

# Administrative Science Quarterly

<http://asq.sagepub.com/>

---

## Fatherhood and Managerial Style : How a Male CEO's Children Affect the Wages of His Employees

Michael S. Dahl, Cristian L. Dezso and David Gaddis Ross

*Administrative Science Quarterly* 2012 57: 669 originally published online 31 October 2012  
DOI: 10.1177/0001839212466521

The online version of this article can be found at:  
<http://asq.sagepub.com/content/57/4/669>

---

Published by:



<http://www.sagepublications.com>

On behalf of:



JOHNSON  
Cornell University

[Samuel Curtis Johnson Graduate School of Management at Cornell University](#)

**Additional services and information for *Administrative Science Quarterly* can be found at:**

**Email Alerts:** <http://asq.sagepub.com/cgi/alerts>

**Subscriptions:** <http://asq.sagepub.com/subscriptions>

**Reprints:** <http://www.sagepub.com/journalsReprints.nav>

**Permissions:** <http://www.sagepub.com/journalsPermissions.nav>

>> [Version of Record](#) - Nov 19, 2012

[OnlineFirst Version of Record](#) - Oct 31, 2012

[What is This?](#)



# Fatherhood and Managerial Style: How a Male CEO's Children Affect the Wages of His Employees\*

Administrative Science Quarterly  
57 (4)669–693  
© The Author(s) 2012  
Reprints and permissions:  
sagepub.com/  
journalsPermissions.nav  
DOI: 10.1177/0001839212466521  
asq.sagepub.com  
 SAGE

Michael S. Dahl,<sup>1</sup> Cristian L. Dezsó,<sup>2</sup>  
and David Gaddis Ross<sup>3</sup>

## Abstract

Motivated by a growing literature in the social sciences suggesting that the transition to fatherhood has a profound effect on men's values, we study how the wages of employees change after a male chief executive officer (CEO) has children, using comprehensive panel data on the employees, CEOs, and families of CEOs in all but the smallest Danish firms between 1996 and 2006. We find that (a) a male CEO generally pays his employees less generously after fathering a child, (b) the birth of a daughter has a less negative influence on wages than does the birth of a son and has a positive influence if the daughter is the CEO's first, and (c) the wages of female employees are less adversely affected than are those of male employees and positively affected by the CEO's first child of either gender. We also find that male CEOs pay themselves more after fathering a child, especially after fathering a son. These results are consistent with a desire by the CEO to husband more resources for his family after fathering a child and the psychological priming of the CEO's generosity after the birth of his first daughter and specifically toward women after the birth of his first child of either gender.

**Keywords:** CEOs, top management teams, values, organizational demographics, wages, gender, work and family

Ever since Barnard (1938), it has been argued that organizations are reflections of their top managers (Hambrick and Mason, 1984; Carpenter, Geletkanycz, and Sanders, 2004), and existing evidence supports the proposition that top managers have a management "style." In particular, top managers' experience, captured by traits such as age, tenure, education, and functional background,

---

\*The authors contributed equally to the study and are listed in alphabetical order.

<sup>1</sup> Aalborg University

<sup>2</sup> Robert H. Smith School of Business, University of Maryland

<sup>3</sup> Columbia Business School

has been associated with many of a firm's policies (e.g., Bertrand and Schoar, 2003; Finkelstein, Hambrick, and Cannella, 2009), including the level and distribution of firm-wide wages (Bastos and Monteiro, 2011). At the same time, researchers have made the case that a firm's policies are also shaped by their top managers' values (Hambrick and Mason, 1984; Hambrick and Brandon, 1988), that is, their beliefs about abstract desirable goals, which serve as motivators and guiding principles for action (Schwartz, 2009).

Yet values have not been the focus of systematic inquiry, and there is only suggestive evidence to support the premise that they have an influence (Adams, Licht, and Sagiv, 2011). In fact, as Finkelstein, Hambrick, and Cannella (2009) noted, some of the most fundamental issues regarding executive values are still wide open for investigation, including how executives' values are shaped, whether they have an impact on corporate policies, and if so, which ones. In this paper, we seek to address this gap in the literature. In particular, motivated by literature in lifecycle psychology and the sociology of the family suggesting that the transition to fatherhood has a profound influence on a man's values, we investigate how the birth and gender of a CEO's child differentially influences the wages of his female and male employees as well as his own wages.

The literature on how children affect their parents is still small, albeit growing (Palkovitz, 2002), and the link between the transition to fatherhood and managerial values and style is virtually unexplored. Consequently, we have followed Ryall and Sampson (2009) in adopting an inductive empirical approach, with two implications: first, we have focused on providing robust large-sample evidence for a previously undocumented empirical relationship of potentially significant concern to researchers and organizational stakeholders (Hambrick, 2007; Helfat, 2007; Miller, 2007); second, rather than developing a comprehensive set of formal hypotheses to predict how employees' wages might change after their male CEO has a child, we offer a more informal theoretical discussion to provide a context for our analysis and an explanation for what that analysis reveals (Helfat, 2007; Oxley et al., 2010). We do not claim that our informal hypotheses are the only ones that one could plausibly propose a priori. But we hope that our empirical analysis and theoretical motivation will spur further inquiry into uncovering the mechanisms underlying our results and lead to new theoretical development in future work (Hambrick, 2007).

One other aspect of our study is worth highlighting. The birth of a child is in principle endogenous, so the relationship between employees' wages and the addition of a child to their male CEO's family could be, in principle, a combination of selection (what the CEO intends) and treatment (how the child affects the CEO's values). By contrast, in a Danish cultural context, the gender of the CEO's child is effectively exogenous. Thus with respect to the gender of the CEO's child and the differential impact of that child on the wages of female and male employees, our study takes the form of a "quasi-experiment," thereby allowing us to interpret our results from a causal perspective (Hambrick, 2007; Oxley et al., 2010).

## CEOS, THEIR CHILDREN, AND THE WAGES OF THEIR EMPLOYEES

The notion that the wages of employees will be affected if their male CEO has a child is based on two theoretical ideas that provide a context for our

investigation: first, that a male CEO's values matter for his firm's wage policies and second, that his values are influenced by having children and differentially so by the gender of those children.

The proposition that top managers matter has received extensive attention and empirical support (e.g., Hambrick and Mason, 1984; Bertrand and Schoar, 2003; Finkelstein, Hambrick, and Cannella, 2009). Much of this evidence has tied top managers' experience in the form of traits such as age, tenure, education, and functional background to a wide array of corporate policies (e.g., Bertrand and Schoar, 2003; Finkelstein Hambrick, and Cannella, 2009), including the level and distribution of employees' wages (Bastos and Monteiro, 2011). Moreover, scholars of top management teams have argued that, in addition to managerial experience, top managers' psychological characteristics and values also influence how managers attend to various corporate policies (Hambrick and Mason, 1984; Hambrick and Brandon, 1988), and recent empirical research provides support for this idea (e.g., Hayward and Hambrick, 1997; Malmendier and Tate, 2005, 2008; Chatterjee and Hambrick, 2007).

While top managers' values may influence managerial style in manifold ways, one important channel is by affecting managers' attitudes toward various stakeholder groups, including a firm's employees (Mitchell, Agle, and Wood, 1997). Given CEOs' discretion over the distribution of a firm's resources and the importance of equity considerations in setting wages (Levine, 1993), it seems intuitive that CEOs' values would influence the generosity of a firm's wage policies toward its employees, subject to the constraints of the labor market and the CEO's other goals of increasing a firm's profitability or his own wages. This would be consistent with recent empirical work showing that female-led firms have more gender-equitable wage policies (Cardoso and Winter-Ebmer, 2010). More generally, managers' other-regarding values, that is, their values related to social equality, generosity, and concern for others' well-being (England, 1967; Rokeach, 1973; Hofstede, 1980; Schwartz, 1992), have also been linked to managers' support for a firm's non-shareholder constituencies, which include employees (Agle, Mitchell, and Sonnenfeld, 1999; Adams, Licht, and Sagiv, 2011). Similarly, several models in the literature on social preferences could be related to CEOs sharing rents with their employees: CEOs might care about fairness in pay (Fehr and Schmidt, 1999; Bolton and Ockenfels, 2000), might be inclined to help the least well-off (Charness and Rabin, 2002), or might identify more with their employees (Akerlof and Kranton, 2000; Chen and Li, 2009) (see Meier, 2007 for a review). The transition to fatherhood is likely to make such values more salient.

### The Transition to Fatherhood

We expect having a child to affect a CEO's values because it is one of the most momentous events that can occur in a man's life. On the one hand, gaining a new family member requires stressful social readjustment (Holmes and Rahe, 1967). On the other hand, having children is a source of intrinsic pleasure and achieves the normative goal of family completeness (Schoen et al., 1997). For most people, parenthood is the primary generative encounter, whereby an individual embraces the goal of caring for and fostering the next generation (Erikson, 1964, 1968). Fatherhood thus operates as a catalyst for personal growth (Palkovitz, 2002) by significantly changing a man's role in society, his

self-construal, and his priorities as he assumes the new role of caring for his offspring (George, 1980; Cowan and Cowan, 1992).

