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# Sustaining Equality: Investigating the Persistent Economic Effects of Gender Pay Disparities in the IT Industry

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## Abstract

Despite significant technological developments, the Information Technology (IT) sector - a crucial driver of global development- continues to struggle with a gender pay gap. The gender wage disparity in the IT business is unjust, which undermines diversity efforts and puts the long-term viability of the sector at risk. The comprehensive literature review addresses other factors that contribute to compensation discrepancies, such as differences in experience, higher education, negotiation dynamics, possibilities for professional progression, and instances of discrimination. By carefully analyzing the underlying causes, assessing the implications on career advancement and job happiness, and putting forth practical tactics for promoting inclusivity and equity, this study seeks to close the research gap. The study approach utilizes a meticulous cross-sectional design, merging secondary data from published studies, publications, and reports with primary data gathered via an online poll. The study used non-probability sampling techniques to collect data from 54 IT professionals, thereby facilitating a thorough comprehension of the difference in earnings between genders in the industry. The findings of the research indicate that in spite of a balanced gender representation and appropriate workplace attitude, women continue to confront substantial pay disparities, being underrepresented in senior roles due to "glass ceiling" and significant micro inequalities. In conclusion, the study recommends the development of a more equitable and inclusive sector that is in line with sustainability principles for a resilient and just future.

**Keywords:** **Disparity, Economic Growth, Gender Pay Gap, IT Industry, Sustaining Equality**

**JEL Classification Code:** J31, J16, O15, M54, C83

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## 1. Introduction and Theoretical Background

### 1.1 Introduction

In an era of rapid technological advancement and digital transformation, the Information Technology (IT) sector is a major influence on global economic growth. Gender pay disparity in the IT business remains a worrying issue, notwithstanding the remarkable progress and innovative achievements. Research on these disparities is vital to identify the various levels of inequality, including the social, economic, and physiological effects of unequal access to employment opportunities that affect people in this dynamic industry (Jaffee, 1989; Wright *et al.*, 1995; Smith, 2002; Huffman & Cohen, 2004). Hence, this study

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emphasizes the incorporation of sustainability concepts that transcend economic considerations. Despite its reputation for fostering innovation and advancing the economy, the IT industry is unfortunately hampered by a persistent gender pay gap that significantly compromises the equality principle. Women continue to contribute significantly to the IT industry, so it is imperative to look into the wider effects of gender pay gaps on sustainability, including social, environmental, and economic dimensions in addition to their financial implications. This goes beyond just looking at how gender pay disparities affect the bottom line. The gender pay gap is caused by differences between men's and women's average gross incomes in an economy. Economic reward is the component of job-related benefits that is most often measured. Another element adding to the significance of workplace inequality is the fact that not every one of them can be accounted for variations in human capital and skill capacities. This is particularly true for differences in the financial rewards that arise from fewer opportunities being accessible (Sebawit G. Bishu & Mohamad G. Alkadry, 2016).

This study intends to inspect the intricate elements of differences in wages between genders in the IT sector, to illuminate the fundamental reasons for these differences and examine their implications for sustainable growth. Our objective is to examine the long-term consequences of wages on the economic inequities on both the individuals who are directly affected and the industry as a whole, by employing a comprehensive and meticulous methodology. We look into how these variations contribute to broader sustainability issues such as corporate social responsibility, diversity and inclusion, and the long-term resilience of the IT workforce. The introduction of gender disparity in the workplace, the particular issues that women in the IT sector confront, as well as the complex interactions between social, organizational, and individual factors that contribute to this problem.

Our objective is to find practical ways to support an inclusive IT environment that honours the contributions of professionals of all genders and ensure that economic parity becomes a fundamental part of the industry's culture by sustainability principles for a just and resilient future. We will accomplish this through a thorough investigation and evaluation.

