

**DO COLLEGE-EDUCATED, NATIVE-BORN ASIAN AMERICANS FACE A GLASS
CEILING IN OBTAINING MANAGERIAL AUTHORITY?***

Isao Takei
Department of Sociology
University of Texas at Austin
1 University Station A1700
Austin, TX 78712-0118
email: takei@prc.utexas.edu
telephone: (512) 471-8467
fax: (512) 471-1748

Arthur Sakamoto
Department of Sociology
University of Texas at Austin
1 University Station A1700
Austin, Texas 78712-0118
email: sakamoto@mail.la.utexas.edu
telephone/voice mail: (512) 232-6338
fax: (512) 471-1748

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*Direct correspondence to Arthur Sakamoto at the above address.

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ABSTRACT

Using data from the 2003 National Survey of College Graduates, this study investigates the managerial authority of native-born, college-educated racial/ethnic minorities. Managerial authority is measured in terms of the total number of people supervised directly or indirectly through subordinates in the workplace. The data are limited to the college-educated portion of the labor force, but provide important information on socioeconomic origins, college type, and field of study in college. Controlling for these and other variables relating to labor market credentials, the results indicate that Asian American men supervise about 13% fewer employees than do non-Hispanic white men. Relative to the latter group, the effects for Hispanic white men and Hispanic non-white men are not statistically significant. The effects for Asian American women, Hispanic white women, and Hispanic non-white women are also not statistically significant relative to non-Hispanic white women. Conversely, African American men and women are slightly advantaged in that they are somewhat more likely to supervise more employees than do comparable non-Hispanic white men and women. Thus, in the native-born, college-educated portion of the labor force, Asian American men are distinctive as being the only major minority group that is disadvantaged in terms of facing a glass-ceiling in obtaining managerial authority.

INTRODUCTION

The study investigates the managerial authority of college-educated, native-born racial/ethnic minorities including non-Hispanic African Americans, non-Hispanic Asian Americans, Hispanic whites, and non-white Hispanics. Previous research has analyzed the wages and earnings of racial/ethnic minorities or sometimes their occupational attainments. Less frequently studied is the attainment of jobs in terms of supervisory power. This dimension of attainment may be somewhat separate from the socioeconomic rewards per se that jobs provide. In other words, the focus of research on the glass ceiling is not on the socioeconomic returns to human capital characteristics and credentials in the labor market as a whole, but on the chances for employment in administrative positions with managerial authority.

The term “glass ceiling” is derived from prior studies that argue that racial/ethnic minorities are distinctly disadvantaged in being promoted to positions with notable managerial authority due to various advantages and preferences for whites in the corporate hierarchy (Woo 2000). For example, in regard to Asian Americans, one of the earliest references is Hirschman and Wong (1981:496) who commented that Asian Americans “are permitted to occupy certain ‘occupational niches’ which allow for somewhat higher socioeconomic status than other minority groups, but there remains a ceiling on advancement into positions of authority or institutional power.” Thus, racial/ethnic minorities may be disadvantaged not only in terms of obtaining pecuniary rewards from the labor market but also in terms of being promoted into managerial positions with significant supervisory power.

Using data from the 2003 National Survey of College Graduates, this study seeks to improve our understanding of the glass-ceiling hypothesis in several ways. First, we use recent data that measures supervisory power in terms of the total number of people supervised directly

or supervised indirectly through subordinates in the workplace. This is an important measure that has not been investigated in prior research. For example, the U.S. Commission on Civil Rights (1988), Yamane (2001), and Sakamoto, Woo, and Yap (2006) study attainment as a manager as a general occupational category but this measure includes jobs that vary widely in terms of actual supervisory power (e.g., corporate CEO's, lower-level managers, and many owners of small family-run businesses). Due to this imprecision of using employment in a managerial occupation as the measure of supervisory power, the career disadvantages of racial/ethnic minorities may be underestimated to the extent that they are more likely to be limited to only the lower ranks of the managerial hierarchy (hence facing a "glass ceiling" in their promotions).

Second, our data include information on socioeconomic origins, college type, and major field of study of the highest degree. People who aspire to the upper levels of management may be more likely to come from higher socioeconomic origins, more prestigious colleges, and may be more likely to have business related fields of study. Racial/ethnic differentials in terms of supervisory power may stem from these class-related characteristics and business credentials rather than from racial/ethnic discrimination per se in corporations. For example, Asian Americans are well known to highly overrepresented in scientific and engineering fields (Xie and Goyette 2003) which are not primarily business-oriented or directly related to management issues. These data thus provide a stronger set of relevant control variables (compared to previous studies based on Census data) and therefore enable a more thorough analysis about net racial/ethnic effects that may be more confidently interpreted as being related to discriminatory practices.

Furthermore, our study uses carefully specified regression models that seek to avoid “over-controlling” (Sakamoto and Furuichi 1997). In general, the market for upper-level managerial positions is typically national in scope. Top executives are not normally hired only from the local labor market. Although studies of wages and earnings often control for regional and metropolitan location in order to take into account cost-of-living differentials, these geographic control variables seem questionable when the dependent variable refers to managerial authority rather than income. Persons who wish to become managers need to be willing to move to where the managerial jobs are located rather than visa-versa. In order to remain competitive, companies are obliged to locate their businesses in order to minimize their costs, and cannot afford to simply conform to the residential preferences of Asian Americans and other minorities.

