



TEACHING COMPENSATION AND REWARDS FOR VIRTUOUS MERIT-BASED PAY EQUITY AND LEGAL COMPLIANCE: AN ASSESSMENT OF GENDER DISPARITY BASED ON PERFORMANCE

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Abstract

Compensation and rewards management is a mission-critical part of any organization, and it should be managed strategically. This study explores the importance of strategic compensation through virtuous pay cycles while assessing graduate students' performance based on gender. A quantitative analysis of test scores from 104 graduate students, in the South Florida region of the United States of America, revealed no adverse impact in the learning achievement of male and female students but the study found a significantly higher performance in total course outcomes.

The paper emphasizes that strategic, virtuous and equitable compensation plays a critical role in closing the gender pay gap, while attracting and retaining a talented, productive, and happier workforce through innovation and proper use of modern artificial intelligence technologies. Suggestions for equitable compensation, benefits, and rewards for today's workforce are provided.

Keywords

Compensation; Rewards; Benefits; Salary Disparity; Disparate Impact; Virtuous Pay Cycle

Introduction

Compensation refers to the total salary and benefits that employees receive in exchange for their work and contributions to an organization (Newman and Gerhart, 2020). It encompasses not only the employee's base salary or wages, but also additional forms of compensation such as bonuses, commissions, overtime pay, benefits (e.g., health insurance, retirement plans), and perks (e.g., stock options, company credit cards or cars for personal use, etc.). Compensation serves as a key motivator for employees, as it influences their job satisfaction, engagement, and overall well-being (Bauer et al., 2024; Martocchio, 2018). For Americans, compensation include all forms of financial returns and tangible services and benefits employees receive as part of an employment relationship (Newman, Gerhart, & Milkovich, 2019), but in China compensation includes returns as well as entitlements. Compensation in Japan means "giving something" or taking care of employees' financial needs.

Modern managers and entrepreneurs all around the world should take care of their employees' overall total financial expectation, which includes a fair market-oriented salary, benefits and relational returns. According to Newman and Gerhart (2020), total compensation is transactional returns including pay received directly as cash and indirectly as benefits. Cash payment includes base pay, merit pay, cost-of living adjustments, and incentives. Benefits include pensions, medical insurance, and programs to help balance work and life demands (Martocchio, 2018). Organizations and managers must also take care of their employees' relational returns, which are psychological including recognition and status, employment

security, learning opportunities, challenging work, and so on (Newman and Gerhart, 2020). Effective compensation strategies enable organizations to attract, retain, and reward top talent through merit and performance, enhance motivation, and maintain a competitive edge in the market by sustaining virtuous pay cycles (Morse and Mujtaba, 2008).

A virtuous pay cycle is the result of strategic pay decisions that are fair, equitable, transparent, and performance based (Newman et al., 2019). To achieve an upward momentum and continuous improvement, organizations must consider not only the pay levels of positions, but also additional perks to employees' total compensation. As a company becomes more successful with profits and market share, they should be able to pay employees larger bonuses and stock-option rewards. Providing these incentives ultimately lead to improved employee engagement, work ethics, and performance. Employees will feel like they are being rewarded for the risks they are taking. They will also share the organization's success and feel like their work contributes to the bigger business picture. On the contrary, as shown in Figure 1, organizations can also develop a vicious cycle that incorporates a downward momentum due to unfair, inequitable, and inconsistent pay procedures. This is when employee performance declines, performance-based pay plans do not pay off, no bonuses are issued, etc. Organizations on the midst of a downfall are at risk of wage cuts and even layoffs, unless higher returns are achieved through quick and productive interventions. This situation can make employees feel anxious believing that their efforts, commitment, and tenure are not leading to fruitful outcomes. There will be no sense of unity, pride, joy, or feelings of contributing to the bigger picture which collectively benefits all relevant stakeholders. Periodic audits should be conducted to close any pay inequities and transition from a negative sequence to a positive outcome, a virtuous cycle. A virtuous pay or compensation program should be strategically designed to attract and retain a talented workforce that is able to achieve the organizational goals through high motivation and a positive attitude.

