

Are there salary differences across genders at the Naval Postgraduate School? August 31, 2020

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On behalf of the NPS Inclusion and Diversity Council (IDC)

Abstract: This report examines whether or not there are salary differences across genders for faculty members at the Naval Postgraduate School (NPS). We use detailed data from the Office of the Provost to construct a comprehensive database on all 573 NPS faculty members for the 2020 fiscal year. The database includes information on salary, gender, school (i.e., GSOIS, GSDM, GSEAS, SIGS, “Other”), teaching scores, citations, years of experience at NPS, years since degree, education level, military service, discipline type, and job type. We use standard regression techniques with the use of key control variables in our preferred estimates. We find no systematic bias for salaries across genders at the Naval Postgraduate School. Regression estimates for the male salary premium coefficient for 11 out of 12 job types were found to be statistically insignificant at all of the conventional levels used in labor economics. The lone exception is the male salary premium estimate for the category involving faculty research associates. We find statistical evidence that there may be a male salary premium involving faculty research associates and advise further investigation from the Office of the Provost on this matter.

Keywords: Gender Gap, Pay Differences, Salary, Wage Premium

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1. Introduction

The gender pay gap has been an ongoing issue in the United States for many years. Congress has tried to correct this problem through the passing of multiple laws and regulations with the most notable being the Equal Pay Act of 1963. These laws essentially require equal pay for equal work across the genders. For these reasons, major corporations often complete periodic reviews and statistical analyses to make sure they are complying with federal law to protect themselves from litigation as well as to ensure basic equality standards within their businesses. The Naval Postgraduate School (NPS) is no different and likewise highly values pay equity across genders for the same types of jobs on campus.

This study analyzes whether or not there are salary differences across genders at the Naval Postgraduate School. We use detailed data from the Office of the Provost to construct a comprehensive database on all 573 NPS faculty members for the 2020 fiscal year. The database includes specific information on salary, gender, school (i.e., GSOIS, GSDM, GSEAS, SIGS, “Other”), teaching scores, citations, years of experience at NPS, years since degree, education level, military service, discipline type, and job type.

We contribute to the extensive gender pay gap literature (Bichsel and McChesney 2017; Cook et al. 2018; Corrigan 2017; Graf et.al 2018; Hegewisch 2018; Moore et al. 2008; Wakabayashi 2019) with a specific focus on the NPS faculty population. Consistent with previous labor economics studies on this topic, we utilize standard regression models with the use of key control variables to estimate the effect of gender on salary differences on campus. We also provide a variety of specifications which break down the estimates across different job types.

Our preferred estimates indicate no systematic bias for salaries across genders at the Naval Postgraduate School. Regression estimates for the male salary premium coefficient for 11 out of 12 job types were found to be statistically insignificant at all of the conventional levels used in labor economics. The lone exception is the male salary premium estimate for the category involving faculty research associates. We find statistical evidence that there may be a male salary premium involving faculty research associates.

The paper proceeds as follows. Section 2 discusses the gender pay gap literature in labor economics. Section 3 describes the data. Section 4 outlines the methodology used in our statistical analysis and presents the main results. Section 5 concludes the study.

2. Gender Pay Gap Issues in the United States

Research shows the wage gap between male and female workers in America has narrowed since 1980 (Graf et.al, 2018). However, it has remained relatively stable over the past 15 years. The Pew Research Center conducted an analysis of the median hourly earnings of workers in the United States in 2018, they found that women earned 85% of what men earned (Graf et.al, 2018).

Cook et. al. (2018) studied a sample size of over a million Uber drivers in the United States and found that female drivers earned 7% less than male drivers. The researchers found that the 7% gap in earnings were attributed to experience on the platform, preferences over where to work, and preferences for driving speed. The analysis indicated that, when these factors were controlled for, gender differences in pay was not statistically significant. According to the researchers, men's willingness to work more hours per week (resulting in more experience),

preference for speed, and targeting the most profitable areas contributed significantly to the wage gap between male and female drivers. Speed alone accounted for 48% of the gap, experience and location contributed to 36% and 28%, respectively (Cook et al., 2018).

Gender related pay gap is a hot topic at Google. Google disagreed that the company has been paying women less than men as it was recently accused of in a lawsuit. Google, however, admitted that there is a “leveling” issue that caused inequity in pay (Wakabayashi, 2019). Since 2012, the company has been conducting annual studies on pay gap issues. Google’s 2018 study on gender related pay gap revealed an outcome that differed from traditional findings. In this new study, they found that men were, in fact, being under paid compared to their female counterparts (Wakabayashi, 2019). Male workers were under paid based on the study that included similar job types and levels, required performance, as well as certain assigned locations. According to a New York Times article, Google paid an additional \$9.4 million to markup the difference for 10,677 workers in response to the 2018 study result (Wakabayashi, 2019). Google employs roughly 98,771 fulltime workers. Female workers represent 31% of the total fulltime workforce at Google with males making up the remaining 69% (Wakabayashi, 2019). The study found that while Google strives to achieve pay equality among men and women, the largest proportion of the leadership and high paying positions are still dominated by male workers. Google contends that the large population male new-hires included in the analysis may have been skewing the results as, naturally, new hires earn lower wages.

The above studies and articles highlight the fact that gender-based wage gaps are an issue across the U.S. workforce. The issue is not restricted to the public or private sector and that new and progressive companies like Google and Uber struggle with gender equality in the same way more conservative, established companies have for decades.

2.1 Overview of Federal Government Gender Policy

The origin of the federal government's gender equality policy is the Equal Pay Act of 1963, Title VII of the Civil Rights Act of 1964 (Title VII) and Section 501 of the Rehabilitation Act of 1973 (Rehabilitation Act). The Equal Pay Act of 1963 first set the foundation for government initiative on equal opportunity. In the subsequent year, the Civil Rights Act was passed, further reinforcing the Equal Pay Act of 1963. Equal Employment Opportunity Management Directive 715 (EEO MD-715) was the key initiative contributing to closing gender pay gaps in the federal workforce. Together, these policy documents were aimed at ensuring that personnel decisions at the federal level are not made on the basis of race, color, religion, sex, national origin, and reprisal or disability. These policies also required federal agencies to establish programs to make employment opportunities available to all federal employees and job applicants. These laws further strengthened women's rights and entitlements for receiving fair treatment. As a result, it is unlawful for any agency of the federal government to allow compensation differences among employees in the same job classification level and within the same category.