One of the most salient aspects of the traditional father role is that of the "good provider." Despite increasing participation by women in the labor force and changing cultural attitudes, there remains a normative imperative, even a taken-for-granted assumption, that a man should support his family (Tasch, 1952; Bachrach, Hindin, and Thomson, 2000; Christiansen and Palkovitz, 2001), and there is evidence that couples have a tendency to revert more to these traditional gender roles after the birth of a child (Coontz, 1997). For example, in Denmark, women take an average of 272 days for maternity leave versus only 18 days of paternity leave for the average father (Goth, 2007). Moreover, the need to provide for more people is a principal source of stress for fathers (Feldman, 1987), who expect that the mother will redirect her attention toward the child (Spence and Lurie, 1975). This reaction by fathers is understandable, because raising a child creates a substantial financial burden (Cowan and Cowan, 1992).

It therefore seems natural to expect that, both in anticipation of and in reaction to his child's birth, a male CEO would, other things being equal, have an impulse to husband his firm's resources for himself and his growing family, potentially at the expense of his employees by reducing their wages or increasing them less than he otherwise would have done. Moreover, because the actual or perceived burden of providing for his children is increasing in the number of children, we would expect this tendency to pay employees less generously to manifest itself after the birth of each additional child.

### The Child's Gender

We expect the change in employees' wages following the birth of a CEO's child to be moderated by the gender of the child, because systematic differences have been observed in how fathers tend to relate to children of different genders and how the gender of a child influences the father's values. In particular, while fathers are important caregivers for both sons and daughters, research suggests that a father attends less to the development of motor skills and focuses more on grooming with daughters (Tasch, 1952). Fathers verbalize more with daughters (Rebelsky and Hanks, 1971) and are, in general, less concerned with achievement and more concerned with interpersonal development than they are with sons (Block, 1983). Fathers are also said to adopt a less authoritarian attitude with daughters than with sons (Cowan and Cowan, 1992). All told, these differential behaviors could be expected to prime a more cooperative orientation in a male CEO and more specifically to prime his other-regarding values, that is, his attachment to the well-being of others.

More generally, Warner (1991) proposed in pioneering research that values are transmitted not only from parents to their children but also from children to their parents. She argued and provided evidence that men parenting daughters acquire more feminine values. Would such feminine socialization have an impact on the generosity and thus the wage policies of a male CEO? While there is a long-standing debate in sociology and social psychology on whether there really are gender differences in values (Schwartz and Rubel, 2005), there seems to be broad agreement that women are more likely to hold other-regarding values, that is, that they tend to feel more responsible for and attach

greater importance to the well-being of others when they make decisions than do men (Beutel and Marini, 1995; Schwartz and Rubel, 2005). Empirical evidence supports this view both in general population samples (Schwartz and Rubel, 2005) and in CEO and director samples. To wit, Adams and Funk (2011) found evidence in a survey of Sweden's population of public corporation directors and CEOs that women emphasized other-regarding values more than their male counterparts.

Recent empirical work links this literature with Warner's (1991) theory by providing evidence that having a daughter may prompt a father to manifest more other-regarding values: Washington (2008) showed that U.S. legislators with daughters tend to vote more liberally, and Oswald and Powdthavee (2010) showed that the birth of daughters made people in general more likely to vote for left-wing parties, which tend to promote redistributive and collectivist policies, at least relative to right-wing parties. Putting this all together, a natural working hypothesis is that the birth of a daughter to a male CEO and his subsequent interactions with her may activate and increase the relative importance of a male CEO's other-regarding values. This would entail greater concern for the well-being of his employees, including their financial well-being. It follows, then, that although the wages of employees may generally be adversely affected if their male CEO has a child, this effect may be smaller or even reversed if the child is a daughter. Furthermore, because the underlying mechanism relates to psychological activation, which has a binary character, we would expect the moderating influence of a child's gender to be more strongly associated with the CEO's first daughter than with the birth of additional daughters.

### The Employee's Gender

We expect the change in employees' wages following the birth of a CEO's child to be moderated by the gender of the employee because the birth of a child will affect the way a CEO perceives his wife and by extension women in general. There are two reasons for expecting this change in perception.

First, the role and social status of motherhood have been revered since antiquity (Bernard, 1974). Even after the recent advances women have made in male professions and important positions of leadership (Helfat, Harris, and Wolfson, 2006), the belief remains widespread that a woman fulfills her destiny in society by having a child (Thompson and Walker, 1989). Scholars have also argued that even if the stresses and time commitments of the transition to parenthood may decrease overall marital satisfaction (Cowan and Cowan, 1992; Palkovitz, 2002), a child holds a marriage together and increases the love of a husband for his wife (Simmel, 1950), because love or approval of one's child promotes love and approval of one's spouse (Thurnher, 1975). In fact, empirical research suggests that a father tends to credit the mother of his children for their successes but not blame her for their failures (Spence and Lurie, 1975). Thus a woman's successful enactment of motherhood and her "gift of a child to the father," as it were—a gift that parents avow will imbue their with lives so much meaning (LaRossa and LaRossa, 1981)—would be expected to increase his positive affect and esteem for her.

We would expect the positive affect and esteem generated by the wife's enactment of the maternal role to have a positive impact on the father's

perception of and behavior toward women, especially those toward whom he feels a closer connection, for example, his employees if he is a CEO. Such an effect would be a manifestation of the pervasive psychological phenomenon of transference, whereby one's mental representation of a significant other is activated in one's perception of another person, often because the new person shares some important characteristics with the significant other (Andersen and Glassman, 1996). The transferred mental representation of his wife from the CEO to his female employees would then guide his emotional, motivational, and behavioral responses toward them (Andersen and Chen, 2002).

Second, in the aftermath of childbirth, mothers frequently assert authority over the welfare and socialization of the child, thereby demonstrating leadership and competence (Thurnher, 1975). This demonstration may transfer to the father's perceptions of other women as described above and may also contradict any preconceived doubts the father has about the competence of women in general.

All told, then, while having children may in general induce male CEOs to pay their employees less generously, there may be a partly or wholly offsetting positive effect on the wages of female employees that arises because his attitude toward them becomes more generous and he holds their competence in higher regard. As with the birth of a daughter, moreover, the underlying mechanism relates to psychological activation and accordingly could be expected to have greater force after the birth of a CEO's first child, when his wife is making her initial transition to motherhood, than after the birth of subsequent children, as it is the first child who is thought to fundamentally alter the sociology of the family (Simmel, 1950) and have the biggest impact on the father's affect (Grossman, 1987).

### **Interaction of the Child's Gender and the Employee's Gender**

Our discussion so far suggests that female employees would doubly benefit from the birth of daughters. Female employees would, like male employees, benefit from an increase in their male CEO's other-regarding values after he fathers a daughter, especially his first daughter; and female employees would in particular benefit from the increase in the esteem with which their male CEO regards them after he fathers a child of either gender, especially his first child. In addition, Warner (1991) argued and provided evidence that if fathers are concerned about the life experiences of their children, then having daughters increases the salience of feminist issues, a form of female-favoring impulse that could extend to gender equity in a firm's wage policies. Consistent with those findings, Washington (2008) found that the effect of having daughters on the propensity of male congressmen to vote liberally was particularly strong on matters related to reproductive rights. It follows that we should observe a particularly positive change to the wages of female employees following the birth of a daughter to their male CEO, especially if the daughter is his first child. A contrasting hypothesis could, however, be formulated based on Schwartz's (1992: 12) theory of values, which asserts that other-regarding values can take the form of universalism, which pertains to "understanding, appreciation, tolerance, and protection for the welfare of all people" or benevolence, which pertains to "preserving and enhancing the welfare of those with whom one is in frequent personal contact," i.e., to a finite set of



others with whom one is especially close. In the latter case, an increase in a CEO's other-regarding values from the birth of a daughter might actually have a stronger effect on the wages of male employees, with whom he may socialize and identify more. We will return to these issues later when discussing our results.

## METHOD

### Data

We used Denmark's Integrated Database for Labor Market Research, most commonly referred to by its Danish acronym IDA, as the source of our data. The IDA contains demographic information on all firms, plants, and individuals in the Danish economy. The IDA is compiled by Statistics Denmark, a governmental agency, using the identification numbers assigned at birth to each Dane as part of maintaining Denmark's extensive social security system. The IDA notably includes detailed information about the family histories and wages of individuals and has been widely used for social science research (e.g., Albæk and Sørensen, 1998; Sørensen and Sorenson, 2007; Bennedsen et al., 2007; Dahl, 2011).