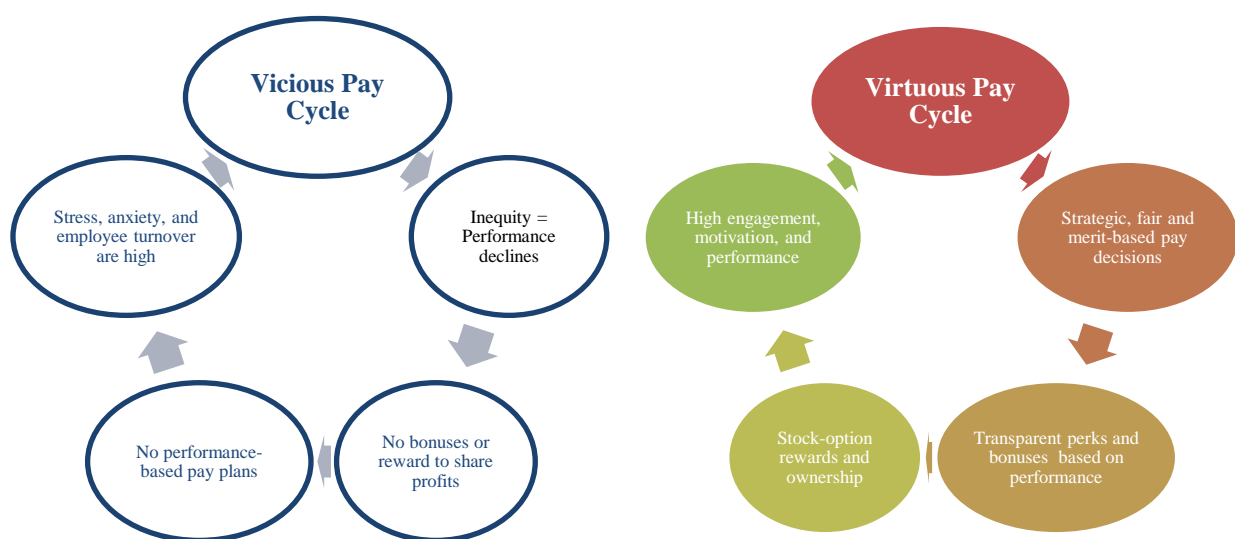


Figure 1 – Vicious vs. Virtuous Pay Cycles
(Source: created by the authors)

Proper compensation, using a virtuous cycle, is crucial for attracting top talent in any competitive job market locally, nationally, and internationally for any small, medium, large, or multinational organization (Noorzad et al., 2024; Morse and Mujtaba, 2008). When professionals feel that they would be fairly and transparently compensated for their work, they are more likely to be drawn to an organization and accept a job offer (Bauer et al., 2024; Noe et al., 2023). Conversely, if an organization's compensation package is perceived as vicious, unfair or inadequate, potential employees may be deterred from joining the company. By offering competitive salaries, benefits, and incentives, organizations can demonstrate their commitment to valuing and rewarding their employees' contributions.

Virtuous compensation is essential for motivating employees to perform at their best (Noe et al., 2023). Different people may be motivated by dissimilar factors related to compensation and other variables; "so organizations often employ various strategies, including recognition, rewards, training, and a positive work environment, to create a motivating atmosphere for their employees" (Noorzad et al., 2024,

p. 271). When employees feel that their hard work and achievements are recognized and rewarded in a legally compliant and equitable manner, they are more likely to be engaged, motivated, and committed to the organization (Mujtaba and Fiedler, 2024). Fair compensation can boost employee morale, reduce stress, and increase job satisfaction. On the other hand, inadequate compensation can lead to demotivation, decreased productivity, and increased turnover. By providing proper compensation, organizations can create a positive and supportive work environment that encourages employees to excel.

Strategically designed virtuous compensation is critical for retaining a talented workforce (Cascio & Boudreau, 2019). When employees feel that they are being fairly and equitably compensated for their expertise and dedication, they are more likely to stay with an organization long-term. Conversely, if employees feel that they are underpaid or undervalued, they may become demotivated or seek alternative employment opportunities. High turnover rates can be costly and detrimental to an organization's success, as they can lead to the loss of valuable knowledge, skills, and experience. By providing proper compensation, organizations can reduce turnover rates, increase employee loyalty, and retain the talent and expertise needed to drive business success.

Modern managers and entrepreneurs can use analytics to make evidence-based decisions regarding the compensation of their current and future workforce. Human resource (HR) analytics generally refers to the process of collecting, analyzing, interpreting, and reporting people-related data for the purpose of strategically improving decision making, achieving objectives, and sustaining the organization's competitive advantage (Bauer et al., 2024; Vargas et al., 2018; Vargas, 2015). HR analytics can be used for many purposes, including for the goal of proper and equitable compensation for everyone in the organization's workforce (Cavico et al., 2017; Minenko and Mujtaba, 2024).

Literature

HR professionals must make sure that their policies do not have any adverse impact on the compensation of employees based on protected group categories, such as gender, disability, pregnancy, etc., especially when they have similar tasks and credentials (Cavico et al., 2017). The disparate impact theory applies to claims dealing with many forms of inequities and discrimination based on sex, religion, ethnicity, disability, etc. in employment (Muffler et al., 2010). To create equity and prevent workplace inequity, HR professionals, managers and employees must protect themselves from illegal discriminatory practices (Cavico et al., 2012) by being aware of disparate impact and disparate treatment forms of compensation discrimination. HR experts must be strategic in leading the organization's compensation policies and procedures.

Regarding pay discrepancy, for decades, the equity theory has emphasized that employees assess pay and compensation fairness in the workplace by comparing their input-to-output ratios to those of others internally within the organization and externally in the market (Adams, 1965). Naturally, any real or perceived inequality, disparity, or imbalance between a person's efforts and the rewards received can lead to feelings of inequity, dissatisfaction and low morale. "All dissatisfaction and low morale are related to a person's suffering injustice in social exchanges" (Adams, 1965, p. 267). In a way, pay satisfaction is not uniquely about salary received but it is also about the observed fairness relative to the job requirements and colleagues in comparable roles within the organization and others outside. Nonetheless, organizations can gain considerably from proactively compensating beyond market value to attract and retain a high-performing workforce (Noe et al., 2023). This is consistent with strategic human resource management techniques, which indicate that compensation can be used not only to motivate but also to promote long-term organizational pliability through talent attraction and retention (Gerhart & Fang, 2015).

