop-out or lower secondary degree	59%	–	49%	–
Upper secondary degree (“Abitur”)	41%	–	51%	–
Occupational degree				
No occupational degree	5%	–	5%	–
Vocational training	68%	–	65%	–
University degree	27%	–	30%	–
Years of labor market experience at establishment entry	13.1	10.5	14.1	11.3
Observation gap	8%	–	9%	–
Part-time employed	8%	–	43%	–
Fixed-term contract	19%	–	28%	–
Job characteristics				
Average years of schooling in job	13.5	1.8	14.2	1.7
Employed in job with most employees in establishment	50%	–	56%	–
% of Employees in focal job	34%	27.1	42%	30.7
N (employees)	424,912		298,578	

Note: Gender differences reach statistical significance ($p < 0.001$) for all variables in this table.

Our models estimate the chances of transitioning to management between 2012 and 2019 because the 2010 occupational classification identifies management positions more accurately than the prior classification. The risk set focuses on employees working in non-managerial positions. To capture employees at various career stages during our analysis period (2012–2019), we include non-managerial employees who entered the establishment before 2012 if they had not transitioned to management before our analysis period. While the pre-2012 occupational classification is too broad to estimate specific transition rates, we are confident it will at least identify transitions to mid and upper-management positions.

Alternatively, we could restrict our sample to individuals hired in or after 2012, but that would limit observations to the first seven years of establishment tenure. Because managerial promotions occur on average after about seven years of tenure, our analyses would only capture effects among early movers. To avoid this narrow focus, we include employees hired between 1993 and 2011 to capture all movers.

By including employees hired before 2012 (but not promoted into managerial positions before 2012), our sample over-represents low-risk cases and excludes individuals who ‘failed’ before the first observation (i.e., they were promoted to management before 2012). To account for this selection bias, we use a conditional likelihood approach that conditions the probability of a left-truncated case having survived to the observation start in 2012 on the time employees had spent in the pre-observation period (Guo, 1993). Our baseline hazard is a quadratic function of employees’ establishment tenure, allowing for non-linear changes in promotion probabilities as tenure increases.

To account for the nested nature of our data, we cluster standard errors within establishments. Moreover, since the logit function is non-linear, the effect of an explanatory variable is not constant but depends on the magnitude of the variable itself. The coefficients of logit estimations are thus challenging to interpret. The interpretation of interaction effects is complex because differences across groups may be due to actual differences in effect size or unobserved heterogeneity between the groups (Allison, 1999). One solution is to analyze the predicted probabilities instead, i.e., the probability that an employee moves to management at different values of our explanatory variables in a given year. Predicted probabilities are unaffected by residual variation, and we can compare them across groups (Long, 2009; Long and Mustillo, 2018). We will, therefore, display predicted annual promotion probabilities.

4. Results

4.1. Sample means and standard deviations

Table 1 provides an overview of our employee-level characteristics. Descriptive statistics show that jobs are quite segregated by gender. 66% of men and 9% of women work in men-dominated jobs (<25% women). Conversely, 6% of men and 46% of women work in women-dominated jobs (>75% women).

Regarding transitions to managerial positions, men are more likely to receive promotions than women. During our observation period, an average of 2% of men and only 0.9% of women transitioned from a non-managerial to a managerial position. To provide context, establishments typically employ 6.8% of their workforce in managerial positions (see Table 2). Managerial positions may only open once every few years and may be filled via a lateral move, meaning no one transitions from non-management into management.

Even when transitions occur slowly, differences accumulate and have lasting consequences. Managerial promotions lead to substantial increases in pay, and pay remains high in subsequent years. Thus, annual gender differences in who gets promoted potentially contribute to gradually widening gender pay gaps among employees post-hire (Kronberg, 2020; Kronberg and Gerlach, 2023). Similarly, initial differences in promotions lead to lasting differences in managerial composition and long-term associations regarding women’s leadership competence. Women’s underrepresentation in management may also affect their supervisees’ career outcomes (e.g., Fuller and Kim, 2023; Huffman et al., 2010; Kurtulus and Tomaskovic-Devey, 2012).