Our data were a panel of the 10,655 firms in private-sector industries covering the period from 1996 to 2006. We excluded firms in industries with a high degree of public-sector involvement (e.g., schools, energy, renovation, etc.) and heavily regulated primary-sector activities (e.g., farming, mining, fisheries, etc.) because the wage dynamics are quite different in such firms. We excluded firms that had less than 10 employees in any year in the study period because data on occupational rank are missing for a large share of these smaller firms. This sample selection criterion also excluded firms that might more accurately be described as personal trades, for example, operating a food truck.

We used the IDA to identify the CEO based on employees' occupational ranks. If there was more than one person listed in the most highly ranked category, we assigned the CEO title to the person with the highest salary in this rank. In general, a change to the identity of the most highly compensated manager was classified as a change in CEO. In a minority of firms, however, a manager had the highest salary for a continuous period of years except for an idiosyncratic year when another manager had the highest salary. In such cases, we considered the first person to be CEO throughout. It is important to note that because our study encompasses all but the smallest Danish firms, the CEOs in our sample are not generally as wealthy as the CEOs of large public companies.

The IDA contains detailed information on the families of all individuals. We used this information to generate our main variables of interest: the gender, birth year, and number of children of the CEO. At the employee level, we collected data on real wages (in 2010 kroner), gender, age, labor market experience, education, marital status, number of children and their ages, full-time work status, firm tenure, and occupational rank (blue collar, white collar, management, and top management). We also collected information on CEOs' real wages, age, education, marital status, and tenure. At the firm level, we collected information on the firm's profitability (net income/sales, lagged by one



**Table 1. Summary Statistics**

Employee-year Level Variables	Female Employees		Male Employees	
	Mean	S. D.	Mean	S. D.
Employee-year observations	1,560,859		3,415,374	
Wages (ln; 2010 kroner)	12.352	0.6641	12.615	0.6741
Age (ln)	3.606	0.2972	3.639	0.3072
Years of experience (ln)	2.486	0.7963	2.692	0.7784
Years of education (ln)	2.460	0.2179	2.497	0.2241
Marital status (married = 1)	0.597	0.4905	0.588	0.4922
Children 5 years and under	0.284	0.5817	0.262	0.5757
Children 6 to 17 years	0.486	0.7994	0.437	0.7896
Full-time status (full-time = 1)	0.923	0.2659	0.958	0.2013
Years of firm tenure (ln)	1.254	0.9695	1.324	0.9892
Blue-collar rank	0.724	0.4472	0.713	0.4525
White-collar rank	0.198	0.3982	0.145	0.3523
Management rank	0.060	0.2378	0.097	0.2958
Top management rank	0.019	0.1348	0.045	0.2077
<b>CEO-year Level Variables</b>				
CEO-year observations	58,332			
Wages (ln; 2010 kroner)	13.450	0.6226		
Age (ln)	3.851	0.1991		
Years of education (ln)	2.605	0.1800		
Marital status (married = 1)	0.809	0.3929		
Number of daughters	0.960	0.8536		
Daughter births	790			
Number of sons	1.018	0.8765		
Son births	802			
Number of children	1.979	1.0000		
Child births	1592			
Years of firm tenure (ln)	1.942	0.9607		
<b>Firm-level variables (lagged)</b>				
Size (ln, std.; number of employees)	-1.943	0.9790		
Profitability (profit/sales)	0.028	0.0699		

year) and size (number of employees, lagged by one year and standardized).

Table 1 provides summary statistics.

Our data contain 4,976,233 employee-year observations for 1,184,169 unique employees over 18 years of age. Of these, 1,560,859 employee-year observations were for female employees and 3,415,374 employee-year observations were for male employees. Female employees earned, on average, 231,441 kroner (after reversing the log transformed figure in table 1), the equivalent of approximately \$41,659 computed using the 0.18 USD/DKK exchange rate prevailing on January 1, 2011. Their average age was 37 and they had, on average, 12 years of labor market experience and 12 years of schooling. Fifty-nine point seven percent were married, 28.4 percent had children 5 years old and under, and 48.6 percent had children between 6 and 17 years old. Ninety-two point three percent of female employees had full-time positions. The

average job tenure was 3.5 years; 72.4 percent of female employees worked in blue-collar jobs, 19.8 percent in white-collar jobs, 6 percent in management positions, and 1.9 percent in top management positions. Male employees earned, on average, 301,173 kroner, or approximately \$54,211. Their average age was 38 and they had, on average, 15 years of labor market experience and 12 years of schooling. Fifty-eight point eight percent were married, 26.2 percent had children 5 years old and under, and 43.7 percent had children between 6 and 17 years old. Ninety-five point eight percent of male employees had full-time positions. The average job tenure was 3.8 years; 71.3 percent of male employees worked in blue-collar jobs, 14.5 percent in white-collar jobs, 9.7 percent in management positions, and 4.5 percent in top management positions.

Our data contain 58,332 CEO-year observations for 18,773 unique male CEOs. CEOs earned, on average, 701,061 kroner, or approximately \$126,191. CEOs were on average 47 years old, had 13.5 years of schooling, and had a 7-year average tenure with their firms. About 81 percent of the CEOs were married. During the sample period, 1,383 CEOs experienced 1,592 birth events, of which 790 were daughters, or almost exactly half. As detailed below, the coefficients on our independent variables of interest were identified based on these birth events. On average, firms had 86 employees. In table 2, we report the correlations between the main variables in our analysis.

### Empirical Design

Because unobservable employee heterogeneity has been identified as a key determinant of wages (Abowd, Kramarz, and Margolis, 1999), an essential aspect of our empirical design involves accounting for unobservable attributes associated with firms, CEOs, and employees. We controlled for unobservable firm and CEO attributes using CEO fixed effects, with firm fixed effects effectively subsumed by CEO fixed effects, and we controlled for unobservable employee attributes using employee fixed effects. Combining these fixed effects yielded a set of CEO-employee fixed effects that account not only for unobservable heterogeneity associated with each CEO-employee relationship itself but also with each CEO, each employee, and the firm for which they both work. A key feature of this empirical design is that the coefficients in our regressions are identified solely based on changes within each panel as defined by CEO-employee matches. Thus the fixed effects account for time-invariant characteristics associated with CEOs, employees, and their firms that may affect family structure, wages, and social preferences (e.g., a CEO's own birth-rank order or the number and gender composition of his siblings).

We also note that gender-related abortion is extremely rare in Denmark, which is reflected in the fact that the birth events that we observe in CEOs' families are nearly equally divided between daughters and sons. Thus for effects associated with a child's gender, we have a quasi-experimental setting whereby the gender of a CEO's newborn child is effectively exogenous, and unobservable heterogeneity and changes in observable heterogeneity are controlled for at a fine-grained level.

Our initial linear regression model may be written as follows:

$$Y_{ijt} = \gamma \text{CEO number of children}_{jt} + \sum_i \beta_{Ei} E_{it} + \sum_j \beta_{Cj} C_{jt} + \sum_k \beta_{Fk} F_{kt} + \varphi_{ij} + \varphi_t + \varepsilon_{ijt}$$

**Table 2. Correlations**

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Wages (ln)												
2. Female	-.179											
3. Age (ln)	.349	-.050										
4. Years of experience (ln)	.436	-.121	.808									
5. Years of education (ln)	.213	-.077	-.070	-.042								
6. Married	.223	.009	.417	.394	.041							
7. Children 5 years and under	.032	.018	-.175	-.081	.135	.343						
8. Children 6 to 17 years	.119	.029	.122	.161	.056	.347	.008					
9. Full time	.273	-.071	.162	.255	.047	.113	.052	.065				
10. Firm tenure (ln)	.407	-.033	.418	.484	-.057	.216	-.068	.067	.150			
11. Blue collar	-.319	.011	-.104	-.073	-.387	-.108	-.079	-.048	-.074	-.022		
12. White collar	.151	.066	.055	.069	.187	.061	.045	.027	.048	.015	-.698	
13. Management	.202	-.061	.033	-.032	.314	.044	.066	.021	.038	-.019	-.485	-.134
14. Top management	.169	-.066	.094	.088	.096	.075	.003	.031	.028	.052	-.311	-.086
15. CEO number of daughters	.012	-.014	.002	.004	.004	.010	.009	.011	.017	-.001	-.012	.002
16. CEO number of sons	-.020	-.001	-.005	-.007	-.015	-.006	-.005	-.003	-.011	.008	.009	-.013
17. CEO number of children	-.009	-.014	-.002	-.003	-.009	.004	.004	.007	.005	.007	-.002	-.010
18. CEO age	.048	-.012	.071	.070	.005	.033	-.010	.010	.042	.064	-.032	.015
19. CEO years of education	.101	.020	.065	.049	.090	.043	.017	.025	.049	.026	-.117	.043
20. CEO tenure	-.007	-.031	.014	.026	-.009	.007	-.010	-.002	.017	.126	.020	-.026
21. CEO married	.022	-.004	.023	.027	.001	.018	.002	.011	.023	.015	-.018	.009
22. Firm size (ln, std.)	.063	.098	.021	-.007	.020	.002	-.004	.000	-.005	-.014	-.080	.040
23. Firm profitability	.051	.057	.026	.018	.029	.020	.008	.012	.028	.026	-.059	.037
24. CEO wages (ln)	.119	.092	.047	.020	.075	.024	.013	.011	.028	.004	-.178	.102

