

# Right time to join? Organizational imprinting and women's careers in public service organizations

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## Abstract

Women across the economy continue to encounter difficulties in progressing their careers as occupational segregation and precarious conditions symbolized by the “glass ceiling” and “glass cliff” indicate. Theories of imprint-organization fit indicate that organizational munificence at the time of appointment may be an important influence on individual careers. Prosperous conditions at the time of hire might generate confidence and capability, whilst scarcity may prompt resourcefulness and resilience. While these effects have been examined in small private firms, they have been relatively unexplored in the context of public service organizations. Moreover, there has been little attention to the study of organizational munificence in the context of women's careers. Drawing on the Integrated Database for Labor Market Research in Denmark, this study evaluates the impact of organizational munificence at appointment on subsequent financial career benefits for women in Danish public services. Results indicate that resource scarcity at the time of appointment is related to enhanced career outcomes, and that the influence of conditions at the outset of a woman's career is more pronounced for women with lower levels of experience and education. The theoretical and practical implications of these findings are discussed.

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## KEYWORDS

careers, gender, imprinting, munificence

## 1 | INTRODUCTION

Despite decades of research demonstrating the disadvantage women experience in progressing within the workplace, calls for improved understandings of the determinants of women's career trajectories persist (Acker, 2009; Broadbridge & Simpson, 2011; Caceres-Rodriguez, 2013; Cornelius & Skinner, 2008; Inkson, 1995; Linehan & Walsh, 2000; Sabelis & Schilling, 2013). It is argued that we need further analysis that captures career dynamics in order to better explain why women are continuing to experience challenges in the workplace in the form of pay gaps, glass ceilings, glass cliffs, and now even glass chains (Arifeen & Gatrell, 2020; Elsaid & Ursel, 2018; Koskina, 2009; Main & Gregory-Smith, 2018; Ryan et al., 2016). Despite scholars' best efforts, the complex mix of societal, organizational, and individual variables makes generating insights into career opportunities and benefits as they develop over time a difficult task. It seems that some serious methodological challenges still need to be overcome for us to continue to build a comprehensive understanding of women's career progression.

Research has highlighted the role of the external environment in shaping workplace conditions, particularly an organization's financial context and the diversity effects it might generate. These effects have a potential impact on organizational, managerial, and individual decision-making (Meier & O'Toole, 2009; Rueda-Manzanares, Aragón-Correa, and Sharma, 2008), socialization (Hatmaker & Park, 2014; Marquis & Tilcsik, 2013), and "in-group" and "out-group" relationships (Pelled et al., 1999). Management theory suggests that besides giving organizations an environmental shock and a short-term impact (Meier & O'Toole, 2009), difficult and protracted organizational contexts do have important and potentially long-lasting effects on individuals and their careers (Marquis & Tilcsik, 2013). The theory of imprint-environment fit indicates that the past is a significant influence on the present and, specifically, that the financial circumstances of an organization at the time of an individual's arrival will leave a persistent and pervasive imprint on their career (Tilcsik, 2014). This theoretical argument indicates that whether individuals are hired in times of extreme munificence or scarcity, they can gain career benefits, compared with those hired at times of greater financial stability. Scarcity, it is argued, can produce resourceful and resilient employees, while munificence offers particular opportunities to engage in complex, developmental projects and work tasks.

In addition, we know that individuals accumulate knowledge and skills by gaining additional experience over time, as well as education and formal training (Becker, 1962), which the labor market rewards with progression and higher earnings (Jacobs, 1999). Education and work experience have been highlighted as two of the best predictors of women's career success (Melamed, 1995), which could suggest that women with lower levels of education and time in employment will be especially influenced by the financial conditions in the organization at the time of hiring. This could mean that employees with higher levels of human capital would be better positioned to outperform organizational expectations in periods of extreme scarcity and munificence and gain career benefits.

In this manuscript we ask: how does munificence or scarcity at the time of appointment impact on women's subsequent career paths and outcomes? By addressing this question, we focus on how circumstances at the beginning of an employment period affect subsequent career dynamics for female employees. Drawing on the theory of imprint-environment fit, we contribute to existing knowledge by investigating how an organization's financial context at the time of hiring shapes female career trajectories and benefit. We examine this theory through the analysis of the employment trajectories of women employed in the public sector in Denmark because imprint-environment fit has not yet been explored in a public service context, and Denmark provides a progressive equality setting in which to explore our central research question. Our study contributes to the developing stream of research interested in the temporal dynamics of women's career trajectories (McKie et al., 2013; Smith & Monaghan, 2013).

Gender differences between men and women's careers are now well established, with studies highlighting a pattern of persistent inequality produced by gender regimes that impact on all aspects of employment, such as recruitment, pay and progression, and job security (Acker, 2009; Caceres-Rodriguez, 2013; Cohen & Duberley, 2021; Duberley et al., 2017; Guy, 1994). It is not our intention here to test or reconfirm the findings of this prior work. Rather, given the established differences in career trajectories, this study focuses explicitly on women employees in Denmark in order to diagnostically detail how women proceed through their careers and whether the organizational context at the time of hiring has an impact on career outcomes. This study aims to generate a more comprehensive understanding of the career trajectory of a large, and historically disadvantaged, group of women employees and, as such, we move away from a relative evaluation of women in contrast to men, which can sometimes detract attention from the significant question being addressed in the manuscript.

In doing so, our study employs Danish Integrated Database for Labor Market Research data, a linked employer-employee data set on employment situation for every individual in the Danish workforce. Specifically, we study women employees hired into public workplaces between 1990 and 1995, a period characterized by scarcity and munificence in local governments, and track their progression in the organization up to 2010 (or organizational exit), allowing us to observe lengthy career histories. Our findings indicate that women with lower levels of human capital are particularly susceptible to imprinting, as their career benefits are more likely to be shaped by an organization's financial context on recruitment. The next section of the manuscript provides a brief discussion the theory of imprint-environment fit before introducing the main hypotheses.