In addition, statistical controls for industrial affiliation may confuse the distinction between cause-and-effect. People who aspire to positions of high managerial authority do not usually first decide upon a particular industry to work in and then take whatever occupation or job is available in that industry. Indeed, industrial affiliation may be largely irrelevant to many managers as they may switch from one industry to another in the course of their careers so as to increase their chances for upward mobility into the higher levels of the managerial hierarchy. In sum, controls for industry are of dubious substantive justification in statistical models that predict supervisory power because people are not usually limited to employment in a single industry, managerial activities and job duties are often similar across industries, and industries are not generally the typical focus of career aspirations.

Previous Literature on the Glass-Ceiling

Some prior studies have investigated the glass-ceiling hypothesis for Asian Americans. Min (1995:42) states that Asian Americans “are severely under-represented in high-ranking

executive and administrative positions.” Ong and Hee (1993:147) suggest that this result arises because Asian Americans “are often stereotyped as not aggressive, inarticulate in the English language, and too technical to become managers.” Fong (1998:116) argues that this underrepresentation demonstrates that “the ‘old-boys’ network is still firmly in place.” Takaki’s (1998:477) discussion similarly concludes that “excluded from the ‘old-boy’ network, Asian Americans are also told they are inarticulate and have an accent.” Although perceptions toward Asian Americans may also sometimes include some positive qualities such as “being diligent, smart, well-organized, motivated, well-educated, passive, quiet, short, reserved, and submissive” (Fernandez 1991), these traits are not usually deemed to be important leadership characteristics in the U.S. (Landau 1995).

In her study of a governmental research organization, Woo (2000) contends that discrimination against Asian Americans is entrenched due to a corporate culture which stereotypes them, imposes a “dual ladder,” and systematically denies them mentoring opportunities or management training (Woo 2000:161-170). There is furthermore a lack of recruitment programs, limited access to informal social networks, and biased evaluation systems (Woo 2000:64-71). Woo (2000:156) contends that “the culture of corporate America has been identified as ‘the most serious type of impediment by far to upward mobility and advancement.’”

A more detailed statistical analysis was conducted by the U.S. Commission on Civil Rights (1988). Using the 1980 U.S. Census data (which is nationally representative), their results for native-born men indicate that the odds of being employed in a managerial occupation is 28 percent lower for Chinese Americans, 43 percent lower for Filipino Americans, and 30 percent lower for Japanese Americans (relative to native-born, non-Hispanic white men). These effects are net of education, years of labor force experience, region of residence, marital and disability

statuses, self-reported English-language proficiency, and industry of employment. Because they pertain to native-born men, these results cannot be explained as deriving from the handicap of foreign educational credentials or the presumed unfamiliarity with American culture or language. The limitation of this study, however, is that it over-controls by including industry, region, and metropolitan residence as independent variables in the statistical model.

Another multivariate statistical analysis by Yamane (2002) used the 1990 U.S. Census data to investigate the socioeconomic attainments of native-born Filipino Americans including their occupational employment as managers relative to whites. Yamane (2002:139) interprets his results as indicating that, net of a variety of control variables, “being a Filipino man decreases the probability of being a manager by 2.6 percent [in terms of absolute percentage points], decreasing the overall probability of being a manager by about 23 percent [in terms of the relative percentage differential] relative to white men.” Yamane’s (2002) findings thus indicate that the glass-ceiling against native-born Filipino American men was still significant in 1990. As was the case with U.S. Commission on Civil Rights (1988), however, the limitation of Yamane (2002) is that his analysis over-controls by including industry, region, and metropolitan residence as independent variables in the statistical model.

Using the 2000 U.S. Census data as well as the Current Population Survey, Sakamoto, Woo, and Yap (2006) study the occupational employment of Asian Americans as managers broken down into those in the private sector, those in the public (i.e., government) sector, and those who are self-employed. The results indicate that after controlling for measured labor market credentials, native-born Asian American men are more likely to be managers in the public sector and less likely to be managers in the self-employed sector as compared to white men. The difference between Asian American and white men in terms of managerial employment in the

private sector is not statistically significant. However, this latter difference becomes statistically significant and slightly negative (i.e., Asian American men are somewhat disadvantaged) after controlling for region and metropolitan residence. Thus, the results of Sakamoto, Woo, and Yap (2006) do not find any significant evidence of a glass ceiling in more recent data except when the statistical model over-controls by including region and metropolitan residence as independent variables. Nonetheless, as was mentioned earlier, the study by Sakamoto, Woo, and Yap (2006) is limited in that it investigates employment as a manager measured as an occupational category which includes jobs that vary widely in terms of actual supervisory power.

The glass-ceiling hypothesis has been also considered for some other minority groups as well as for women. Palepu et al. (1995) find some significant disadvantages in the promotion rates to the rank of full or associate professor for African American, Hispanic and Asian relative to non-Hispanic faculty in medical schools. Using the Multi-City Survey of Urban Inequality, Elliott and Smith (2004:365) find that relative to white men, African Americans and Latinos face lower odds of achieving higher levels of workplace power (measured in terms of simple indicators of supervisory and hiring authority) but that these disadvantages were mostly explained by their lower credentials such as educational attainment. Elliott and Smith (2004:365) conclude that “only black women seem to experience this form of inequality as a result of direct discrimination.”