  

Variable	13	14	15	16	17	18	19	20	21	22	23
14. Top management	-.060										
15. CEO number of daughters	.010	.009									
16. CEO number of sons	-.002	.007	-.382								
17. CEO number of children	.007	.015	.542	.570							
18. CEO age	.031	.001	.067	.114	.163						
19. CEO years of education	.138	-.009	.029	-.044	-.014	-.050					
20. CEO tenure	-.005	.011	.013	.058	.065	.333	-.132				
21. CEO married	.012	.009	.129	.112	.217	.200	.054	.059			
22. Firm size (ln, std.)	.089	-.017	.002	.020	.020	.117	.225	-.195	.093		
23. Firm profitability	.052	-.009	-.015	-.009	-.022	.094	.106	.083	.021	.158	
24. CEO wages (ln)	.136	.025	.046	.065	.100	.223	.272	-.051	.138	.629	.186

where  $Y_{ijt}$  is the natural log of real wages of employee  $i$  working for CEO  $j$  in year  $t$ , and  $CEO\ number\ of\ children_{jt}$  is the number of children of CEO  $j$  in year  $t$ .  $E_{it}$ ,  $C_{jt}$ , and  $F_{kt}$  are, respectively, observable characteristics for employee  $i$ , CEO  $j$ , and the firm  $k$  where employee  $i$  and CEO  $j$  work in year  $t$ .  $\varphi_{ij}$  represent fixed effects for the match between employee  $i$  and CEO  $j$ , and  $\varphi_t$  are year fixed effects.  $\varepsilon_{ijt}$  is a random error associated with each observation. Given the presence of fixed effects for the CEO-employee match, the coefficient  $\gamma$  is identified from births of children to CEOs. Consequently,  $\gamma$  represents the effect of an additional child to CEO  $j$  on employee  $i$ 's wages.

To consider the moderating role of child gender, we modified the foregoing regression equation by splitting *CEO number of children*<sub>it</sub> into two orthogonal categories, *CEO number of sons*<sub>it</sub> and *CEO number of daughters*<sub>it</sub>. To consider the moderating role of employee gender, we retain the variables *CEO number of sons*<sub>it</sub> and *CEO number of daughters*<sub>it</sub> and run separate regressions on female and male employees because many of the control variables differentially affect the wages of female and male employees, and failing to account for these differential effects would give rise to omitted variable bias.<sup>1</sup> We consider birth order by further splitting *CEO number of sons*<sub>it</sub> and *CEO number of daughters*<sub>it</sub> into orthogonal subcategories based on whether the CEO has or does not have a child, daughter, or son, and analyzing their effects on female and male employees separately.

We calculated robust standard errors to account for any unobservable heterogeneity not captured by the CEO-employee fixed effects, including arbitrary correlation within and across the panels defined by the CEO-employee fixed effects. This calculation of standard errors subsumes clustering at the firm level.

Finally, as an extension to our analysis, we studied CEOs' own wages. These regressions included CEO fixed effects, year fixed effects, and the control variables associated with observable CEO and firm characteristics.

## RESULTS

### Main Analysis

We present results of our initial analysis in table 3. Column (1) reports the results of a regression of wages on the control variables and the fixed effects described above.

All controls are highly significant and have the expected signs. At the employee level, older, more experienced, and longer-tenured employees were compensated better, as were employees who acquired a higher education level and those promoted to full-time jobs or in the organizational hierarchy. Marriage was also associated with higher wages, although the effect was highly gender-specific as shown by the interaction term between marital status and the gender of the employee. Having children was associated with lower wages, particularly if the children were 5 years old or younger and if the employee was female, evidence of the well-known motherhood penalty. At the CEO level, we note that older CEOs tended to pay higher wages, but those with longer tenure paid lower wages. CEO marriage was also associated with higher wages. Finally, at the firm level, we see that larger and more profitable firms paid their employees higher wages, as expected.

Next, in column (2), we introduce the variable *CEO number of children*. The coefficient on this variable is negative and significant at the 1 percent level, indicating that the birth of a child to a male CEO is associated with 0.2 percent lower real wages than they otherwise would have been. In practice, this would imply a somewhat smaller increase in nominal wages. This result is consistent

<sup>1</sup> To compare results for female and male employees, we also ran pooled regressions in which we used two versions of each independent variable, one for female employees and one for male employees. We do not separately report the results of these regressions because they produce results identical to those reported.

**Table 3. Least Squares Regressions of Employees' Wages (ln) on CEOs' Children\***

Variable	(1) Full Sample	(2) Full Sample	(3) Full Sample	(4) Fem. Employees	(5) Male Employees	(6) Fem. Employees	(7) Male Employees
CEO number of children		-0.002*** (0.000)					
CEO number of sons			-0.004*** (0.000)	-0.002* (0.001)	-0.005*** (0.001)		
CEO number of daughters			-0.000 (0.001)	0.001 (0.001)	-0.001 (0.001)		
CEO number of sons x Has no children						0.008*** (0.002)	-0.005*** (0.002)
CEO number of sons x Has child						-0.004*** (0.001)	-0.005*** (0.001)
CEO number of daughters x Has no children						0.011*** (0.002)	0.006*** (0.002)
CEO number of daughters x Has child						-0.001 (0.001)	-0.002** (0.001)
<i>Employee controls</i>							
Age (ln)	1.069*** (0.023)	1.068*** (0.023)	1.068*** (0.023)	0.420*** (0.044)	1.335*** (0.027)	0.418*** (0.044)	1.334*** (0.027)
Years of education (ln)	0.819*** (0.009)	0.819*** (0.009)	0.819*** (0.009)	0.802*** (0.021)	0.818*** (0.010)	0.802*** (0.021)	0.818*** (0.010)
Years of experience (ln)	0.439*** (0.003)	0.439*** (0.003)	0.439*** (0.003)	0.600*** (0.006)	0.378*** (0.004)	0.600*** (0.006)	0.378*** (0.004)
Tenure (ln)	0.233*** (0.001)	0.233*** (0.001)	0.233*** (0.001)	0.220*** (0.001)	0.238*** (0.001)	0.220*** (0.001)	0.238*** (0.001)
Full time	0.302*** (0.002)	0.302*** (0.002)	0.302*** (0.002)	0.251*** (0.003)	0.304*** (0.002)	0.251*** (0.003)	0.304*** (0.002)
Full time x Female	-0.043*** (0.004)	-0.043*** (0.004)	-0.043*** (0.004)				
White collar	0.035*** (0.001)	0.035*** (0.001)	0.035*** (0.001)	0.033*** (0.002)	0.035*** (0.002)	0.033*** (0.002)	0.035*** (0.002)
Management	0.053*** (0.002)	0.053*** (0.002)	0.053*** (0.002)	0.049*** (0.005)	0.054*** (0.003)	0.049*** (0.005)	0.054*** (0.003)
Top management	0.074*** (0.002)	0.074*** (0.002)	0.074*** (0.002)	0.090*** (0.005)	0.070*** (0.003)	0.090*** (0.005)	0.070*** (0.003)
Married	0.022*** (0.002)	0.022*** (0.002)	0.022*** (0.002)	-0.037*** (0.002)	0.011*** (0.002)	-0.037*** (0.002)	0.011*** (0.002)
Married x Female	-0.072*** (0.002)	-0.072*** (0.002)	-0.072*** (0.002)				
Children 5 years and under	-0.019*** (0.001)	-0.019*** (0.001)	-0.019*** (0.001)	-0.124*** (0.001)	-0.011*** (0.001)	-0.124*** (0.001)	-0.011*** (0.001)
Children 5 years x Female	-0.088*** (0.001)	-0.088*** (0.001)	-0.088*** (0.001)				
Children 6 to 17 years	-0.019*** (0.001)	-0.019*** (0.001)	-0.019*** (0.001)	-0.046*** (0.001)	-0.008*** (0.001)	-0.046*** (0.001)	-0.008*** (0.001)
<i>CEO controls</i>							
Age (ln)	0.015*** (0.002)	0.016*** (0.002)	0.017*** (0.002)	0.026*** (0.004)	0.012*** (0.003)	0.026*** (0.004)	0.012*** (0.003)
Years of education (ln)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.016*** (0.004)	0.008*** (0.003)	0.017*** (0.004)	0.008*** (0.003)
Tenure (ln)	-0.016*** (0.000)	-0.016*** (0.000)	-0.016*** (0.000)	-0.014*** (0.001)	-0.017*** (0.000)	-0.014*** (0.001)	-0.017*** (0.000)
Married	0.005*** (0.001)	0.006*** (0.001)	0.006*** (0.001)	-0.001 (0.002)	0.009*** (0.001)	-0.001 (0.002)	0.009*** (0.001)

(continued)

**Table 3. (continued)**

Variable	(1) Full Sample	(2) Full Sample	(3) Full Sample	(4) Fem. Employees	(5) Male Employees	(6) Fem. Employees	(7) Male Employees
<i>Firm controls</i>							
Firm profitability (lagged)	0.060*** (0.004)	0.059*** (0.004)	0.059*** (0.004)	0.028*** (0.007)	0.078*** (0.005)	0.027*** (0.007)	0.078*** (0.005)
Firm size (ln, std.; lagged)	0.021*** (0.000)	0.021*** (0.000)	0.021*** (0.000)	0.019*** (0.001)	0.021*** (0.001)	0.019*** (0.001)	0.021*** (0.001)
Observations	4,976,233	4,976,233	4,976,233	1,560,859	3,415,374	1,560,859	3,415,374
R <sup>2</sup>	0.19	0.19	0.19	0.20	0.19	0.20	0.19

\* $p < .10$ ; \*\* $p < .05$ ; \*\*\* $p < .01$ .