## 2 | THEORY AND HYPOTHESES

### 2.1 | Theories of imprint-environment fit

For some time, scholars have highlighted links between the external environment and patterns of diversity, with Kellough estimating that "as much as 50% or more of the variation in employment of women and minorities is apparently explained by contextual variables that are not ordinarily changed by an agency's Equal Employment Opportunity office" (1990, p. 564). A recent analysis of the impact of economic circumstances on female employment indicates that when organizations grow, they tend to appoint more women managers, albeit only at lower managerial levels (Krøtel et al., 2018). However, this prompts a further question about whether and how organizational circumstances at the time of appointment influence future careers and prepare recruits for organizational challenges. Studies of imprinting offer a potentially helpful theoretical lens through which to consider these important questions about the role of munificence relative to women's careers.

The term "organizational munificence" refers to the financial aspect of organizational context and specifically to scenarios where organizations have plentiful financial resources, compared to a context of scarcity when organizational budgets are tight (Rueda-Manzanares et al., 2008). Research has demonstrated the impact of the external financial environment by examining the macroeconomic context and estimating its impact on short-term outcomes. For example, studies show that leaders appointed during times of economic downturn tend to be more circumspect, conservative, and reactive in their decision-making (Marquis & Tilcsik, 2013; Rueda-Manzanares et al., 2008; Schoar, 2007). However, recent attention has turned to the persistent effect of organizational context and its influence on the "skills, habits, and routines that organization members, particularly newcomers, learn" (Tilcsik, 2014, p. 640). The contention is that different organizational entrants are faced with specific circumstances on arrival, depending on the context, which impact on subsequent performance and career outcomes. These conditions then shape socialization processes that are especially significant in supporting the adaptation process for new entrants (Ashforth & Saks, 1996). They also lead to an "imprinting effect", defined by Marquis and Tilcsik as: "a process whereby, during a brief period of susceptibility, a focal entity develops characteristics that reflect prominent features of the environment, and these characteristics continue to persist despite significant environmental changes in subsequent periods"

(2013, p. 199). Due to role uncertainty and ambiguity, individual employees at the outset of their appointment are transitioning and therefore particularly open to the “stamp” and influence of their organizational context. Further into their tenure, times are less sensitive and they are therefore less open and susceptible to cognitive unfreezing processes (Marquis & Tilcsik, 2013; McEvily et al., 2012; Tilcsik, 2014).

Taking the imprinting concept a stage further, Tilcsik promotes the concept of “resource imprinting” (McEvily et al., 2012) in his 2014 study, on the basis that subtle but pervasive contextual circumstances, such as an organization's economic context, have a significant effect on socialization processes. Scholars have already highlighted the implications that cost reductions could have for socialization, mentoring, and networking, given their central role in facilitating newcomer development and establishing effective long-term working relationships (Hatmaker & Park, 2014; Hatmaker et al., 2011; Linehan & Walsh, 2000; Opstrup & Villadsen, 2015). However, Tilcsik suggests that both munificent and scarce financial scenarios could produce positive career benefits in this respect. For him, scarcity may prompt individual resourcefulness driven by sharpened competition and performance within the organization, while also charging employees with a responsibility to contribute to the survival of the organization through smart and innovative working. Equally, he argues that munificence might generate special opportunities to gain experience and deliver effective performances due to high profile and complex initiatives and projects. His own analysis, based on two professional service firms over a 15-year period demonstrates a temporal effect where different imprint effects emerge over time, dependent upon alternative combinations of past and current circumstances (2014, p. 662). He identifies “a curse of extremes”, where scenarios of sharp scarcity and munificence at appointment are both subsequently connected with less than average performance.

Research on women's careers has been hampered somewhat by the difficulties associated with observing employees over a lengthy duration after their appointment. Nevertheless, a developing stream of research has indicated the importance of considering how women's career outcomes are shaped by complex dynamics developing over time. For instance, Duberley et al. (2014) identify how women's experiences in retirement are shaped by past events, while McKie et al. (2013) discuss career pathways into self-employment for women. Attention to imprinting could make a further contribution and shed additional light here, as it enables us to analyze historical factors and their lasting impacts simultaneously (Marquis & Tilcsik, 2013). Also, studies to date have been focused on certain types of organizations, prompting Tilcsik (2014) to suggest that his findings should be tested in alternative sector settings—for example, where organizations are large and bureaucratic in nature.

## 2.2 | Prior education and experience

While organizational conditions at the time of appointment are argued to be important for subsequent career progression, research indicates that the individual resources that women are able to draw upon are also likely to have an effect. Theory indicates that individuals accumulate human capital in terms of knowledge and skills by gaining additional experience, as well as education and formal training, which the labor market rewards with progression and higher earnings (Becker, 1962). Previous studies have highlighted education and work experience as key predictors of women's career success (Melamed, 1995); women who have improved their acquired human capital assets in terms of higher education and increased work experience have the potential to breach the glass ceiling, while Jacobs (1999) observed that women in high-level occupations were little affected by discontinuity due to childbirth compared to women in lower-level occupations. Rimmer and Rimmer's (1997) study of career development among Australian women revealed no relative pay penalties for broken work experience for the highly educated or skilled. This suggests that levels of education and professionalization are likely to impact career development and the extent to which women can mitigate organizational munificence or scarcity.

Resource imprinting has been shown to be particularly contingent upon levels of work experience (McEvily et al., 2012; Tilcsik, 2014), while periods of unemployment, which are most likely to occur during tight economic times, have proved to be “scarring”, with evidence of discrimination against those who have been unemployed (Mooi-Reci

& Ganzeboom, 2015). Research on gender regimes (Acker, 2009) also highlights the ways that differential impacts on men and women are produced, highlighting the role of resources. Given evidence of the cumulative impact of “what women know” on their careers (Broadbridge, 2010), it seems likely that women with greater experience and more advanced education will be less susceptible to being influenced by a scarcity of munificence and structural conditions at the time of hiring, and less likely to be exposed to a “curse of extremes”.

