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## Gendered Ambition: Career Advancement in Public Schools

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*Education Reform*

## **WORKING PAPER SERIES**

### **Gendered Ambition: Career Advancement in Public Schools**

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# **Gendered Ambition: Career Advancement in Public Schools**

## **Abstract**

We explore the relationships between gender, career ambition, and the emergence of executive leadership. In *Bureaucratic Ambition*, Teodoro (2011) shows that public administration career systems shape bureaucrats' ambitions, political behavior, and management strategies. But career systems are not neutral conduits of talent: administrators are more likely to pursue advancement when career systems favor them. This research proposes that women and men respond to *gendered* public career systems. Using national and state-level data on public school managers, we find marked gender disparities in the career paths that lead educators from the classroom to the superintendent post. Specifically, we find that female and elementary school teachers take longer to advance than male and secondary school teachers. We also find gender disparities in certification and experiences among school principals. Accordingly, female and elementary principals report lower levels of ambition. Such gendered career systems may lead to biases in policy agendas and management styles.

KEY WORDS: bureaucratic ambition, gender gap, gender and leadership, educational leadership

## **Introduction**

This paper proposes a theory of gendered bureaucratic ambition, in which public administration career systems lead women and men to advance to management and executive ranks by different paths. Accordingly, male and female administrators in the same field tend to develop different degrees of career ambition, with attendant results for policy and management in public bureaucracies.

In *Bureaucratic Ambition*, Teodoro (2011) argues that public administration career systems—that is, the institutions that define recruitment, selection, and promotion—make different kinds of individuals more or less likely to emerge as leaders of public organizations.

Systemic biases in career systems thus lead to variation in innovation, management, and political behavior among public executives. One well-established bias in public administration career systems not addressed in Teodoro's (2011) work relates to gender, where recruitment, development, and promotional practices tend to favor men over women (Naff 1994; Daley 1996; Connell 2006, among others).

The individuals who form the supply side of public administration labor markets are not ignorant of such dynamics. Connecting Teodoro's (2011) theory of bureaucratic ambition to research on gender and career advancement, this paper argues that public employees are aware of the gender biases that typify the career systems in which they work. With this knowledge, men and women of varying ambition select into different career paths, with ambitious administrators seeking opportunities to burnish their credentials in ways that are likely to foster advancement, given their genders. One consequence of these patterns is that male and female middle-managers are likely to have taken very different paths to their jobs; another consequence is that male and female managers are likely to hold markedly different degrees of ambition for advancement to executive posts. Ultimately, gendered career systems are likely to lead to gendered public management, with likely effects on politics, policy, and public administration.

We begin with a discussion of how bureaucratic ambition shapes managerial behavior. We then turn to public education in particular, tracing the gendered history of educational leadership and its evolution from predominantly female to predominantly male. Building on this history, we advance hypotheses on the differences between elementary and secondary principal posts and how these differences shape bureaucratic ambition in markedly gendered ways. Specifically, we argue that a gendered public education career system causes female and male educators to follow different paths into administration, and that these differences cause gender

disparities in ambition for executive jobs. We test these hypotheses with two datasets: the 2011-2012 national Schools and Staffing Survey and the 2012-2014 Texas Middle Managers Survey. Analyses of both datasets demonstrate systematic, mutually-reinforcing gender differences in career paths and ambition among public school managers. We conclude with a discussion of the policy implications of our results and suggestions for future research.

### **Bureaucratic ambition & gendered career systems**

The effects of ambition and systems of career advancement on public administration are the subjects of considerable recent research. A central theme of Teodoro's (2011) theory of bureaucratic ambition is that public administrators' political and managerial decisions are inseparable from the labor markets in which they work. The institutions that define professions and job opportunities can foster or frustrate advancement by different kinds of bureaucrats. Aware of the preferences and biases of the professions in which they operate, administrators and politicians alike set their expectations and behaviors accordingly.

#### **Ambition & public management**

Organizational theorists since Downs (1967) have observed that most administrators have mixed motives, typically both individual goals like promotion and job security, and public service goals like improved organizational performance. Downs posits that only *zealots* with single-minded devotion to a particular policy and *statesmen* dedicated to serving society as a whole readily embrace policies likely to risk their job security and promotion prospects. Such officials are rare. Generally, mixed motive officials and purely self-interested *conservers* (who seek to maximize their own security and convenience) avoid innovations since innovation requires effort and risk. *Climbers*, who seek only their own self-advancement, seek innovation if

likely to help their careers. Generally, analysts must consider such individual incentives in understanding the likelihood of public sector innovation.