\* Standard errors are in parentheses and are robust to heteroskedasticity and arbitrary within- and across-panel correlation. All models include fixed effects for the CEO-employee match and year. R<sup>2</sup> calculated after within transformation.

with the idea that after his child's birth, a male CEO husbands his firm's resources for himself and his growing family, at the expense of his employees. The negative 0.2 percent effect on wages represents a reduction of approximately 555 kroner (\$100) in annual compensation. This figure is large enough to be meaningful, but not so large that it would necessarily prompt an employee to seek employment elsewhere. As we will see below, moreover, the economic effects are larger when we account for the moderating roles of an employee's gender and a child's gender.

We split *CEO number of children* into *CEO number of sons* and *CEO number of daughters* in column (3) to separate the effect of sons from that of daughters. We find that the birth of a son to a male CEO is associated with a negative 0.4 percent influence on employees' wages, whereas the birth of a daughter has no effect. These results are consistent with the twofold proposition that, unconditional on gender, the birth of a child provides an impetus for the CEO to husband his firm's resources for himself and his growing family at the expense of his employees, but that this effect is entirely offset by an increase in other-regarding values from the birth of a daughter. Another possible explanation is that the birth of a daughter does not affect a CEO's values, whereas the birth of a son makes a CEO less other-regarding. We examine this potential explanation below.

In columns (4) and (5), we analyze how an employee's gender moderates the effect of the birth of a CEO's child by repeating the analysis in column (3) for female and male employees separately. It is notable that the control variables have different values in the two regressions. For instance, the coefficient on employee age is 1.335 for male employees versus 0.420 for female employees, even though on average they are almost the same age, whereas the coefficient on years of experience is 0.600 for female employees versus 0.378 for male employees. These differential effects are interesting in their own right and demonstrate the importance of running separate regressions for female and male employees.

With regard to our primary independent variables of interest, the results are intriguing. Both female and male employees experience an adverse effect

on real wages after their CEO fathers a son, but the effect on the wages of female employees is negative 0.2 percent and only marginally significant, whereas the effect on the wages of male employees is negative 0.5 percent and highly significant; the difference between the two coefficients is also highly statistically significant ( $p$ -value of .001). Moreover, the birth of a daughter to the CEO is associated with a negative 0.1 percent (albeit insignificant) effect on the real wages of male employees and a positive 0.1 percent (albeit insignificant) effect on the real wages of female employees. These results are fully consistent with the threefold proposition that, unconditional on gender, employees experience an adverse effect on wages if their male CEO has a child, but that this adverse effect is lower if the employee is female, lower if the child is female, and even positive if both the employee and child are female. To demonstrate this fully, however, we need to examine how these effects interact with birth order.

We do this in columns (6) and (7), which repeat the regressions from columns (4) and (5), respectively, but separate out the effect of first-born children from that of subsequent births. It is in these regressions that everything comes together. Considering sons first, the birth of a son always has a negative influence of 0.5 percent on the wages of male employees and, except for first-born sons, has a negative influence of almost the same magnitude (0.4 percent) on the wages of female employees. First-born sons, by contrast, have a 0.8 percent positive influence on the wages of female employees, or 1,851 kroner (\$333). The difference between the first-born son coefficients for female and male employees is highly statistically significant with a  $p$ -value of less than .001. This is consistent with the proposition that the first-born child positively affects a CEO's attitude toward female employees.

Considering the effect of daughters, the results show that, in general, they have a more benign influence on employees' wages than do sons, but birth order has a large influence on the moderating role of a child's gender. If the daughter is not the first-born child, the negative influence on employees' wages is only a statistically insignificant 0.1 percent for female employees (versus a statistically significant negative 0.4 percent for sons) and a statistically significant negative 0.2 percent for male employees (versus a statistically significant negative 0.5 percent for sons). By contrast, the moderating role is much larger if the daughter is first-born: a positive 0.6 percent for male employees and a positive 1.1 percent for female employees, or 2,546 kroner (\$458). The difference between these coefficients is statistically significant at the 10 percent level. Not only are these results consistent with the proposition that a first-born daughter positively affects the CEO's attitude toward all employees, but the positive 1.1 percent effect of a first-born daughter on the wages of female employees is also larger than both the effect of a first-born son on the wages of female employees (positive 0.8 percent) and the effect of a first-born daughter on the wages of male employees (positive 0.6 percent), precisely what one would expect from a condition that combines the positive effect of the first-born child on women's wages with the positive effect of the first-born daughter on everyone's wages.



### Follow-on Analysis: The First Child of Each Gender

The foregoing analysis did not settle the question of whether a first daughter who is not the first-born child would have as large a positive influence on employees' wages as a first daughter who is also the first-born child or whether a CEO's previous experience with fathering sons would in some sense adulterate the influence of his first daughter on his values and by extension on employee wages. There may also be some interest in seeing whether a first son who is not the first-born child would have as positive an influence on the wages of female employees.

To examine these questions, we repeated the analysis from table 3, columns (6) and (7), this time replacing the dichotomous classification Has no children/Has child with either Has no daughters/Has daughter or Has no sons/Has son. We report an excerpt of the results in table 4, which also replicates, in columns (1) and (2), the relevant portions of table 3, columns (6) and (7) for ease of comparison.

Columns (3) and (4) compare the effects of first daughters with that of subsequent daughters. A first daughter has a positive 0.5 percent influence on the wages of male employees versus a nearly identical positive 0.6 percent influence for a first daughter who is also first-born, as shown in Column (2). By contrast, a first daughter has only a positive 0.6 percent influence on the wages of female employees versus a positive 1.1 percent influence for a first daughter who is also first-born. This makes sense. First daughters have a positive influence on everyone's wages, and first-born children have a positive influence on the wages of female employees alone. The first daughters in column (3) are not necessarily first-born so they do not fully reflect the benefit to female employees of first-born children of either gender. The birth of subsequent daughters is associated with a negative 0.2 percent effect on the wages of female employees and a negative 0.4 percent effect on the wages of male employees. By contrast, the birth of a daughter when the CEO already has a child of either gender is associated with an insignificant negative 0.1 percent effect on the wages of female employees and a negative 0.2 percent effect on the wages of male employees, in each case smaller in magnitude than the corresponding figures in columns (3) and (4). This makes sense. The birth of subsequent daughters, like the birth of sons, leads to lower wages for all employees. The figures in columns (1) and (2) for the Has child condition include first daughters and also subsequent daughters. We thus see that it is the first daughter, regardless of whether she is the first child or not, who is associated with a positive influence on employee wages, whereas subsequent daughters, like sons, lead to lower wages.

Columns (5) and (6) of table 4 replicate the regressions in columns (1) and (2) but replace Has no children/Has child with Has no sons/Has son. The coefficients associated with the birth of a son in columns (5) and (6) are quite similar to those in columns (1) and (2). As expected, however, the positive effect of a first son who is not necessarily a first-born child on the wages of female employees is 0.6 percent versus positive 0.8 percent for first-born children regardless of gender. This makes sense, as the figure in column (5) is the average of first sons who are also first-born (who we expect to have a positive effect on the wages of female employees) and first sons who are not first-born (who we expect will not have a positive effect on the wages of female

**Table 4. Effects on Employees' Wages (ln) of the Rank Order at Birth of CEOs' Children\***

Variable	(1) Fem. Employees	(2) Male Employees	(3) Fem. Employees	(4) Male Employees	(5) Fem. Employees	(6) Male Employees
CEO number of sons x Has no children	0.008*** (0.002)	-0.005*** (0.002)				
CEO number of sons x Has child	-0.004*** (0.001)	-0.005*** (0.001)				
CEO number of daughters x Has no children	0.011*** (0.002)	0.006*** (0.002)				
CEO number of daughters x Has child	-0.001 (0.001)	-0.002** (0.001)				
CEO number of sons x Has no daughters			-0.002 (0.001)	-0.006*** (0.001)		
CEO number of sons x Has daughter			-0.001 (0.001)	-0.004*** (0.001)		
CEO number of daughters x Has no daughters			0.006*** (0.001)	0.005*** (0.001)		
CEO number of daughters x Has daughter			-0.002** (0.001)	-0.004** (0.001)		
CEO number of sons x Has no sons					0.006*** (0.001)	-0.004*** (0.001)
CEO number of sons x Has son					-0.005*** (0.001)	-0.006*** (0.001)
CEO number of daughters x Has no sons					0.001 (0.001)	0.000 (0.001)
CEO number of daughters x Has son					-0.001 (0.001)	-0.001* (0.001)

\* $p < .10$ ; \*\* $p < .05$ ; \*\*\* $p < .01$ .