As Dokko et al. (2009) argue, organizations anticipate that new employees will bring “a repertoire of cognitions and behaviors” from previous roles that allow them to make an instant and immediate contribution (2009, p. 52). In addition to this, those with a higher level of experience have often gained knowledge about how to perform under different circumstances and can more easily adjust to situational requirements. Consequently, it is likely that more experienced and highly educated candidates will be hired for more specialized and highly paid job roles where performance may not be as affected by the organizational situation. Finally, external assessments of job performance also depend on the specific performance expectations about an individual. It is more difficult for an experienced or highly educated person to outperform organizational expectations as these are often based on a stronger and more reliable performance record. On the contrary, it may be difficult to know what to expect from someone with little experience or formal education, so this person may find it easier to exploit organizational circumstances to demonstrate outstanding performance.

To summarize, first, we investigate how organizational munificence at the time of hiring impacts subsequent career outcomes for women. Existing knowledge points to potential gains for women hired in both good and bad times. When hired in times of munificence, more opportunities may materialize for employees that facilitate career growth and success. Times of scarcity, on the other hand, may provide the chance for employees to demonstrate ingenuity and intrapreneurial skills that assist the organization in maintaining its services and level of performance. We therefore argue that there may be a u-shaped nonlinear relationship between organizational munificence at the time of hiring and women's success later in their career and hypothesize that:

- H1** *Women hired in times of (high) munificence are more likely to receive career benefits later in their tenure at the organization compared to women hired in times of greater stability.*
- H2** *Women hired in times of (high) scarcity are more likely to receive career benefits later in their tenure at the organization compared to women hired in times of greater stability.*

The key aim for this study is to determine how organizational munificence or scarcity impacts women's career trajectories. However, noting that the literature highlights the potential for contingent effects, particularly related to human capital in the form of prior work experience and level of education, we explore how organizational munificence at the time of hiring might have a differential impact, depending on the accumulated human capital of the individual. Therefore, we expect human capital factors, such as work experience and length of education, to be important contributory elements that we expect to moderate and potentially reduce the effect of conditions at the time of appointment on the subsequently accrued career benefits.

- H3** *Career benefits of women with lower human capital (work experience and education) are more strongly affected by organizational scarcity or munificence at their time of hiring, when compared with women with higher levels of human capital.*

## 3 | RESEARCH DESIGN, METHODS AND MEASURES

### 3.1 | Empirical setting

The research is situated in Denmark, which is considered to be a progressive national context for gender equality. The Danish public sector covers an extensive range of public services and we incorporate all public sector organizations

in Denmark, which are divided into three different administrative levels; state, regional, or municipal. First, the state-level covers departments in the different ministries, as well as a large number of independent institutions, such as universities and high schools. The regions' primary task is healthcare, including the running of the hospitals, emergency rooms, etc. Third, the 98 local governments are semi-autonomous entities, providing public services within a range of different areas, such as schooling, elderly care, childcare, utility supply, civil service, libraries, and road maintenance.

The overall terms and finances for the regions and local governments are negotiated yearly between the Central Government, the Danish Regions (branch organizations for the Danish regions) and Local Government Denmark (the branch organization for the Danish local governments) (see Hansen & Mailand, 2013). This means that any budgetary expansion or retraction at the national level spills over to regional and local governments when their annual budget is negotiated. While salaries and working conditions in the public sector have traditionally been settled in collective bargaining agreements, reforms have increasingly transferred more bargaining rights to the local levels. Andersen et al. (2021) report that by 2007, around 10% of wage development in the public sector has happened at local levels. This means that individual employees can be rewarded locally as a recognition of their contribution and performance. These contextual features demonstrate that the Danish public sector is highly appropriate for a study of this kind.

As we further explain below, in this paper, we are interested in the relative munificence of the public sector workplaces in the first half of the 1990s. This period is well suited to the aims of the study as the first years were characterized by a modest to low Gross Domestic Product (GDP) growth in the early years followed by higher growth in the last part of the period. While there is no direct link from economic growth to the relative well-being of public workplaces, we observe substantial workplace variation within this period (see below).

In the Danish public sector, women constitute the majority of the workforce in both the early period of our study and the later years of our research window. In 2013, 54% of employees at the state level are women but this percentage increases to 79% and 78% for regional and local government levels, respectively.<sup>1</sup> Women constitute a clear majority of employees in areas such as healthcare, social care, and childcare and among frontline workers, such as teachers and daycare employees. In our study, we focus on women hired in the years between 1990 and 1995. In the middle of this period, in 1993, women constituted 48% of employees doing public administration work, with the clear majority working in areas such as education (59%), health care (80%), and social institutions, such as elder care (87%).<sup>2</sup>

Within the managerial ranks, women are also well represented. For example, in 2010, 55% of managers at the municipal level were female (Krøtel et al., 2018). However, this is not to say there is no gender pay gap or a glass ceiling in Denmark. For example, if we look only at the 25% highest paid managers, the proportion of women is reduced to 36%. Further, a recent study featuring the analysis of Danish employment data finds that the gender pay gap is smaller in the public sector than in the private sector but that women professionals in the public sector earn considerably less than their male counterparts, even when controlling for a range of demographic characteristics (Stritch & Villadsen, 2018). We will return to this discussion on representation later when we introduce our measures.

### 3.2 | Data

We draw on the Integrated Database for Labor market research in Denmark. The database is a linked employer-employee data set on the employment situation for every individual in the Danish workforce. The data is powered by Statistics Denmark and consists of information from various governmental registers updated on a yearly basis. As every person in the Danish labor market has a unique social identification number, it is possible for Statistics Denmark to draw data from various registers including the tax register, and track individuals' career trajectories back to 1980. Data are highly reliable and provide an accurate picture of the labor market situation for every individual in each year, including information about an individual's employer, salary, managerial status, and hours worked. In addition, the data are linked to demographic information, such as gender, age, ethnic origin, and education.