The efficiency wage theory hypothesizes that offering generous compensation can result in fewer errors and heightened effort, as workers would be less inclined to neglect their duties when they perceive their roles as valued and adequately rewarded (Noe et al., 2023). This efficiency wage principle is even more relevant in technical tasks, where even minor errors can incur significant costs immediately or down the line. Additionally, when employees believe they are being paid fairly, they will engage in organizational citizenship behaviors more often (Organ, Podsakoff, & MacKenzie, 2006). Of course, the law of diminishing returns should be taken into consideration, because the motivating effect of a generous pay may plateau, especially if other important motivational factors like recognition and autonomy are missing. A balanced pay approach that combines both monetary and non-financial incentives, such as recognition, autonomy, and opportunity for advancement in the organization or one's profession, can help to improve performance and work satisfaction (Deci & Ryan, 2000). So, organizational leaders must

strategically look at compensation holistically from all angles to make sure the workforce's perception of their total pay and rewards is fair.

Strategic leadership aligns effective people management systems, design, and initiatives with organizational objectives. Strategic HR leaders contribute to organizational decision-making, leveraging their expertise to drive business outcomes (Mujtaba, 2025c; Bauer et al., 2024). They focus on building capabilities, enhancing organizational culture, and developing leadership pipelines. By applying strategic thinking, HR leaders can help organizations adapt to changing market conditions, improve employee engagement, and increase competitiveness. Besides making sure there is legal compliance with local and national laws, HR management encompasses various additional practices, policies, and procedures to select, hire, develop, and fairly compensate all employees in alignment with organizational goals (Mujtaba, 2025c).

Strategically designed higher pay can at times outweigh the higher costs for an entity when increasing compensation brings more value to the organization. This true value and return on investment can be shown through improved performance, increased retention, or enhanced reputation (Jamaludin et al., 2024). When employees feel valued and compensated equitably, they are more likely to stay engaged, committed, and motivated to contribute to the organization and its success (Noe et al., 2023). Retaining and growing internal talent, by paying them more than the market wage, is often more efficient and cost-effective than the high costs of recruiting, onboarding, and training new employees (Jamaludin et al., 2024). Internal employees usually possess relevant organizational knowledge and are familiar with work procedures, policies, processes, culture, and expectations, which makes them more valuable than most external prospects (Kossyia et al., 2024). By prioritizing internal candidates, organizations can avoid the repeated expenses and disruptions associated with high turnover.

HR professionals must always be aware that they are responsible for the accuracy of payroll to all employees and for legal compliance with applicable laws. Some of the common reasons for back pay could include misclassifications, wrongly terminating workers, errors in calculating pay, not including holidays or pay increases into account, and not paying the required minimum wage for non-exempt employees in any given week. When employers make mistakes and do not pay workers properly in a vicious cycle, then those employees are entitled to back pay. Underpayment is a huge risk for a costly lawsuit involving litigation and/or arbitration (Mujtaba & Garner, 2024). Of course, overpayment, while not illegal, can be very damaging to an institution. In the next few sections, we will discuss the importance of paying employees accurately based on hours worked and making sure there is gender equity in overall salaries.

Compensating Correctly

One of the most common payroll mistakes companies make that can lead to underpaying employees is the incorrect classification of workers. Misclassifying employees as exempt from overtime or incorrectly identifying them as independent contractors can result in underpayment of wages (Mujtaba and Fiedler, 2024). For example, if an employee is misclassified as exempt, they may not receive overtime pay for hours worked beyond 40 in a week. Similarly, misclassifying an employee as an independent contractor can lead to underpayment of benefits, taxes, and wages.

Under the Fair Labor Standards Act (FLSA), a company's workers can be classified as exempt or nonexempt. Exempt employees usually hold positions (often managerial in rank) that are not always paid overtime. There are several categories to determine if a job classifies for exempt status, including executive, administrative, professional, computer, and outside sales. Nonexempt employees are required to be paid overtime when they work more than 40 hours or on holidays. The FLSA established that overtime pay must be paid 1.5 times the regular pay rate (Jackson et al., 2017). While nonexempt employees may not be intentionally scheduled for overtime, employers must consider issues such as training time, travel time for work, and after-hours duties (e.g., responding to emails from colleagues, vendors, customers, and/or government officials). The rule is that the time spent by workers on-the-job training should count towards time worked, even if this leads to overtime pay. Furthermore, work-related travel time should be paid. Companies are required to keep their wage and hour records for at least three years (Mujtaba and Fiedler, 2024; Smith, 2022).

Another common payroll mistake that can lead to underpaying employees is inaccurate tracking of work hours. Failing to accurately record employee work hours, including overtime, breaks, and time-off, can result in underpayment of wages. This can occur due to manual errors, inadequate time-tracking systems, or lack of clear policies and procedures. Additionally, companies may also underpay employees by failing to account for various forms of compensation, such as holiday hours, overtime, bonuses,

commissions, tips, etc. (Mujtaba and Fiedler, 2024).

Calculating worker pay can take less time when there is only one or two employees. However, even small firms must be very careful to make sure their employees are paid what they deserve in accordance with the local, state, and federal laws in the country. While underpayment can lead to a huge lawsuit and fines by the government, overpayment can reduce company profitability while causing ethical dilemmas. For example, Wells Fargo bank managers discovered that they had been overpaying some of their employees for years because of a bug or technical problem associated with its payroll system and leave of absence policies. When the error was discovered, the company demanded repayment from affected employees; with some owing thousands of dollars (Eisen, 2023). The request for repayment caused an upheaval among many because some employees were unaware that they were being overpaid and could not make the requested repayment. The ethical dilemma of demanding back pay from employees by such a big organization is seen as wrong since it was not caused by employees. As such, Wells Fargo faced criticism for the miscalculation and asking for repayment from its employees (Eisen, 2023). To prevent payroll miscalculation issues, companies should implement regular audits of payroll systems. Transparent communication and proactive measures like checks and balances and separation of duties can help identify discrepancies early before they escalate. Small and large organizations alike should assess the human toll before deciding to recover losses from payroll mistakes.