Following suit, a growing literature explores the implications of bureaucratic ambition and job mobility for public management and policy. A handful of recent studies link administrators' job mobility to policy decisions (Teodoro 2009; LeRoux and Pandey 2011; Villadsen 2012; Adolph 2013). Maranto and Wolf (2013) develop case studies of New York Police Commissioner William Bratton and Washington, DC School Superintendent Michelle Rhee to argue that innovations that improve public service are unlikely to spread unless they are advantageous to top administrators' careers. Regarding public education, several studies have linked career ambition and executive mobility to management behavior and/or organizational performance (Hill 2005; Boyne and Meier 2009; Hamidullah, Wilkins and Meier 2009; Teodoro 2013; Carroll 2016). This line of research is particularly promising because it links management behaviors and organizational outcomes to the microfoundational logic of individual administrators and agencies.

### **Gendered career systems**

To date, research on bureaucratic ambition and gender in public administration have developed separately. In developing his theory of bureaucratic ambition, Teodoro (2011) observed that gender could condition bureaucratic ambition and career advancement. "Career concerns might affect administrators' political choices if a career opportunity structure is systematically biased in favor of or against a particular gender..." argued Teodoro. "Individuals' perceptions of bias in a profession can affect their behavior, whether or not a systematic bias exists (99). Despite this recognition, Teodoro (2011) leaves aside gender as a factor in his empirical analyses.

Research on women in public administration gives ample reason to expect that gender conditions bureaucratic ambition in important ways. This literature demonstrates the historical exclusion of women in public administration and its theory (Stivers 1991; Bearfield 2009). Given this exclusion, Stivers (2002) argues that gender relates to various administrative characteristics as women bring different experiences and perspectives to their jobs as bureaucrats. Meier, Mastracci, and Wilson (2006) describe these experiences in their research on “emotional labor,” implying that women bring unrecognized skills to their organizations. For instance, in a survey of public managers, women scored higher on scales of compassion and attraction to policy-making (Dehart-Davis et al 2006). These skills result in more effective client interactions (Fox and Schuhmann 1999), increased agency performance (Meier et al 2006), and different patterns of managerial interactions (Dolan 2000). As in elected office, women in public executive posts are increasing in number, but typically have more educational and organizational experience than their male counterparts (Bowling et al 2006).

### **Educational administration as gendered career system**

The history of educational professions is to a considerable degree a history of shifting gender roles. In the 19<sup>th</sup> and early 20<sup>th</sup> centuries a great many educational administrators were women, in part reflecting stereotypes that women better fit childcare roles, but also due to gender discrimination in labor markets: women’s labor cost far less than men’s. Through the early and mid-20<sup>th</sup> century, administrative progressives “professionalized” educational leadership. Small schools and school districts consolidated and graduate education was increasingly a requirement for principal and superintendent posts. Part of this professionalization was redefining educational *leadership* as fundamentally *male*. As Rousmaniere (2013) details, the number of female school

superintendents declined through the mid 20<sup>th</sup> century. The percentage of elementary school principal posts held by women fell from 55 percent in 1928 to 20 percent in 1973. At that point the percentage of high school principal posts held by women, which had never been high due to the relatively elite status of the job, fell to 1 percent. Rousmaniere observes that by the 1960s “[i]n schools, it seemed to be the natural order of things that women taught and men managed” (102). Indeed, going back to the mid-19<sup>th</sup> century, as schools grew larger, school boards and American elites generally saw women as lacking the temperament to manage other women, much less men; instead they assumed male leadership could make (mainly) female teachers more efficient and effective. In the postwar period educational administration, particularly at the secondary level, was made male in part through the GI Bill, which enabled (overwhelmingly male) veterans to gain the credentials to enter administration. Perhaps more important over the long term was the development of alternative career paths to attract men to the teaching profession by enabling them to ascend to administrative roles rapidly, particularly through athletic coaching. As Rousmaniere writes:

“The work of athletic coaching---communication, authority, disciplinary training of students, and public relations---aligned with the emerging professional identity of the new principal and, in a happy coincidence, provided the masculine image that appealed to both the public and to school reformers. An aspiring male principal who had a background in athletic coaching was automatically identified with a physicality that excluded women... The message was that school principals were not only responsible for bureaucratic paper-pushing but also for such physical work as supervising fire drills, breaking up playground fights, disciplining adolescent boys, and providing a virile and stabilizing presence in the school.” (p. 101)

A 1971 study found that nearly 80 percent of school superintendents had coached athletic teams earlier in their careers. Similarly, surveys in the 1990s indicated that a fifth of elementary principals and half of secondary principals had coached (Rousmaniere 2013). This finding was confirmed in fieldwork in the 1980s (Edson 1988) and 1990s (Hill and Ragland 1995), which indicated that, despite the passage of Title IX in 1972, coaching *male* athletic teams was a



relatively quick pathway to principal; coaching female teams was not.<sup>1</sup> Football in particular receives considerable attention and requires substantial organizational and political skills. Greene (2013) offers empirical evidence that high school football provides school and community level social capital which in turn improves academic success.