The data set is excellently suited for an analysis where we are interested in exploring how organizational conditions at the time of hiring affect women's subsequent careers in the organization. Specifically, we study nonmanagerial women employees hired into public sector organizations between 1990 and 1995, a period characterized by scarcity and munificence in public services. This 5-year period enables us to account for organizational variations in terms of the financial context. For this analysis, we focus on the entire Danish public sector. We can identify and include every workplace in the public sector within the given period, which provides us with 17,917 different workplaces. The group of nonmanagerial women employees is studied up to 2010 (or organizational exit), which allows for observing lengthy career histories. A 15-year window is considered broadly sufficient in order to get a robust understanding of how conditions at the time of hiring affects the careers of women employees.

### 3.3 | Measures

#### 3.3.1 | Dependent variable

In this study, we are focused on the career benefits achieved by women in public employment. To understand differences in career outcomes for women, a variable that can capture career benefit with sufficient granularity is needed. Salary can be argued to constitute an appropriate variable because salary differences indicate variations in responsibility, job performance, positive growth, position, and, to some degree, how an individual is valued by an organization. One of the advantages of the Danish register data is the detailed information it contains on salary. From the data set, two separate measures that indicate different types of salary-related career benefits are derived to act as dependent variables. Consistent with other studies of career success, we transform the variable using the natural logarithm (Seibert et al., 2001). First, we use *salary*, which is measured as the average hourly wage an employee receives. While salary for most employees increases over time when staying in the same organization, we are interested in whether some of this increase can be explained by organizational circumstances at the time of hiring. As a second measure, we use *salary increase* calculated as salary in a current year in relation to the previous year. While related to the first measure, this measure indicates an individual's ability to obtain salary increases.

#### 3.3.2 | Independent variable

The main independent variable is organizational munificence. To indicate this, variables that provide measures of financial resources are created to estimate whether an organization is experiencing munificence or scarcity at the time of hiring for each employee. This is operationalized through a measure of organizational growth, indicated by the relative increase or decrease of the number of employees in a given year in relation to the previous year. As an alternative to using head count as the growth measure, a budget measure could have been used to indicate munificence and scarcity, but easily comparable budget dates for the period under analysis were not available. However, we do not believe this to be a major limitation as public agencies are typically labor-focused, and there is a strong connection between budgets and headcount (Kellough, 1990).

The independent variable was constructed in a flexible way to allow for a complex nonlinear relation with career outcomes. While we expect greater scarcity or munificence to be more strongly related to outcomes than greater stability, we do not necessarily expect a neat U-shaped relation, so we opted for a modeling strategy that could accommodate a less symmetrical situation. To achieve this, the measure of organizational munificence was divided into four groups in the following way. First, we defined organizational munificence at times of hiring for each individual as the ratio of the organizational size in the year of appointment to organizational size in the previous year. This was then multiplied with 100 such that values above 100 indicate increases in size whereas values below 100 correspondingly indicate decreasing size. Next, we split this variable into four dummy variables to be able to obtain

separate estimates for the effects of different levels of munificence. *High scarcity* is defined as values between 25 and 90. This reflects an organizational decrease in size of 10% or more. *Moderate scarcity* is defined for values between 90 and 100, corresponding to a decrease in size of 10% or less. *Moderate munificence* is defined as an increase in size of up to 10%, reflected by growth taking values of 100–110, and *high munificence* as growth rates above 10% (110 and above on the growth variable). These four indicators enable us to assess how different levels of growth may have varying effects for alternative employees, without restricting relations to linearity or strict concaveness or convexness (see descriptive statistics in Table 2).

The individual employee is the unit of analysis and as the independent variable is measured at the organization level, and this implies that every individual starting in the same workplace in the same year has the same value. However, as explained below, in the analysis, we compare individuals at the same workplace but starting in different years to secure variation in the independent variable.

### 3.3.3 | Interactions

To assess whether effects are contingent on an individual's human capital, interaction terms are calculated by multiplying the munificence dummies with *years of formal education* and *years of work experience*. This means that we explore two commonly used operationalizations of human capital (Melamed, 1995). We chose years of formal education as educational attainment has been argued to be a strong driver of high-paying and high-status jobs (Melamed, 1995). Further, we make use of years of work experience as it is associated with increased job-related knowledge as well as provides a set of merits based on formal criteria that are particularly important for women to progress in their careers (Melamed, 1995).

### 3.3.4 | Control variables

In line with previous studies on career outcomes (Seibert et al., 2001), we incorporate a number of organizational and personal controls, in order to account for other variables influencing the relationship between organizational munificence at times of hiring and later career benefits. To capture differences in organizational characteristics, organization size is calculated, as the number of employees at each workplace was included (Krøtel & Villadsen, 2016). To control for other organizational differences such as industry, location, and age, a fixed-effects estimation strategy was employed (that will be further elaborated in the following section).

As organizational munificence at the time of hiring is stable across time, individual-level fixed-effects cannot be included. So, in order to account for personal characteristics, we include a number of different individual level controls. We include a control for age and age squared, as the effect of age might be nonlinear. Women who are single and without children may have a different career progression compared to women who are married with children living at home, so family life is likely to be of great importance when it comes to career priorities; so we include a control for marital status (married/living together or single) as well as the number of dependents in the household. Further, as research has demonstrated the impact that pregnancy and childbirth can have on progression, we have included a dummy variable to capture whether there are children in households that are 2 years old or younger so we can incorporate the potential effect of childbirth.

To control for the influence of other work life characteristics, we include measures of tenure in the organization and total time spent as unemployed (in months). In addition, we incorporate a control for the skill level of the individual divided into two categories. *Professionals* (following the definition from Statistics Denmark and the International Standard Classification of Occupations) are broadly defined as individuals at the highest skill level involved in knowledge intensive work where they apply or teach advanced theories or concepts to increase the existing stock of knowledge. We use other (*non-managerial*) occupations requiring lower skill levels as the reference category. We



include a control for the *starting salary* for each individual at the time of hiring as career benefits and future earnings are very likely to be connected to the starting salary. Finally, we add *year dummies* to control for the possibility that salary dynamics are affected by larger events such as the overall economic conditions (e.g., GDP growth) and collective bargaining agreements that take place approximately every third year.