Table 2 shows the characteristics of the 8543 establishments in our sample. About 36% of our establishments are heavily men-dominated (<25% women), while only 17% are heavily women-dominated (>75% women). Please see Tables 1 and 2 for descriptive statistics on all variables in our analyses. For correlations between selected variables, see Table S1 in the Supplement.

4.2. Overall effect of employees’ gender and gender composition of jobs and establishments

Table 3 includes the main effects of our three central variables and then adds employee, job, and establishment controls. Negative coefficients from the discrete-time event history model indicate a hazard reduction, meaning these predictors decrease transition chances. Positive coefficients identify factors that increase employees’ chances of promotion.

Our initial model without control variables indicates that women are significantly less likely than men to move from non-managerial to managerial positions ($b_{m1} = -0.555$). Moreover, employees in women-dominated jobs transition more often compared to jobs with no women ($b_{m1} = 0.009$), and there are slightly fewer promotions in establishments with more women ($b_{m1} = -0.018$).

In Model 2, we add all employee characteristics, including education, labor market experience, age, citizenship, part-time status, temporary status, and employment gaps. Adding these variables improves the model’s overall explanatory power, and the effect of gender and gender composition weakens slightly. The effect of our key explanatory variables remains relatively stable in Model 3, where we add job-level controls, including years of schooling in the occupation and numeric strength of the job in the specific establishment (as a continuous percentage and a yes/no indicator for the largest occupation).

Next, we add establishment-level controls in Model 4. The effect of gender and job gender composition remains similar. However, establishment composition becomes non-significant and trends in the opposite direction. Establishment controls included

Table 2
Sample descriptives: Establishment characteristics.

Variables	Share/Mean	Std. Dev.
% Women in the establishment (continuous)	43%	27%
% Women in the establishment (categorical)		
0–24% Women	36%	–
25–49% Women	22%	–
50–74% Women	25%	–
75–100% Women	17%	–
Establishment Size		
20–49 SSN employees	31%	–
50–99 SSN employees	21%	–
100–199 SSN employees	19%	–
200–499 SSN employees	19%	–
500–999 SSN employees	6%	–
1000+ SSN employees	5%	–
% Change in number of employees	–0.05	4.5
Establishment age in years		
0–4 Years	4%	–
5–9 Years	7%	–
10–13 Years	6%	–
14+ Years	81%	–
Missing information	1%	–
Legal organization form		
Individually owned firm	2%	–
Partnership	2%	–
Limited partnership	68%	–
Capital corporation	4%	–
Public corporation	14%	–
Other form	9%	–
Official work council: Yes	57%	–
Collective bargaining agreement: Yes	58%	–
Member of chamber: Yes	76%	–
Level of bureaucratization		
No written policies	10%	–
1–3 written policies	29%	–
4–6 written policies	50%	–
Missing information	11%	–
Dissimilarity index	49.2	26.6
% of Women in management	27%	32.1
Managerial intensity	7%	6.1
N (establishments)	8543	

Note: SSN employees = employees who pay social security contributions.

establishment size, age, industry, location, legal form, collective bargaining, formalization of personnel practices, occupational segregation, managerial intensity, and women's representation in management.

4.3. Intersection of gender and gender composition of jobs and establishments

Next, we add interactions between our explanatory variables in Table 4 to test our hypotheses. We hold constant all employee, job, and establishment variables discussed in Section 3.2.3. We begin by examining Model 5, which includes the interaction between gender and job composition. Fig. 1 shows the predicted annual transition rates based on Model 5. The gray line indicates women's annual probability of promotion, while the black line shows men's probability. As the percentage of women in a job increases, men's predicted transitions to management increase noticeably, while women's transition rates stay the same. Thus, as Hypothesis 1 and the glass escalator literature predicted, gender promotion gaps widen significantly in more women-dominated jobs ($b_{m5} = -0.010$, $p < 0.001$).