The Equal Pay Act of 1963, administered and enforced by the Equal Employment Opportunity Commission (EEOC), "prohibits sex-based wage discrimination between men and women in the same establishment who perform jobs that require substantially equal skill, effort and responsibility under similar working conditions" (EEOC Portal, 2019). Essentially, within a same establishment, men and women must receive equal payment if they are performing work at the same level. Furthermore, the act explicitly dictated that payment must be based on the content of the work and not the job title. The Equal Pay Act of 1963 marked the beginning of government enforced initiatives on closing the gender pay gap and prohibiting employers paying women less just because they are women.

The Civil Rights Act of 1964 forbids employment discrimination on the basis of race, color, religion, sex, or national origin. Section 703(a) makes it unlawful for an employer to “fail or refuse to hire or to discharge any individual, or otherwise to discriminate against any individual with respect to his compensation, terms, conditions or privileges or employment, because of such individual’s race, color, religion, sex, or national origin.” This act encompasses and further enforces the Equal Pay Act of 1963 by emphasizing the government’s commitment to protecting women in the workforce and ensuring they receive the same treatment as their male counterparts.

“Section 717 of Title VII of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000e-16. The Equal Employment Opportunity Commission (EEOC) is responsible for the review and evaluation of all federal sector equal employment opportunity (EEO) efforts. Thus, Section 717 of Title VII requires federal agencies to take proactive steps to ensure equal employment opportunity for all their employees and applicants for employment. This means that agencies must work to proactively prevent potential discrimination before it occurs and establish systems to monitor compliance with Title VII. Agencies must regularly evaluate their employment practices to identify barriers to equality of opportunity for all individuals. Where such barriers are identified, agencies must take measures to eliminate them. With these steps, agencies will ensure that all persons are provided opportunities to participate in the full range of employment opportunities and achieve to their fullest potential” (Equal Employment Opportunity Commission [EEOC], 2019). In order to achieve this objective, federal agencies are tasked to perform self-assessments to identify barriers and monitor progress in their respective equal employment opportunity programs. The federal government entrusts enforcement of the equal employment opportunity law to the departments of Justice (DOJ), Labor (DOL), the Equal

Employment Opportunity Commission (EEOC), and the Office of Personnel Management (OPM). (EEOC, 2019).

“The United States government employs over two million men and women across the country and around the world. The ability of our government to meet the complex needs of our nation and the American people rest squarely on dedicated and hard-working individuals. Perhaps now more than ever before – with increasing public expectations of governmental institutions – federal agencies must position themselves to attract, develop and retain a top-quality workforce that can deliver results and ensure our nation's continued growth and prosperity. Equal opportunity in the federal workplace is key to accomplishing this goal” (Equal Employment Opportunity Management [EEOM], 2003).

Government Executive conducted a study in 2017 on gender pay gap within the federal domain. According to Jack Corrigan of Government Executive, while most of the high paying jobs in the federal government are still occupied by men, there was a significant improvement in the number of women that held higher paying federal jobs in the past ten years (Corrigan, 2017). The U.S. Office of Personnel Management (OPM) published a report in 2014 stating that the gender pay gap closed by more than 50% in the federal government workforce from 1992 to 2012, indicating that we have making significant progress on the gender pay gap issues (OPM, 2014). As of March 2017, men held 66.3% of jobs paying more than \$150K while they only represent 53.7% of the total federal workforce (Corrigan, 2017). Among education jobs within the federal government, 35.8% of women held jobs paying \$150K or more in 2007 while in 2017 that number rose to 42.4%; a net of 6.53% improvement in pay gap difference (Corrigan, 2017). Recent reports from the Institute for Women’s Policy Research disclosed that in 2017, median

earnings among females was 81.8% of male earnings across the United States for all full-time workers (Hegewisch, 2018).

2.2 Department of Defense Policy

The Department of Defense falls under the same policy and regulation guidance that the greater federal government does. DoD can, and often does, supplement federal regulation and policy with its own defense specific guidance. This section will review the guidance issued over and above the applicable federal government policy addressed in the previous section, as well as any existing literature on the history and effectiveness of DoD specific gender equality efforts.

The DOD's Equal Employment Opportunity policy for civilians was originally introduced via DOD Directive 1440.1 in 1987. The directive enabled the establishment of equal opportunity programs within the DOD and aligned their policy with that of the federal government at large. Under this directive, “the DOD Develop and implement affirmative action programs to achieve the objective of a civilian work force in which the representation of minorities, women, and people with disabilities at all grade levels, in every occupational series, and in every major organizational element is commensurate with the representation specified in EEOC and OPM guidance. Such programs, which shall be designed to identify, recruit, and select qualified personnel, shall be coordinated with the cognizant legal offices. 4.3. Ensure that Civilian EEO Program activities for minorities, women, and people with disabilities are integrated fully into the civilian personnel management system” (DOD, 2015) The DOD leverages the Office of Diversity Management and Equal Opportunity (ODMEO) to oversee and enforce the following programs within the DOD: Diversity and Inclusion Management Program, DOD MEO Program, DOD Civilian EEO Program, and DOD Civil Rights Program, and Harassment Prevention and Response in the Armed Forces Program (DoD, 2015).

The DoD Diversity and Inclusion Management Program allows the development and implementation of diversity and inclusion-centered programs to enhance the practices of fostering an inclusive environment that composes different characteristics and attributes of the DoD workforce. Additionally, this program developed an accountability framework to assess DoD agencies' initiatives in identifying and eliminating barriers on diversity and inclusion efforts.

The DoD MEO Program requires individual DoD agencies to promote:

“equal opportunity as being critical to mission accomplishment, unit cohesiveness, and military readiness. Evaluates Service members only on individual merit, fitness, capability, and performance. Ensure that (1) All Service members are afforded equal opportunity in an environment free from harassment and unlawful discrimination on the basis of race, color, national origin, religion, sex, or sexual orientation. The chain of command is used as the primary and preferred channel to (a) Identify and correct unlawful discriminatory practices, (b) Process and resolve complaints of unlawful discrimination or harassment, to include sexual. (c) Ensure that MEO matters are taken seriously and acted on as necessary. (3) The Military Departments monitor and report on selected categories of their personnel programs to ensure MEO and fair treatment for all Service members through MEO plans, programs, or other initiatives. (4) Systems are in place to receive and process complaints of discrimination or harassment, to include sexual, and that those resolution systems are compliant with federal and DoD guidance. (5) To the extent permitted by law and DoD policy, all on-installation activities and, when possible, all off-installation activities available to military personnel are open to all military personnel and their families regardless of race, color, national origin, religion, sex, or sexual orientation.” (DOD1020.02E, 2015)

“DoD Civilian EEO Program Prohibits unlawful employment discrimination based on race, sex (including pregnancy, gender identity, and sexual orientation when based on sex stereotyping), color, national origin, age, religion, disability, genetic information, or reprisal for previous EEO activity in accordance with applicable statutes and Equal Employment Opportunity Commission (EEOC) regulations” (DOD1020.02E, 2015). DoD goes to great lengths to ensure it provides an employment opportunity for its civilians free from any form of discrimination. As with other federal government entities, the DoD seeks to uphold the standards set by statute and exists as an example to private industry as a success story in the realm of equality. The department employs numerous avenues for complaint reporting and resolution and continues to evaluate its status as an equal opportunity employer and discourage harassment in the workplace.