\* Standard errors are in parentheses and are robust to heteroskedasticity and arbitrary within- and across-panel correlation. All models include fixed effects for the CEO-employee match and year. Columns (1) and (2) replicate columns (6) and (7) from table 3 for comparison.

employees.) In conclusion, then, after investigating the effects of first daughters and first sons, it appears that the models in columns (1) and (2) are the most informative.

### Follow-on Analysis: The Wages of CEOs

An important part of our theoretical motivation was that the birth of a child to a male CEO, unconditional on gender, prompts the CEO to husband more of his firm's resources for himself and his growing family, potentially at the expense of his employees. Consistent with this, we observed that except for a CEO's first-born child and first daughter, the birth of a child to a male CEO has a negative influence on the wages of both female and male employees. A natural question is whether the "missing money" shows up somewhere else.

One place to look is the CEO's own wages, that is, if the wages of his employees are lower than they would have been because he fathered a child, are his wages correspondingly higher? While that is intuitive, several caveats are in order. First, the birth of a child has a positive effect on how hard and how productively fathers work (Gray and Vanderhart, 2000; Waite and Gallagher, 2000), which might result in higher wages for a CEO after he fathers

**Table 5. Least Squares Regressions of CEOs' Wages (ln) on CEOs' Children (N = 58,332)\***

Variable	(1)	(2)	(3)	(4)	(5)	(6)
CEO number of children		0.049*** (0.010)				
CEO number of sons			0.064*** (0.017)			
CEO number of daughters			0.035*** (0.012)			
CEO number of sons x Has no children				0.037* (0.021)		
CEO number of sons x Has child				0.071*** (0.020)		
CEO number of daughters x Has no children				0.052*** (0.020)		
CEO number of daughters x Has child				0.031** (0.015)		
CEO number of sons x Has no daughters					0.044** (0.017)	
CEO number of sons x Has daughter					0.078*** (0.026)	
CEO number of daughters x Has no daughters					0.052*** (0.015)	
CEO number of daughters x Has daughter					0.020 (0.019)	
CEO number of sons x Has no sons						0.054*** (0.018)
CEO number of sons x Has son						0.075*** (0.027)
CEO number of daughters x Has no sons						0.025 (0.017)
CEO number of daughters x Has son						0.050*** (0.019)
<i>CEO controls</i>						
Age (ln)	0.698*** (0.148)	0.598*** (0.152)	0.602*** (0.149)	0.602*** (0.149)	0.620*** (0.146)	0.598*** (0.152)
Years of education (ln)	0.325* (0.167)	0.323** (0.163)	0.324** (0.162)	0.323** (0.161)	0.313* (0.161)	0.327** (0.161)
Tenure (ln)	0.025*** (0.008)	0.025*** (0.008)	0.025*** (0.008)	0.025*** (0.008)	0.025*** (0.008)	0.025*** (0.008)
Married	0.007 (0.009)	-0.003 (0.009)	-0.003 (0.009)	-0.003 (0.009)	-0.003 (0.009)	-0.003 (0.009)
<i>Firm controls</i>						
Firm profitability (lagged)	0.243*** (0.032)	0.243*** (0.031)	0.243*** (0.031)	0.243*** (0.031)	0.243*** (0.031)	0.243*** (0.031)
Firm size (ln, std.; lagged)	0.084*** (0.009)	0.082*** (0.009)	0.082*** (0.009)	0.082*** (0.009)	0.082*** (0.009)	0.082*** (0.009)
R <sup>2</sup>	0.03	0.03	0.03	0.03	0.03	0.03

\* $p < .10$ ; \*\* $p < .05$ ; \*\*\* $p < .01$ .

\* Standard errors are in parentheses and are robust to heteroskedasticity and arbitrary within- and across-panel correlation. All models include fixed effects for the CEO and year. R<sup>2</sup> calculated after within transformation.

a child without necessarily impacting the wages of employees. Second, CEOs have other ways of extracting rent from their firms, many of which we cannot observe in these data; examples include cash distributions associated with ownership stakes, executive loans, and the consumption of perquisites. Third,

a CEO might be content to leave the money economized on employees' wages inside the firm for use on a rainy day, as it were. Nonetheless, we think that analyzing the wages of CEOs is of sufficient interest to merit exploratory analysis, which we present in table 5.

Column (1) reports the results of a regression of (logged) CEO wages on observable CEO and firm characteristics and fixed effects at the CEO and year level. All controls (except for the CEO's marital status) are highly significant and have the expected signs. Older, more experienced, and longer-tenured CEOs were compensated better, as were CEOs who acquired a higher education level. CEOs of larger and more profitable firms were also compensated better.

Next, in column (2), we introduce the variable *CEO number of children*. The coefficient on this variable is positive and significant at the 1 percent level, indicating that the birth of a child to a male CEO is associated with a 4.9 percent increase in the CEO's real wages. In column (3) we consider the moderating influence of the gender of the child and find that the birth of a son to a male CEO is associated with a 6.3 percent increase in his real wages, while the birth of a daughter to a male CEO is associated with a more modest, 3.5 percent increase in his real wages. Taken together with the evidence that the birth of a son to a male CEO has a larger negative influence on employees' real wages than does the birth of a daughter, these results are indeed consistent with the notion that the birth of a child to a male CEO prompts him to husband more of his firm's resources for his growing family at the expense of his employees and that he husbands more resources after having a son than after having a daughter.

In the remaining columns, we consider rank order at birth. The results are intriguing and suggest that a firm's wage bill is not a fixed pie in the sense that changes to employees' wages do not ipso facto result in proportional changes to the CEO's wages. On the one hand, as shown in column (4), a first son who is also the CEO's first child is associated with a smaller increase in the CEO's wages than a subsequent son; this result is consistent with our finding that subsequent children impose a negative influence on the wages of all employees but that first-born children benefit female employees while still imposing a cost on male employees. On the other hand, as shown in column (5), a first daughter is associated with a larger increase in the CEO's wages than subsequent daughters, whereas we found that first daughters lead to higher wages for everyone. Is it possible that the first daughter prompts the CEO to work much harder or more productively and thereby create a larger pie for everyone to share? Does the first daughter prompt the CEO to reduce investment and thereby leave a larger pie to share in the current year at the expense of future years? These issues merit further investigation, but data limitations oblige us to leave them for future research.

## DISCUSSION

Motivated by research suggesting that the transition to fatherhood influences a man's values, we studied how a male CEO's newborn child affects the wages of his employees, as well as how the baseline effects are moderated by the gender of the child and the gender of the employee. Our empirical context used a comprehensive panel dataset of Danish firms, their employees and CEOs, and their CEOs' families. We used fixed effects at the level of the match

between CEO and employee, creating a quasi-experimental research design in which the gender of a CEO's child is effectively exogenous even if the child's birth is in principle endogenous. We found robust empirical evidence not only that a male CEO generally pays his employees less generously after fathering a child, but also that this effect is moderated by the gender of the child as well as that of the employee. In particular, a male CEO pays both his female and male employees more generously after the birth of his first daughter and he pays his female employees more generously after the birth of his first child. Thus a female employee benefits doubly from the birth to her CEO of a first daughter who is also the CEO's first child. We also found that male CEOs tend to pay themselves more after fathering a child, especially if the child is a son. These results are consistent with the hypothesis that a male CEO tends to husband more resources for his own growing family after fathering a child as well as with the hypotheses that the first child activates the CEO's generosity toward women and that the first daughter activates his generosity toward everyone.

It is also worth considering other potential explanations for the results we observe and reasonable hypotheses one might propose a priori. For example, that wages are lower following the birth of sons but not the birth of daughters is consistent with the proposition that sons reduce a male CEO's other-regarding values, whereas daughters have no effect. But this explanation cannot account for the fact that the first daughter has a positive effect on the wages of all employees, whereas the birth of subsequent daughters has a negative effect similar to that of sons. In addition, at 1.1 percent, the largest positive effect on employees' wages was for female employees following the birth of a CEO's first-born daughter. This is consistent with a female-favoring impulse following the birth of a daughter, as argued by Warner (1991). Yet we can explain this large positive effect as the confluence of a tendency to favor female employees following the birth of a CEO's first child of either gender and a tendency to be more generous to all employees following the birth of a CEO's first daughter. Moreover, there is no evidence that female employees particularly benefit from the birth of a first daughter who is not first born. In summary, though we do not claim that the mechanisms discussed in our theoretical motivation are the only possible mechanisms that could underlie our results, we do believe that our theoretical explanation is the most parsimonious combination of mechanisms that is consistent with what we observe.