While the annual transition probabilities appear small in Fig. 1, it is important to note that they compound considerably when

Table 3
Discrete-time EHA: Determinants of promotion to management, main effects.

	Model 1: No controls	Model 2: Employee Controls	Model 3: Job Controls	Model 4: Establishment Controls
Main Effects				
Women	−0.555*** (0.097)	−0.365*** (0.104)	−0.379*** (0.105)	−0.389*** (0.107)
% Women in job	0.009*** (0.001)	0.005*** (0.001)	0.005*** (0.001)	0.005*** (0.001)
% Women in the establishment	−0.018*** (0.004)	−0.012** (0.004)	−0.008* (0.004)	0.008 (0.005)
Employee characteristics				
Establishment tenure	0.139*** (0.017)	0.075 (0.043)	0.074 (0.044)	0.074 (0.040)
Establishment tenure squared	−0.006*** (0.001)	−0.005** (0.002)	−0.005** (0.002)	−0.005*** (0.001)
Survey year	yes	yes	yes	yes
Age	−	0.201*** (0.027)	0.207*** (0.027)	0.197*** (0.023)
Age squared	−	−0.002*** (0.0003)	−0.002*** (0.0004)	−0.002*** (0.000)
Country of citizenship (Ref: Germany)				
South Europe/Balkans	−	−0.302*** (0.078)	−0.300*** (0.072)	−0.262*** (0.065)
Central/North Europe/North America	−	0.066 (0.178)	0.089 (0.184)	0.035 (0.147)
East Europe	−	−0.362** (0.129)	−0.307* (0.128)	−0.341** (0.115)
Africa, Asia, Oceania, South America	−	−0.370* (0.154)	−0.326* (0.151)	−0.393*** (0.100)
Upper secondary degree	−	0.038 (0.107)	0.068 (0.095)	0.076 (0.083)
Occupational degree (Ref. no degree)				
Occupational training	−	0.038 (0.131)	0.026 (0.131)	−0.019 (0.103)
University degree	−	0.994*** (0.182)	0.986*** (0.193)	0.766*** (0.133)
Labor market experience at estab. entry	−	−0.067*** (0.015)	−0.070*** (0.014)	−0.074*** (0.012)
Gap in estab. employment	−	1.564*** (0.194)	1.553*** (0.189)	1.483*** (0.121)
Part-time employed	−	−1.046*** (0.153)	−1.029*** (0.152)	−1.003*** (0.122)
Fixed-term contract	−	−0.319 (0.654)	−0.232 (0.664)	0.107 (0.786)
Job characteristics				
Average years of schooling in job	−	−	−0.054 (0.033)	−0.048 (0.035)
Employed in job with most employees in establishment	−	−	0.292 (0.630)	0.191 (0.640)
% of Employees in focal job	−	−	−0.014 (0.011)	−0.008 (0.011)
Establishment characteristics				
Change in size	−	−	−	0.004 (0.008)
Establishment size (categorical)	−	−	−	yes
Establishment age	−	−	−	yes
Industry	−	−	−	yes
Federal state	−	−	−	yes
Legal form	−	−	−	yes
Official work council	−	−	−	−0.136 (0.127)
Collective agreement	−	−	−	−0.064 (0.122)
Member of chamber	−	−	−	0.077 (0.134)
	Model 1: No Controls	Model 2: Employee Controls	Model 3: Job Controls	Model 4: Establishment Controls

(continued on next page)

Table 3 (continued)