The DoD Civil Rights Program ensures all service members receive equal treatment irrespective of national origin, race, color, sex or age. “The right of individuals not to be subject to unlawful discrimination in federally assisted or federally conducted programs on the basis of: Race, color, or national origin in programs or activities that receive federal financial assistance from the DoD, pursuant to sections 2000d through 2000d-7 of Reference (t). Disability, in any program or activity receiving federal financial assistance from or conducted by the DoD, pursuant to sections 794 through 794d of Reference (j). Age, in programs or activities that receive federal financial assistance from the DoD, pursuant to part 90 of Reference (u). Sex, in education programs or activities that receive federal financial assistance from the DoD” (DOD, 2015).

As noted by the myriad federal and DoD laws, regulations, directives and policies, emphasis has been placed on ensuring gender equality far beyond the issue of salary. It should be

noted however, that despite all the laws, regulation, directives and policies, it is still the onus of department and agency leadership to ensure their organizations adhere to the rules. All the policy in the world can be written on a subject, yet means nothing if it goes unread and unheeded.

In May of 1998, the Government Accountability Office (GAO) published a report on gender issues in the Department of Defense. The study focused on and reviewed the military's progress and efforts on three key elements: promotion, professional military education (PME), and opportunities. In 1993 and 1994, changes in policy and legislation opened more than 250,000 positions in the armed services to women. (Department of Defense [DoD], 2015) By contrast, there are currently 1,425,000 service positions open to women, approximately 80 percent of the services billets. A DOD directive in 1995 required the services to conduct annual equal opportunity assessment throughout the military to ensure equity among service members irrespective of gender. (DOD, 2015).

In reviewing the area of promotion, GAO analyzed 58 officer promotion boards and 60 enlisted boards from 1993 to 1997. The results showed 47 of the 58 officer boards and 49 of the 60 enlisted boards men and women were selected at equal rates. For the remainder of the boards, the results leaned in favor of selecting more women than men. The GAO report failed to identify any amplifying statistical analysis that may have shed further light on the study. For instance, we do not know what variables were included in the analysis and what, if any, variables were controlled for in order to indicate any bias. Nor do we know if the skewed results of the remaining board were due to any outside influence on the board members. Perhaps the senior board members were aware their promotion policy was under equal opportunity scrutiny.

The GAO further looked into the top three, non-flag level, officer and enlisted boards to see how the services were promoting its members into the senior service leadership. After

reviewing all such promotion boards from 1993 to 1997, they found that male and female service members were being promoted at similar rates in about 82% of the boards. Of the remaining boards, 15% leaned in favor of females and 3% leaned in favor of males. The results of this study seem to indicate that there is no overwhelming gender bias in the services' promotion history. However, the detailed analysis is once again lacking. In order to determine that no bias exists, we need to see the data collected and correct for factors in the service records of promotion candidates. Elements of time in service, performance history, and other factors would need to be corrected for to determine that "all else being equal" men and women were being chosen for promotion at equal, or nearly equal, levels.

The PME findings of the GAO study indicated that men and women were being selected for PME opportunities at similar rates 46% of the time. The remaining 54% favored women by a four-percent margin. The military branches select service members for PME opportunities similarly to how they conduct promotion selections; a statutory board meets and reviews the member's paper record. PME opportunities include advanced degrees and certifications programs for both the enlisted and officer ranks in resident and distance learning formats. Notable institutions include NPS, Naval War College, Air University, Marine Corps University, U.S. Army War College, Command and General Staff College, Dwight D. Eisenhower School for National Security and Resource Strategy, and the Joint Forces Staff College. Similar to the portion of the study dedicated to promotions, the reader is not privy to data and analysis that compensate for differences in selectees' service records that truly indicate whether gender bias exists.

Finally, the study conducted analysis on gender issues in the assignment of senior members to "key" service assignments. "Key" assignments were generally identified as

commanding officer, executive officer, and senior enlisted leader level billets and are selected in statutory boards very similar to promotions and PME opportunities. GAO found that in 53% of the boards, men and women were selected in similar rates; men were selected in over half of the remaining 47% of boards. Again, we can draw limited conclusions on the existence of gender bias based on the limited analysis conducted by the study. The GAO noted that many factors may have contributed the significant differences found in the study and therefore recommended further study to determine the actual factors that may have resulted in the finding. (Gebicke, 1998).

The GAO study provides insight into how the military handled active duty gender issues related to selection boards at the onset of a major change in gender policy efforts in DoD. It does not, however, provide any insight into how the DoD fairs in civilian application of equal employment opportunity policy application. At the time of this research, no studies or articles were found evaluating the DoD civilian workforce in terms of gender and salary.

2.3 Academia

2.3.1 Naval Postgraduate School

The Naval Postgraduate School in Monterey, California, is a Department of Defense-affiliated graduate level institution of higher learning dedicated to providing “relevant and unique advanced education and research programs to increase the combat effectiveness of commissioned officers of the Naval Service to enhance the security of the United States” (Naval Postgraduate School, 2018). Offering master’s and doctoral degrees in 93 fields of study, it is the DoD’s preeminent research and education facility. NPS originally opened its doors in 1909 and gradually expanded to include four schools, the Graduate School of Defense Management

(GSDM), the Graduate School of Engineering and Applied Sciences (GSEAS), the Graduate School of Operational and Information Sciences (GSOIS), and the School of International Graduate Studies (SIGS), overseeing 14 academic departments granting 77 master's degrees and 16 doctoral degrees. NPS is accredited by WASC Senior College and University Commission (WSCUC), the Accreditation Board for Engineering and Technology (ABET), the Association of Advance Collegiate Schools of Business (AACSB), and the Network of Schools of Public Policy, Affairs, and Administration (NASPAA).

Faculty research is generally defense- and security-related and aligned to NPS curricula. Students in most curricula are required to complete a thesis or research project in order to graduate and are guided by at least two faculty members. The school receives approximately \$100 million in sponsored research funding. In 2017, NPS had an operating budget of \$387 million, with a direct authorization budget of \$91 million (NPS, 2018). NPS also received \$104 million in reimbursable funding to support research and operations.