To prevent overpayment or underpayment, managers and HR professionals in the United States must remember that sick time should be paid; however, it should not count as “worked hours” or overtime. Therefore, the additional time (after sick time) beyond normal work hours should count as overtime work to be paid 1.5 times the hourly rate. In most locations, overtime applies when employees work more than 40 hours each week, but in some states like California, overtime calculations might be necessary daily if associates work beyond the regular 8 hours each day. To practice pay calculation, let us assume Ms. Lucille Ball works as a call center operator for \$8.00 per hour.

Table 1 – Ms. Lucille Ball’s Hours Worked

Days	Hours Worked
<i>Monday</i>	8 hours
<i>Tuesday</i>	9 hours
<i>Wednesday</i>	4 hours + 4 hours sick time*
<i>Thursday</i>	10 hours
<i>Friday</i>	6 hours
<i>Saturday</i>	4 hours

** Note that sick time is paid. Overtime is paid at 1.5 hourly rate.*

As shown on Table 1, this week Ms. Ball worked 8 hours on Monday, 9 hours on Tuesday, 4 hours on Wednesday and earned 4 sick hours as well, 10 hours on Thursday, 6 hours on Friday, and 4 hours on Saturday. Payroll professionals in HR must determine how much money Ms. Ball earned this week. Given these factual hours, some graduate students end up paying her more than she earned, and others pay her less. Students often miscalculate sick time payment. To prevent pay calculation mistakes, there should be a systematically automated process that can be audited periodically to prevent under-and-over payments.

Since Ms. Ball worked 40 hours, one can multiply it by \$8 / hour, which equals \$320. Then, add \$12 for one hour of overtime (= \$332), while also giving her \$32 of sick time for four hours, all totaling \$364 for the week.

Some companies may underpay employees due to errors in payroll processing, such as incorrect wage rates, deductions, or benefits. For example, if an employee's wage rate is not updated correctly, he or she may be underpaid. Similarly, incorrect deductions, such as taxes, health insurance, or retirement contributions, can also lead to underpayment of wages. These errors can be due to manual mistakes, software glitches, or inadequate training of payroll staff. Regular audits and reviews of payroll processes can help identify and correct these errors to ensure employees receive accurate and timely payment.

Paying employees correctly in accordance with local and federal laws is crucial for maintaining a fair and compliant work environment. Failure to comply with wage and hour laws can result in significant financial penalties, legal liabilities, and damage to an organization's reputation. For instance, non-compliance with the Fair Labor Standards Act can lead to back pay awards, fines, and even criminal prosecution (Mujtaba and Fiedler, 2024). The FLSA is the primary federal law affecting pay policies and

procedures, and it is enforced by the Wage and Hour Division of the Department of Labor (DOL). The FLSA was passed in 1938 to ensure that all employees are paid fairly and in accordance with federal legal standards with a focus on compliance in four areas: (1) minimum wage mandates, (2) limitations imposed on the use of child labor, (3) exempt and nonexempt status for overtime pay, and (4) record-keeping requirements (Jackson et al., 2017). Moreover, employees who feel that they are not being paid fairly may experience decreased morale, reduced productivity, and increased turnover rates, ultimately affecting the organization's bottom line.

Paying employees correctly promotes transparency, trust, and fairness in the workplace. When employees are confident that they are being paid accurately and in accordance with the law, they are more likely to feel valued and respected by their employer. This, in turn, can lead to increased job satisfaction, improved employee engagement, and better overall performance. Furthermore, paying employees correctly demonstrates an organization's commitment to social responsibility and ethical business practices, which can enhance its reputation and contribute to long-term success.

Gender Disparity and Happiness

Women, historically underrepresented in certain professions and paid much less than their male counterparts, do face unique challenges that impact their success, happiness and job satisfaction (Naqawi and Sultani, 2025; Mateer, 2025; Mujtaba, 2022; Rasool, 2021). Stereotypes and biases may influence how men and women are perceived in professional settings due to sex or even appearance (Cavico et al., 2013), which can adversely affect opportunities for advancement, compensation and overall job satisfaction of some candidates, thereby creating a vicious pay cycle (Siocon, 2023; Whitfield, 2023; Brakus et al., 2022). According to Versere (2023), women tend to portray less confidence during an employment interview process than men, which might lead to more male candidates being chosen for the position and women dropping out of candidacy. Riccardi (2023) states that women are less satisfied than men in the ability for a flexible work-life balance because of the women's responsibilities at home. Women often do not receive the flexibility, supportive policies, and time off options needed to meet childcare and other personal obligations (Riccardi, 2023). Such inequities in compensation of men and women of different background seems to be endemic and hurtful.

Inequities in compensation for employees in the workforce are a persistent and pervasive issue. Despite the passage of equal pay laws in the U.S., such as the Equal Pay Act of 1963, significant pay gaps remain between different demographic groups. For example, women on average earn only 82 cents for every dollar earned by American men, while racial and ethnic minorities face similar pay disparities. These inequities can be attributed to various society-based factors, including biases in hiring and promotion practices, unequal access to education and training, and discriminatory workplace cultures.