### 3.4 | Estimation strategy

Our data set consists of all the women hired into full-time positions in public sector workplaces between 1991 and 1995. We have annual observations following the careers of these individuals up until 2010. Individuals are excluded from our data set if they change jobs, retire, or for other reasons leave employment. Our unit of analysis is the individual-year, and we employ estimate standard errors clustered by the individual. An investigation into the impact of organizational munificence at the time of hiring on subsequent career outcomes is associated with a series of challenges. Perhaps the most significant among these is that organizations, because of differences in routines, traditions, or culture, tend to reward their employees differently. This means that endogeneity caused by unobserved heterogeneity becomes a major concern if we compare career outcomes of individuals working in different organizations, even when controlling for observable differences such as area of work and size. To combat this challenge, ideally, we would like to be able to randomly assign one group of individuals to commence work at an organization in a time of scarcity and another group of individuals to commence work *in the same* organization at a time of munificence. This is not possible, so we exploit features of the Danish register data to create a setting that offers as robust a test of our hypotheses as possible.

In the data sets of Statistics Denmark, a workplace (establishment) is "an organizational unit with its own type of activities and/or geographical location" (Timmermans, 2010). A given organization, thus, may consist of several workplaces. For example, in a university context, the organization might be the disciplinary department. In order to avoid comparing employees in different workplaces, we employ estimations with workplace fixed-effects, and only compare individuals within the same workplace. Because each workplace in any given year will either experience scarcity, stability, or munificence, we compare individuals starting within the same workplace across different years. However, as we observe individuals hired into a public sector workplace in a 5-year window, some will have been hired in good years and others in bad ones. Our estimation utilizes this difference to explore career outcomes among women in the same workplace but hired in different years between 1990 and 1995. With workplace fixed-effects in place, we effectively control for unobservable time-invariant workplace-level factors such as area of public service delivery (and its political salience), geographical location, and workplace traditions.

## 4 | RESULTS

### 4.1 | The importance of financial context at the time of hiring on career benefits

It could be expected that different types of employees will enter organizations in times of scarcity as compared with times of munificence. To begin to assess this question, Table 1 presents descriptive statistics split between individuals entering in years of either high scarcity, moderate scarcity, moderate munificence, or high munificence.

The table provides an overall picture of the profile of personal and organizational characteristics for employees hired into jobs in the different times of organizational scarcity or munificence.

Overall, the cases are reasonably distributed when it comes to observable basic demographics such as age and education. In terms of time spent unemployed, there is a small tendency that this is higher for employees hired in times of high munificence. To the extent that time as unemployed indicates a lower level of skill (Mooi-Reci & Ganzeboom, 2015), this could indicate that organizations have fewer applicants in high munificence periods and are

TABLE 1 Descriptive statistics at the time of hiring for different financial contexts

	High scarcity		Moderate scarcity		Moderate munificence		High munificence	
	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.
Age	31.74	9.54	32.62	9.57	32.44	9.44	33.32	9.71
Work experience (years)	7.99	4.31	8.47	4.39	8.41	4.34	8.68	4.32
Time of unemployment (months)	1362	1817	1189	1726	1194	1719	1425	1873
Education length (years)	12.54	2.17	12.96	2.28	13.00	2.31	12.77	2.24
Skill level professional	0.33	0.47	0.38	0.49	0.39	0.49	0.37	0.48
Skill level other	0.67	0.47	0.62	0.49	0.61	0.49	0.63	0.48
Organization size	393	901	898	1482	1015	1748	337	768
Married	0.63	0.48	0.66	0.47	0.65	0.48	0.66	0.47
Number of children in household	0.77	0.96	0.80	0.98	0.79	0.97	0.84	0.98
Start salary (in)	4.61	0.33	4.67	0.31	4.67	0.31	4.69	0.29
Children aged two or younger	0.15	0.35	0.15	0.36	0.16	0.36	0.15	0.36
N	13,436		30,553		41,496		30,096	



FIGURE 1 Financial context for all workplaces from 1991 to 1995

therefore less selective in terms of hiring. However, it should be noted that starting salaries are very similar across all groups, which could indicate that there are no substantial differences in the quality of the employees. A second characteristic that seems to deviate across the four groups is organization size. The table shows that larger organizations tend to experience smaller proportional changes in their size.

As stated earlier, our analyses include fixed workplace effects, which suggests comparing women hired within the same organization, but in different financial contexts, due to variations in organizational munificence within the time period (1991–1995). The two graphs in Figure 1 present the development in the levels of scarcity and munificence within the period from 1991 to 1995.

Our estimations below compare women starting in the same organization in different years. For estimates to be valid, we need to make sure that organizations experience different financial conditions through the 5-year window. Otherwise, there would be no variation on the independent variable. Table 2 (panel a) reports the variation in the financial context for all the organizations in our study. The table shows that more than half of the organizations (53.4%) experienced both scarcity and munificence within the 5-year period. Further, as suggested in Table 2 (panel b), around 65% had experienced more than one financial situation (high scarcity, low scarcity, low munificence, and

**TABLE 2** Variation in different financial contexts experienced by workplaces in the study (panel a top, panel b bottom)

		Experienced scarcity	
		No (%)	Yes (%)
Experienced munificence	No	0.0	38.0
	Yes	8.6	53.4

No. of stages	Number of different stages of munificence experienced by the organization from 1991 to 1995 (%)
1	35.3
2	34.5
3	22.4
4	7.9

high munificence). We include individuals hired into the organizations experiencing variation in the estimations below, which suggests that the period under study provides us with some useful variation in the independent measure.

Table 3 presents six regression models in total. The main independent variables are the four dummies indicating different levels of scarcity and munificence. High levels of scarcity are chosen as the reference category, so the other scarcity and munificence variables should be interpreted in relation to this. These dummy variables are interacted with education and labor market experience in subsequent models in order to assess whether effects are contingent on human capital.