## 1.2 Theoretical Background

### *1.2.1 The Indian Context*

India is placed sixth in South Asia and 127th out of 146 countries in the world by the 2023 Global Gender Gap Index survey. It will take decades for India to close the gender wage gap (Source: https://theleaflet.in/international-equal-pay-day). According to a Deloitte survey, women in India experienced a decrease in non-inclusive behaviours in the workplace, falling by nearly 10 percentage points to 48%. As women go up the corporate ladder, they encounter wider wage disparities. The most recent forecasts, as cited by the Economic Times, indicate that there would be an unadjusted difference in pay between genders in the IT industry in 2023. The survey also said that when women advance in their careers, there is a gender pay difference of 28-30%, whereas it is 8–10% for junior management. Women in India had a decrease in non-inclusive behaviours in 2023 compared to 2022, which was consistent with the worldwide trend. The Deloitte '2023 Women at Work Report' states that the occurrence decreased by nearly 10 percentage points to 48%. The World Economic Forum's (WEF) 2022 Global Gender Gap (GGG) Index ranked India 135th out of 146 countries. Men in India make up 82% of labour income, while women make up 18%, according to projections from the World Inequality Report 2022 (Source: Deccan Herald Published on 10 October 2023). A Pew Research Center study identified the majority of women's unequal treatment by employers as a primary cause of the wage disparity. Smaller proportions show that women are opting to work in lower-paying professions (34%) and are finding jobs where they can manage work and family (42%). The International Labour Organization noted in another analysis, show that a few possible causes include the lack of representation of women in positions of authority, career pauses, and reduced working hours due to additional obligations. According to a CFA Institute report published in March 2023, the wage gap grows as women advance in their careers. It was reported that for Key Management People (KMP) and directors, the median compensation ratio for women to males was 0.52 and 0.64, respectively. This implies that the salary of a woman in a key managerial role is just half that of her male colleague. The survey said that women in key management positions make around half as much as their male counterparts. It also mentioned that some practitioners thought

women may be overrepresented in company secretary positions, which had lower salaries than other KMP positions.

### *1.2.2 Gender Pay Disparity and Economic Growth*

The World Economic Forum has increased its prediction that it requires more than 130 years to eliminate gender disparities globally from the previous estimate of roughly 100 years prior to the epidemic. Women are more likely to work in positions that are informal, brief, and freelance jobs, which are usually the first to be eliminated by enterprises during a downturn. These employment typically pay less and provide less social security benefits, which is why during the pandemic, 64 million women lost their jobs worldwide — twice as many as men. Moreover, according to UNDP (2016), 80% of those who are believed to have been displaced by climate change are women. Assuring equality of opportunity and involvement in the economy can hasten both a recovery from recent shocks and a potent development engine for future resilient, sustainable, and inclusive economies. Gender equality is closely associated with macroeconomic and financial stability; it can also reduce income inequality, stimulate economic growth, and enhance the performance of the public and private sectors. (Source: Speech by IMF First Deputy Managing Director Gita Gopinath at the Korea Gender Equality Forum, September 27–28, 2022). Women typically invest more money upfront in their education, but they also frequently end up in lower-paying jobs that don't match their skill level. As a consequence, Moody's noted that there has been "limited and divergent" progress in elevating women in economies during the previous ten years, leading to "both individual and macroeconomic economic loss". (Source: Moody's Analytics, Dawn Holland, Katrina Ell).

According to Klasen and Lamanna (2009), for example, who used an advanced technique to quantify the impact of overall female educational disparities on growth, economic growth is slowed by educational inequality. According to Schober and Winter-Ebmer (2011), this study continues to draw attention to the macroeconomic repercussions of gender inequality. Understanding how gender functions in the economy is necessary before we can enact macro-level policies that make gender (and other types of) equality compatible with economic growth. The gender wage gap spurs economic growth and is not in favour of or even a defence of inequality. Instead, it is an evidence-based methodology for evaluating the current situation and the policy measures that should be taken to support equity-led growth.

### *1.2.3 Causes of Gender Pay Gaps*

#### 1. Disparities in Higher Education

Without a doubt, a person's chances of landing a well-paying job increase with their educational background. In the case of India's engineering field, where enrolment in science and technology courses is higher among men than among women. This results in women in these fields making less money overall (Das, 2023).

#### 2. Difference in Year of Experience

Women may be compelled to leave the employment proportionately in order to fulfil caregiving and other unpaid duties. This is because, in the absence of paid family leave or medical/maternity leave, it takes longer for women to return to their normal lives, which makes it more challenging to get back to work. Additionally, in the absence of proper medical leave insurance, female employees may not turn up to jobs that they would otherwise consider lost, which could result in a break in their experience and, ultimately, lower earnings for them (Das, 2023).