	Model 1: No Controls	Model 2: Employee Controls	Model 3: Job Controls	Model 4: Establishment Controls
Bureaucratization index (Ref: no written policies)				
1–3 written policies	–	–	–	0.088 (0.171)
4–6 written policies	–	–	–	0.172 (0.159)
missing	–	–	–	1.130*** (0.257)
Dissimilarity index	–	–	–	–0.001 (0.004)
% of Women in management	–	–	–	0.004 (0.003)
Managerial intensity	–	–	–	0.063*** (0.007)
Constant	–5.260*** (0.275)	–9.301*** (0.432)	–8.54*** (0.606)	–10.57*** (1.175)
N (person-years)	2,063,760	2,063,760	2,063,760	2,063,760
BIC	139,137	128,696	128,237	123,708
Log-likelihood	–69,481	–64,166	–63,915	–61,287
		Model 1: No controls	Model 2: Employee	Model 3: Job
Job characteristics		–	–	–0.054 (0.033)
Average years of schooling in job				–0.048 (0.035)
Employed in job with most employees in establishment		–	–	0.292 (0.630)
% of Employees in focal job		–	–	–0.014 (0.011)
Establishment characteristics				
Change in size		–	–	0.004 (0.008)
Establishment size (categorical)		–	–	yes
Establishment age		–	–	yes
Industry		–	–	yes
Federal state		–	–	yes
Legal form		–	–	yes
Official work council		–	–	–0.136 (0.127)
Collective agreement		–	–	–0.064 (0.122)
Member of chamber		–	–	0.077 (0.134)
Bureaucratization index (Ref: no written policies)				
1–3 written policies		–	–	0.088 (0.171)
4–6 written policies		–	–	0.172 (0.159)
missing		–	–	1.130 *** (0.257)
Dissimilarity index		–	–	–0.001 (0.004)
% of Women in management		–	–	0.004 (0.003)
Managerial intensity		–	–	0.063 *** (0.007)
Constant		–5.260 *** (0.275)	–9.301 *** (0.432)	–8.54 *** (0.606)
N (person-years)		2,063,760	2,063,760	2,063,760
BIC		139,137	128,696	123,708
Log-likelihood		–69,481	–64,166	–63,915

Note: Standard errors in parentheses. *p < 0.05, **p < 0.01, ***p < 0.001.

Table 4
Discrete-time EHA: Determinants of promotion to management, interaction effects.

	Model 5: Gender * Job	Model 6: Gender * Establishment	Model 7: Job * Establishment	Model 8: Gender * Job * Establish.
Women	0.040 (0.154)	-0.287 (0.172)	-0.396 *** (0.110)	0.663 * (0.278)
% Women in job	0.008 *** (0.002)	0.005 *** (0.001)	-0.001 (0.003)	0.006 (0.004)
% Women in estab.	0.009 (0.005)	0.010 * (0.005)	-0.0004 (0.005)	-0.001 (0.006)
% Women in estab. * % women in job	-	-	0.0002 * (0.0001)	0.0001 (0.0001)
Woman * % women in job	-0.010 *** (0.003)	-	-	-0.032 *** (0.006)
Women * % women in estab.	-	-0.003 (0.003)	-	-0.014 (0.008)
Women * % w in estab. * % women in job	-	-	-	0.0004 * (0.0001)
Controls				
Establishment tenure	0.074 (0.040)	0.074 (0.040)	0.073 (0.040)	0.075 (0.041)
Establishment tenure squared	-0.005 *** (0.001)	-0.005 *** (0.001)	-0.005 *** (0.001)	-0.005 *** (0.001)
Employee controls	yes	yes	yes	yes
Job controls	yes	yes	yes	yes
Establishment controls	yes	yes	yes	yes
Survey year	yes	yes	yes	yes
Constant	-10.62 *** (1.193)	-10.61 *** (1.183)	-10.39 *** (1.152)	-10.43 *** (1.151)
N (person-years)	2,063,760	2,063,760	2,063,760	2,063,760
BIC	123,594	123,714	123,649	123,378
Log-likelihood	-61,223	-61,283	-61,250	-61,093

Note: Standard errors in parentheses. *p < 0.05, **p < 0.01, ***p < 0.001, models include all employee, job, and establishment control variables discussed in section 3.2.3.