Historically, school boards typically terminated female (though not male) teachers or administrators once they married, and nearly always once they expected children (Rousmaniere 2013; Urban 1982). While such practices are long gone, vestiges remain in the widely held view among superintendents and school boards that men treat education as a career, requiring upward mobility into administration to support their families, but women—particularly at the elementary levels—teach for a few years until they marry and have children, after which they may or may not return to education. Of course to some degree this is likely true for some women: female administrators may bear double burdens due to common expectations that they should shoulder most of the work of child-raising. Even in progressive institutions like universities, women may choose or be pushed into roles less apt to result in eventual promotion to peak posts (Rothman, Kelly-Woessner and Woessner 2011; Connelly and Ghodsee 2011). Within public schools, female administrators typically gain promotion more slowly and face particular challenges in relationships with elected school board members (McGee Banks 2007; Polka and Litchka 2008). Accordingly, fieldwork suggests that male administrators do not view women’s educational career paths as equal to those of men (Edson 1988; Hill and Ragland 1995). As one female assistant principal interviewed by Edson (125) put it: “I think people wonder about a female administrator. Is she a woman, or is she a woman who wants to be a man? Why would she want this job? I am a woman, and I don’t try to be a man. I would have had a problem, though, if I had been profoundly ugly or dramatically beautiful. But luckily, I am just an ordinary person.”

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<sup>1</sup> This finding accords with the observations of the lead author, who serves on a school board.

Reinforcing gender distinctions are the structural differences between elementary and secondary schools. Relationships and trust between schools and families are more easily fostered in elementary schools (Adams and Christenson 2000; Bryk and Schneider 2002). On the classroom level an elementary teacher typically interacts with perhaps one-fifth as many students as a secondary teacher. Elementary schools typically cover five or more grades while secondary schools typically cover four or fewer, meaning that the latter have far greater annual student turnover through graduation, with additional turnover from teens dropping out of school. Further, elementary schools are typically smaller than secondary schools (Snyder and Dillow 2015). Generally, elementary teachers are thought to show more dedication to their children (maternal roles); secondary teachers to their fields (expert roles) (Sargent 2001). In combination, these factors mean that elementary school principals can and often do know each student on sight. Such intimacy is unusual in secondary schools; indeed secondary educators often belittle the relationship building of elementary educators as *maternal*. The relative impersonality of large secondary schools has made them targets of school reformers from Ted Sizer (1996) to William Ouchi (2009), and increased demand for charter schools and other alternatives (Maranto, Milliman, Hess & Gresham, 2001).

Yet in the view of administrative progressives who have dominated schools of education since the early 20<sup>th</sup> century, serving as principal of a large secondary school offers better preparation for a superintendent post than an elementary school could provide. The larger size, larger physical plants, athletic teams, and larger and more differentiated staffs of high schools are seen as providing more and more challenging budgeting and management experience – work more akin to that of a superintendent. Ironically, isolation from the classroom is often seen as positive for aspiring educational executives, enabling leaders to see the “big picture” of the

school district rather than the micro perspective of individual teachers, parents, and children. High school principals also have greater visibility, with opportunity to network with school board members and community leaders generally (Rousmaniere, 2013; Callahan, 1962; Brouillette 1996). Traditionally these have not been women's roles.

Edson (1988) and Hill and Ragland (1995) report that female teachers interested in promotion are often pressured to go into elementary rather than secondary administration. The latter suggests that such sexism is slowly fading, but in our national data (discussed below), 63.8 percent of elementary school principals are women, compared to 48.4 percent of secondary school principals. In contrast, women make up 89.2 percent of elementary teachers and 62.9 percent of secondary teachers. Women who do become superintendents are significantly older and more experienced than their male counterparts. In many cases they were *asked* to take leadership roles to help their schools, rather than *seeking* such roles. This pattern may suggest that female school leaders, particularly in elementary schools, focus more on serving students and less on personal advancement (McGee Banks 2007; Polka and Litchka 2008).