Landau (1995) investigates organizational data to estimate the effects of race and gender on promotion ratings for managerial and professional employees. After taking into account various factors such as age, education, organizational tenure, salary grade, type of position and satisfaction with career support, Landau (1995: 397) finds that “both being female and being Black or Asian negatively influenced ratings of promotional potential, black women and Asian

women faced a double liability. They were penalized for being female, in addition to being penalized for their race.” Landau (1995) concludes that the promotion potential assessment process is being affected by biased perceptions and stereotypes toward female and racial minority workers.

In sum, several previous studies find that minority men and women sometimes face obstacles in achieving obtaining managerial positions or authority. The results to some extent vary, however, depending upon the different measures that are used.¹ The findings in this literature may also vary to some degree depending upon which set of control variables are included in the statistical model as well as the time period of the data.

METHODS

This study seeks to improve our understanding of the glass-ceiling hypothesis in several ways. First, in addition to using relatively recent nationally-representative data, our dependent variable refers to the total number of people supervised directly or supervised indirectly through subordinates in the workplace. This sort of information for nationally-representative data has not yet been investigated in the previous research. This measure is a more direct indicator of one’s workplace authority than occupational employment as a manager.

Second, our analysis takes into account the major field of study of the highest degree, the Carnegie classification for school awarding the highest degree, and socioeconomic origins (i.e., parental education). Prior research shows that the economic returns to a college degree vary

¹ Lee (2002) does not find clear evidence of a disadvantage for Asian Americans in obtaining high salaries among full-time instructional faculty. Nevertheless, Lee (2002:695) argues that “Asian Americans do not derive comparable benefits from several characteristics associated with higher salaries for Whites and appear to have more limited pathways to higher salaries.”

substantially by major field of study (Berger 1988; Goyette and Xie 1999; Xie and Goyette 2003). Moreover, parental educational attainments are known to be predictive of college selectivity (Hearn 1984; Bennett and Xie 2003). Although recent empirical research on the economic returns to college selectivity is sparse, some prior studies find that graduates from more selective colleges tend to have higher labor market returns (Weisbrod and Karpoff 1968; Wales 1973; Solmon and Wachtel 1975; Loury and Garman 2001). The graduates of more selective colleges are much more likely to have higher socioeconomic origins (Davies and Guppy 1997; Goyette and Xie 1999; Bennett and Xie 2003).

We can therefore indirectly control for college selectivity by including these indicators of socioeconomic origins in the multivariate statistical analysis. Even if employers do not reward workers for higher socioeconomic origins per se, we hypothesize that these indicators will have significant effects on supervision because persons from higher socioeconomic origins tend to go to more selective colleges which in turn results in higher labor market rewards. The consideration of college selectivity for Asian Americans has not been considered in previous labor market studies due to a lack of data.

Data and Target Population

We use the 2003 National Survey of College Graduates (NSCG). The sampling frame for this survey is nationally representative of all persons who responded in the 2000 U.S. Census that they had a college degree. The target population includes non-Hispanic African Americans, non-Hispanic Asian Americans, non-white Hispanics, Hispanic whites, and non-Hispanic whites who are native-born and are between the ages of 25 to 64 working full-time during the week of the survey. Because the analysis is restricted to the native born, racial/ethnic differentials cannot be attributed to immigrant characteristics such as limited English-language skills, a lack of

American educational credentials, and a reduced familiarity with American culture or with the social norms that are critically important for competence as a manager (Zeng and Xie 2004).

Variables

The dependent variable is the natural logarithm of the total number of workers supervised directly or indirectly through subordinates. A larger score is indicative of a higher place in the managerial hierarchy. Because the total number of workers supervised (directly or indirectly) has a highly skewed distribution, the natural logarithmic transformation is applied (Sakamoto and Furuichi 1997). We assigned a score of one to those who supervise no one (i.e., workers in our sample who report zero for the total number of people that they directly or indirectly supervise) because the natural logarithm is not defined for zero.

We estimate OLS regressions in which four dichotomous variables are used to indicate racial/ethnic category including non-Hispanic Asian, non-Hispanic black, non-white Hispanic, and Hispanic white versus non-Hispanic white who serve as the reference category. Non-white Hispanics are included as a separate group because in recent years a significant number of Hispanics identify as “some other race” rather than as any of the traditional categories of African American, Asian American or white (Choi, Sakamoto and Powers 2007). The demographic control variables refer to years of age, the square of years of age, a dichotomous variable to indicate disability status, three dichotomous variables to indicate the highest level of education completed (master’s degree, doctorate degree, and professional degree versus bachelor’s degree as the reference category), a dichotomous variable to indicate marital status, and four dichotomous variables to indicate parental status (living with child/children under age 2, aged 2-5, aged 6-11, and aged 12-18, with the reference category represented by those residing no children under 19 years of age).