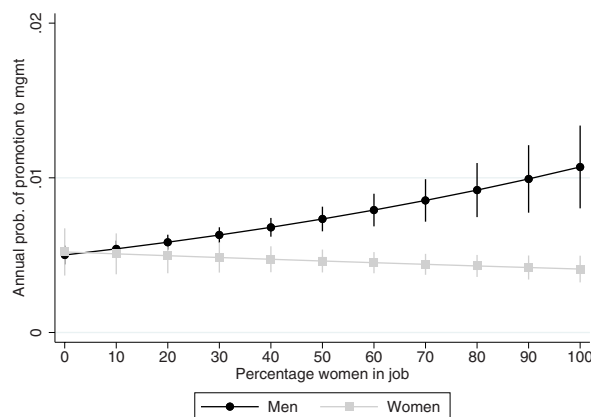


Fig. 1. Predicted promotion probability for men and women, by job gender composition. Note: Predicted probability based on Model 5 in Table 4. The multivariate model accounts for all employee, job, and establishment characteristics discussed in section 3.2.3.

computing the cumulative probability of receiving a promotion across our study's entire seven-year observation window.⁵ The length of our observation window also roughly corresponds to the average firm tenure at which employees receive promotions. In jobs where women comprise 20% of the workforce, 4.0% of men and 3.4% of women receive promotions during our observation period. Gender promotion gaps widen noticeably in jobs where women comprise 80% of employees. Here, 6.3% of men transition to management within seven years, but only 3.0% of women do.

Model 6 interacts gender and establishment composition to examine whether establishment composition affects women's overall status in the organization. The non-significant interaction between gender and establishment gender composition ($b_{m6} = -0.003$, $p = 0.319$) suggests that gender promotion gaps are independent of establishment composition. Hence, working in a women-dominated establishment does not benefit women across the board.

Model 7 interacts gender composition of jobs and establishments. The combined effect of job and establishment is slightly positive and significant ($b_{m7} = 0.0002$, $p = 0.016$). Promotions go to women-dominated jobs somewhat more frequently when these jobs are located in women-dominated establishments. This finding is consistent with Hypothesis 2, which predicted that women-dominated jobs will gain status in women-dominated establishments.

Our final Model 8 addresses Hypothesis 3, which predicted that women's mobility disadvantages in women-dominated jobs weaken when establishments employ more women overall. We introduce a three-way interaction between gender, job composition, and establishment composition. While our model estimates transition rates for the entire spectrum of establishments, we illustrate effects using two examples in Fig. 2: Men-dominated establishments employing 25% women (dashed lines) and women-dominated establishments employing 75% women (solid lines).

Consistent with Hypothesis 3, the glass escalator phenomenon varies depending on establishment composition. Gender promotion gaps in more women-dominated jobs are substantially wider when embedded in a men-dominated establishment than when embedded in a women-dominated establishment. For instance, when focusing on jobs where 80% of employees are women, men are promoted four times more often than their female colleagues when they work in an establishment employing primarily men. This means 6.4% of men receive a promotion within seven years, but only 1.5% of women move to management.

If that same job is in an establishment with a women-dominated workforce, men are "only" promoted 1.8 as often as their female colleagues and the difference is not statistically significant. Specifically, 9.7% of men and 5.3% of women will transition to management cumulated over seven years. Thus, establishments moderate the glass escalator pattern. Women's disadvantages in women-dominated jobs are most pronounced in men-dominated establishments.