The presence of society-based gender inequities in compensation, salary raises, and management promotions into higher ranks can be clearly observed from the fact that despite many highly qualified liberal candidates (such as Elizabeth Warren, Amy Klobuchar, Marianne Williamson, Kamila Harris, Hilary Rodham Clinton, Tulsi Gabbard, Geraldine Anne Ferraro, Ellen McCormack), conservatives (such as Nikki Haley, Michele Bachmann, Carly Fiorina, Sarah Palin, Elizabeth Hanford Dole), and third party contenders (such as Jill Stein, Jo Jorgensen, Cynthia McKinney, Belva Ann Bennet Lockwood, Victoria Claflin), no female politician has yet been appointed as President in the United States. The unprecedented election losses of presidency in the U.S. by two highly qualified female politicians (Senator Hillary Clinton in 2016 and Vice President Kamila Harris in 2024) to the arguably "least qualified" male populist candidate (President Donald Trump) demonstrates the existence of some gender bias among the general American population. Yet, despite being the oldest male candidate, President Joe Biden was able to secure the presidency in 2020. The startling political losses by such competent individuals also demonstrate that professional women often must become "superwomen" or overachievers just to be perceived as equal with an average male counterpart. Inclusionary intervention work needs to be done to create a level playing field for women in our male-dominated society. Due to fears of violating the Equal Pay Act, organizations must consciously intervene to make sure all their male and female employees are paid fairly as the law protects employees of all sexes. Since 1960, the compensation disparity among men and women has narrowed, yet it has remained around 80% for female working professionals for several decades. Based on the current rate of progress, and without conscious interventions to create virtuous pay cycles, it is estimated that women will not reach gender parity with men for 134 years (JP Morgan Perspectives, 2025), and this should be unacceptable to every manager, professional, and public sector policy maker.

The impact of compensation inequities on nearly 50% of any modern organization is substantial

and demoralizing. For employees, such a prolonged vicious cycle of unequal pay can lead to financial insecurity, reduced job satisfaction, more unhappy workers, decreased morale, and high employee turnover. It can also limit career advancement opportunities and perpetuate systemic inequalities. For organizations, compensation inequities can result in decreased productivity, increased turnover rates, and reputational damage. Furthermore, inequitable compensation practices can lead to costly lawsuits and settlements, as well as damage to an organization's brand and social responsibility reputation.

Overall, many people suffer when a position or even the privilege of earning more money is not justified based on merit and qualification. The unfortunate part is that often we cannot do much about it, other than simply acknowledge and rectify the inequity, when possible, by being fair to our own colleagues and employees. For example, in the U.S. and much of the world, an average male is automatically given about 12-20% more in compensation compared to most equally qualified female colleagues. Men did not do anything special to get this unearned privilege and they cannot blame themselves since they were born male. But men can acknowledge and make sure their employees earn a fair and equitable wage regardless of whether they are males or females. This is why "HR compensation audits" are so important to make sure everyone is paid fairly in the department and organization.

Addressing compensation inequities requires a multifaceted approach that involves both organizational and systemic changes. Organizations can start by conducting regular pay audits to identify and address pay disparities. HR professional can also implement transparent and equitable compensation practices, provide training and education to reduce biases, and promote inclusion initiatives through innovative means (Isibor et al., 2025). Additionally, policymakers and advocates can work to strengthen equal pay laws and regulations, increase transparency and accountability, and promote greater pay equity across industries and occupations.

Men and women across the globe face many personal and professional ethical dilemmas that can be taxing (Mujtaba et al. 2025). Luckily, most professionals learn to manage some of the daily stresses effectively through better and transparent communication (Langaas and Mujtaba, 2023). A survey of Chinese physicians showed no significant differences in male or female satisfaction rates, but a study in Europe found that females were more satisfied in the workplace than men (Redmond and McGuinness, 2019). A study in Britain and another in the European countries in 2007 also showed women were more satisfied in the workplace. Redmond and McGuinness (2019) attribute satisfaction to lower expectations by women in the workplace.

In the U.S., women have been found to place more weight on work-life balance and flexibility than men (Redmond and McGuinness, 2019), which might be costing them in terms of compensation, including gender-based microaggressions and biases, which can contribute to feelings of isolation, underappreciation, demotivation, and burnout (Kohn, 2020; Shin, 2019). Women face higher expectations for emotional labor in their roles, especially in service-oriented professions, which can increase the emotional strain and physical stress they experience on the job (Brotheridge & Lee, 2003). In reality, "companies can choose to treat employees as an asset that requires investment of resources or as an expense to be minimized" (Noe et al., 2023, p. 92), where the latter assumes complacency, stagnation, and a vicious pay cycle. If managers see their human capital as an asset, then they must invest in their development and growth by having sustained virtuous pay cycles.

Understanding the ways in which men and women experience and perceive workplace happiness is essential for fostering inclusive and equitable work environments (Warren et al., 2019). The workplace is not a gender-neutral space, and various societal and organizational factors can contribute to different experiences of happiness between men and women. Workplace happiness is a crucial aspect of employee well-being and organizational success. So, it is essential to focus on gender equity and workplace happiness. The dynamics of the workplace have undergone significant transformations, with a growing emphasis on happiness, equity and inclusion (Warren et al., 2019). However, amidst this pursuit, gender disparities in workplace happiness have emerged as a critical area of concern, especially for women as they may be discriminated against purposely or unintentionally.