The regression model controls for the major field of study (for the highest degree obtained) by including dichotomous variables for the following majors: mathematics, life sciences, physical sciences, engineering, social sciences, business, business finance, education, humanities, medical sciences, medicine and pharmacy, communications, and legal studies or law. The reference category for the fields of study includes majors in the visual or performing arts and majors reported as “other.” The Carnegie classification for school awarding the highest degree is indicated by dichotomous variables for the following classifications: Research University I, Research University II, Doctorate Granting I, Doctorate Granting II, Comprehensive I, Comprehensive II, Liberal Arts I, Liberal Arts II, Theological Seminars and Bible Colleges, Medical Schools and Medical Centers, Schools of Engineering and Technology, Schools of Art, Music, and Design, Schools of Law, and classifications reported as “missing.”² The reference category is two-year institutions as well as other specialized institutions.

Finally, a series of dichotomous variables are used to indicate the highest level of education completed by the respondent’s father and mother. We also include as separate dichotomous variables whether the highest level of education completed by the respondents’ mother (or father) is unknown. Rather than deleting these cases, their missing values are indicated by dummy variables that are probably correlated with having been raised in a single-parent family which is known to reduce educational and academic achievement (McLanahan and Sandefur 1994).

EMPIRICAL RESULTS

Descriptive Statistics

² For detailed descriptions of these classifications, see the Scientists and Engineers Statistical Data System (SESTAT) website at <http://sestat.nsf.gov/docs/carnegie.html>.

The sample sizes, means and standard deviations are shown separately by gender in Table 1 and Table 2. Table 1 indicates that there are 1,992 non-Hispanic African American (hereafter black) men, 808 non-Hispanic Asian American (hereafter Asian) men, 1,697 Hispanic white men, 187 non-white Hispanic men, and 28,643 non-Hispanic white (hereafter white) men. For women, Table 2 shows that the sample sizes are 2,741 blacks, 567 Asians, 1,428 Hispanic whites, 180 non-white Hispanics, and 16,732 whites.

Regarding managerial authority, Table 1 for men shows that blacks have the highest mean number of people supervised (27.08) which is even greater than for whites (21.32) while the corresponding figure is the smallest for Asians (9.58). While the mean for non-white Hispanics (19.77) is close to that for whites, Hispanic whites have a lower mean number of people supervised (15.18). Among women as shown in Table 2, the mean number of people supervised for blacks (15.29) is almost same as that for whites (15.81). Asian and non-white Hispanic women have the smallest mean number of people supervised—8.88 and 8.72, respectively. These descriptive results suggest that the glass-ceiling hypothesis may be quite relevant for Asian Americans due to their low levels of managerial authority for both genders.

As for the other descriptive results, whites and blacks for both genders tend to be slightly older while Asians and the two Hispanic groups have lower mean age. Because managers tend to be older persons who have more work force experience, age differences across these groups may partly account for their differences in managerial authority. Another important factor is having a major field of study in business or business finance. Among men the differences are not large but Asians are slightly less likely than whites to have a business degree. Conversely, among women, Asians are more likely than whites to have a business degree. Asians of both genders are much likely to have parents with a college or graduate degree than is the case for

whites or any of the other racial/ethnic groups. On the other hand, blacks and to some extent non-white Hispanics have relatively high rates of not knowing their father's level of completed schooling.

In Table 1, the descriptive statistics for the Carnegie classification (for the highest degree obtained) indicate that the majority of Asian men (55 percent) are graduates of a Research University I level school. This rate is far higher than for any of the other male groups. Among women, Table 2 shows that Asian women are similarly advantaged over the other racial/ethnic groups in terms of graduating from a Research University I level school. For both genders, Asians have the lowest levels of graduation from second-tier comprehensive and liberal arts colleges while blacks have the highest levels.

In sum, Asians have the lowest mean level of managerial authority among men while it is nearly the lowest for Asians among women. When compared to the other racial/ethnic minorities, Asians tend to be younger, and Asian American men are slightly less likely to have a business degree than white men. On the other hand, Asians are advantaged in tending to have more educated parents, and are less likely to graduate from smaller, second-tier colleges.

Multivariate Results

Table 3 shows the estimates of the regression models for which the dependent variable is the log of the total number of people supervised. Due to the log transformation, the estimated coefficient for an independent variable refers to the percentage change in the total number of people supervised resulting from a unit change in that independent variable (net of the other variables in the model). Model 1 shows the bivariate model that contains only the dichotomous variables for the racial/ethnic groups while Model 2 adds in the control variables. The models

are estimated separately by gender because our focus is on racial/ethnic differentials which are known to vary by gender (Farley 1996).

The coefficients for the bivariate analysis stipulated by Model 1 in Table 3 are necessarily consistent with the descriptive statistics shown in Table 1 and Table 2. For example, the predicted log of the total supervised in Model 1 is about .22 lower for Asian than for white men (which is the reference category for the regressions) and this result is identical to the differential between these two groups as shown in Table 1. The additional information that is provided by the results shown for Model 1 in Table 3 is that the differentials in the log of the total supervised are statistically significant for the contrast between Asian men and white men (i.e., Asians are lower) and for the contrast between black men and white men (i.e., blacks are higher).