NPS students are active duty and reserve U.S. Air Force, Navy, Army, Marine Corps, as well as civilian and international military partners. According to data published by the school in 2017, NPS hosts 1,432 resident students, 167 international students, and 909 distance learning students world-wide. GSDM conferred 285 degrees in academic year 2017, GSEAS conferred 408, GSOIS conferred 294, and an additional 294 were conferred from National Security Affairs.

2.3.2 Policy

NPS is subject to all applicable policies, regulations, and legislation directed to and by the federal government, DoD, as well as the Department of the Navy (DON). In addition, NPS generates, distributes, and periodically reviews its own internal "NPS Instructions" that govern

local procedures for dealing with issues of employment and equal opportunity. This section will review the current policies in effect at NPS related to equal employment opportunity; namely, NPS Instruction 5354.1, Equal Employment Opportunity (EEO) Program Policies and the Assistant Secretary of the Navy, Manpower and Reserve Affairs' (ASN (M&RA)) Naval Postgraduate School Policy Regarding Appointment, Promotion, Salary, and tenure of Office of the Civilian Members of the Faculty.

The overarching instruction governing the EEO program at NPS is NPS Instruction 5354.1, Equal Employment Opportunity (EEO) Program Policies. The most recent version of the instruction was signed by the NPS president in November of 2016. The local policy echoes the guidance of the federal and DoD policy and even pastes in the DON guidance:

“A Federal agency may not discriminate against an employee or applicant with respect to the terms, conditions or privileges of employment on the basis of race, color, religion, sex, national origin, age, disability, marital status or political affiliation. Discrimination on these bases is prohibited by one or more of the following statutes: 5 U.S.C 2302(b)(1), 29 U.S.C. 206(d), 29 U.S.C. 631, 29 U.S.C. 633(a), 29 U.S.C. 791 and 42 U.S.C. 2000e-16” (NPSINST.5354.1, 2016)

Secretary of the Navy Instruction 12435.1C assigns the responsibility for generating NPS policy hiring, compensation, promotion and tenure to the ASN (M&RA). The current policy was signed in 2015 by Juan M. Garcia. The document is officially titled “Policy Regarding Appointment, Promotion, Salary, and Tenure of Office of the Civilian Members of the Faculty at the Naval Postgraduate School” and any changes are subject the review and approval of ASN (M&RA). The Policy defines faculty position as “Civilian members of the faculty are those who are appointed pursuant to the authority in Title 10, U.S. Code, Section 7044 as implemented in Department of Defense Instruction 1402.06, 06 Nov 2007, and who occupy positions with

primary functions including one or more of the following criteria; teaching, lecturing, instructing, facilitating discussions in seminars; conducting research and writing; designing or developing curricula; designing or developing learning support systems; providing academic advice or consultation; managing and governing of the academic enterprise; and managing and governing of an educational program” (Garcia, 2015, p. 3).

NPS faculty are appointed by the NPS President in the excepted service, schedule A, meaning they are not subject to normal appointment, and pay rules for federal employees governed by Title 5, U.S. Code. Rather, excepted service agencies set their own rules for appointment and hire on a discretionary basis. Additionally, “under schedule A, Excepted Appointments, members of the faculty are covered by the Office of Personnel Management regulations governing merit principals, veterans’ preference, equal employment, performance ratings, annual sick leave, health benefits, retirement, and insurance benefits” (Garcia, 2015, p. 6).

NPS employs tenure and non-tenure track faculty. Tenure track faculty are those with no definite term of office. Non-tenure track faculty are those with definite terms of office and no guarantee of renewal appointment. Non-tenure track faculty are also known as adjunct faculty. Appointment of faculty, both tenured and non-tenured, are “made by the President upon recommendation of the Provost after discussion with the appropriate faculty, Chair, and Dean” (Garcia, 2015, p. 6). All appointments are based on elements of merit with a positive factor given to veteran candidates. The specific merits identified by the ASN(M&RA) policy document include:

- (1) Professional Competence, as evidenced by the candidate's educational record; by scholarly activities such as publications, research, papers presented at professional meetings, and contributions to the DoD; and by reputation among peers in the field of specialization;
- (2) Teaching/research ability, as evidenced by recommendations from former supervisors, peers, students, or other appropriate evidence;
- (3) Personal attributes, such as initiative, cooperation, and breadth of intellectual interests.

In order to be eligible for promotion, tenured faculty must receive a most recent performance rating of "Meritorious." Promotion proceedings are held once a year and are approved by the president of the school. Candidates are considered and recommended for promotion to the president by the provost, academic unit of the school, Faculty Promotion Council, and the Dean's Council. The latter two committees are defined in the Faculty Handbook. Promotions include a change in rank from Assistant Professor to Associate Professor and from Associate Professor to Professor. Annual promotion proceedings consider "internal service such as those faculty activities which contribute to supporting the high quality of the NPS's academic environment; and, external service such as those faculty activities that enhance the NPS's contributions especially to the DON, the DoD, National Security and Homeland Defense, and/or the Academic Community" (Garcia, 2015, p. 8). Performance reviews for non-tenure track faculty are based on the degree of success in the performance of the specific tasks under which he or she was hired. The ASN(M&RA) policy includes a provision that at each stage of the promotion proceeding deliberation an objective observer be present in order to "assure that the process is indeed fair and equitable."

2.3.3 Peer Institution Studies

Since the early 2000s, more and more public universities have been conducting and publishing data relating to salary equality across gender and racial differences. The University of California system publishes annual updates to its salary equity study that first started in 2015. This research will reference the University of California, Berkeley (UCB), University of California, Santa Cruz (UCSC), University of California, Santa Barbara (UCSB), University of California, Los Angeles (UCLA), and University of California, San Diego (UCSD) due the vicinity of the universities in relation to NPS, their association as research universities, as well as the robustness of the studies completed and published. This study will also reference studies completed at the University of Texas at Austin (UT) showing progress made over time and how effective efforts and studies have been at identifying and correcting any gender pay gap issues. We also highlight published studies by respected institutions within academia that have studied gender salary inequities across the spectrum of higher education.

2.3.3.1 University of California

The overarching University of California system released the findings of an internal faculty pay equity study in 2011. The study generated a prediction equation resulting from a linear multiple regression predicting appointment pay rate for white men to assess salary discrepancies on the basis of gender or race. The results of the study found that system-wide, female faculty received lower compensation than their male counterparts. Based the findings then UC president Mark Yudof directed each individual campus to conduct a salary equity study by 2015.