### **Does gender matter for public management?**

Female leadership of schools may be positive for students. Given their traditional positions as outsiders, one might expect female administrators to embrace more idealism, prioritizing educational equity (Stivers 2004). To use Downs' (1967) terms, we might expect relatively more women to act as *zealots* or *statesmen* (stateswomen?) rather than as strictly self-interested officials (though for a more nuanced view, see Perry 1997).

Because women bring different perspectives, qualities, and acquired skills to the bureaucracy, female executives demonstrate different behaviors in their managerial interactions (Meier, O'Toole, and Goerdel 2006), strategies (Johansen 2007), and spending outputs (Dolan

2002). Regarding management generally, past research finds women somewhat more likely to embrace collaborative and equity focused leadership styles, and indeed to be perceived by their superiors and subordinates to do so (Crampton and Mishra 1999; Hill and Ragland 1995; McGee Banks 2007; Pearce 2012; Stivers 2004; Kanter 1977). As noted above, these patterns may be particularly true for women in elementary schooling.

To summarize, research indicates that career ambition significantly shapes bureaucratic behavior, and that public administration careers generally and education posts in particular may have gendered dimensions. With these elements in mind, we trace the implications of a gendered public administration career system for bureaucratic ambition.

### **A theory of gendered bureaucratic ambition**

Here we propose a theory of gendered bureaucratic ambition, in which public administration career systems lead women and men to advance by different paths and develop different degrees of career ambition, with attendant results for policy and management in public agencies. Employees (bureaucrats) and employers (agencies) in this theory are analytically inseparable, since our argument is about public administration career systems composed of both *sellers* and *buyers* of bureaucratic labor. Although our main claims address the actions and attitudes of individual bureaucrats, their choices are conditioned by a labor market that includes *both their current employers and a set of potential future employers*. We see this inescapable endogeneity not as an analytical obstacle, but as a fact of professional life. For purposes of prediction and inference, we assume that administrators are more willing and able to adapt to market conditions than are government agencies (March and March 1977).

#### **Gendered career paths**

In their model of “Almost Random Careers,” March and March (1977) argued that

bureaucrats rationally adapt to career systems in ways that result in cadres of administrators with remarkably similar qualifications. With an empirical focus on school administrators, they find that superintendents and candidates for the superintendency tend to closely resemble one another—so much that their hiring and promotion appears nearly random. Notably, March and March (1977) did not account for gender—an understandable omission since at the time of their study superintendents were overwhelmingly male: the gendered nature of the education profession precluded analysis of gender at that time.

To the extent that there is significant gender diversity in a public administration career system, any bias favoring men over women (or women over men, for that matter) in recruitment and promotion will be evident in differences between men's and women's resumes at a given level of advancement. For example, a gendered career system might demand greater tangible qualifications (e.g., experience, education, certification) of female administrators than of their male peers. In educational administration, that disparity is likely to manifest itself as slower, more qualified-on-paper advancement to management by female educators. Moreover, because male teachers serve disproportionately in secondary schools (the historical conduits to senior administration), we expect elementary school administrators to feature similarly slower, more qualified-on-paper advancement than secondary school administrators.

Principals who have been department heads or curriculum specialists have had opportunities to manage typical student-centered tasks related to instruction. In contrast, athletic coaches have had greater opportunities for contact with and influence over external stakeholders, including central office personnel and school board members. They would also be more likely to have personnel and budgetary authority, which would further burnish their credentials for promotion to higher posts. Our first two hypotheses follow:

H1. Female and elementary school principals have more educational experience and training than male and secondary school principals prior to promotion.

H2. Female and elementary school principals are less likely to have had athletic coaching experience than male and secondary school principals prior to promotion.

### **Gendered ambition**

As close and interested observers of their own professions, administrators will likely recognize the gendered patterns of career advancement described in H1 and H2. If a career system is noticeably gendered in ways that favor men over women in advancement, then men are likely to express more career ambition than women, *ceteris paribus*. Our main claim is not that male or female administrators are inherently more or less ambitious. Rather, we argue for a causal process in which individuals respond rationally to the labor market based on their gender. Men are more likely to maintain ambition for senior leadership posts because the obstacles to promotion are perceived as less. In the same way, female administrators recognize additional challenges they may experience to pursue the position, and their desire to do so changes as a result. By the same token, ambitious females may choose not to pursue administration careers in particular types of agencies precisely because they perceive career systems to be biased. With respect to school administration in the United States, we expect that the historical development of school administration will result in female principals expressing less ambition than their male and counterparts; thus our third hypothesis:

H3. Female and elementary school principals indicate less ambition for career advancement than male and secondary school principals.

