

The Effect of Being a Women to Employment and Salary in the Financial Sector

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Rationale

Gender disparities in the workplace, particularly within the financial industry, have garnered significant interest and concern in recent years. Numerous studies have shed light on the persistent challenges faced by women in achieving career advancement and attaining higher-paid positions. This literature review aims to examine existing research on gender disparities within the financial industry, with a specific focus on whether women are less likely to achieve higher-paid positions and whether increasing the representation of women in the workplace leads to financial prosperity. The insights gained from this review are of great value to legal initiatives, like ones in Europe aimed at promoting gender equality.

To conduct this review, the U.S. Bureau of Labor Statistics database was selected as the primary source of information. By analyzing the occupational distributions of women and men, the research question at hand is whether women are less likely to attain higher-paid positions in the financial industry.

In order to gain a deeper understanding of this topic, it is crucial to review the existing literature on prior research conducted in this area. One study conducted by Jillian Lindsay Fox in 2020 in the Northcentral University School of Business investigated gender inequality in leadership positions within the banking industry. The researcher surveyed 178 women working in the investment finance field, including both managers and non-managers. It is important to note that this study specifically focused on investment banking, rather than other types of banking such as commercial banking. The research utilized a qualitative survey design consisting of 21 questions. The findings revealed that while men dominate top-level management positions, women tend to occupy the majority of mid-level management positions. The results underscored

the ongoing gender equality gap and indicated that over 50% of the surveyed women believed that women tended to shy away from management roles. Additionally, a majority of participants expressed the belief that current workplace policies contributed to gender inequality, suggesting that altering these policies could help mitigate the disparity. It is worth noting that this study employed a purposive sampling approach, which grants researchers the discretion to select the sample based on their judgment. While this technique can be beneficial in cases where a specific subset of individuals is required, such as female managers and non-managers in investment banking, it also introduces the possibility of researcher bias or judgment in sample selection.

Another study in 2015 conducted by David A. Blum examined gender disparities within U.S.-based venture capital firms. The research explored various factors contributing to the underrepresentation of women in these firms. The study involved contacting 385 venture capital directors and partners, ultimately resulting in a sample size of 20 partners and directors from 20 venture capital firms. Given that the minimum sample size for qualitative studies is often considered to be 15, this study's sample size leaned toward the smaller side. Similar to the previous study, purposive sampling was employed to capture a specialized group with specific experiences and knowledge. However, this sampling technique also poses the risk of unintentional bias or the exclusion of important subgroups relevant to the research topic. Participants in this study completed a three-question survey, revealing that there were 4 main factors that contribute to gender disparity. First, upper executives don't actively prioritize gender balance. Second, recruiting practices heavily rely on networks that are not gender diverse. They heavily rely on networks and talent pools that are not gender diverse, which reduces the amount of qualified female talent. With less employment women often don't have the same essential

experience as an entrepreneur and would likely be an unsuccessful VC, because of a lack of real-world entrepreneurial experience. Third, current work policies make women choose between a career and family. The concern with several participants was that female venture capitalists would work in industry for a couple of years and then quit to start a family. Fourth, the lack of female senior employees and promotions of them.

Furthermore, a study analyzing data from 2003 to 2007 in Europe concluded that an increase in the number of women in board positions corresponded to improved financial performance. The study observed a 15.8% increase in the proportion of women serving as members of boards of directors during the period under consideration. The findings indicated that gender diversity on boards of directors had a positive effect on company value and that increasing the representation of women in management positions was beneficial to shareholders.

A study conducted by Brush et al. (2004) emphasizes the importance of increasing the representation of women in venture capital (VC) firms. The research suggests that having more female venture capitalists can provide greater opportunities for entrepreneurs, particularly women, to access capital and support for their ventures. This, in turn, can foster economic growth, job creation, and overall financial stability.

Furthermore, the study by The Clute Institute Merino (2013) demonstrates that boards of directors with a significant proportion of women, specifically at least 33%, consistently outperform market trends and generate substantial positive financial returns. This finding underscores the financial benefits associated with gender diversity in decision-making roles within organizations. By reducing bias and welcoming qualified women into decision-making

positions, VC firms can tap into a broader range of perspectives and expertise, potentially leading to improved financial outcomes.