#### 3. Negotiation Difference

Research indicates that women may be less inclined than males to negotiate for higher pay. This may have an effect on long-term profits and result in variations in starting salaries.

#### 4. Career Advancement Opportunities

Potential contributing factors to the gender wage gap include unequal access to leadership positions, mentorship, and career development chances.

#### 5. Discrimination

Even when a woman's credentials and experience match those of her male co-workers, she may still encounter prejudice in terms of hiring, promotions, and compensation.

Source: The Economic Times published on 19/03/2023.

## 2. Literature Review

**Galasi (2000):** Contends that despite some inequalities in educational attainment, women nevertheless have less work experience than men because they take longer and more frequent breaks. Both vertical and horizontal segregation have a big impact on the degree of gender pay disparity.

**Acker (2009):** Defines the "glass ceiling" as a collection of barriers stemming from subjective, structural, and organizational factors that keep women from progressing to middle and upper management roles, collectively. This results in wider pay gaps among men and women at the appropriate point in the spectrum of earnings.

**Miller (2008):** The study compares the gender pay gap in the public and private sectors. The analysis finds evidence of sticky floors in the public sector but not in the private sector. According to this study, the glass ceiling is frequently experienced at the top of organizational hierarchies in the private sector.

**Lips, 2013; Stockdale and Nadler (2013):** Workplace limitations and differences in women's attributes connected to their jobs contribute to a wider range in the gender wage gap. Gender is an important factor in explaining persisting wage disparities even after taking into consideration of human capital traits, profession areas, and agency-related impacts. Remarkably, this pattern holds true even for federal agencies, which are supposed to abide more closely by federal law that demands due process and equitable treatment. It should note that societal expectations and pressures can still impact employers and employees in the labour market, so career decisions and human capital investments made by individuals remain vulnerable to gender-based discrimination.

**Altuzarra, González-Flores and Gálvez-Gálvez. (2021):** Governments in addition to civil society are encouraged to take measures aimed at meeting the international standards for gender equality established by the Sustainable Development Goals (SDGs) of the United Nations for 2015–2030. According to the report, the objective is to raise the bar for women in all areas of their lives, including work, education, and participation in institutions that represent the public. This can be particularly the case in the least developed countries and in those where the gender gap is more noticeable. The results suggest that boosting women's educational opportunities is a good way to support emerging countries' economic development.

**Jakub Harman and Lucia Bartuskova (2023)**: According to the report, education widens the gender pay gap, with males generally benefiting more from education than women. The largest factor contributing to the gender wage gap's expansion turned out to be post-secondary education. Accordingly, depending on the subjects in which they have studied, women are more likely to choose lower-paying occupations or to enrol in institutions that offer lower educational returns. There is a good chance that men will make more money than women in industries and professions where women predominate. This suggests that there is a significant "glass ceiling" or "sticky floor" impact that affects women in the workforce and lowers their prospective earnings relative to males.

**Emily Grabham (2023):** This paper has evaluated the possible effects of decertifying gender, which is defined as carrying the recognition of gender plurality, self-identification, and a protected characteristic of gender, on equal pay legislation and gender pay gap reporting. In order to evaluate how decertification can impact each step of the current legal framework—proving uneven compensation, identifying a comparator, and asserting a protected attribute, the study has concentrated on the procedure for pursuing an equal pay claim. For individuals with a greater variety of gender identities, claiming a protected trait would be easier. A comparison between the claimant and a person of a different gender would take place. The focus would continue to be on the gendering practices of the business rather than the identities of specific employees while addressing the issue in way that different job functions and structures have led to unequal pay.

**Ricarda Anna-Lena Fischer, Emitzá Guzmán, and Janey Kok (2024):** In the study women report witnessing and experiencing harassment and sexism when working in the software sector substantially more frequently than men do, and they report encountering micro-inequities much more frequently than males do. Furthermore, the findings demonstrate that although women bear comparable responsibilities for supervising and mentoring others,

a notably higher percentage of them believe they have insufficient authority and support to make critical decisions at work, are dissatisfied with their salaries, and feel underappreciated and unappreciated in their teams. Additionally, it discovered that men's main barriers are related to technical and project concerns, while women's key barriers are related to team chemistry and biases.