In addition to the broader literatures relating to how executive values influence corporate policies, the determinants of employee wages, and the relationship between the domains of work and family, our results pertain to other lines of inquiry. In particular, a growing and extensive literature has used laboratory experiments to test and provide support for social preference models; yet it remains an open question how much these results apply outside the laboratory, particularly with regard to attitudes and behaviors in commercial settings and to important social issues like wage policy and work and family (Levitt and List, 2007). Our paper provides robust, albeit indirect, evidence that social preferences do play an important role in economic life.

We also acknowledge that our analysis has a number of limitations. First and foremost, while our results are consistent with the proposition that the birth of a child affects a male CEO's values and the way he pays his employees, we cannot directly measure these values, nor can we directly observe the actions

of the CEOs we study. Likewise, we cannot observe other material changes in how a CEO treats his employees, for example, in terms of child-related or other non-pecuniary benefits – although generous periods of parental leave are mandatory under Danish law and, within the scope of that law, most employees are covered by collective or individual bargaining agreements, which, we understand, do not change frequently. Thus other mechanisms and effects might be in play.

Second, while we are able to make claims of causality with regard to the moderating roles of a child's gender and, to a large extent, an employee's gender, we cannot make causal claims with regard to the birth of a child itself, unconditional on gender, because having a child is evidently non-random. That said, separating selection and treatment in this context may be mostly academic, because most births to Danish CEOs are surely either intended or at least regarded benignly by their parents.

Third, we used Denmark as our empirical context largely because of data availability. It is unclear how much our results would generalize to non-Scandinavian countries, especially those where attitudes toward gender and marriage are markedly different. It is also unclear whether our results will remain stable as attitudes toward these and other important societal institutions continue to evolve.

This paper has focused on two widely applicable but understudied social processes: how children shape their parents' values and how the values of CEOs influence corporate policies. If nothing else, we hope this paper will stimulate more research on both domains. One promising avenue pertains to other moderating factors that might affect how a male CEO responds to the transition to fatherhood but that we did not have sufficient space to consider here; examples include a CEO's marital status, his location vis-à-vis that of the employee, the rank of the employee, the CEO's level of education, his birth-rank order, the number of brothers and sisters he has, attributes of the firm like its industry, size, and profitability, as well as the group dynamics within the top management team after one or more of them transitions to parenthood. One could also study female CEOs as a separate group. Another avenue relates to other events that could influence social preferences such as marriage or divorce, the death of one's spouse—the most stressful life event, according to Holmes and Rahe (1967)—or another family member, natural disasters, acts of terrorism and war, and significant changes to sin laws (e.g., prohibition); a nice feature of some of these events is that they would usually be unanticipated by the affected parties and thus give rise to natural experiments. Lastly, future research could focus on different outcome variables, such as investment and acquisition behavior, diversification, competitive strategy, organizational culture, other human resources activities (e.g., hiring, promotion, and termination), and managerial cognition, as well as how a manager might anticipate changes to a competitor's strategy as a result of changes to the family structure of the competitor's CEO.

## Acknowledgments

The authors would like to thank the editor (Hayagreeva Rao), three anonymous *ASQ* referees, Witold Henisz, and Ebonya Washington, as well as seminar participants at the 2011 Academy of Management Annual Meeting, the 2011 European Summer

Symposium in Financial Markets, the 2011 Strategy Research Initiative—Administrative Science Quarterly Workshop, Aalborg University, Columbia Business School, George Mason University, Harvard Kennedy School, Louisiana State University, National University of Singapore, New York University, Northwestern University, the University of Maryland, the University of Michigan, and the University of Rhode Island for their helpful comments. The usual disclaimer applies.

## REFERENCES

- Abowd, J. M., F. Kramarz, and D. N. Margolis**  
1999 "High wage workers and high wage firms." *Econometrica*, 67: 251–333.
- Adams, R. B., and P. Funk**  
2011 "Beyond the glass ceiling: Does gender matter?" *Management Science*, forthcoming.
- Adams, R. B., A. N. Licht, and L. Sagiv**  
2011 "Shareholders and stakeholders: How do directors decide?" *Strategic Management Journal*, 32: 1331–1355.
- Agle, B. R., R. K. Mitchell, and J. A. Sonnenfeld**  
1999 "Who matters to CEOs? An investigation of stakeholder attribute and salience, corporate performance, and CEO values." *Academy of Management Journal*, 42: 507–525.
- Akerlof, G. A., and R. E. Kranton**  
2000 "Economics and identity." *Quarterly Journal of Economics*, 115: 715–753.
- Albæk, K., and B. E. Sørensen**  
1998 "Worker flows and job flows in Danish manufacturing." *Economic Journal*, 108: 1750–1771.
- Andersen, S. M., and S. Chen**  
2002 "The relational self: An interpersonal social-cognitive theory." *Psychological Review*, 109: 619–645.
- Andersen, S. M., and N. S. Glassman**  
1996 "Responding to significant others when they are not there: Effects on interpersonal inference, motivation, and affect." In R. Sorrentino and E.T. Higgins (eds.), *Handbook of Motivation and Cognition*, 3: 272–331. New York: Guilford Press.
- Bachrach, C., M. J. Hindin, and E. Thomson**  
2000 "The changing shape of ties that bind: An overview and synthesis." In L. J. Waite (ed.), *The Ties That Bind: Perspectives on Marriage and Cohabitation*: 3–16. New York: Aldine de Gruyter.
- Barnard, C. I.**  
1938 *The Functions of the Executive*. Cambridge, MA: Harvard University Press.
- Bastos, P., and N. P. Monteiro**  
2011 "Managers and wage policies." *Journal of Economics and Management Strategy*, 20: 957–984.
- Bennedsen, M., K. M. Nielsen, F. Peréz-González, and D. Wolfenzon**  
2007 "Inside the family firm: The role of families in succession decisions and performance." *Quarterly Journal of Economics*, 122: 647–691.
- Bernard, J.**  
1974 *The Future of Motherhood*. New York: Penguin Books.
- Bertrand, M., and A. Schoar**  
2003 "Managing with Style: The Effect of Managers on Firm Policies." *Quarterly Journal of Economics*, 118: 1169–1208.
- Beutel A. H., and M. M. Marini**  
1995 "Gender and values." *American Sociological Review*, 60: 436–448.



**Block, J. H.**

1983 "Differential premises arising from differential socialization of the sexes: Some conjectures." *Child Development*, 54: 1335–1354.

**Bolton, G. E., and A. Ockenfels**

2000 "ERC—A theory of equity, reciprocity, and competition." *American Economic Review*, 90: 166–193.

**Cardoso, A. R., and R. Winter-Ebmer**

2010 "Female-led firms and gender wage policies." *Industrial and Labor Relations Review*, 64: 143–163.

**Carpenter, M. A., M. A. Geletkanycz, and W. G. Sanders**

2004 "Upper echelons research revisited: Antecedents, elements, and consequences of top management team composition." *Journal of Management*, 30: 749–778.

**Charness, G., and M. Rabin**

2002 "Understanding social preferences with simple tests." *Quarterly Journal of Economics*, 117: 817–869.

**Chatterjee, A., and D. C. Hambrick**

2007 "It's all about me: Narcissistic CEOs and their effect on company strategy and performance." *Administrative Science Quarterly*, 52: 351–386.

**Chen, Y., and S. X. Li**

2009 "Group identity and social preferences." *American Economic Review*, 99: 431–457.

**Christiansen, S. L., and R. Palkovitz**

2001 "Why the 'good provider' role still matters: Providing as a form of paternal involvement." *Journal of Family Issues*, 22: 84–106.

**Coontz, S.**

1997 *The Way We Really Are: Coming to Terms with America's Changing Families*. New York: Basic Books.

**Cowan, C. P., and P. A. Cowan**

1992 *When Partners Become Parents: The Big Life Change for Couples*. New York: Basic Books.

**Dahl, M. S.**

2011 "Organizational change and employee stress." *Management Science*, 53: 240–256.

**England, G. W.**

1967 "Personal value systems of American managers." *Academy of Management Journal*, 10: 53–68.

**Erikson, E. H.**

1964 *Insight and Responsibility: Lectures on the Ethical Implications of Psychoanalytic Insight*. New York: W. W. Norton.

**Erikson, E. H.**

1968 *Identity, Youth, and Crisis*. New York: W. W. Norton.