Additionally, Fig. 2 speaks to our proposed theoretical mechanism. Building on relational inequality theory, we argued that the status of jobs will increase when their composition mirrors the gender composition of the establishment (H2). Building on status characteristics theory, we expected that changing occupational status primarily affects women. Consistent with our expectations, men generally benefit from working in more women-dominated jobs, irrespective of the establishment's gender composition (black lines). In contrast, the effect of job composition on women's promotion chances (gray lines) depends on the gender composition at the establishment. Women's probability of receiving a promotion to management is higher when they work in jobs that mirror their establishment's gender composition, with the similarity potentially providing a status boost. When jobs mismatch establishments' gender composition (e.g., women-dominated jobs in men-dominated establishments), jobs potentially receive status penalties, amplifying lower performance expectations attributed to women. Consequently, women's probability of promotion drops considerably with a greater mismatch.

In summary, two key findings emerge. First, establishments moderate women's mobility disadvantages in more women-dominated occupations (i.e., the glass escalator phenomenon) such that disadvantages are most pronounced in establishments employing more men. Second, women are particularly sensitive to the intersection of job and establishment composition. Women's chances of promotion are significantly better when they work jobs that mirror the establishment's gender composition. In contrast, men's transition rates increase with the percentage of women in the job regardless of establishment gender composition.

4.4. Robustness checks

4.4.1. Share of women in managerial positions

Establishment composition might affect who gets promoted via the composition of managerial ranks if female supervisors hire more women (e.g., Cohen et al., 1998; Tomaskovic-Devey et al., 2009). We already control for the percentage of women in managerial positions in the prior analyses to account for average differences in composition across firms. However, to examine whether women's promotion chances depend on the managerial gender composition, we estimate a model with two three-way interaction terms (see Table S2 in the Supplement): One three-way interaction between employee gender, job, and establishment gender composition and a

⁵ In any event history analysis, the cumulative probability $F(t)$ of experiencing the event of interest within a time span t is defined as the complement of the survivor function $G(t)$, i.e. $F(t) = 1 - G(t)$. In a discrete-time model, $G(t) = \prod_{j=1}^t (1 - r_j)$ so that $F(t) = 1 - \prod_{j=1}^t (1 - r_j)$. When

treating the hazard rate r as time-constant, this equation further simplifies to $F(t) = 1 - (1 - r)^t$. To convey the magnitude of estimated effects in what might be a substantively more meaningful quantity than the point-in-time transition rates themselves, we will use this latter simplification throughout. The event history models that we have been estimating do allow for duration dependence in the hazard rate, but we prefer to ignore this additional statistical subtlety when trying to illustrate the main findings from our study in a reasonably parsimonious way.

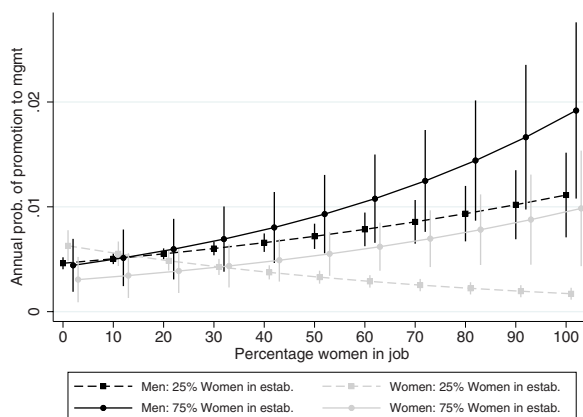


Fig. 2. Predicted promotion probability for men and women, by job and establishment composition. Note: Predicted results based on Model 8 in Table 4. The multivariate model accounts for all employee, job, and establishment characteristics discussed in section 3.2.3.

second three-way interaction between gender, job, and management gender composition. When we include interactions with the percentage of women in managerial ranks, the effect of establishment composition becomes weaker, but the substantive pattern remains. Thus, while managerial gender composition partially accounts for our findings, establishment composition operates above and beyond managerial composition.