If gender conditions ambition in school administration, then the public education career systems may systematically stymie elementary school leaders and promote secondary school

leaders. In this way, the gendered dimension of school administration career systems may lead to marked biases in the policy agendas and management styles pursued by school superintendents.

### **Analysis: bureaucratic ambition in a gendered career system**

Our empirical inquiry proceeds in two parts. We first evaluate the expectation that public education is a gendered career system (H1 and H2) with an analysis of school administrators' career paths. We then turn to bureaucratic ambition (H3) by analyzing data on school principals' future career ambitions.

*Modeling a gendered career system.*

#### **Data and model**

To evaluate our first pair of hypotheses we rely on data from the 2011-2012 Schools and Staffing Survey (SASS). SASS is a survey of a nationally-representative sample of US schools that is administered by the US Department of Education every four years. Principals, teachers, and district office administrators in the sample complete a series of questionnaires gauging their opinions and variety of contextual details about their school. Usefully for present purposes, respondents report on their backgrounds in education. In particular, principals are asked to indicate the number of years of teaching experience before becoming a principal, whether they have received professional development in a program preparing aspiring principals, and the various positions in schools prior to becoming principal. The present analysis uses responses of 7,520 principals participating in SASS.

To test H1 and H2 we use the number of years of teaching experience prior to becoming a principal to assess the speed at which teachers are promoted to principals. We also examine whether principals received professional development for becoming principals along with the positions held prior to becoming principal to describe career paths to principal. Specifically,

principals indicated whether they had been department head, a curriculum specialist, or an athletic coach prior to being principal.

We use principals' years of teaching experience and past professional experiences as dependent variables in regression models that include indicators for gender and school level as key independent variables. Years of teaching experience are self-reported number of years a principal served as a classroom teacher before being becoming principal. Measures of past professional experience comprise a series of binary variables indicating whether a principal has received specialized training for principal development and whether (s)he served in a variety of positions prior to principal. We run ordinary least squares (OLS) regression models when our dependent variable is continuous, and logistic regression for dichotomous dependent variables, but report results as marginal effects for ease of interpretation.

In addition to principals' gender and school level, our models control for a variety of principal-level and school-level characteristics that might influence career trajectories. Specifically, we include the principal's age, indicators for the principal's race and ethnicity, and the log of the principal's salary. At the school-level, we include a dummies for whether the school made adequate yearly progress according state accountability requirements, whether the school served an urban area, and state. We also control for the size of the school with the natural log of enrollment. Sampling weights provided by the U.S. Department of Education are used to ensure the national representativeness of the results. Table 1 provides a descriptive summary of the data used in this analysis.

« Table 1 about here »

## **Results**

Table 2 reports OLS regression results for years of teaching experience prior to becoming



a principal, while Table 3 reports logistic regression results for various prior professional experiences prior to becoming a principal.

« **Table 2** »

Consistent with H1, we observe in Table 2 that female principals typically spend more time than male principals as teachers before being promoted to principal. Female principals on average spend nearly 2 more years as teachers than do male principals. Moreover, we find suggestive evidence that middle school principals appear to have spent less time — about 0.37 years on average — as teachers than do elementary school principals. High school principals also spend an average of 0.12 fewer years as teachers than elementary school principals, but the coefficient estimate is small and not statistically significant.

While Latino principals have about 1 more year of teaching experience than white principals, principals who are black or of other races have relatively fewer years of teaching experience. Durations of teaching experience do not appear to differ significantly between urban and non-urban schools. Still, charter-school principals have nearly 2 fewer years of teaching experience than other public-school principals. Principals with lower salaries also report spending more years as teachers, suggesting more generally that transitions from teacher to principals go slower for districts with lower principal salaries. This pattern is not surprising insofar as salaries function as a salient incentive to seek promotion to a principalship.