Model 2 in Table 3 shows that after controlling for the covariates, the coefficient for Asian men is partially reduced (in absolute value). That is, their measured characteristics partly explain why Asian men have lower managerial authority than white men. However, a differential still exists that is substantively and statistically significant. Specifically, the coefficient for Asians in Model 2 indicates that Asian men supervise about 13 percent fewer people than white men who are otherwise the same on the independent variables controlled for in the regression. By contrast, black men are advantaged in that their coefficient in Model 2 implies that, net of the covariates in the regression, black supervise about 11 percent more people than white men. The coefficients for the two Hispanic groups, however, are not statistically significant indicating that the evidence does not clearly support the conclusion that they are different from white men in regard to the outcome.

Other results for men as shown in Model 2 reveal that having a business degree does increase one's managerial authority. Degrees that reduce it, however, include mathematics, life sciences, physical sciences, engineering, social sciences, humanities and communications. Perhaps somewhat unexpectedly, medical related majors tend to increase managerial authority. Graduating from a Research University I level institution does not have a statistically significant net effect on managerial authority although the latter does appear to be reduced for graduates from second tier doctoral granting and liberal arts institutions. Having a father who has a college degree (as his highest level of education) has a net positive effect on managerial authority.

The bivariate specification for women is given by Model 3 in Table 3. For women, the lower level of managerial authority is statistically significant for Asians while the higher level of managerial authority for blacks is statistically significant. After adding in the covariates in Model 4 for women as shown in Table 3, however, the coefficient for Asians is no longer statistically significant. That is, after controlling for the characteristics of Asian women, their level of managerial authority is no longer statistically different from that for white women. By contrast, the coefficient for black women remains statistically significant in Model 4 and indicates that this group supervises about 8 percent more people than comparable white women.

CONCLUSIONS

This study has investigated the glass-ceiling hypothesis among college-educated racial/ethnic minorities using a carefully specified multivariate statistical model and relatively recent nationally representative data. Focusing on the total number of people supervised, we estimated net racial/ethnic differentials in managerial authority across Asian, black, non-white Hispanic, and Hispanic white men and women in reference to non-Hispanic whites. The net

racial/ethnic differentials were assessed after taking into account age, educational level, marital status and family structure, major field of study, Carnegie classification, and parental education.

The empirical findings indicate that Asian men are disadvantaged in that their level of managerial authority is about 13 percent less than white men who are comparable in terms of the aforementioned control variables. Other results show that non-white Hispanic and Hispanic white men are not disadvantaged relative to white men at least in regard to obtaining managerial authority. Black men stand out, however, as being advantaged because they supervise about 11 percent more people than white men after controlling for the covariates.

Among women as well, blacks are advantaged in that they supervise about 8 percent more people than white women after controlling for the covariates. The results for non-white Hispanic and Hispanic white men do not show any significant differences relative to white women. For Asian women, however, their lower managerial authority is statistically explained by their characteristics such as being younger and being more likely to have a degree in life sciences.

Our findings thus indicate that only Asian men are disadvantaged in terms of obtaining managerial authority relative to white men. Whether this is due to a discriminatory “corporate culture” that seeks to promote white males (as argued by Woo 2000) should be further investigated in future research. We note, however, that our finding that blacks are advantaged over whites suggests that organizational processes may have become more complex in recent years. Furthermore, our results do not demonstrate that Asian women are any more disadvantaged than white women in terms of managerial authority. Further research on these differentials is needed, but one might speculate that affirmative action concerns (which typically do not include Asians) may have become successful in the case of blacks at least in regard to

obtaining managerial authority. As for Asian women, the disadvantage of gender may override that of race.

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Table 1: Descriptive Statistics for Men