# 3.Research Design

## 3.1 Research Gap

The subject of gender pay inequalities has been investigated as part of some general research, but comparatively little in-depth examination of the IT sector has been done. Previous studies frequently concentrate on general salary disparities without exploring the particular characteristics of the IT industry. Furthermore, nothing is known about how these salary differences affect IT workers' ability to advance in their careers and their level of job satisfaction. The framework that is currently available falls short of giving a thorough analysis of the particular elements - like skewed assessments and negotiating assistance—that lead to gender-based compensation disparities in IT positions. In order to close this gap, focused research that examines the intricate details around gender wage disparities in the IT sector identifies the underlying causes, and analyses the effects on career progression and work satisfaction. The specific sustainability issues that gender-based wage differences present are to be identified, along with viable ways to close these gaps and initiatives to advance equality, inclusion, and long-term viability in IT organizations.

## 3.2 Problem Statement

Gender pay disparities persist in the IT industry, creating an unjust work climate where female employees are every so often paid less for equivalent roles compared to their peers who are male. This systemic problem endangers the long-term viability of the IT industry in addition to impeding efforts to cultivate a diverse and inclusive workforce. The continued existence of the gender pay disparity puts the industry's capacity to draw and keep top personnel from all demographic groups, notwithstanding the growing significance of sustainability in corporate operations.

## 3.3 Research Questions

**RQ1:** How do disparities between genders in salary exist in the IT sector?

**RQ2:** What are the primary factors contributing to the gender pay gaps in the IT sector?

**RQ3:** What is the impact of gender pay discrepancy on IT worker's career advancement and job satisfaction?

## 3.4 Objectives of the Study

1. To understand the present state of gender pay disparities in the IT industry.
2. To identify the primary drivers of the gender pay disparities in the IT roles.
3. To examine the disparities that impact work satisfaction and career advancement.
4. To recommend strategies based on findings, for promoting more inclusion and equity in the IT industry.

## 3.5 Design of the Study

A cross-sectional design is used in the investigation which makes it possible to gather data at single point of time. Information about gender pay gaps in the IT industry is gathered from the survey, The literature research yielded qualitative insights that explore the complex interplay between gender pay discrepancies in the IT industry, subjective experiences and environmental factors. A deeper comprehension of the phenomenon's complexity is facilitated by the examination of qualitative data from academic publications, case studies, and professional perspectives.

## 3.6 Data Collection Methods

### 1. Primary Data Collection

The primary data was collected using an online survey. Five factors were identified, which comprised over twenty-four statements that were examined thoroughly. All of the measurements except for the demographic data were assessed reliability for, five-point Likert scales, where 1 represented 'strongly disagree' and 5 indicated 'strongly agree'.

### 2. Secondary Data Collection

The Secondary data about gender pay gaps in the IT industry is sourced from previously published research, reports, and books.

## 3.7 Sampling Method

### 1. Quantitative Sampling

This sampling is used in this study.

### 2. Non-Probability Sampling

The sampling strategy is characterized by convenience and snowball sampling because participants are chosen primarily on their accessibility and recommendations from professional networks. Only 54 responses were received; this is due to employees busy schedules and the difficulty in finding the time to complete the survey.

**Table 1.** Demographic Profile of Employees from IT Industry

| Basis of Classification | Classification | N | % |
|---|---|---|---|
| Gender | Male | 26 | 48.1 |
| | Female | 28 | 51.9 |
| | **Total** | **54** | **100.0** |
| Age | 18-24 | 10 | 18.5 |
| | 25-34 | 34 | 63.0 |
| | 35-44 | 10 | 18.5 |
| | **Total** | **54** | **100.0** |
| Educational background | Bachelor's Degree | 35 | 64.8 |
| | Master's Degree | 19 | 35.2 |
| | **Total** | **54** | **100.0** |
| Marital status | Single | 31 | 57.4 |
| | Married | 23 | 42.6 |
| | **Total** | **54** | **100.0** |
| Geographic location | Bengaluru | 54 | 100.0 |
| | **Total** | **54** | **100.0** |
| Designation | Associate Manager-Marketing | 1 | 1.9 |
| | Civil Software | 2 | 3.7 |
| | Data Analyst/Scientist | 3 | 5.6 |
| | Fraud Analyst | 1 | 1.9 |
| | IT Support/Help Desk | 5 | 9.3 |
| | Manager-Service Delivery | 2 | 3.7 |
| | Project Manager | 3 | 5.6 |
| | Recruiter | 1 | 1.9 |
| | Regional Manager-Team Lead | 1 | 1.9 |
| | Senior Business Analyst | 1 | 1.9 |
| | Senior Technology Support | 1 | 1.9 |
| | Software Developer/ Engineer | 26 | 48.1 |
| | System Analyst | 3 | 5.6 |
| | System Associate | 4 | 7.4 |
| | **Total** | **54** | **100.0** |