« **Table 3** »

Turning to the first three columns of Table 3, we find additional support for H1. Differences in the principals' prior professional experience are apparent. Female principals are about 3 and 16 percentage points more likely than male principals to report having served as department chairs and curriculum specialists, respectively (columns 1 and 2). Moreover, female

principals are about 6 percentage points more likely to have completed professional development programs for aspiring principals. As indicated in the third and fourth rows of Table 3, elementary school principals are nearly 10 percentage points less likely to have experience as department heads than middle and high school principals. This is not surprising, given that department chair positions are more typical of secondary than elementary schools. However, this pattern also suggests that promotion to principal in secondary schools may be more difficult for elementary school educators, who are predominantly female. Similarly, elementary school principals are about 5 percent more likely than their secondary-school counterparts to have experience as curricular specialists or coordinators, which may be positions more commonly held by elementary school teachers. Insofar as elementary school teachers are more likely to be curricular specialists and experience as curricular specialists is less valued among candidates for secondary school principals, elementary school teachers may be less likely to become secondary school principals. Overall, prior professional experience and, hence, professional opportunities appear to condition the likelihood of promotion to principal positions.

Finally, female principals are nearly 40 percentage points less likely than male principals to have been an athletic coach. Elementary school principals are 20 percentage points less likely to have experience as athletic coaches. These estimates provide empirical support for H2 and further illustrate the distinctive career paths within public schools systems. To the extent that prior experience as an athletic coach is desired among candidates for principal positions in secondary schools, the lack of opportunities to serve as an athletic coach among elementary schools and their teachers who are predominantly female will condition educators' career paths.

*Gendered ambition.*

### **Data and model**

Having established a gendered pattern in career advancement for public education administration, we now turn to H3 and whether gender also affects bureaucrats' ambition. To test this hypothesis we draw on the Texas Middle Managers Survey, which is sent to more than 3,000 Texas school principals via emails collected from the Texas Education Agency (TEA) website. Unlike the national SASS data, the Texas data spans multiple school years. Its response rate was 20.7 percent in 2012, 21.9 percent in 2013, and 11 percent in 2014. These data were matched with data on school performance and organizational characteristics, gathered from TEA. After dropping cases with missing data, we are left with approximately 2,000 schools for analytical use.

The dependent variable of interest for H3 is a measure of career ambition. For school principals, the next high-profile position available in the profession is school district superintendent. We gauge ambition with a survey question that asked respondents their level of agreement for: "One day, I plan to become superintendent." The respondent's choices included strongly disagree (1), tend to disagree (2), tend to agree (3), and strongly agree (4). In the analysis, this variable has been standardized to have mean of 0 and standard deviation of 1.0 for ease of interpretation. These data provide the opportunity to test whether a gendered labor market affects individual perceptions and behavior.

As in earlier analyses, our independent variables of interest are indicators for gender and school level. We again employ OLS models to predict the individual influence of these independent variables on ambition and include controls for school and principal characteristics that might condition ambition. For instance, we control for school performance using the percentage of students in the school passing the Texas Assessment of Knowledge and Skills (TAKS) exam. We also include controls for school size (measured as logged enrollment),

indicators for principal race, and principal experience. Year fixed effects control for unobserved trends across years. Potential correlation of errors across districts also is a concern given the spatial and temporal variation in our data, so we cluster the standard errors at the school campus level. Summary statistics for this analysis are reported in Table 4.

« **Table 4** »

**Results**

Our analytical results are presented in Table 5. We find support for H3's prediction of gendered effects on ambition, and that those effects are consistent with the depiction of a gendered career system that emerges from both history and our earlier analysis. Specifically, findings indicate that female principals are significantly less likely than male principals to desire career advancement.

« **Table 5** »

Moreover, middle school principals are 0.14 standard deviations and high school principals 0.50 standard deviations more ambitious than elementary school principals. These results imply that elementary principals are in fact on average less ambitious than principals assigned to secondary schools. Because some individuals who choose to manage secondary schools may do so with intentions of becoming superintendent, it is possible that these results are related to selection effects. However, if selection effects are present they can be expected of a most secondary principals in any generalized test—as noted earlier, ambition emerges within a career system, and so is analytically inseparable from employees' choices of profession and employers' hiring and promotion decisions.

Several organizational and individual control variables are also noteworthy. School size was negatively related to career ambition, indicating that principals in larger organizations were

less likely to desire the position of superintendent. In all models, overall performance and past performance were insignificant. This result accords with prior work suggesting that improving student success has no statistical bearing on the retention and advancement of school administrators (Maranto and Wolf, 2013; Maranto et al., 2016). Bureaucratic characteristics that are significant in both models include principal race and principal experience. African-American principals are significantly more ambitious than their white peers. However, the ambitions of Latino principals on average do not differ from those of whites. Principals with more experience are also less likely to have ambitions of becoming superintendent. On average, for every 10 years of experience, principals are 0.25 standard deviations less likely to desire the position of superintendent.