The dominance of men in top-level management positions within investment banking and venture capital firms has been observed in various studies. Women, on the other hand, tend to occupy mid-level positions, indicating an existing gender disparity in the distribution of leadership roles. This disparity suggests that current workplace policies contribute to gender inequality by hindering women's advancement to higher-paid and more influential positions.

To address these disparities, it is essential to consider policy changes that promote gender equality and create a more inclusive work environment. By implementing measures such as flexible work arrangements, family-friendly policies, mentoring programs, and networking opportunities, women entrepreneurs and potential female venture capitalists can gain better access to resources and support across all industry sectors, expanding their opportunities for success.

In conclusion, the existing literature highlights the gender disparities within the financial industry, emphasizing the need to address these imbalances for both ethical and financial reasons. By increasing the representation of women in decision-making roles and implementing policies that support gender equality, organizations can harness the full potential of their workforce, leading to improved financial outcomes and a more equitable and prosperous future.

Purpose of study

The purpose of this study was to discover if there was underrepresentation of women in the financial industry. TJ strives to help break the gender disparities in the STEM field and we

were curious about disparities in other high paying fields. Gender disparities in the workplace, particularly within the financial industry, have garnered significant interest and concern in recent years. Numerous studies have shed light on the persistent challenges faced by women in achieving career advancement and attaining higher-paid positions. This study aims to examine existing research on gender disparities within the financial industry, with a specific focus on whether women are less likely to achieve higher-paid positions and whether increasing the representation of women in the workplace leads to financial prosperity. The insights gained from this review are of great value to legal initiatives, like ones in Europe aimed at promoting gender equality.

Research Question

This paper addresses whether there is a statistically significant difference in the rate of women's employment compared to men within the financial sector. Additionally, we will explore to what extent women experience lower pay compared to men in the financial sector.

Methods

Sampling and Measures

This study used a survey conducted by the Current Employment Statistics (CES) program is a monthly survey conducted in the United States. It involves approximately 122,000 businesses and government agencies, representing around 666,000 worksites. The survey

provides employment, hours, and earnings estimates for the nation, states, and metropolitan areas, at a detailed industry level. The data is adjusted for seasonal variations, such as holidays and weather changes, to reveal underlying economic trends. The CES uses a concurrent seasonal adjustment methodology, which incorporates estimates up to the current month's data for accuracy.

All employment, hours, and earnings data in CES are classified according to the 2017 North American Industry Classification System (NAICS), which allows for direct comparisons across the United States, Canada, and Mexico. The CES sample design is based on a stratified, simple random sample of worksites, grouped by UI account number. The sample is updated twice a year to reflect changes in the workforce, including new firms and business closures. Additionally, the sample is completely redrawn every year for the first quarter.

The CES also takes data from The Bureau of Labor Statistics (BLS), which collects data on employment, payroll, and paid hours from establishments each month. Various collection techniques are used to encourage participation, such as telephone interviews, self-reporting modes, electronic data interchange, and mail. The BLS enrolls approximately 55,000 new sample units each year to account for new firms, adjust the sample distribution, and rotate a portion of the sample. Larger firms with 1,000 or more employees are asked to participate, along with a sample of firms of all sizes, which are retained in the sample for at least two years.

Data Analysis

In order to examine the differences in jobs and salaries between genders within the financial industry, a paired t-test was conducted. The study began by examining the number of

female employees and wages per sector, followed by collecting data on male employees in each sector. This approach ensured that each sector formed a matched pair in the dataset, facilitating a direct comparison between genders.

The data collection process involved employing a stratified random sampling method to select workplaces within the financial industry. This sampling approach ensured that each data point obtained was independent and representative of the broader population. A total of 16 sectors within the financial industry were included in the study, providing a comprehensive

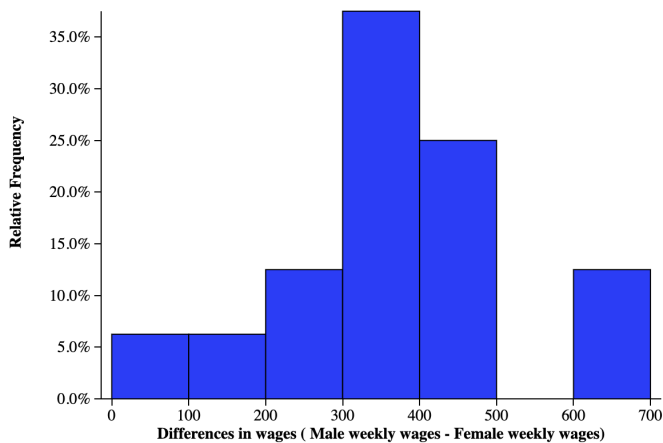
representation of the sector's workforce.