Variables	Non-Hispanic White		Non-Hispanic Asian		Non-Hispanic Black		Non-White Hispanic		Hispanic White	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Number of People Supervised	21.32	160.80	9.58	22.55	27.08	225.58	19.77	66.48	15.18	47.70
Log of Number of People Supervised	1.77	1.11	1.55	0.90	1.85	1.19	1.79	1.15	1.74	1.07
<i>Demographic Background</i>										
Age	45.09	9.60	41.05	9.75	44.61	9.44	41.36	8.98	42.58	9.24
Age-Squared	2125.45	865.93	1780.04	826.07	2078.84	849.51	1790.78	765.27	1898.73	813.44
Disability Status	0.06	0.24	0.05	0.22	0.05	0.22	0.06	0.25	0.07	0.25
Bachelor's Degree	0.58	0.49	0.56	0.50	0.63	0.48	0.60	0.49	0.63	0.48
Master's Degree	0.27	0.44	0.23	0.42	0.24	0.43	0.26	0.44	0.22	0.41
Doctorate Degree	0.07	0.26	0.08	0.26	0.05	0.23	0.10	0.30	0.05	0.23
Professional Degree	0.08	0.27	0.14	0.34	0.07	0.26	0.04	0.19	0.10	0.30
Married	0.80	0.40	0.65	0.48	0.71	0.45	0.70	0.46	0.73	0.45
Living with Child/Children Under Age 2	0.10	0.30	0.10	0.30	0.09	0.29	0.16	0.37	0.12	0.32
Living with Child/Children Aged 2-5	0.16	0.37	0.15	0.36	0.15	0.36	0.18	0.39	0.19	0.39
Living with Child/Children Aged 6-11	0.23	0.42	0.19	0.40	0.24	0.43	0.20	0.40	0.24	0.43
Living with Child/Children Aged 12-18	0.25	0.43	0.15	0.36	0.23	0.42	0.22	0.42	0.22	0.41
<i>Major Degree Field</i>										
Mathematics	0.07	0.26	0.08	0.27	0.07	0.26	0.05	0.23	0.06	0.23
Life Sciences	0.06	0.23	0.08	0.27	0.02	0.15	0.05	0.21	0.04	0.20
Physical Sciences	0.04	0.20	0.02	0.15	0.02	0.13	0.04	0.20	0.03	0.16
Engineering	0.22	0.41	0.25	0.43	0.13	0.33	0.21	0.41	0.19	0.39
Social Sciences	0.10	0.30	0.08	0.27	0.16	0.36	0.15	0.36	0.12	0.33
Business	0.14	0.35	0.13	0.33	0.15	0.35	0.11	0.31	0.13	0.34
Business Finance	0.05	0.21	0.05	0.23	0.04	0.20	0.05	0.23	0.05	0.21
Education	0.07	0.25	0.03	0.16	0.10	0.30	0.09	0.28	0.08	0.27
Humanities	0.03	0.18	0.02	0.13	0.03	0.18	0.03	0.16	0.02	0.15
Medical Sciences	0.02	0.12	0.03	0.17	0.02	0.14	0.02	0.15	0.02	0.15
Medicine and Pharmacy	0.04	0.20	0.08	0.27	0.03	0.16	0.02	0.13	0.05	0.21
Communications	0.01	0.12	0.01	0.11	0.02	0.15	0.02	0.13	0.02	0.12
Legal Studies	0.04	0.18	0.04	0.19	0.05	0.21	0.01	0.10	0.05	0.22
Visual and Performing Arts	0.12	0.33	0.11	0.31	0.17	0.38	0.16	0.37	0.14	0.35
<i>Carnegie Classification</i>										
Research University I	0.34	0.47	0.55	0.50	0.24	0.43	0.28	0.45	0.26	0.44
Research University II	0.10	0.30	0.05	0.21	0.06	0.23	0.02	0.13	0.05	0.22
Doctorate Granting I	0.08	0.26	0.03	0.17	0.06	0.24	0.06	0.24	0.05	0.22
Doctorate Granting II	0.07	0.26	0.04	0.20	0.05	0.23	0.10	0.30	0.08	0.28
Comprehensive I	0.23	0.42	0.20	0.40	0.36	0.48	0.30	0.46	0.33	0.47
Comprehensive II	0.02	0.13	0.01	0.09	0.02	0.15	0.02	0.13	0.01	0.10
Liberal Arts I	0.02	0.15	0.01	0.10	0.02	0.13	0.01	0.10	0.01	0.10
Liberal Arts II	0.04	0.21	0.02	0.14	0.10	0.30	0.05	0.21	0.04	0.21
Theological Seminaries, Bible Colleges	0.01	0.09	0.005	0.07	0.01	0.08	0.00	0.00	0.001	0.03
Medical Schools and Medical Centers	0.02	0.13	0.02	0.16	0.01	0.11	0.02	0.15	0.03	0.16
Schools of Engineering and Technology	0.01	0.09	0.01	0.08	0.01	0.08	0.00	0.00	0.01	0.10
Schools of Art, Music, and Design	0.003	0.06	0.001	0.04	0.005	0.07	0.01	0.07	0.00	0.05
Schools of Law	0.004	0.06	0.01	0.09	0.002	0.04	0.00	0.00	0.01	0.09
Classification Don't Know	0.03	0.18	0.04	0.19	0.04	0.19	0.11	0.32	0.09	0.29
Other Specialized Institutions	0.02	0.13	0.00	0.04	0.02	0.12	0.02	0.13	0.02	0.13
Two-Year Institutions	0.00	0.05	0.01	0.11	0.003	0.05	0.01	0.10	0.004	0.06
<i>Socioeconomic Origins</i>										
Mother Less Than High School Completed	0.08	0.28	0.18	0.39	0.21	0.41	0.25	0.43	0.31	0.46
Mother HS Graduate or Some College	0.63	0.48	0.45	0.50	0.56	0.50	0.47	0.50	0.49	0.50
Mother College Degree	0.19	0.39	0.20	0.40	0.12	0.33	0.18	0.38	0.12	0.33
Mother Some Graduate or Prof. School	0.09	0.29	0.16	0.37	0.11	0.31	0.10	0.30	0.07	0.25
Mother's Education Don't Know	0.001	0.04	0.001	0.04	0.01	0.07	0.005	0.07	0.00	0.07
Father Less Than High School Completed	0.12	0.33	0.14	0.35	0.30	0.46	0.28	0.45	0.31	0.46
Father HS Graduate or Some College	0.47	0.50	0.35	0.48	0.47	0.50	0.34	0.48	0.41	0.49
Father College Degree	0.22	0.41	0.19	0.39	0.11	0.31	0.22	0.42	0.14	0.35
Father Some Graduate or Prof. School	0.19	0.39	0.32	0.47	0.10	0.30	0.13	0.34	0.13	0.34
Father's Education Don't Know	0.004	0.06	0.01	0.08	0.03	0.16	0.02	0.13	0.01	0.09
Sample Size	28,643		808		1,992		187		1,697	