**Fehr, E., and K. M. Schmidt**

1999 "A theory of fairness, competition, and cooperation." *Quarterly Journal of Economics*, 114: 817–868.

**Feldman, S. S.**

1987 "Predicting strain in mothers and fathers of 6-month-old infants: A short-term longitudinal study." In P. W. Berman and F. A. Pedersen (eds.), *Men's Transition to Parenthood: 13–35*. Longitudinal Studies of Early Family Experience. Hillsdale, NJ: Lawrence Erlbaum Associates.

**Finkelstein, S., D. C. Hambrick, and A. A. Cannella, Jr.**

2009 *Strategic Leadership: Theory and Research on Executives, Top Management Teams, and Boards*. New York: Oxford University Press.

- George, L. K.**  
1980 *Role Transitions in Later Life*. Belmont, CA: Wadsworth.
- Goth, A. F.**  
2007 "Status report on the work-life balance in Denmark." Trans. by A. Bell. KVINFO, October 9. <http://www.kvinfo.dk/side/674/article/67/>. Accessed September 9, 2012.
- Gray, J. S., and M. J. Vanderhart**  
2000 "Understanding the distribution of housework between husbands and wives." In L. J. Waite (ed.), *The Ties That Bind: Perspectives on Marriage and Cohabitation*: 356–367. New York: Aldine de Gruyter.
- Grossman, F. K.**  
1987 "Separate and together: Men's autonomy and affiliation in the transition to parenthood." In P. W. Berman and F. A. Pedersen (eds.), *Men's Transition to Parenthood: Longitudinal Studies of Early Family Experience*: 89–112. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Hambrick, D. C.**  
2007 "The field of management's devotion to theory: Too much of a good thing?" *Academy of Management Journal*, 50: 1346–1352.
- Hambrick, D. C., and G. L. Brandon**  
1988 "Executive values." In D. C. Hambrick (ed.), *Executive Effectiveness—Concepts and Methods for Studying Top Managers*: 3–34. Greenwich, CT: JAI Press.
- Hambrick, D. C., and P. A. Mason**  
1984 "Upper echelons: The organization as a reflection of its top managers." *Academy of Management Journal*, 9: 193–206.
- Hayward, M. L. A., and D. C. Hambrick**  
1997 "Explaining the premiums paid for large acquisitions: Evidence of CEO hubris." *Administrative Science Quarterly*, 42: 103–127.
- Helfat, C. E.**  
2007 "Stylized facts, empirical research and theory development in management." *Strategic Organization*, 5: 185–192.
- Helfat, C. E., D. Harris, and P. J. Wolfson**  
2006 "Women and men in the top executive ranks of U.S. corporations." *Academy of Management Perspectives*, 20 (4): 42–64.
- Hofstede, G.**  
1980 *Culture's Consequences: International Differences in Work-Related Values*. Beverly Hills, CA: Sage.
- Holmes, T. H., and R. H. Rahe**  
1967 "The social readjustment rating scale." *Journal of Psychosomatic Research*, 11: 213–218.
- LaRossa, R., and M. M. LaRossa**  
1981 *Transition to Parenthood: How Infants Change Families*. Beverly Hills, CA: Sage.
- Levine, D. I.**  
1993 "Fairness, markets, and ability to pay: Evidence from compensation executives." *American Economic Review*, 83: 1241–1259.
- Levitt, S. D., and J. A. List**  
2007 "What do laboratory experiments measuring social preferences reveal about the real world?" *Journal of Economic Perspectives*, 21: 153–174.
- Malmendier, U., and G. Tate**  
2005 "CEO overconfidence and corporate investment." *Journal of Finance*, 60: 2661–2700.
- Malmendier, U., and G. Tate**  
2008 "Who makes acquisitions? CEO overconfidence and the market's reaction." *Journal of Financial Economics*, 89: 20–53.

**Meier, S.**

2007 "A survey of economic theories and field evidence on pro-social behavior." In B. S. Frey and A. Stutzer (eds.), *Economics and Psychology: A Promising New Cross-disciplinary Field*: 51–88. Cambridge, MA: MIT Press.

**Miller, D.**

2007 "Paradigm prison, or in praise of atheoretical research." *Strategic Organization*, 5: 177–184.

**Mitchell, R. K., B. R. Agle, and D. J. Wood**

1997 "Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts." *Academy of Management Review*, 22: 853–886.

**Oswald, A. J., and N. Powdthavee**

2010 "Daughters and left-wing voting." *Review of Economics and Statistics*, 92: 213–227.

**Oxley, J. E., J. W. Rivkin, M. D. Ryall, and the Strategy Research Initiative**

2010 "The strategy research initiative: Recognizing and encouraging high quality research in strategy." *Strategic Organization*, 8: 377–386.

**Palkovitz, R.**

2002 *Involved Fathering and Men's Adult Development: Provisional Balances*. Mahwah, NJ: Lawrence Erlbaum Associates.

**Rebelsky, F., and C. Hanks**

1971 "Fathers' verbal interaction with infants in the first three months of life." *Child Development*, 42: 63–68.

**Rokeach, M.**

1973 *The Nature of Human Values*. New York: Free Press.

**Ryall, M. D., and R. C. Sampson**

2009 "Formal contracts in the presence of relational enforcement mechanisms: Evidence from technology development projects." *Management Science*, 55: 906–925.

**Schoen, R., Y. J. Kim, C. A. Nathanson, J. Fields, and N. M. Astone**

1997 "Why do Americans want children?" *Population and Development Review*, 23: 333–358.

**Schwartz, S. H.**

1992 "Universals in the content and structure of values: Theory and empirical tests in 20 countries." In M. Zanna (ed.), *Advances in Experimental and Social Psychology*, 25: 1–65. New York: Academic Press.

**Schwartz, S. H.**

2009 "Basic values: How they motivate and inhibit prosocial behavior." In M. Mikulincer and P. Shaver (eds.), *Herzlyia Symposium on Personality and Social Psychology*, 1: 221–241. Washington, DC: American Psychological Association Press.

**Schwartz, S. H., and T. Rubel**

2005 "Sex differences in values: Cross-cultural and multimethod studies." *Journal of Personality and Social Psychology*, 89: 1010–1028.

**Simmel, G.**

1950 *The Sociology of Georg Simmel: Trans., edit., and with an Introduction by K. H. Wolff*. New York: Free Press.

**Sørensen, J. B. and O. Sorenson**

2007 "Corporate demography and income inequality." *American Sociological Review*, 72: 766–783.

**Spence, D., and E. Lurie**

1975 "Style of life." In M. F. Lowenthal, M. Thurnher, and D. Chiriboga (eds.), *Four Stages of Life: A Comparative Study of Women and Men Facing Transitions*: 1–23. San Francisco: Jossey-Bass.

**Tasch, R. J.**

1952 "The role of the father in the family" *Journal of Experimental Education*, 20: 319–361.

**Thompson, L., and A. J. Walker**

1989 "Gender in families: Women and men in marriage, work, and parenthood." *Journal of Marriage and the Family*, 51: 845–871.

**Thurnher, M.**

1975 "Family confluence, conflict, and affect." In M. F. Lowenthal, M. Thurnher, and D. Chiriboga (eds.), *Four Stages of Life: A Comparative Study of Women and Men Facing Transitions*: 24–47. San Francisco: Jossey-Bass.

**Waite, L. J., and M. Gallagher**

2000 *The Case for Marriage: Why Married People Are Happier, Healthier, and Better off Financially*. New York: Doubleday.

**Warner, R. L.**

1991 "Does the sex of your child matter? Support for feminism among women and men in the United States and Canada." *Journal of Marriage and the Family*, 53: 1051–1056.

**Washington, E. L.**

2008 "Female socialization: How daughters affect their legislator fathers' voting on women's issues." *American Economic Review*, 98: 311–332.

**Authors' Biographies**

**Michael S. Dahl** is a full professor of entrepreneurship and organizations at Aalborg University, Department of Business and Management, Fibigerstraede 4, 9220 Aalborg O, Denmark (e-mail: md@business.aau.dk). His research focuses on the organization and success of incumbents and start-ups. He received his Ph.D. and M.Sc. in economics from Aalborg University.

**Cristian L. Dezsó** is an assistant professor at the University of Maryland's Robert H. Smith School of Business, 3347 Van Munching Hall, College Park, MD 20742 (e-mail: cdezso@rhsmith.umd.edu). His research examines the impact of people on corporate policies and performance. He received his Ph.D. in economics from New York University's Stern School of Business and an M.A. in economics from the Central European University in Budapest, Hungary.

**David Gaddis Ross** is an associate professor at Columbia Business School, Uris Hall, Room 726, New York, NY 10027 (e-mail: dr2175@columbia.edu). His research examines how to recruit, motivate, and organize employees for competitive success. He received his Ph.D. in economics from New York University's Stern School of Business and an M.B.A. from the University of Pennsylvania's Wharton School of Business.