Disparate Impact

Disparate treatment exists when individuals in similar situations are treated differently based upon sex, national origin, age, or disability status (Muffler et al., 2010). Whenever individuals are treated differently because of their race, sex, or the like, and there is an actual intent to treat them differently (Mujtaba, 2025b), the plaintiff must prove that there was a discriminatory motive—that is, that the employer intended to discriminate (Mujtaba, 2024). Organizations often proactively defend themselves against disparate

treatment or intentional discrimination claims by showing there was a non-discriminatory job-relatedness reason for the adverse action against the applicant or employee (Cavico et al., 2017). In other words, an organization must defend its practices using the business necessity criteria. The bona fide occupational qualification (BFOQ) theory or business necessity defense means that using the procedure which caused an adverse impact is vital for the survival of the organization (Mujtaba, 2025b; Cavico et al., 2017; Muffler et al., 2010).

Disparate impact occurs when an employment practice excessively excludes a protected group's members from employment or promotional opportunities (Cavico and Mujtaba, 2020). As per the laws in the United State, adverse or disparate impact based on protected categories is illegal. As such, HR professionals and managers must be prepared to show how specific requirements related to knowledge, skills, education, training, background, as well as height, weight, strength, and dexterity are legitimate qualifications that directly relate to successful job performance (Cavico et al., 2017).

To assess any disparate impact, the four-fifths rule can be used. In the four-fifths rule assessment, a test has a disparate impact if the hiring rate for the minority group is less than four-fifths (80%) of the hiring rate for the majority group (Caughlin, 2020; Mujtaba, 2022). In this study, we can assess if there is any disparate impact based on gender in the performance of male and female students.

Methodology

In this study of students learning about compensation and rewards, we can assess if course assignments and tests have a disparate impact on either males or females. The research question is: *given the diversity of assignments in the compensation and rewards course, are male and female students able to achieve similar scores?*

Using a convenience sampling methodology, the population of this study are graduate students who completed the “*Managing Total Rewards*” course as part of the requirement for the Master of Science in Human Resource Management in the South Florida region of the United States during 2020 to 2023. The data is the combination of students who successfully completed the course in three separate terms online, using the same assignments and exams, facilitated by the same professor. Since one professor taught the course using the same exact topics, lectures, and exams, one can assume a high level of objectivity in the assessment process. Students were graded based on weekly online discussion forum posts, participation in the synchronized lectures, completing a proctored mid-term exam, completing a research paper on compensation-related topic, and completing the final exam. Students' earned grades were totaled for all assignments to see if there is a disparate impact based on gender at a score of 80%.

In the sample of males and female in the course, a total of 104 students successfully completed the course, with 88 females and 16 males.

The Four-Fifths Rule Analysis

As shown in Figure 2, using an 80% achievement level or pass rate, 24 women (27.3% rate) and 4 men passed (25% pass rate). In this sample, women have the highest pass rate at 27.3%; so, to calculate the adverse impact ratio using the four-fifths rule, we can divide the pass rate for men by the rate for women ($0.25 / 0.273$) to get an impact ratio of 91.6% for males. Since the adverse impact ratio on male pass rate is 91.6%, higher than 80%, there is no evidence of adverse impact or unintentional discrimination based on gender. We can rule out the existence of a vicious cycle or a cruel learning environment due to gender inequity or teaching preferences predominantly favoring either male or female learning styles.

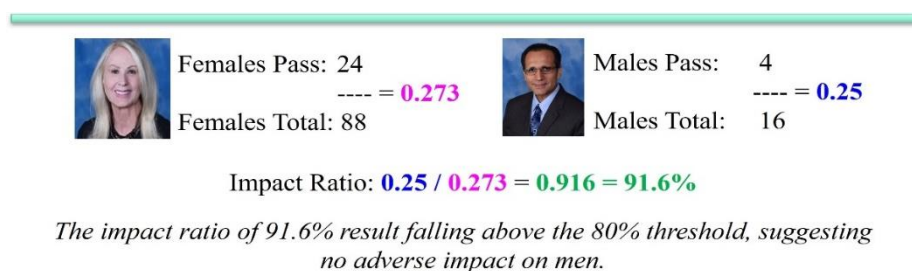


Figure 2 – The Four-Fifth Rule Summary

Research has consistently highlighted difficulties and challenges modern students face in a vicious environment, especially while studying online, including issues related to the accessibility of course content, low individual and group student motivation, low levels of trust among colleagues, constant harassment, and obstacles to effective participation in online group projects (Joseph CJ and Gopal, 2025; Kanaris and Mujtaba, 2024). Of course, in today's complex environment in academia and workplace, it is best to move forward with a high-performing team (Lawrence et al., 2022). It is also said that educators can have difficulties in modern educational settings that are supplemented with virtual platforms, necessitating a greater level of digital and artificial intelligence (AI) competency from the academic staff (Sharma, 2025; Mujtaba, 2025a). Modern technologies like AI and social media usage can have both positive negative consequences; so, one must use them cautiously (Nagendra, 2014). Proper AI usage can reduce bias and improve efficiency in getting work done academically and in the workplace. In some firms, up to 80% of customer support is now handled by AI, which also helps with employee growth and well-being (Sharma, 2025). AI tools can enhance, rather than replace, the people element of decision-making and human resource assets.

It is clear that "Students' learning process is greatly aided by the collaborative environment that is fostered in the classroom" (Joseph CJ and Gopal, 2025, p. 237). When inequities or discriminatory practices are present, it will be accompanied by little to no participation in the learning process (Mujtaba, 2025b). Considering the difficulties that come with modern day education for most students, if courses are not audited and learning outcomes are not assessed periodically, it is very possible that some institutions will turn out learners who lack the necessary skills to function effectively in the real world (Joseph CJ and Gopal, 2025).