Upon analyzing histograms of both datasets, it was observed that they exhibited a rough bell-shaped curve, indicating a distribution resembling a normal distribution. This characteristic is crucial as it allows for the application of statistical tests, such as the paired t-test, which assume normality of the data. It suggests that the data points follow a pattern of

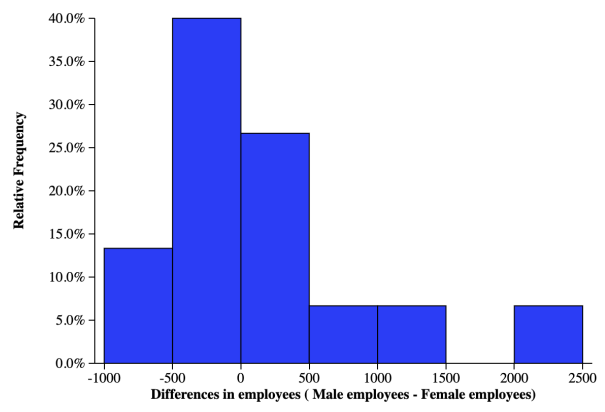
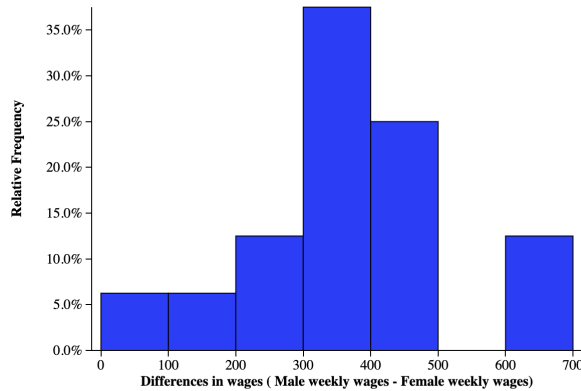
central tendency and are not heavily skewed or influenced by extreme values.

While examining the dataset of employees, two outliers were identified, with values of 1315 and 2023. These outliers, although present, were not extreme outliers and were deemed not to significantly affect the p-value obtained from the analysis. Thus, their impact on the overall results was considered negligible.

The use of a paired t-test in this study enabled a direct comparison of job and salary data between genders within the financial industry. By considering matched pairs within each sector,



the analysis aimed to identify statistically significant differences in these variables. The careful sampling approach, along with the consideration of data distribution and outliers, ensured the robustness and validity of the statistical analysis conducted in this study.



	Differences between # of employees	Differences between median salary
Management, professional and related occupations	-1,843	414
Management, business, and financial operations occupations	1,353	393
Management Occupations	2,023	390
Chief executives	431	661
General and operations managers	421	300
Marketing managers	-85	297
Sales managers	169	485
Financial managers	-21	638
Purchasing managers	25	195
Property, real estate, and	-15	96

community association managers		
Managers,all other	522	370
Business And Financial Operations Occupations	-670	341
Business operations specialists, all other	-18	454
Accountants and auditors	-298	334
Credit counselors and loan officers	-53	479
Bookkeeping, accounting, and auditing clerks	-531	292

EMPLOYEE CALCULATIONS

$\mu: 88 \quad \sigma: 844.23 \quad DF: 15$

$$t = \frac{88 - 0}{\frac{844.23}{\sqrt{16}}} \quad t = 0.41753971 \quad P(t < 0.4175) = 0.3402$$

SALARY CALCULATION

$\mu: 384 \quad \sigma: 36.095 \quad DF: 15$

$$t = \frac{384 - 0}{\frac{36.095}{\sqrt{16}}} \quad t = 10.62990648 \quad P(t < 10.6299) = < 0.001$$

Results

The null hypothesis was that the difference in medians and employment numbers in the financial industry was equal to zero and the alternative hypothesis was that it was greater than zero. The test was done with an alpha value of 0.05. For comparing median salaries, results of the paired t-test indicated that there is a significant large difference between women ($M = 1273.4$

,SD = 267.6) and men (M = 1657.1 ,SD = 352.8), $p < .001$. For comparing jobs, results of the paired-t test indicated that there is a non-significant very small difference between women (M = 3163.9 ,SD = 6631.4) and men (M = 3252 ,SD = 6380.7), $p = .341$.