## 4.2 | Salary as the dependent variable

The first three models estimate salary (log transformed) as the dependent variable. In model 1, it can be seen that the indicators for moderate scarcity and moderate munificence are negative and significant. This indicates that employees in a subsequent year are likely to earn a lower salary if hired in a year of relative stability, as compared to a year of high scarcity or high munificence (which is also significantly negative but with a smaller difference in effect). The average effect is estimated at about 1.4% lower salary ( $(1 - \exp(-0.014)) * 100$ ). While this sounds modest, it corresponds to a nontrivial Danish Krone (DKK) 4170 annually for a person earning a typical annual salary of DKK 300,000.

In hypothesis 3, we proposed that the relationship between munificence at the time of hiring and career benefits is more pronounced for employees with lower human capital in terms of lower levels of education and lesser work experience. In models 2 and 3, education and work experience are introduced as moderators. The positive and significant interactions for moderate scarcity and moderate munificence indicate that a longer period of prior education or work experience may mitigate the disadvantage of being hired during these years. The results provide support for hypothesis 3 as it appears that employees with less education or experience benefit more from being hired in years of fairly high levels of scarcity or munificence.

This effect is illustrated in Figure 2, panel a. In order to ease the interpretation, we have transformed the predictions for log (hourly salary) and reverted back to its original scale using Duan's method for adjusted predictions (Villadsen & Wulff, 2021). While effect sizes are small, the curve for less educated employees is U-shaped, while it is inversely U-shaped for highly educated employees. On average, the hourly pay rate for women with lower levels of education is 4.94 DKK lower when hired in times of low scarcity, relative to times of high scarcity. While this sounds modest, it amounts to a substantial difference of 9466 DKK on a yearly basis (based on 1924 working hours a year). We see a similar picture when human capital is indicated by labor market experience (panel b). Here, the interaction is equally positive and significant for moderate scarcity and munificence. The effect is illustrated in Figure 2b. For a nonmanagerial woman employee with little labor market experience, the curve is U-shaped and significantly different

TABLE 3 Results of panel data regression analysis predicting employees' salaries

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Salary (ln)	Salary (ln)	Salary (ln)	Relative salary	Relative salary	Relative salary
Tenure	0.013 (0.000)***	0.013 (0.000)***	0.013 (0.000)***	-0.009 (0.000)***	-0.009 (0.000)***	-0.009 (0.000)***
Age	0.010 (0.000)***	0.019 (0.000)***	0.019 (0.000)***	-0.007 (0.000)***	-0.007 (0.000)***	-0.007 (0.000)***
Age squared	-0.000 (0.000)***	-0.000 (0.000)***	-0.000 (0.000)***	0.000 (0.000)***	0.000 (0.000)***	0.000 (0.000)***
Work experience (years)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	0.001 (0.000)***	0.001 (0.000)***	-0.000 (0.000)
Unemployment (in months)	-0.00 (0.000)***	-0.00 (0.000)***	-0.00 (0.000)***	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Skill level professional	0.103 (0.001)***	0.103 (0.001)***	0.104 (0.000)***	0.021 (0.002)***	0.021 (0.002)***	0.021 (0.002)***
Education (in years)	0.03 (0.000)***	0.025 (0.001)***	0.03 (0.000)***	0.008 (0.000)***	0.006 (0.001)***	0.008 (0.000)***
Organization size	0.000 (0.000)	0.000 (0.000)	0.00 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000) *
Married	-0.013 (0.001)***	-0.013 (0.001)***	-0.013 (0.001)***	-0.007 (0.001)***	-0.007 (0.001)***	-0.007 (0.001)***
Number of children in household	-0.005 (0.000)***	-0.005 (0.000)***	-0.005 (0.000)***	0.002 (0.000)***	0.002 (0.000)***	0.002 (0.000)***
Children aged two or younger	0.025 (0.001)***	0.025 (0.001)***	0.025 (0.001)***	-0.007 (0.001)***	-0.007 (0.001)***	-0.007 (0.001)***
Start salary (ln hourly)	0.261 (0.003)***	0.261 (0.003)***	0.261 (0.003)***	-0.183 (0.009)***	-0.183 (0.009)***	-0.183 (0.009)***
High scarcity	Reference	Reference	Reference	Reference	Reference	Reference
Moderate scarcity	-0.014 (0.002)***	-0.118 (0.011)***	-0.025 (0.003)***	-0.004 (0.001)**	-0.044 (0.007)***	-0.026 (0.003)***
Moderate munificence	-0.014 (0.002)***	-0.086 (0.011)***	-0.021 (0.003)***	-0.003 (0.001)*	-0.034 (0.007)***	-0.023 (0.003)***
High munificence	-0.008 (0.002)***	-0.037 (0.011)***	0.003 (0.003)	-0.002 (0.001)	0.015 (0.008)	-0.018 (0.004)***
Moderate scarcity * education		0.008 (0.001)***			0.003 (0.001)***	
Moderate munificence * education		0.005 (0.001)***			0.002 (0.001)***	
High munificence * education		0.002 (0.001)**			0.001 (0.001)	
Moderate scarcity * work experience			0.001 (0.000)***			0.002 (0.000)***
Moderate munificence * work experience			0.000 (0.000)*			0.001 (0.000)***
High munificence * work experience			-0.001 (0.000)**			0.001 (0.000) ***
Constant	2.66 (0.014)***	2.72 (0.016)***	2.65 (0.014)***	1.96 (0.033)***	1.99 (0.032)***	1.98 (0.033)***

TABLE 3 (Continued)