Table 2: Descriptive Statistics for Women

Variables	Non-Hispanic White		Non-Hispanic Asian		Non-Hispanic Black		Non-White Hispanic		Hispanic White	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Number of People Supervised	15.81	154.47	8.88	29.31	15.29	72.42	8.72	17.67	12.55	52.92
Log of Number of People Supervised	1.56	0.97	1.47	0.83	1.65	1.04	1.54	0.86	1.56	0.95
<i>Demographic Background</i>										
Age	43.87	9.76	40.00	9.77	43.52	9.37	39.88	8.62	40.94	9.05
Age-Squared	2019.95	857.29	1695.62	820.59	1981.70	819.89	1664.14	716.23	1757.88	768.14
Disability Status	0.06	0.23	0.04	0.20	0.07	0.26	0.05	0.22	0.06	0.24
Bachelor's Degree	0.53	0.50	0.53	0.50	0.57	0.49	0.56	0.50	0.60	0.49
Master's Degree	0.36	0.48	0.26	0.44	0.32	0.47	0.31	0.46	0.27	0.45
Doctorate Degree	0.06	0.24	0.06	0.24	0.05	0.22	0.06	0.23	0.05	0.22
Professional Degree	0.05	0.22	0.14	0.35	0.05	0.22	0.08	0.27	0.08	0.27
Married	0.65	0.48	0.56	0.50	0.46	0.50	0.52	0.50	0.60	0.49
Living with Child/Children Under Age 2	0.07	0.25	0.07	0.26	0.06	0.24	0.11	0.32	0.10	0.30
Living with Child/Children Aged 2-5	0.10	0.30	0.11	0.31	0.11	0.31	0.21	0.41	0.15	0.35
Living with Child/Children Aged 6-11	0.16	0.36	0.13	0.34	0.18	0.38	0.21	0.41	0.21	0.41
Living with Child/Children Aged 12-18	0.20	0.40	0.12	0.33	0.22	0.42	0.17	0.38	0.21	0.41
<i>Major Degree Field</i>										
Mathematics	0.04	0.20	0.05	0.22	0.04	0.21	0.02	0.13	0.03	0.18
Life Sciences	0.06	0.23	0.07	0.25	0.03	0.16	0.04	0.21	0.05	0.21
Physical Sciences	0.02	0.13	0.02	0.14	0.01	0.09	0.01	0.07	0.01	0.11
Engineering	0.04	0.21	0.08	0.27	0.03	0.17	0.04	0.19	0.05	0.22
Social Sciences	0.15	0.36	0.12	0.33	0.19	0.39	0.19	0.39	0.16	0.37
Business	0.09	0.29	0.11	0.32	0.14	0.34	0.09	0.29	0.11	0.31
Business Finance	0.03	0.17	0.04	0.19	0.03	0.18	0.03	0.16	0.03	0.18
Education	0.22	0.42	0.14	0.34	0.19	0.39	0.24	0.43	0.19	0.40
Humanities	0.05	0.21	0.04	0.19	0.03	0.17	0.04	0.21	0.05	0.21
Medical Sciences	0.08	0.27	0.06	0.24	0.07	0.25	0.06	0.24	0.08	0.27
Medicine and Pharmacy	0.02	0.15	0.08	0.27	0.02	0.13	0.05	0.22	0.03	0.17
Communications	0.02	0.15	0.02	0.14	0.02	0.15	0.02	0.13	0.03	0.16
Legal Studies	0.03	0.17	0.06	0.24	0.04	0.21	0.04	0.21	0.05	0.22
Visual and Performing Arts	0.13	0.34	0.11	0.32	0.16	0.36	0.13	0.33	0.13	0.34
<i>Carnegie Classification</i>										
Research University I	0.29	0.45	0.54	0.50	0.21	0.41	0.24	0.43	0.20	0.40
Research University II	0.08	0.27	0.05	0.22	0.05	0.22	0.03	0.18	0.04	0.20
Doctorate Granting I	0.09	0.28	0.03	0.18	0.09	0.28	0.07	0.25	0.06	0.24
Doctorate Granting II	0.06	0.24	0.04	0.20	0.05	0.23	0.11	0.32	0.12	0.32
Comprehensive I	0.31	0.46	0.21	0.41	0.38	0.49	0.24	0.43	0.34	0.47
Comprehensive II	0.02	0.15	0.01	0.09	0.02	0.15	0.03	0.16	0.01	0.10
Liberal Arts I	0.03	0.16	0.02	0.13	0.01	0.11	0.02	0.15	0.02	0.12
Liberal Arts II	0.06	0.23	0.01	0.09	0.10	0.30	0.07	0.25	0.05	0.22
Theological Seminaries, Bible Colleges	0.004	0.06	0.002	0.04	0.002	0.05	0.00	0.00	0.001	0.03
Medical Schools and Medical Centers	0.02	0.13	0.02	0.15	0.01	0.12	0.04	0.21	0.03	0.17
Schools of Engineering and Technology	0.00	0.04	0.002	0.04	0.004	0.06	0.01	0.07	0.001	0.03
Schools of Art, Music, and Design	0.003	0.06	0.004	0.06	0.004	0.06	0.01	0.07	0.004	0.06
Schools of Law	0.003	0.06	0.01	0.10	0.003	0.05	0.01	0.07	0.004	0.06
Classification Don't Know	0.03	0.16	0.03	0.18	0.04	0.19	0.12	0.32	0.10	0.30
Other Specialized Institutions	0.01	0.11	0.01	0.09	0.01	0.12	0.00	0.00	0.004	0.06
Two-Year Institutions	0.002	0.04	0.002	0.04	0.002	0.04	0.01	0.11	0.017	0.13
<i>Socioeconomic Origins</i>										
Mother Less Than High School Completed	0.09	0.28	0.14	0.34	0.21	0.41	0.28	0.45	0.34	0.47
Mother HS Graduate or Some College	0.62	0.48	0.46	0.50	0.57	0.50	0.48	0.50	0.47	0.50
Mother College Degree	0.18	0.39	0.21	0.41	0.11	0.32	0.18	0.38	0.11	0.32
Mother Some Graduate or Prof. School	0.11	0.31	0.18	0.39	0.10	0.30	0.06	0.23	0.08	0.27
Mother's Education Don't Know	0.001	0.03	0.007	0.08	0.004	0.06	0.006	0.07	0.00	0.07
Father Less Than High School Completed	0.13	0.33	0.12	0.33	0.29	0.46	0.27	0.45	0.32	0.47
Father HS Graduate or Some College	0.47	0.50	0.39	0.49	0.50	0.50	0.49	0.50	0.43	0.50
Father College Degree	0.21	0.41	0.16	0.37	0.09	0.29	0.15	0.36	0.13	0.33
Father Some Graduate or Prof. School	0.20	0.40	0.32	0.47	0.09	0.28	0.06	0.24	0.11	0.32
Father's Education Don't Know	0.004	0.06	0.01	0.09	0.03	0.17	0.03	0.16	0.01	0.11
Sample Size	16,732		567		2,741		180		1,428	