## **Discussion**

Our findings affirm the persistence of gendered career systems in U.S. public education. Compared to their male and secondary school peers, female and elementary principals on average have more years of teaching experience prior to becoming principal. For women, this classroom experience is typically accompanied by more experience as curriculum coordinators and formal professional development training. At the same time, men are more likely to have been athletic coaches on the path to educational administration.

Our analysis of Texas principals suggests that individuals respond to the gendered career systems that they experience and/or observe: female principals are less likely than men to desire the superintendent post. That is, administrators' ambition is shaped in part by their gender identities. Alternatively, ambitious women may be less likely to choose careers in educational administration because they perceive a gender bias that works against them.

For elementary school principals (who are disproportionately female) there are similar

labor market patterns and responses. As elementary principals have on average the most teaching experience prior to becoming principals, the perceived disadvantages of moving from the elementary school level manifests in elementary administrators indicating the least interest in becoming superintendent.

As with any empirical study, this analysis carries important limitations. Throughout the research we have explained theoretically the causal process of how a gendered labor market would influence individual ambition. But we do not demonstrate the direct connections with data measuring the mechanism directly. To do so confidently, we would need the presence of a counterfactual or an organization where both men and women have equal chances of entry-level and management positions. Until we can randomly assign boys and girls of varying ambition to grow up into educators, principals, and aspiring superintendents, precise identification of these mechanisms is not possible. Short of such an opportunity<sup>2</sup>, perhaps the most promising way to explore the effects of gendered public administration career systems is to conduct similar studies across other fields, such as law enforcement, public health, city management, firefighting, public finance, and so on.

Notwithstanding its limited scope, our finding that a gendered career system in public education carries potentially significant implications for management and public policy to the extent that women and men manage differently. Providing equal pathways to management for men and women can also promote different organizational cultures. For instance, because female administrators attain more expertise in education, female administrators may use their extended experience in the classroom and with curricula to tackle policy issues in different ways. Females' extended experiences as street-level bureaucrats may also give these administrators different

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<sup>2</sup> For a variety of practical and ethical reasons, we do not advocate such an experiment, whatever its scientific merits.

perspectives on management. As female administrators recognize and consider the multiple challenges for the street-level bureaucrat, employee empowerment and potential satisfaction may improve. Perhaps as significantly, a systemic bias in favor of secondary school principals and against elementary school principals—a likely corollary of broadly gendered career systems—produces senior administrators whose dominant focus is on secondary schools, sports and other activities, and school finance rather than relationship building and academic achievement. Historical evidence (Rousmaniere 2013) and contemporary surveys and other empirical work (Maranto et al. 2016) indicate that such foci reflect the priorities of school boards; thus gendered career paths may reflect the democratic governance of public schools.

That public administration careers exhibit gender bias is, alas, hardly a groundbreaking finding. Nonetheless, the history of U.S. educational administration presents an analytical puzzle with respect to gender: once an uncommon outpost of female public sector leadership, the professionalization of public education in the 20<sup>th</sup> century transformed educational administration into a predominantly male field. As public administration professions continue to evolve in an era of legal gender equity, the apparently persistent gender bias in educational administration affords an opportunity to explore the ways that individual bureaucrats respond to gendered career systems. Our findings indicate that in such systems, bureaucratic ambition itself is gendered; thus evolution toward equality may depend in part on making women believing that paths to advancement are open to them.

Table 1: Summary Statistics for Schools Staffing Survey

	Mean	Standard Deviation	Minimum	Maximum
<i>Dependent Variables</i>				
Prior Professional Experience				
Years of Teaching Experience	11.77	6.53	0	40
Was Department Head	.40	.49	0	1
Was Curriculum Specialist/Coordinator	.26	.44	0	1
Was Athletic Coach	.36	.48	0	1
Completed Professional Development Program for Aspiring Principals	0.55	.50	0	1
<i>Independent Variables</i>				
Female	.48	.50	0	1
Age	48.01	9.04	23	80
School Level				
Elementary	.64	.48	0	1
Middle	.16	.36	0	1
High	.20	.40	0	1
Race/Ethnicity				
White	.79	.41	0	1
Black	.11	.31	0	1
Latino	.07	.25	0	1
Other Race	.03	.17	0	1
School Locale				
Urban	.24	.43	0	1
Suburban	.27	.45	0	1
Town	.14	.34	0	1
Rural	.33	.47	0	1
Salary (in logged dollars)	11.38	.25	9.90	12.42
Charter School	.05	.22	0	1
School MET Federal Adequate Yearly Progress Benchmarks	.55	.50	0	1
Logged Enrollment	6.00	.90	0	9.21

N= 7,510

Note: Sampling weights used computing summary statistics.