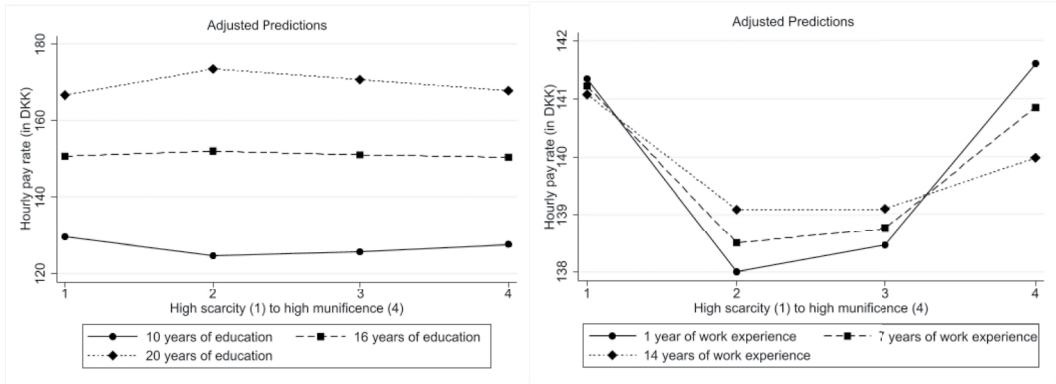
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Salary (ln)	Salary (ln)	Salary (ln)	Relative salary	Relative salary	Relative salary
Workplace fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.676	0.676	0.676	0.089	0.089	0.089
N	681,573	681,573	681,573	667,603	667,603	667,603

Note: Standard errors reported in bracket. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

Salary

Panel (a)  
(in years)

Panel (b)



Relative salary increase (year to year)

Panel (c)  
(in years)

Panel (d)

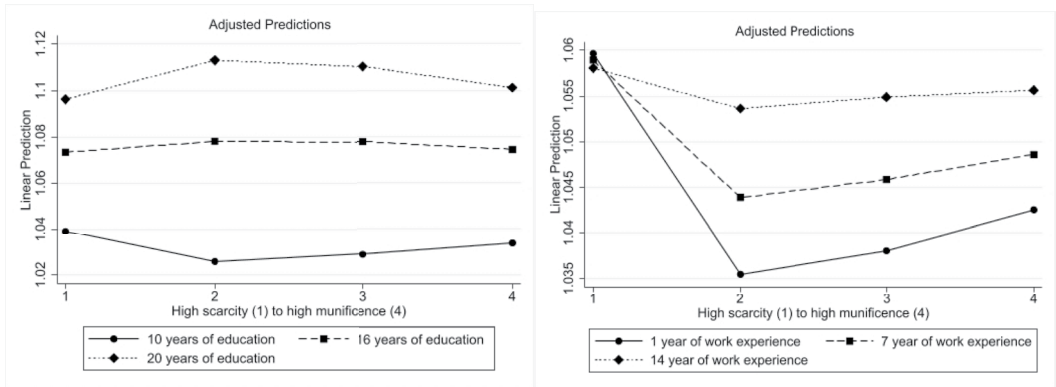


FIGURE 2 Graphical illustrations of interactions between munificence at the time of hiring and human capital. (a) Education. (b) Work experience (in years). (c) Education. (d) Work experience (in years)

from more experienced counterparts when scarcity is modest, and munificence is moderate or high. The graph in Figure 2b illustrates that the difference in hourly pay rate is much smaller across the different levels of work experience. However, if we calculate the difference between being hired in times of high scarcity compared to that in low scarcity for women with only 1 year of work experience, the difference amounts to 3.35 DKK compared to only 2 DKK for women with 14 years of work experience. On a yearly basis this difference amounts to 2603 DKK (based on 1924 working hours a year). This suggest that the more experience a woman employee has, the less her future salary appears to be affected by organizational munificence at the time of hiring.

### 4.3 | Salary increase as the dependent variable

Moving to models 4 through 6, we observe relative yearly salary increases as the dependent variable. Model 4 reveals a similar picture with moderate scarcity and moderate munificence being negative and significantly different from high scarcity and high munificence (which does not differ from high scarcity). This suggests that in terms of receiving pay raises later in their career, being hired in times of high munificence or scarcity will yield a higher salary, compared to being hired in times of relative stability. In model 5, the interaction between moderate scarcity and education is positive. This indicates that women employees with more education hired in such a period tend to receive larger salary increases later in their tenure than otherwise comparable women with less education. In model 6, this picture is even more pronounced when focusing on experience. Women with more experience seem to benefit more from being hired in years of moderate scarcity or munificence, when compared to employees with less experience (as indicated in Figure 2d).

For those women employees whose prior work experience is high, hiring conditions seem to matter less, as indicated by the flat line. For less experienced colleagues, being hired in times of moderate scarcity appears to inhibit future career benefits in the form of higher annual increases. We note that the lines in panel c and d are ordered as expected as a higher level of human capital, in the form of education and experience, is predicted to be related to higher salary increases. However, the magnitude of the difference compared to human capital colleagues is contingent on the relative scarcity and munificence at the time of hiring.<sup>3</sup>

## 5 | DISCUSSION AND CONCLUSIONS

This manuscript aims to determine whether organizational conditions at the time of hiring affect subsequent career development outcomes for women in employment. Our findings indicate that organizational conditions do indeed impact future careers although they also reflect a complex relationship between scarcity, munificence, and career benefits for women. In terms of actual salary, our results confirm a curvilinear relationship, suggesting that female employees in a subsequent year are likely to earn a lower salary if hired in a year of relative stability, as compared to those in a year of high scarcity or high munificence. This evidence demonstrates that the lingering effects previously observed in the private sector are also evident within public organizations, where prior organizational munificence shapes career benefits for women, working in combination with human capital.

Our study suggests that conditions at the time of hiring shape the development of women's early careers and their individual resilience and likely influence their prospects of breaching the glass ceiling at a later point. These findings have implications for leaders and policy makers seeking to address career progression, glass ceiling, and glass cliff effects in organizations of all kinds. Significantly, they indicate the need for urgent attention not only to policies and practices focused on women's advancement to the upper levels of the hierarchy but also to those resources that build resilience and create facilitative conditions at organizational entry.