In 2015, UC Berkeley completed its study of faculty pay equity, of faculty pay equity, that involved analysis of salary, gender, and ethnicity data of the institution while controlling for factors such as career experience, field, and rank. The researchers developed two main sub-models for their analysis. The first controlled for experience, field, and rank, and the second sub-

model implemented controls for experience and field but excluded rank. The findings of the study suggest that, women as well as members of ethnic minority groups at the school earned lower salaries on average than white male faculty members. “For women relative to white men, the two sub-models yield differences of -1.8% (including controls for rank) and -4.3% (excluding controls for rank); for minority groups relative to white men, the two sub-models show differences that range from -1.0% to -1.8%”(University of California, Berkeley, 2015). The UC Berkeley’s initial study findings indicated that female faculty at the university earned 15.8% less than their white male counterparts. However, when experience-related variables were considered, the gap was reduced to 11.3%. The analysts further factored in the effects of field related variables and the gap was reduced down to a 4.3% difference. Finally, after rank was incorporated into the model, the study indicated that women earned only 1.8% less than their male counterparts. The final results were vastly different from the initial study, indicating the need to take factors of experience, field of study, and rank into consideration when determining whether or not a salary equity issue exists and the extent to which it does.

Under the same direction as the UCB study, UCSD conducted two recent salary equity studies. The first focused on the general campus as well as its Scripps Institute of Oceanography and found some evidence of salary inequity on the basis of gender. However, like UCB, after correcting for factors of department, years since highest degree, and years since ladder-rank appointment they concluded that the difference in salary on the basis of gender was not statistically significant. The second study focused solely on the health sciences. This particular study indicated that females made 13.2% less than their male peers after correcting for factors of rank, department, highest degree earned, and years of service.

Contrary to the results from fellow UC system campuses, UCLA released a study of salary equality for their Division of Social Sciences in 2015 and found significant gender inequalities. While the study found no statistically significant differences in median starting base salaries by gender, the current salaries adjusted for experience showed male salaries were higher in all ranks than for women. When current step within rank, starting rank and step, and time since start date were factored into their model, gender still revealed itself to be significant. Male faculty members made on average \$11,344 more than their female counterparts.

Just an hour's drive from NPS, UCSC conducted its most recent salary equity study in 2015. The research found similar results to those of the Berkeley and San Diego studies; that lower wages were found among female faculty members, but could be explained primarily by departmental differences in salary and promotion growth. The departmental findings led to further research that found departments with more male faculty members generally had higher salaries and rates of promotion.

UCSB is located approximately four hours south of NPS and has comparable demographics to those of the Monterey Peninsula and Santa Cruz areas. UCSB's study indicated that the overall salary gap based on gender was explained by factors of experience and academic discipline or department. Their study went slightly farther than the others in that it identified outliers, or female faculty with notably lower salaries than their regression model predicted, and conducted individual reviews to account for additional factors of rank, step at initial hire, and rates of advancement.

In aggregate, the studies performed by the individual campuses of the UC system indicate the need to compensate for factors that significantly affect salary levels. Through regression models, characteristics like highest degree earned, years of experience, years since highest

degree earned, field or department, and rank should be tested for significance and controlled for in an effort to achieve an analysis that determines whether salary gaps exist with “all else being equal.”

2.3.3.2 University of Texas at Austin

In 2008, following a trend of institutional gender salary analysis, the University of Texas at Austin commissioned a Gender Equity Task Force to examine salary disparities among its faculty members. The task force found a significant pay gap amongst its faculty members. In a peer comparison section of their findings, the Task Force reported that UT ranked last among the 12 institutions it compared itself to on a 2006 AAUP gender equity study. On average, female faculty at UT earned 72.3% of the average male salary (Moore et al., 2008). Their analysis controlled for differences in salary based on career field and faculty characteristics. The percentages equated to females making an average of \$9,028 less than their male counterparts. While the Task Force did not uncover the underlying causes of the gender pay gap, they were able to find that the inequity was driven by male faculty members being given higher starting salaries than females.

The College of Liberal Arts at UT revisited the issue of faculty salary equity in 2012 as part of a targeted effort to decrease the salary disparity within the College through merit-based salary increases and the hiring of more female faculty members into senior positions. The subsequent report of findings did not include detailed statistical results, but did reveal improvement in the academic rate of female faculty over the last several years. In 2007, female full professors earned 89% of what male full professors earned; by 2011, the ratio had increased to 98%. Similarly, the ratio improved for associate professors from 91% in 2007 to 97% in 2011. Conversely, the ratio decreased for assistant professors, the most junior of the tenured faculty

track, from females earning 97% of their male peers in 2007 to 94% in 2011. An examination of total compensation across all ranks indicated that in 2007 the average total compensation for female faculty was 88% of the total male compensation, but that this ratio increased to 96% in 2011 (The University of Texas at Austin College of Liberal Arts, 2013).

The College and University Professional Association for Human Resources (CUPA-HR) has been collecting data on higher education since 1967 and collecting diversity specific data on academia since 1980. A study for CUPA-HR published by Jacqueline Bichsel and Jasper McChesney is a result of 15 years of gender specific data on administrative faculty positions. The study found three conclusions of note. The first is that the gender salary gap in administrative faculty positions is not narrowing on the whole; it has stayed relatively constant for the 15-year period of 2001 to 2016. Second, women are underrepresented in senior administrative positions, but equitably represented in the administrative faculty as a whole. Lastly, at the senior leadership positions, women were typically paid more than their male counterparts although they were underrepresented. (Bichsel & McChesney, 2017).

The CUPA-HR research references studies proving that in industry, as well as institutions of higher learning, organizations are more successful when they are diverse. “In fact, gender diverse companies are 15% more likely to outperform their peers” (Bichsel & McChesney, 2017). Academia is no exception and the importance of a diverse faculty has an immense positive effect on research and education. Society recognizes universities and colleges as places of progressive thought and practices; it stands to follow that these institutions would tend to be more progressive and equitable in their hiring and compensation practices. However, the CUPA-HR study showed that this is not the case. Data compiled by the study shows that while salaries amongst men and women have been steadily increasing, the gender pay gap has been relatively

steady, averaging just over \$20,000. In 2001, women were earning 77 cents for every dollar men did; in 2016, that ratio only rose to 80 cents. The study shows that efforts to close the gender pay gap has been largely ineffective over the last 15 years.