| | | | |
|---|---|---|---|
| Years of experience in the IT industry | 0-2 Years | 18 | 33.3 |
| | 3-5 Years | 14 | 25.9 |
| | 6-9 Years | 9 | 16.7 |
| | 10-14 Years | 8 | 14.8 |
| | 15 or more years | 5 | 9.3 |
| | **Total** | **54** | **100.0** |
| Company size | Small (1-50 Employees) | 1 | 1.9 |
| | Medium (51-500 Employees) | 8 | 14.8 |
| | Large (501 -5000 Employees) | 12 | 22.2 |
| | Enterprise (5001 + Employees) | 33 | 61.1 |
| | **Total** | **54** | **100.0** |
| Annual income | Upto 3,00,000 Lakhs | 7 | 13.0 |
| | 3,00,000 Lakhs - 8,00,000 Lakhs | 21 | 38.9 |
| | 8,00,001 Lakhs - 13,00,000 Lakhs | 10 | 18.5 |
| | 13,00,001 Lakhs - 18,00,000 Lakhs | 4 | 7.4 |
| | 18,00,000 Lakhs | 12 | 22.2 |
| | **Total** | **54** | **100.0** |

Source: Author (Desk Research)

## 4. Data Analysis and Interpretation

It might be inferred from Table 1, that the demographic profile of IT industry personnel exhibits a gender distribution which is balanced, with 51.9% women and 48.1% men. 63% of the respondents are between the age range of 25 and 34, and 68% of them possess a bachelor's degree. The proportion of individuals being single 57.4% and married 42.6% is equal. Bengaluru is the most common geographic place, accounting for all of the sample's 100%. Considering the technical focus of the industry, the most common designation 48.1% is "software developer/engineer." In regard to professional experience, a significant number of respondents had worked in the IT industry for 0–2 years (33.3%) and 3-5 years (25.9%). Since annual income distribution varies, the distribution of company size shows that large firms predominate (61.1%). 38.9% of the population earns between 3,00,000 and 8,00,000 lakhs. Overall, the data sheds light on the diversified nature of employees in the IT industry, showing a range of income groups, educational backgrounds, and experience levels in the constantly evolving tech industry.

**Table 2.** Descriptive Statistics of Factors Influencing the Gendre Pay Gap

| Factors | Mean | SD | Variance |
|---|---|---|---|
| Job Equality | 15.30 | 3.462 | 11.986 |
| Recognition and Fairness | 15.19 | 3.905 | 15.248 |
| Bias-Free Evaluations | 15.22 | 3.893 | 15.157 |
| Negotiation Support | 14.24 | 3.453 | 11.922 |
| Career Opportunities | 15.59 | 3.569 | 12.737 |
| Flexible Arrangements | 14.91 | 3.891 | 15.142 |

Source: Author (Desk Research)