The T-Test Analysis

We can assess outcomes based on average or mean scores achieved by the two different groups (male and females). Using Excel, we can apply an independent-samples *t*-test to evaluate the effectiveness of the assignments based on male and female achievement outcomes (Bauer et al., 2024; Mujtaba, 2025b). For the purposes of this analysis, we are concerned about the students' scores and want to see if there are gender disparities in their achievements. Using the grades earned for the assignments, we assess their overall knowledge based on their cumulative scores in the course (or a specific test). Before testing gender differences, we can see in Table 2 that there is a statistically significant difference ($\alpha < 0.00$) between students who scored at the 80% level on the final exam and those that scored below it.

Table 2 - Pass Disparity at 80% Rate
(t-Test: Two-Sample Assuming Unequal Variances)

	Pass @ 80%	Not pass
Mean	89.083	65.989
Variance	27.176	83.969
Observations	75	29
Hypothesized Mean Difference	0	
df	35	
t Stat	12.795	
P(T<=t) one-tail	4.65057E-15	
t Critical one-tail	1.6896	
P(T<=t) two-tail	9.3011E-15	
t Critical two-tail	2.0301	

Collectively, those that scored below the 80% level are likely to be busy individuals that did not have sufficient time to study. Therefore, as observed based on the four-fifth's rule analysis, lower performance on the exam is more likely to be due to their level of effort and not necessarily linked to gender identification. As such, once again, we can rule out the existence of a vicious cycle or learning environment favoring one gender over another's learning style. Nonetheless, we can confirm this conclusion by comparing the results of the final exam and total course performance.

Table 3 - Final Exam based on Gender

(t-Test: Two-Sample Assuming Unequal Variances)

	<i>Males</i>	<i>Females</i>
Mean	83.76	82.44
Variance	101.42	160.6
Observations	16	88
df	25	
t Stat	0.4609	
P(T<=t) one-tail	0.3245	
t Critical one-tail	1.7081	
P(T<=t) two-tail	0.6489	
t Critical two-tail	2.0595	

The analysis for any gender differences can be done using an independent sample *t*-test to evaluate whether the mean score for participants is significantly different. As shown in the comparison of final exam scores (Table 3), and total course grades (Table 4), there are no statistically significant differences between males and females in this course. Once again, we can rule out the existence of a vicious cycle in this learning environment based on gender.

Table 4 - Total Course Scores based on Gender

(t-Test: Two-Sample Assuming Unequal Variances)

	<i>Males</i>	<i>Females</i>
Mean	90.72	89.50
Variance	23.56	67.41
Observations	16	88
df	33	
t Stat	0.809	
P(T<=t) one-tail	0.212	
t Critical one-tail	1.692	
P(T<=t) two-tail	0.424	
t Critical two-tail	2.0345	

Table 5 shows the performance of students in the final exam compared to their total course grades, which includes the weekly discussion question answers, case study exercise / article summary, mid-term exam, term paper and presentation, and the final exam score. Students earned a significantly higher score ($p\text{-value} = 0.0000018$) in their total course grades versus the comprehensive final exam. It shows that relying on one exam may not always be true or effective assessment of the knowledge or competency gained in a course. Therefore, since students have different learning styles, they should be given opportunities to showcase their acquisition of knowledge via multiple assessment modalities such as objective questions, problem solving, case analysis, presentation, essay questions, research paper, etc.

Table 5 – Final Exam vs. Total Course Performance

(t-Test: Two Sample Assuming Unequal Variances)

	Exam	Total Course
Mean	82.64	89.69
Variance	150.65	60.56
Observations	104	104
df	174	
t Stat	-4.9453843	
P(T<=t) one-tail	8.90038E-07	
t Critical one-tail	1.653658	
P(T<=t) two-tail	0.0000018	
t Critical two-tail	1.9736914	

To accurately judge learning achievement in a course, educators should use a variety of assessment methods, beyond just comprehensive exams, to evaluate students' learning and competence

because it provides a more accurate representation of student understanding. Relying solely on a final exam can be misleading, as it may not capture the full range of students' knowledge, skills, and abilities. Additionally, high-stakes testing can lead to anxiety and stress, which can negatively impact a person's performance. By incorporating multiple methods, such as quizzes, projects, class discussions, and formative assessments, teachers can gather a better understanding of student learning, identify areas where students may need additional support, and provide opportunities for students to demonstrate their knowledge and skills in different ways.

Discussion

Learning about compensation, rewards and benefits should be of interest to every professional since it is a major component of why one works so hard to acquire relevant education, certification, and experience in the field. Of course, teachers and administrators are concerned about students learning the content and systems of compensation being researched and practiced in this changing work environment as more people opt-in to be a part of the “gig economy” that provides flexibility to work online, remotely, or as relevant based on their needs. As such, more research needs to take place to keep up with the changing dynamics of academia and the modern work environment to prevent vicious cycles and grow virtuous merit-based opportunities for high productivity and satisfaction. By accommodating multiple learning styles through both traditional and innovative technologies and robotics, we can help create a healthier and effective learning environment for all students, along with a virtuous merit-based workplace (Nafei et al., 2025; Khanfar et al., 2024). Although, it should be noted that technology can be a double-edged sword and should be used strategically and cautiously while being prepared to mitigate against any possible negative