The CUPA-HR study also factored in an aspect of region into their analysis to determine if wage gaps were more or less pronounced depending on what part of the country the institution was located. They found that salary inequity did not vary by region. Splitting the U.S. into four regions, the west, midwest, south, and northeast, yielded similar results; all regions hovered around the 80-cent mark in terms of the female-to-male dollar earned ratio. The analysis was able to show which regions made the most progress in decreasing the pay gap, but generally confirmed that the issue of gender pay gaps was pervasive throughout academia and not tied to regional locality.

The study had an interesting finding when factoring seniority into its analysis. The researchers found that women were underrepresented in the senior administrative faculty ranks, and men were compensated far more equitably compared to their female counterparts. In 2016, women in senior administrative positions earned more than 90 cents for every dollar men in senior administrative positions earned. While the pay gap certainly still exists, the finding indicates that pay gaps become narrower for the more senior the positions, “positions where women are less represented, they tend to be paid more” (Bichsel & McChesney, 2017). Among the highest levels of faculty administration, the study found that women, though outnumbered by a factor of nine, made 17% more than men of equal positions. This portion of the study examined very specific positions, namely chief executive-type faculty positions such as chief financial officer and chief information officer. It seems institutions of higher learning recognize the importance of having women in leadership positions only. “In general, the better represented

women are in a given position, the wider the pay gap (the lower their salary in comparison to men). In positions where women are less represented, the pay gap is narrower” (Bichsel & McChesney, 2017).

3. Data

Data for this project was provided by the Office of the Provost and are current as of fiscal year 2020. A total of 573 faculty members are included in the database and each observation has specific information on salary, gender, school (i.e., GSOIS, GSDM, GSEAS, SIGS, “Other”), teaching scores, citations, years of experience at NPS, years since degree, education level, military service, discipline type (i.e., security studies, computer technology, engineering, professional development, science, management, and “other” discipline), and job type (i.e., lecturer, senior lecturer, assistant professor, associate professor, full professor, faculty research associate, “other” faculty associate, professor of practice, research assistant professor, research associate professor, research professor, and “other” position types).

Table 1 shows summary statistics for all of the key variables used in our final analysis.¹ The average salary across the NPS faculty was \$154,161 with a standard deviation of \$31,832. Male faculty earned \$157,917 per year and females earned \$142,433 on average. GSEAS includes 35% of the observations and GSOIS has 33%, comprising the two largest schools in terms of number of faculty. In terms of position types, the largest number of faculty are in the

¹ The teaching score variable was manually imputed for the faculty members who have not taught before. We use the average value of 4.46 for those faculty members. Of note, the 4.46 value across all females and males is not a typo. The teaching score averages were simply very close to each other across all faculty.

faculty research associate position type which includes 21% of the faculty. Other notables include associate professors (14%), full professors (12%), and senior lecturers (11%).

The typical faculty member, as shown in Table 1, has worked at NPS for a total of 10 years. Almost two-thirds of the faculty members have a Ph.D. (63%). However, only 21% of the faculty have any type of military experience. The difference in military experience is especially evident across the sexes with only 4% of females having any military experience in comparison to 27% of the male observations. As for the discipline types, engineers comprised 28% of the observations, followed by computer technology (17%), security studies (16%), and “other” discipline types (16%). Management had the lowest total of the discipline types at only 3%.

Table 2 shows summary statistics across the different schools on campus. The average salary for all faculty members was \$154,161 with a standard deviation of \$31,832. Males on campus averaged \$157,917 and females averaged \$142,433 in salary per year. GSDM had the highest average salary across the schools at \$165,054 per year. In GSDM, male salaries averaged \$158,384 and females averaged \$159,155. GSOIS had the lowest average salary at \$150,484 per year followed by GSEAS (\$152,603), “Other” schools (\$153,015), and SIGS (\$153,841).

Table 3 shows summary statistics by position type. Full professors have the highest average salaries at \$176,627 per year. All 13 of the female full professors earned the maximum salary allowed (for normal positions) at \$176,900 while male full professors earned \$176,561 on average. Closely behind full professors in terms of average salary were professors of practice (\$175,814), “other” position types (\$174,914), and associate professors (\$174,428). The lowest average salary on campus was for faculty research associates at \$117,225 per year. Interestingly, the largest difference in salary across the sexes was also for the faculty research associate

category. Female faculty research associates earned \$104,404 per year on average in comparison to males earning \$123,965 on average.

4. Analysis

4.1 Methodology

To identify the effect of gender on salary, we use the following regression model:

$$Salary_i = \alpha + \beta Male_i + X_i' \theta + \epsilon_i \quad (1)$$

where $Salary_i$ is the yearly salary of individual i in the 2020 fiscal year. The binary indicator variable $Male_i$ is equal to one if individual i is a male and zero otherwise. The vector X_i' is a set of individual control variables including dummy variables for school (i.e., GSOIS, GSDM, GSEAS, “other” school), teaching scores, citations, number of years at NPS, years since degree, Ph.D., military service, discipline type (i.e., computer technology, engineering, professional development, science, management, and “other” discipline), and job position (i.e., lecturer, senior lecturer, assistant professor, associate professor, faculty research associate, “other” faculty associate, professor of practice, research assistant professor, research associate professor, research professor, “other” position types). SIGS, security studies, and full professor are omitted from the regressions to use as baseline control variables and ϵ_i is an idiosyncratic error term. Here β is the coefficient of interest and can be interpreted as the effect of being male on salary.

4.2 Results

Table 4 shows the main results from equation (1). The final column displays the overall effect of being male on salary for all faculty members across NPS. The male salary premium coefficient in the final column shows a point estimate of \$2,283. This suggests that males earn a salary premium of \$2,283 per year in comparison to females, *ceteris paribus*. However, this coefficient is not statistically significant at any of the standard levels used in labor economics. Therefore, we view this as strong evidence that there is no systematic bias for salaries across genders at the Naval Postgraduate School.

The control variable coefficients as shown in the final column in Table 4 provide insight into how certain factors play a significant role in salary determination for faculty at NPS. Some of the strongest indicators are listed by job type. For example, in comparison to full professors, the coefficients for the various job types indicate lecturers, senior lecturers, assistant professors, faculty research associates, “other” faculty associates, research assistant professors, and research associate professors all have negative and statistically significant values. This is a strong indicator that job type drives a large majority of the salary differences for faculty at NPS.