While our main focus was on the impact of organizational conditions on career benefits and outcomes, we noted that prior literature on organizational munificence highlights the potential for contingent effects in the form of prior education and experience. In response, we explored how the financial context at the time of hiring might have a differential impact, depending on the accumulated human capital of the individual. More generally, our findings indicate that women with accumulated educational and work experience receive greater career benefits, consistent with earlier studies that observe that higher levels of human capital are likely to be related to an increase not only in salary but also in the probability of selection for employment (King et al., 2005). Scarcity and munificence at the time of hiring seems to have more of an effect on career benefits when an employee enters with a lower level of prior education and work experience. Consistent with the literature, this evidence suggests that prior work experience tends to mitigate against the prospect of a positive or negative environment "misfit" (McEvily et al., 2012; Tilcsik, 2014).

These findings indicate that women with lower levels of resources in the form of education and experience are more vulnerable to the extremes that organizational munificence may present. They offer some novel insights into contingent effects linked to educational background that are not always incorporated into studies of occupational segregation but also perhaps indicate an urgent need for further research focused at the intersection of gender and class. As Acker (2009) observes, while class and gender are no longer as neatly integrated, gendered assumptions continue to impact women's social mobility, and there is still evidence of organizational gender segregation that reflects social class distinctions.

Organizations seeking to reduce gender segregation might usefully consider targeting resilience programs and practices specifically toward those women with lower levels of human capital at close proximity to the point of their organizational entry (Bardoel et al., 2014). Resilience is a concept that has gained considerable traction in academic and policy terms in recent years, moving beyond its home field of psychology and into the field of management and organization studies (King et al., 2016; Khilji & Pumroy, 2019). Defined by Britt, Sinclair, and McFadden, as "the demonstration of positive adaptation in the face of significant adversity" (Britt et al., 2016, p. 6), recent attention to individual resilience within the workplace illuminates the potential for resources to shape resilient trajectories, characterized by positive adaptation and growth. For example, Britt et al. (2016) demonstrate that employees can achieve positive growth in response to adversity, which is then reflected in career outcomes, such as job performance, promotion, and salary gains. Focusing specifically on women's careers, Khilji and Pumroy (2019) identify different coping strategies that women use to navigate and become more resilient when facing gendered social and organizational norms.

Our findings indicate that women entering organizations with higher levels of education and a work experience background are more likely to successfully adapt in extreme financial contexts and go on to achieve positive growth. This is interesting when considered alongside evidence that suggests that women are more likely to be found in "glass cliff" leadership positions associated with a higher degree of failure (Smith & Monaghan, 2013). Future research might usefully analyze whether women who occupy these leadership positions display resilient attributes, as the enduring tenure of female CEOs identified in a recent study by Elsaid and Hursel suggests (Elsaid & Ursel, 2018).

Despite the robustness of our statistical analysis, our research suffers from a series of important limitations. While this study aimed to highlight how organizational conditions at the time of hiring affect subsequent career development outcomes for women in employment, our analysis is inevitably limited in scope and prompts a series of intriguing additional questions that indicate the need for urgent attention in future research. Our study points to an association between financial context at the time of appointment and subsequent career benefits, but the constraints of the paper mean that we are unable to demonstrate how and why these outcomes materialize and test a range of potential explanations. For example, given the evidence discussed above on the contingent effect of educational background, following this analysis, it should be a priority to establish the extent to which professional status, qualifications, and shifts in professional career pathways may impact women's ability to counteract organizational munificence. While we have attempted to elaborate this as far as possible within the scope of this paper, it is vital that the effects of comparative professional status are further interrogated in a future study.

Similarly, we have not had the capacity to address the question of the self-selecting of individuals into organizations facing particular conditions, which is very hard to control in an observational study. Fortunately, evidence in Table 1 indicates that observable factors are very similar for individuals entering organizations in different time periods. Future research might, for example, explore the prospect of whether anxiety and stress induced by the organizational environment may eventually prompt an exit from the organization to an alternative employer or self-employment in order to achieve a better balance between work and family (Duberley & Carrigan, 2013). Research suggests that women (and their employers) lose precious human capital benefits at this point (Jacobs, 1999) and while our data set can identify individual exits, we are unable to determine the factors that determine why a woman might leave her public service employment. We hope that future ethnographic studies can examine these processes in more depth.

Finally, our study focuses on public organizations that are in direct receipt of government funds and likely much more susceptible to governmental direction and influence on equality policies. It covers a limited number of years



and it is situated in a particular national public service system. Future research that generates greater insight into the employment context, not just at the time of hiring but throughout employees' subsequent career, in order to better interrogate effects of congruence and divergence would be helpful, in addition to studies that are based in different national contexts (Tilcsik, 2014).

## DATA AVAILABILITY STATEMENT

The data that support the findings in this study are not publicly available. The study is based on individual-level register data from Statistics Denmark, which for security reasons, are highly restricted and not publicly available.

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## ENDNOTES

- <sup>1</sup> [http://www.oao.dk/fileadmin/user\\_upload/loen\\_og\\_ansaettelse/ok13/OK13\\_folder\\_STATEN.pdf](http://www.oao.dk/fileadmin/user_upload/loen_og_ansaettelse/ok13/OK13_folder_STATEN.pdf), <http://www.regioner.dk/media/2784/personaledata-2015.pdf>, [www.noegletal.dk](http://www.noegletal.dk)
- <sup>2</sup> Our own calculations based on [www.statistikbanken.dk/ras](http://www.statistikbanken.dk/ras).
- <sup>3</sup> We are aiming to contribute to a better understanding of career progression for women in public sector employment. The disadvantage that women have experienced within organizations across many sectors and international contexts in terms of career development is well established in the literature. Given this, we argue that it is vital to focus research attention on women and their progression in the workplace. In this way, we follow a research tradition from qualitative studies that indicate that in order to understand how women's careers develop, we need to study women themselves in more detail. Notably, we also ran our models for the male nonmanagerial employees. Our results suggest that there is no main effect when the dependent variable captures a salary increase. When we consider the interactions and the moderating effect of human capital, previous work experience is not significant for men, and although prior education had a very modest effect, it was less pronounced than for women employees.

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