**Table 3.** Tests of Normality

| Classification | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Gender | 0.349 | 54 | 0.000 | 0.636 | 54 | 0.000 |
| Age | 0.315 | 54 | 0.000 | 0.771 | 54 | 0.000 |
| Education | 0.415 | 54 | 0.000 | 0.604 | 54 | 0.000 |
| Marital Status | 0.377 | 54 | 0.000 | 0.629 | 54 | 0.000 |
| Location | . | 54 | 0.000 | . | 54 | 0.000 |
| Designation | 0.344 | 54 | 0.000 | 0.801 | 54 | 0.000 |
| Experience | 0.212 | 54 | 0.000 | 0.859 | 54 | 0.000 |
| Company Size | 0.289 | 54 | 0.000 | 0.869 | 54 | 0.000 |
| Income | 0.255 | 54 | 0.000 | 0.848 | 54 | 0.000 |
| JE_1 | 0.244 | 54 | 0.000 | 0.837 | 54 | 0.000 |
| JE_2 | 0.283 | 54 | 0.000 | 0.845 | 54 | 0.000 |
| JE_3 | 0.216 | 54 | 0.000 | 0.879 | 54 | 0.000 |
| JE_4 | 0.233 | 54 | 0.000 | 0.857 | 54 | 0.000 |
| RF_1 | 0.230 | 54 | 0.000 | 0.837 | 54 | 0.000 |
| RF_2 | 0.239 | 54 | 0.000 | 0.872 | 54 | 0.000 |
| RF_3 | 0.256 | 54 | 0.000 | 0.871 | 54 | 0.000 |
| RF_4 | 0.231 | 54 | 0.000 | 0.863 | 54 | 0.000 |
| BFE_1 | 0.215 | 54 | 0.000 | 0.863 | 54 | 0.000 |
| BFE_2 | 0.240 | 54 | 0.000 | 0.845 | 54 | 0.000 |
| BFE_3 | 0.219 | 54 | 0.000 | 0.876 | 54 | 0.000 |
| BFE_4 | 0.252 | 54 | 0.000 | 0.853 | 54 | 0.000 |
| NS_1 | 0.222 | 54 | 0.000 | 0.891 | 54 | 0.000 |
| NS_2 | 0.211 | 54 | 0.000 | 0.878 | 54 | 0.000 |
| NS_3 | 0.223 | 54 | 0.000 | 0.890 | 54 | 0.000 |
| NS_4 | 0.229 | 54 | 0.000 | 0.898 | 54 | 0.000 |
| CO_1 | 0.286 | 54 | 0.000 | 0.827 | 54 | 0.000 |
| CO_2 | 0.273 | 54 | 0.000 | 0.847 | 54 | 0.000 |
| CO_3 | 0.267 | 54 | 0.000 | 0.838 | 54 | 0.000 |
| CO_4 | 0.282 | 54 | 0.000 | 0.852 | 54 | 0.000 |
| FA_1 | 0.183 | 54 | 0.000 | 0.880 | 54 | 0.000 |
| FA_2 | 0.217 | 54 | 0.000 | 0.865 | 54 | 0.000 |
| FA_3 | 0.234 | 54 | 0.000 | 0.886 | 54 | 0.000 |
| FA_4 | 0.215 | 54 | 0.000 | 0.852 | 54 | 0.000 |
| Lilliefors Significance Correction | | | | | | |

Source: Author (Desk Research)

**Table 4.** Mann Whitney U Test to Determine whether There is a Significant Difference between the Mean Rank of Males and Females in relation to the Factors Influencing the Gender Pay Gap Among IT Employees

| Factors of Gender Pay Disparity | Gender | | Z Value | P Value |
|---|---|---|---|---|
| | Male | Female | | |
| Job Equality | 27.63 | 27.38 | 0.062 | 0.951 |
| Recognition and Fairness | 29.25 | 25.88 | 0.798 | 0.452 |
| Bias-Free Evaluations | 26.19 | 28.71 | 0.599 | 0.549 |
| Negotiation Support | 26.72 | 28.64 | 0.564 | 0.573 |
| Career Opportunities | 26.83 | 28.13 | 0.316 | 0.752 |
| Flexible Arrangements | 26.87 | 28.09 | 0.292 | 0.770 |

Source: Author (Desk Research)

From Table 2 it is inferred that respondents generally have positive views of various aspects of the workplace. The highest mean score (15.59) for "Career Opportunities" indicates a favourable outlook on professional growth, while the lowest mean score (14.24) for "Negotiation Support" suggests fewer positive perceptions in this area. "Job Equality," "Recognition and Fairness," and "Bias-Free Evaluations" received similar mean scores, indicating consistent positive perceptions in these areas. The standard deviations and variances reveal some variability in responses, particularly for "Negotiation Support" and "Flexible Arrangements".

From Table 3, the significance level is set at 0.05, and the p-values are compared to this cutoff, as can be estimated. The null hypothesis is often rejected when the p-value is less than 0.05, which denotes non-normality. The exceptionally low p-values (<< 0.05) in all variables suggest that the null hypothesis of normality is rejected.