4.4.2. Motherhood penalty

Mothers in Germany often interrupt or reduce employment after childbirth (Musick et al., 2020). Consequently, motherhood may drive the overall gender gap in managerial promotions. Because the standard LIAB data do not include parental or marital status, the German Institute for Employment Research (IAB) developed an indirect identification of childbirth using health insurance records (Müller and Strauch, 2017).⁶ While this measure is relatively imprecise and only identifies 40–70% of all births for women aged 20–38, it is still the closest approximation of parental status in the LIAB. The measure also does not identify new children for fathers. Nevertheless, because parenthood primarily affects women's mobility (Stojmenovska and England, 2020), we believe controlling motherhood is better than not controlling parental status at all. We limit our analyses from 2012 to 2017 because we only have information on motherhood for this period.

To disentangle the effect of gender versus motherhood, we ran analyses with an additional three-way interaction between motherhood, job, and establishment composition. Results (see Table S3 in the Supplement) suggest that we cannot attribute our results from Fig. 2 to mothers and their selection into specific careers and establishments. Instead, we see that even after including the additional interactions for mothers, the effects for women without children resemble Fig. 2.

5. Discussion and conclusion

This paper examined how occupations and establishments intersect to shape men's and women's transitions into managerial and supervisory positions. Specifically, we focus on the glass escalator phenomenon, highlighting that men's mobility advantages are greatest in women-dominated occupations. Drawing on status characteristics and relational inequality theory, we recast the glass escalator as an intersection between two status characteristics (gender and occupation) in the establishment context. Thus, the paradoxical pattern of women receiving fewer promotions in women-dominated jobs is due to the low status associated with women-dominated jobs, which amplifies low expectations for leadership competence attributed to women.

Overall, our findings replicate the glass escalator pattern, where gender promotion gaps grow wider when the share of women in a job increases (Hypothesis 1). However, establishment gender composition moderates the glass escalator such that women's mobility disadvantages in women-dominated jobs are particularly pronounced in men-dominated workplaces (Hypothesis 3). For example, when women-dominated jobs (80% women) are located in women-dominated establishments (75% women), nearly 10% of non-managerial men transition to management within seven years, while only 5.3% of women do so. Thus, men's cumulative probability of transitioning to management in women-dominated establishments is nearly twice as high as their female colleagues. Gender promotion gaps in women-dominated jobs widen even more in establishments primarily employing men. Here, 6.4% of men transition to management within seven years, but only 1.5% of women, meaning men's cumulative transition probability is more than four times as high as women's probability. Together, these gender promotion gaps accumulate over time and may contribute to gradually widening pay gaps between employees after the point-of-hire (Kronberg, 2020; Kronberg and Gerlach, 2023)

We argue that establishment composition matters because it changes occupational status locally. Jobs (i.e., occupations in specific

⁶ Data on parental status is not part of the standard LIAB QM9317 data. Consequently, the Research Data Center (FDZ) generated this measure for our project as part of the DFG Priority Programme 1764.

establishments) increase in status when their gender composition mirrors the establishment, ostensibly because the numerically dominant group can bid up the value of their jobs (Avent-Holt et al., 2019a). With the increasing status of women-dominated jobs in women-dominated establishments, gender promotion gaps narrow.

Our findings recast the glass escalator in the light of status expectation theory. That is, considering the glass escalator as a consequence of intersecting gender and occupational status resolves the counterintuitive pattern of women actually experiencing less upward mobility (relative to male colleagues) in more women-dominated jobs. Moreover, we critically extend the literature on occupational gender composition (e.g., Dämmrich and Blossfeld, 2017; Malin and Wise, 2018; Maume, 1999a; Williams, 1992) as our results suggest that the glass escalator is not a universal phenomenon. Instead, it is a characteristic of more men-dominated establishments. As the proportion of women in the workplace increases, employment in female-typed occupations turns from a disadvantage to an advantage regarding women's access to management positions. The impression that it was a broadly consistent pattern emerges because few establishments are women-dominated.