Discussion

For the paired t-test in comparing median salaries, the p-value resulted in a number below 0.001, which, in turn, is less than the alpha value 0.05. This data value provides sufficient evidence to reject the null hypothesis that the difference in men and women's median salaries in the financial sector is equal to zero. However, for the paired t-test in comparing employment numbers, the p-value resulted in the value 0.341, which, in turn, is greater than the alpha value 0.05. This data value states that we failed to reject the null hypothesis. The strength of evidence against the null hypothesis is weak. In this case, the null hypothesis is that the difference in men and women's employment in the financial sector is equal to zero. Through this research, we learned that women were less likely to achieve higher-paid positions in the financial industry. We also found that there is not a statistically different rate in women being employed in the financial sector. So while there is not a gender disparity within the amount of men and women employed, there is a clear contrast in the level of positions they occupy and their salaries. Furthermore, as this was not an experiment, since no treatments were imposed, a cause-and-effect situation cannot exactly be established.

For our data collection process, we used a stratified random sampling method to make sure the data points were representative and not biased. This is in contrast to Fox's 2020 study and Blum's 2015 study which both used a purposive sampling approach, giving the possibility of

bias. However, the results yielded similar findings. For Fox's research, she was actually able to find more specific findings in that women occupied the majority of mid-level management positions. While we were able to determine that men received higher pay, it was unsure exactly whether women occupied the majority of low-level positions while men actually dominated the mid-level positions. For the studies used in the literature review, it did correspond that men do dominate in top-level management positions in certain sections of the financial industry, such as investment banking and venture capital firms. However, none of the studies we found explored the different jobs in the financial industry like we did in our research.

The findings of our study can allow for different research-based implications. Such as conducting observational studies to examine the different specific factors that allow for men to overtake such high level positions. Experiments can also be done to determine the best strategies to eliminate the reason for the gender disparity in different job-positions. Also, the findings of our study can actually eliminate the need for other directions of research. Such as, trying to encourage more women to join the financial industry. There is no need to garner interest as the industry as a whole has relatively equal proportions of men and women. It is just within the industry and the different levels within each job position.

Reflection

This project allowed us to revive certain research skills that had become dormant since taking the class RS1 as a freshman over a year ago. Through this research paper, we were able to gain insight on how the U.S. Census Bureau gathered data through their surveys and interviews. At first, it was actually a bit difficult to find an initial data set. Although we were given resources

from the library, since it was our first time performing this sort of task, it proved to be challenging. However, acquiring the skill of searching for relevant and accurate data will allow us to be better researchers in the future. Doing a literature review was also an aspect of research we did not have much experience with. Knowing how to do a comprehensive overview and evaluation of the current state of knowledge in a particular field will make us be even more prepared for our next research project.

References

- Blum, D. A. (2015). Exploring gender disparity in U.S. based venture capital firms. *Journal of Diversity Management (JDM)*, 10(1), 33–42. <https://doi.org/10.19030/jdm.v10i1.9260>
- Fox, Jillian Lindsay. *Gender Inequality in Leadership Positions in the Banking Industry*. 2020. Northcentral University, PhD dissertation. *ProQuest Dissertations & Theses Global*, www.proquest.com/dissertations-theses/gender-inequality-leadership-positions-banking/docview/2395282030/se-2?accountid=34939. Abstract.
- Highlights of women's earnings in 2020. (2021, September). U.S. Bureau of Labor Statistics. Retrieved May 19, 2023, from <https://www.bls.gov/opub/reports/womens-earnings/2020/>
- Report: Moving toward gender balance in private equity and Venture Cap.* ifc.org. (n.d.). https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/gender+at+ifc/resources/gender-balance-in-emerging-markets
- Valls Martínez, M. del, & Cruz Rambaud, S. (2019). Women on corporate boards and firm's financial performance. *Women's Studies International Forum*, 76, 102251. <https://doi.org/10.1016/j.wsif.2019.102251>