Other key indicators in the last column in Table 4 include number of years at NPS, years since degree, Ph.D., military service, and certain disciplines and schools. The Ph.D. coefficient suggests faculty members receive a salary premium of \$5,550 if they have a Ph.D. in comparison to if they did not obtain a Ph.D. Faculty members having some form of military service see an increase in salary of \$10,516 in comparison to having zero military experience. Each year of service at NPS has a positive effect of \$281 of extra salary per year. Each year since degree has a

positive effect of \$502 of extra salary per year. GSOIS and GSEAS faculty have lower salaries in comparison to SIGS faculty, *ceteris paribus*, by about \$8,300 to \$9,400, respectively.

The results indicate 11 out of the 12 job type categories (i.e., lecturers, senior lecturers, assistant professors, associate professors, full professors, “other” faculty associates, professors of practice, research assistant professors, research associate professors, research professors, and “other” position types) do not have any statistical difference in salaries across the genders. The lone exception is the faculty research associate category. We find a point estimate of \$11,858 for the male salary premium coefficient for that category. This indicates that males in the faculty research associate’s category earn \$11,858 more per year in salary in comparison to females, *ceteris paribus*. This coefficient is statistically significant at the 5% level.

5. Conclusions

The research presented here uses detailed data from the Office of the Provost to examine whether or not there are salary differences across genders for faculty members at the Naval Postgraduate School. We use standard regression techniques with the use of key controlled variables to estimate the effect of gender on salary as our primary means of identification. We find no systematic bias for salaries across genders at the Naval Postgraduate School.

Regression estimates for the male salary premium coefficient for 11 out of 12 job types were found to be statistically insignificant at all of the conventional levels used in labor economics. The lone exception is the male salary premium estimate for the category involving faculty research associates. We find statistical evidence that there may be a male salary premium involving faculty research associates and advise further investigation from the Office of the Provost on this matter.

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Table 1: Summary Statistics

	Average	Female Std Dev	Obs	Average	Male Std Dev	Obs	Average	Total Std Dev	Obs
Salary	142,433	40,620	139	157,917	27,466	434	154,161	31,832	573
GSOIS	0.29	0.46	139	0.34	0.47	434	0.33	0.47	573
SIGS	0.13	0.34	139	0.09	0.28	434	0.10	0.30	573
GSEAS	0.23	0.42	139	0.38	0.49	434	0.35	0.48	573
GSDM	0.25	0.44	139	0.14	0.35	434	0.17	0.38	573
"Other" School	0.09	0.29	139	0.05	0.21	434	0.06	0.24	573
Lecturer	0.12	0.32	139	0.09	0.28	434	0.09	0.29	573
Senior Lecturer	0.05	0.22	139	0.13	0.33	434	0.11	0.31	573
Assistant Professor	0.08	0.27	139	0.08	0.27	434	0.08	0.27	573
Associate Professor	0.12	0.33	139	0.15	0.35	434	0.14	0.35	573
Full Professor	0.09	0.29	139	0.12	0.33	434	0.12	0.32	573
Faculty Research Associate	0.29	0.46	139	0.18	0.38	434	0.21	0.41	573
"Other" Faculty Associate	0.09	0.28	139	0.03	0.16	434	0.04	0.20	573
Professor of Practice	0.02	0.15	139	0.03	0.18	434	0.03	0.17	573
Research Assistant Professor	0.02	0.15	139	0.02	0.14	434	0.02	0.14	573
Research Associate Professor	0.02	0.15	139	0.04	0.20	434	0.04	0.19	573
Research Professor	0.01	0.08	139	0.03	0.16	434	0.02	0.14	573
"Other" Position Types	0.09	0.28	139	0.11	0.31	434	0.10	0.30	573
Teaching Scores	4.46	0.35	139	4.46	0.36	434	4.46	0.36	573
Citations	278	725	139	686	2,064	434	587	1,839	573
NPS Years Experience	10.06	7.65	139	12.71	9.50	434	12.06	9.15	573
Years Since Degree	17.27	12.04	139	21.49	12.42	434	20.47	12.45	573
Ph.D.	0.55	0.50	139	0.65	0.48	434	0.63	0.48	573
Military Service	0.04	0.20	139	0.27	0.44	434	0.21	0.41	573
Security Studies	0.22	0.41	139	0.14	0.35	434	0.16	0.37	573
Science	0.08	0.27	139	0.17	0.37	434	0.14	0.35	573
Professional Development	0.08	0.27	139	0.05	0.21	434	0.06	0.23	573
Engineering	0.24	0.43	139	0.29	0.46	434	0.28	0.45	573
Computer Technology	0.11	0.31	139	0.19	0.39	434	0.17	0.38	573
Management	0.07	0.26	139	0.02	0.14	434	0.03	0.18	573
Other Discipline	0.20	0.40	139	0.14	0.35	434	0.16	0.36	573

Table 2: Salary Summary Statistics by School

	Female			Male			Total		
	Average	Std Dev	Obs	Average	Std Dev	Obs	Average	Std Dev	Obs
GSOIS	131,993	43,503	41	155,641	27,785	147	150,484	33,218	188
SIGS	138,282	34,605	18	161,211	19,119	38	153,841	27,070	56
GSEAS	133,377	37,129	32	156,309	31,020	166	152,603	33,083	198
GSDM	159,155	30,102	35	168,384	16,712	62	165,054	22,765	97
"Other" School	158,380	55,977	13	149,693	27,182	21	153,015	40,070	34
Overall	142,433	40,620	139	157,917	27,466	434	154,161	31,832	573

Table 3: Salary Summary Statistics by Position

	Female			Male			Total		
	Average	Std Dev	Obs	Average	Std Dev	Obs	Average	Std Dev	Obs
Lecturer	145,604	29,066	16	150,734	18,672	37	149,185	22,152	53
Senior Lecturer	151,843	27,056	7	169,699	13,504	55	167,683	16,306	62
Assistant Professor	153,539	19,426	11	147,080	17,502	35	148,624	17,974	46
Associate Professor	173,922	6,152	17	174,564	5,168	63	174,428	5,357	80
Full Professor	176,900	0	13	176,561	1,766	54	176,627	1,589	67
Faculty Research Associate	104,404	35,106	41	123,965	33,702	78	117,225	35,300	119
"Other" Faculty Associate	124,538	32,649	12	122,194	27,524	11	123,417	29,644	23
Professor of Practice	173,324	6,194	3	176,312	2,279	15	175,814	3,178	18
Research Assistant Professor	117,186	25,836	3	131,004	23,359	9	127,550	23,606	12
Research Associate Professor	166,129	16,824	3	161,353	20,803	19	162,004	20,018	22
Research Professor	163,543	-	1	170,435	16,668	11	169,861	16,016	12
"Other" Position Types	179,324	45,174	12	173,788	7,723	47	174,914	20,961	59
Overall	142,433	40,620	139	157,917	27,466	434	154,161	31,832	573