The paper also contributes to the literature on firm gender composition. Firm-based studies in the U.S. consistently found that establishments with more women soon increased women's representation in management (e.g., Chambliss and Uggen, 2000; Cohen et al., 1998; Taylor et al., 2019). The results implied that women-dominated organizations value women more, causing gender differences to narrow. The positive career effects of women-dominated establishments contrast with the glass escalator literature, where women-dominated environments disadvantage women. We resolve this contradiction by using German linked employer-employee data, which allows us to consider establishment and occupation effects at the same time. These data suggest that the net positive effect of women-dominated establishments on women's promotion observed in the firm-level gender composition literature (e.g., Chambliss and Uggen, 2000; Cohen et al., 1998) was an artifact of changing job status. Put differently, we did not find a direct effect of establishment composition on gender promotion gaps. Instead, a greater share of women in an establishment increased the status for women-dominated tasks (Hypothesis 2), improving women's upward mobility in these jobs. As women-dominated jobs comprise most positions in women-dominated establishments, the net effect we observe resembles those in prior firm-level studies, but our research pinpoints the occupations as the relevant mechanism. That is, women-dominated establishments do not lift all women's boats, but only women in women-dominated jobs. The overall effect of gender as a primary cognitive category remains persistent, and job status can reduce but not cancel gender effects.

Finally, these results contribute to the emerging literature examining how establishments and occupations interact to affect employees' labor market outcomes (e.g., Avent-Holt et al., 2019b, 2019a; Bechky, 2011). Concerning gendered career trajectories, our findings suggest that neither the establishment nor occupational context alone, but their interaction shapes the valuation of women-dominated jobs and, by implication, the tasks and skills associated with those positions. More specifically, when women's leadership competence is concerned, the job context shapes women's upward mobility. Jobs, in turn, attain meaning in the context of the establishment's composition. Women-dominated occupations undoubtedly carry attributions of skills and competence. However, the larger the share of women in a firm, the more employees value female-typified work roles.

Our main findings are consistent with the idea of locally varying job status. However, we "only" infer status indirectly based on who gets promoted. Future research should reexamine the idea of locally varying status by using measures capturing status and leadership perceptions directly and comparing similar occupations (e.g., HR and IT) across establishments with different demographics.

Because the LIAB is a panel of establishments, we have no information about respondents' workplaces before they enter the Establishment Panel or after they leave. Consequently, our paper focuses on how job and establishment composition affect firm-internal transitions to management. Firm-internal mobility is a critical avenue for employees to expand responsibilities into supervisory and managerial tasks (Bidwell and Mollick, 2015). Future studies with access to applicants' prior occupations should examine whether establishment composition affects how hiring managers evaluate applicants.

Finally, it was beyond the scope of our data to examine other dimensions of inequality, such as race, ethnicity, religion, disability, or sexual orientation. We know that men of color do not benefit from the glass escalator (e.g., Alegria, 2019; Keynton and Lee, 2024; Maume, 1999a; Wingfield, 2009). Similarly, only heteronormative men with local citizenship and without disabilities ride the glass escalator (for a review, see Williams, 2013). These findings are consistent with our status-based approach, where additional characteristics associated with lower status hinder employees' claim to authority. We hope future research can reexamine composition effects on mobility gaps between other demographic characteristics (e.g., Avent-Holt et al., 2019a).

Considering how the results may inform businesses, our findings have practical implications for workplaces. Companies striving to develop women's talent more evenly across their workforce must consider occupations whose gender composition differs from the overall establishment. These occupations may contain untapped talent. Likewise, women looking for promotions within their jobs should be mindful of the overall establishment composition.

CRediT authorship contribution statement

Anne-Kathrin Kronberg: Writing – review & editing, Writing – original draft, Supervision, Project administration, Methodology, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Anna Gerlach:** Writing – review & editing, Writing – original draft, Visualization, Methodology, Formal analysis, Data curation. **Markus Gangl:** Writing – review & editing, Supervision, Resources, Project administration, Methodology, Funding acquisition.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ssresearch.2024.103003>.

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