Table 3: Estimates of OLS Regression of Log-Number of People Supervised

	Men		Women	
	(1)	(2)	(3)	(4)
Non-Hispanic Asian	-0.21978 ***	-0.13521 ***	-0.09078 *	-0.06032
Non-Hispanic Black	0.07964 **	0.10842 ***	0.08780 ***	0.08147 ***
Non-White Hispanic	0.02636	0.08167	-0.01778	-0.00126
Hispanic White	-0.02523	0.01419	0.00370	0.01875
<i>Demographic Background</i>				
Age		0.04257 ***		0.05388 ***
Age-Squared		-0.000389 ***		-0.00054 ***
Disability Status		-0.08224 ***		-0.04799 ***
Master's Degree		0.07659 ***		0.08403 ***
Doctorate Degree		0.03415		0.12525 ***
Professional Degree		-0.07770 *		0.00309
Married		0.16298 ***		0.02077
Living with Child/Children Under Age 2		0.03807		0.04012
Living with Child/Children Aged 2-5		0.03454		0.00857
Living with Child/Children Aged 6-11		0.04726 **		0.02186
Living with Child/Children Aged 12-18		0.09922 ***		0.01108
<i>Major Degree Field</i>				
Mathematics		-0.27067 ***		-0.06491
Life Sciences		-0.12030 ***		-0.09637 **
Physical Sciences		-0.24752 ***		-0.12478 *
Engineering		-0.04447 *		0.01295
Social Sciences		-0.05128 *		-0.05443 *
Business		0.09863 ***		0.09356 ***
Business Finance		0.05508		0.04804
Education		-0.02809		-0.06020 *
Humanities		-0.12187 **		-0.13445 ***
Medical Sciences		0.17963 ***		0.14215 ***
Medicine and Pharmacy		0.11416 *		0.15643 **
Communications		-0.12536 *		0.02583
Legal Studies		-0.01423		0.00608
<i>Carnegie Classification</i>				
Research University I		-0.08079		-0.05760
Research University II		-0.06229		-0.04534
Doctorate Granting I		-0.05888		-0.05092
Doctorate Granting II		-0.10309 *		-0.07306
Comprehensive I		-0.08537		-0.10049
Comprehensive II		-0.05348		-0.07132
Liberal Arts I		-0.00705		-0.05865
Liberal Arts II		-0.12154 *		-0.09007
Theological Seminaries, Bible Colleges		0.18118 *		-0.06838
Medical Schools and Medical Centers		-0.11784		-0.10497
Schools of Engineering and Technology		-0.05135		-0.09241
Schools of Art, Music, and Design		-0.18528		-0.15758
Schools of Law		-0.18868		-0.18668
Classification Don't Know		-0.00714		-0.08169
<i>Socioeconomic Origins</i>				
Mother HS Graduate or Some College		0.02350		-0.02416
Mother College Degree		0.01882		-0.02331
Mother Some Graduate or Prof. School		-0.03403		-0.05141
Mother's Education Don't Know		-0.0646		-0.02157
Father HS Graduate or Some College		0.04027 *		0.04821 *
Father College Degree		0.05137 *		-0.01373
Father Some Graduate or Prof. School		0.02173		-0.01430
Father's Education Don't Know		-0.03298		0.05740
Intercept	1.76588 ***	0.54616 ***	1.55972 ***	0.31667 *
R-Sq	0.0013	0.0302	0.0012	0.0199

***Significant at the 0.001 level; **Significant at the 0.01 level; *Significant at the 0.05 level (two-tailed tests).