Table 4: The Effect of Gender on Salary

	Lecturers	Senior Lecturers	Assistant Professors	Associate Professors	Full Professors	Faculty Research Associates	"Other" Faculty Associates	Professors of Practice	Research Assistant Professors	Research Associate Professors	Research Professors	"Other" Positions	All Faculty
Male	-1,710 (7,673)	1,734 (7,306)	2,545 (4,481)	-561 (1,464)	-193 (507)	11,858** (5,576)	-22,499 (18,073)	1,869 (3,575)	4,497	-4,927 (15,315)	8,012 (21,457)	-11,478 (7,678)	2,283 (2,162)
GSOIS	-43,282** (17,572)	2,190 (9,421)	-1,174 (8,011)	-300 (2,418)	-1,282 (1,155)	-7,176 (18,796)	21,632 (26,708)	omitted	84,558	-39,777 (26,286)	-105,574 (53,457)	13,689 (13,220)	-8,305** (4,203)
GSDM	1,515 (24,332)	14,670 (12,579)	22,758*** (7,137)	5,482** (2,463)	785 (1,470)	96,935*** (35,735)	-948 (31,078)	-4,375 (4,408)	omitted	-2,982 (33,297)	omitted	-9,228 (13,367)	4,070 (7,804)
GSEAS	-51,127** (24,520)	-9,486 (11,494)	23,595** (10,309)	-1,807 (3,222)	-1,149 (1,366)	-14,177 (21,577)	-14,262 (24,836)	-3,618 (3,195)	61,776	-39,401 (22,726)	omitted	12,210 (15,969)	-9,435* (5,362)
"Other" School	-35,053 (27,608)	1,607 (18,590)	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	21,482* (12,512)	-2,475 (8,262)
Teaching Scores	6,951 (15,316)	159 (6,223)	-2,023 (3,999)	1,897 (1,444)	221 (462)	657 (10,355)	165,835 (144,471)	-5,481 (5,787)	233,434	-15,649 (15,019)	-26,171 (22,384)	-2,972 (7,247)	1,566 (2,571)
Citations	-15.4 (38.6)	5.12 (3.82)	-0.911 (3.23)	1.19 (0.723)	0.175* (0.100)	-459** (194)	-688 (528)	0.402 (13.98)	-15.6	-11.67* (6.057)	0.554 (1.33)	0.195 (0.768)	-0.269 (0.516)
NPS Years Experience	640 (630)	-99.5 (392)	-932 (715)	261** (103)	3.90 (34.2)	1,051** (441)	1,679 (1,630)	-390 (207)	702	1,334* (632)	-1,890 (1,258)	-185 (348)	281** (132)
Years Since Degree	-2.961 (269.5)	238 (234)	634 (527)	34 (101)	65.3* (35.1)	1,389*** (239)	356 (984)	151* (62.7)	1,174	358 (559)	-2,567 (1,144)	77.2 (336)	502*** (96.1)
Ph.D.	13,626 (8,264)	-8,804 (5,587)	omitted	omitted	omitted	14,234* (7,888)	17,563 (21,295)	1,154 (2,657)	-33,494	26,233 (28,944)	omitted	27,865*** (8,947)	5,550* (2,838)
Military Service	-3,183 (8,769)	13,648** (5,203)	-7,478 (4,795)	1,846 (1,579)	545 (1,550)	21,071*** (6,249)	15,076 (25,231)	6,016* (2,564)	-5,471	11,489 (11,447)	omitted	34,676*** (9,137)	10,516*** (2,475)
Other Discipline	16,811 (23,148)	-11,244 (11,510)	10,728* (6,205)	1,463 (2,539)	1,124 (1,413)	-54,949* (31,530)	-20,354 (25,551)	-2,123 (5,535)	omitted	-13,983 (27,342)	omitted	-25,351* (13,846)	5,323 (7,552)
Computer Technology	58,060*** (19,614)	-1,658 (8,768)	16,433** (7,638)	3,432 (2,522)	2,779** (1,066)	13,641* (8,071)	omitted	omitted	omitted	16,388 (16,964)	-25,364 (18,974)	-29,102 (18,239)	16,085*** (3,866)
Engineering	57,128** (22,012)	4,100 (8,770)	-16,163* (8,016)	6,400** (2,611)	2,747*** (1,030)	16,341 (10,894)	omitted	-646 (4,056)	-6,408	10,656 (13,797)	-87,670 (45,927)	-29,665* (16,957)	10,458** (4,299)
Professional Development	23,250 (27,342)	-13,296 (15,323)	omitted	-13,034** (5,023)	1,192 (1,540)	-125,224*** (46,982)	omitted	omitted	omitted	omitted	omitted	-19,302 (20,494)	-3,560 (8,645)
Science	39,227 (27,478)	20,660 (12,539)	-27,492*** (9,937)	7,995** (3,086)	2,620** (1,217)	13,307 (13,572)	63,613 (35,798)	-5,566 (5,402)	-49,075	omitted	-103,485 (55,492)	-22,982 (18,540)	9,394* (5,172)
Management	12,986 (28,121)	omitted	omitted	omitted	omitted	-83,893** (42,135)	omitted	omitted	omitted	omitted	omitted	-45,533** (21,389)	2,616 (9,085)

Table 4 (continued): The Effect of Gender on Salary

	Lecturer	Senior Lecturer	Assistant Professors	Associate Professors	Full Professors	Faculty Research Associates	"Other" Faculty Associates	Professors of Practice	Research Assistant Professors	Research Associate Professors	Research Professors	"Other" Positions	All Faculty
Lecturer	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	-20,421*** (4,555)
Senior Lecturer	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	-9,891** (4,081)
Assistant Professor	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	-14,015*** (4,555)
Associate Professor	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	2,101 (3,508)
Faculty Research Associate	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	-47,828*** (4,386)
"Other" Faculty Associate	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	-39,362*** (5,740)
Professor of Practice	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	-2,479 (6,133)
Research Assistant Professor	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	-35,911*** (6,642)
Research Associate Professor	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	-13,881*** (5,105)
Research Professor	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	-6,732 (6,599)
"Other" Position Types	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted	-2,744 (3,904)
Observations	53	62	46	80	67	119	23	18	12	22	12	59	573
R ²	0.47	0.44	0.77	0.43	0.33	0.58	0.50	0.81	1.00	0.74	0.84	0.41	0.62

Notes: ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Standard errors are shown in parentheses.

SIGS and Security Studies are omitted for the baseline control variables in all regressions.

In the All Faculty column, Full Professor is omitted for the baseline position control variable.