**$H1_1$: There is a statistically significant difference between the mean rank of men and women with respect to the factors determining the gender pay gap among IT employees.**

From Table 4 it can be inferred that, at a significance level of 5% ($\alpha = 0.05$), the results of the Mann-Whitney U Test suggest that there is no statistically significant gender difference in the factors contributing to the gender wage gap. At the 5% level, we observed there are no significant differences between male and female employees in areas such as career prospects, flexible work arrangements, fairness and recognition, bias-free evaluations, negotiation support, and job equality. All related p-values are more than the 0.05 threshold. Hence we reject alternate hypothesis $H1_1$.

**$H1_2$: Level of Gender Pay Disparity of IT Employees is equally distributed.**

**Table 5.** Chi-Square Test for Goodness of Fit of Level of Gender Pay Disparity of IT Employees

| Level of Gender Pay Disparity | Frequency | Percent | Chi-square Value | P Value |
|---|---|---|---|---|
| Low | 13 | 24.1 | 8.333 | 0.016 |
| Moderate | 28 | 51.9 | | |
| High | 13 | 24.1 | | |
| Total | 54 | 100.0 | | |

Source: Author (Desk Research)

From Table 5, it can be inferred that the results of the chi-square test of goodness of fit at a significance level of 5% ($\alpha = 0.05$) indicate a statistically significant relationship between gender and the degree of gender pay disparity among IT workers. The observed frequencies for low, moderate, and high disparity categories revealed a significant deviation from expected values, resulting in

the rejection of the null hypothesis. The analysis suggests that the proportion of females in the moderate and high gender pay disparity groups is higher than would be expected by chance, indicating a higher likelihood of pay gaps for women compared to men. Overall, these results confirm a significant and meaningful association between gender and the extent of gender pay disparity within the IT industry, highlighting the need for targeted interventions or policies to address the issue. Hence we reject $H1_2$.

**$H1_3$: There is a significant association between Years of Experience and Level of Gender Pay Disparity of IT Employees**

**Note:**

1. Row Percentage is the value included in ( ).
2. Column Percentage is the value included in [ ].

From Table 6, it is inferred that the chi-square statistic of 14.199 is not significant at the 0.05 level, with a p-value of 0.077. This suggests that it is not possible to reject the null hypothesis. Years of experience and the gender wage gap do not appear to be significantly correlated, according to the chi-square test results, although confounding factors might still have an effect. Hence, we fail reject $H1_3$.

**$H1_4$: There is a significant difference among mean ranks towards factors of Gender Pay Disparity of IT Employees.**

Table 7 suggests that the Friedman test statistic is 15.418%, with a p-value of 0.009. Given that the p-value (0.009) is less than the significance level (usually 0.05), we may reject the null hypothesis and conclude that there is a statistically significant difference in the respondents' median ranks on at least one of the factors causing gender pay inequality. Hence we accept $H1_4$.

## 5. Key Findings

The small sample size prevents generalizing the study's findings to a large population. The number of

**Table 6.** Chi-Square Test for Association between Years of Experience and Level of Gender Pay Disparity of IT Employees

| Years of experience | Level of gender pay disparity | | | Chi-square value | p Value |
|---|---|---|---|---|---|
| | Low | Moderate | High | | |
| 0-2 Years | 4<br>(22.2%)<br>[30.8%] | 10<br>(55.6%)<br>[35.7%] | 4<br>(22.2%)<br>[30.8%] | 14.199 | 0.077 |
| 3-5 Years | 2<br>(14.3%)<br>[15.4%] | 10<br>(71.4%)<br>[35.7%] | 2<br>(14.3%)<br>[15.4%] | | |
| 6-9 Years | 3<br>(33.3%)<br>[23.1%] | 2<br>(22.2%)<br>[7.1%] | 4<br>(44.4%)<br>[30.8%] | | |
| 10-14 Years | 2<br>(25.0%)<br>[15.4%] | 6<br>(75.0%)<br>[21.4%] | 0<br>(0.0%)<br>[0.0%] | | |
| 15 or more years | 2<br>40.0%<br>[15.4%] | 0<br>(0.0%)<br>[0.0%] | 3<br>(60.0%)<br>[23.1%] | | |
| Total | 13<br>(24.1%)<br>[100.0%] | 28<br>(51.9%)<br>[100.0] | 13<br>(24.1%)<br>[100.0%] | | |