Table 2: Principals' Estimated Prior Years Teacher Experience  
(Schools and Staffing Survey)

	Years of Teaching Experience
Female	1.826*** (.205)
Age	.323*** (.013)
Middle School	-.370* (.208)
High School	-.122 (.222)
Black	-.703** (.336)
Latino	1.078*** (.391)
Other Race	-1.378** (.559)
Suburban	-.302 (.294)
Town	.139 (.354)
Rural	.224 (.301)
Log of Salary	-2.915*** (.786)
Charter School	-1.603*** (.412)
School MET Federal Adequate Yearly Progress Benchmarks	-.246 (.215)
Logged Enrollment	.285** (.118)
Constant	23.306*** (8.600)
Observations	7,510
R <sup>2</sup>	.257

Notes: Sampling weights included. Standard errors in parentheses. \*\*\*p<.01; \*\*p<.05; \*p<.1

Table 3: Estimated Professional Experience prior to being Principal (Schools and Staffing Survey)

	(1)	(2)	(3)	(4)
	Department Head	Curriculum Specialist	Completed Principal Professional Development	Athletic Coach
Female	.033*	.158***	.064***	-.378***
	(.018)	(.016)	(.018)	(.017)
Age	-.001	.001	-.004***	-.006***
	(.001)	(.001)	(.001)	(.001)
Middle School	.091***	-.049***	.013	.200***
	(.019)	(.018)	(.020)	(.019)
High School	.099***	-.050***	-.000	.194***
	(.019)	(.018)	(.020)	(.018)
Black	.016	.025	.123***	-.040
	(.029)	(.025)	(.032)	(.030)
Latino	-.011	-.085***	-.013	.222***
	(.042)	(.031)	(.044)	(.046)
Other Race	-.046	-.014	.067	-.125**
	(.052)	(.050)	(.054)	(.053)
Suburban	.012	-.042*	-.021	.075***
	(.026)	(.023)	(.028)	(.027)
Town	.016	-.048*	-.048	.134***
	(.029)	(.027)	(.030)	(.028)
Rural	.037	-.037	-.080***	.145***
	(.026)	(.023)	(.027)	(.026)
Log of Salary	-.036	.039	.071	-.059
	(.055)	(.053)	(.058)	(.053)
Charter School	.026	.040	-.131***	-.079**
	(.034)	(.031)	(.036)	(.032)
School Met Adequate Yearly Progress	-.012	-.000	.032*	.015
	(.019)	(.017)	(.019)	(.018)
Logged Enrollment	.017	.012	.038***	.020*
	(.011)	(.010)	(.011)	(.010)
Observations	7,510	7,510	7,510	7,510
Pseudo R <sup>2</sup>	.060	.046	.094	.229

Notes: Coefficient estimates are marginal effects, expressed as changes in likelihood of a principal having a past experience with a one-unit change in the covariate. Models additionally include state-level dummies. Standard errors in parentheses. \*\*\*p<.01; \*\*p<.05; \*p<.10.

Table 4: Summary Statistics for Texas Middle Managers Survey

	Mean	Standard Deviation	Min	Max
Ambition	0	1	-1.04	1.72
Gender	.57	.50	0	1
School Level				
Elementary	.58	.49	0	1
Middle	.24	.42	0	1
High	.25	.44	0	1
Race				
White	.06	.24	0	1
Black	.16	.37	0	1
Latino	.73	.45	0	1
Charter School	.04	.20	0	1
Principal Experience	8.00	6.47	0	61
Performance	75.72	12.60	12	100
Past Performance	75.65	12.96	12	100
Logged Enrollment	6.06	.93	0	8.45
N = 2,126				

Table 5: Principal Career Ambition (Texas Middle Managers Survey)

	Career Ambition
Female	-.578*** (.051)
Middle School	.136** (.061)
High School	.507*** (.062)
Charter School	-.037 (.129)
Black	.330*** (.106)
Latino	.091 (.070)
Experience	-.025*** (.003)
Overall Performance	-.001 (.003)
Past Performance	.001 (.003)
Logged Enrollment	-.132*** (.033)
2013	-.051 (.041)
2014	.160*** (.054)
Constant	1.201*** (.242)
Observations	2,126
R <sup>2</sup>	.205

Notes: Standard Errors in parentheses. \*\*\*p<.01; \*\*p<.05; \*p<.10

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