Source: Author

**Table 7.** Friedman Test for Significance Difference among Mean Ranks towards Factors of Gender Pay Disparity Employees

| Factors of gender pay disparity | Mean rank | Chi-square value | p Value |
|---|---|---|---|
| Job equality | 3.61 | 15.418 | 0.009 |
| Recognition and fairness | 3.39 | | |
| Bias-free evaluations | 3.80 | | |
| Negotiation support | 2.90 | | |
| Career opportunities | 3.89 | | |
| Flexible arrangements | 3.42 | | |

Source: Author (Desk Research)

employees who completed the survey is 54 and may not fully represent the perspectives of the entire target group.

1. Employees who were surveyed from the IT industry exhibited a balanced gender distribution (51.9% female, 48.1% male) with the majority of them (63%) falling under the age group of 25-34 and holding a bachelor's degree.
2. The most prevalent job designation was, "Software Developer/Engineer" (48.1%) indicating the industry's technological emphasis.
3. Employee impressions were generally positive, as evidenced by mean scores above 3.5 in all sectors (Job Equality, Recognition and Fairness, Bias-Free Evaluations, Negotiation Support, Career Opportunities, and Flexible Arrangements).
4. According to the results of the Mann-Whitney U Test, all the p-values exceed the 0.05 threshold, stating no significant difference in factors contributing to the gender wage gap, as both male and female employees perceive these factors to be the same.
5. The Chi-square test results $\chi^2 = 14.199$, $p = 0.077$, show that there is no significant relationship between the years of experience and the gender wage gap, indicating that there is no direct statistical association based on the data.
6. The Friedman test, where $\chi^2 = 15.418$, $p = 0.009$, shows a significant difference in the mean ranks, indicating that employees' perceptions of various aspects may differ. 'Career Opportunities' and 'Bias-free Evaluations' ranked as the most influential factors.
7. In the workplace, non-inclusive behaviors among Indian women decreased by almost 10 percentage points to 48%. As women go up the corporate ladder, larger salary gaps become apparent.
8. The salary of women in senior management roles is approximately half that of men in similar roles.
9. The concept of the "glass ceiling" creates obstacles that prevent women from advancing to higher managerial positions.
10. Women report feeling underpaid and underappreciated in their teams, and they experience micro-inequities more frequently.

## 6. Implications of the Study

Empowering women and promoting their professional growth and self-assurance are two ways that initiatives that promote equal chances and negotiation skills can benefit women individually. Further investigation into the specific elements impacting career progression opportunities, negotiating gaps, and biases in performance evaluations could help clarify the minor characteristics that contribute to gender salary discrepancies. Longitudinal studies tracking changes in gender wage discrepancies over time may provide a comprehensive understanding of this dynamic when paired with qualitative research exploring the real-world experiences of people working in the IT business. To better understand how organizational initiatives and policies affect inclusion and lessen gender wage gaps, more studies may be helpful. Examining how gender intersects with other factors is vital given the global discourse on gender equality is always evolving, making a study of the intersection of gender vital.

## Conclusion and Scope for Further Research

In examining gender pay disparities in the Indian IT industry in particular, the current study closes by highlighting the complex interplay of factors that lead to payment differences. Empirical evidence demonstrates the need for targeted interventions by demonstrating that disparities continue to exist even when women advance

in their jobs. The findings emphasize the significance of mediating conflicts during negotiations, promoting equitable access to chances for career advancement, and combating prejudice in hiring and advancement. The larger impacts of gender pay discrepancies on economic growth are highlighted in the research, which emphasizes the need for governmental adjustments. Still, given the complexity of gender pay disparities, more research needs to be done on how to adapt workplace practices to changing circumstances to guarantee gender equality in the IT sector is sustained.

There are several limitations to the study that must be acknowledged. First of all, only 54 responses out of an estimated 100 suggest that the sample size may not adequately represent the diversity of the IT industry. Moreover, this study solely examines Bengaluru and the gender wage discrepancies in other Indian cities are not taken into consideration. Self-reported data introduces the risk of response bias, where respondents give responses they believe to be acceptable to society. The study's over-reliance on quantitative data is more significant than the exploration of nuanced qualitative aspects that may provide more insight into participants' experiences in the IT industry.

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