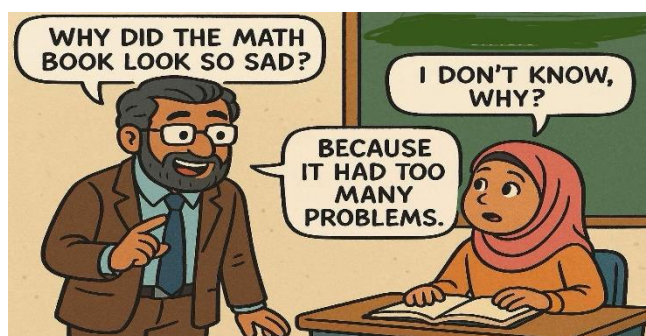


Figure 3 – AI Generated Cartoon based on Names
(Source: created using ChatGPT 4.0)

consequences. Biases and assumptions are an integrated part of modern technology as well, especially when generative artificial intelligence is being prompted for screening candidates and recommending pay or promotional decisions that can be based on demographic data such as age, sex, religion, ethnicity, disability, etc. As one example, based on teacher name (identified as “Bahaudin”) and student (named “Fiza”), ChatGPT made assumptions of religion or ethnicity and produced the visual presented in Figure 4 where the student is wearing a hijab, which is a common accessory for Muslims.

Implications

The finding of no adverse impact based on gender is a positive outcome for the overall well-being of all students. By promoting a healthy culture, educators, leaders and agile organizations can promote a more positive, virtuous, and supportive work environment using creative and innovative leadership along with strategic compensation practices while eliminating the presence of vicious cycles of compensation inequities (Aaman et al., 2024; Subramaniam et al., 2023).

The pay gap remains unchanged from 2024 in the U.S., as female workers on average make 83 cents on the dollar compared to men (JP Morgan Perspectives, 2025). Multiple factors contribute to the prolonged vicious cycles of gender pay gap. Individual factors are related to parental, family, age, race, education, and income. These demographic person-level factors include the tendency for women to select tasks that have lower hourly compensation rates (Litman et al, 2020). Despite continuing inequities, women are now more likely to graduate from high school, graduate from college and earn master's degrees. They earn half of all doctorates in the U.S. and many other developed economies. In business-related programs, women represent around 47% of those receiving graduate business degrees from U.S. schools over the last five years. Women have invested in education, increased control regarding family planning, and prioritized career success. Higher education, a shift to higher-paying occupations, and more labor market experience have helped women narrow the gender pay gap since 1982. But even as women have continued to outpace men in educational attainment, the pay gap has been stuck in a holding pattern since 2002, ranging from 80 to 85 cents to the dollar.

Gender “pay gaps” arise despite the absence of overt discrimination, labor segregation, and inflexible work arrangements, and even after the experience, education, and other human capital factors are controlled for in empirical studies (Litman et al., 2020). Connor and Fiske (2019) argue causal attributes for the gender pay gap to individual factors. Many have unintended consequences of reinforcing system-justifying ideologies that serve to perpetuate inequity and violate equality of pay right (Bornstein, 2014). It is possible that family-friendly policies in the U.S. may be keeping the pay gap from closing as gender stereotypes and discrimination remain a challenging hurdle.

Recommendations

It is a given that job satisfaction levels within the organization and job engagement levels are predictive of the overall turnover rate (Bauer et al., 2024). Additionally, research has shown that happier employees are about 12% more productive than their unhappy counterparts (He, “Happy Employee Statistics,” 2023, para 3). When male and female employees are welcomed, treated equitably, and engaged at work; they are more willing to take on additional projects to ensure all organizational goals are achieved efficiently in a timely manner. Overall, such motivation, engagement, and performance will enhance and sustain the organization's profitability in the marketplace. Employee happiness can influence career satisfaction and progression and communication across ranks and cultures, potentially reducing barriers to advancement for both men and women (Cifre et al., 2015; Langaas and Mujtaba, 2023).

Unfortunately, many employees at some point in their careers find out that others are making more money even though they may have less tenure or qualification. If you ever feel that you are not paid equitably, then this might be a good time to prepare yourself for discussing getting a raise with your boss in future opportunities by staying focused on the following three areas (Johnson, 2009):

1. Assess yourself to make sure you truly deserve a raise.
2. Prove your value to your managers and the company.
3. Demonstrate that you do enjoy your work and love being with the company / industry.

Interventions to reduce the gap are eloped from the barriers that have been identified as contributing to the pay gap. Some broad ideas stand out that could be useful to employers for more sustained progress in closing the pay gap, as follows:

1. Workplace flexibility affects how men and women balance their careers and family lives.
2. Caregiving support is a growing trend among employee benefits, including childcare benefits, especially in times of a major pandemic or recession, responding to employees' urgent needs.
3. Employers cultivating internal mobility opportunities can build skills and retain talent.
4. Greater movement into growing occupations for all workers can assist women in obtaining high paying positions.
5. Rotate people internally for cross-functional training, focus on coaching, and foster a culture that challenges employees while empowering them.
6. Target training and apprenticeship programs, especially for midcareer talent, and offer skill-enhancing opportunities.
7. Paying workers based on the worth of the job, regardless of past salary rates.
8. Organizations and governments should promote two remedies: banning salary history and promoting pay transparency (Weiss, 2024).

Enhancing wage transparency can be an effective deterrent to unfairness. Employees who understand how compensation is calculated are less likely to face discrimination and are more accountable to their supervisors. Research has shown that transparency in compensation policy can improve employee satisfaction and retention (Kim, 2021). Managers should invest in transparency as well as in bias training to make sure that all performance evaluations are transparent, fair and consistent. Creating mentorship and advancement programs for underrepresented groups can help to improve evenhandedness by addressing any existing disparities and pay discrepancies. Of course, resolving pay disparities requires a commitment to fairness and transparency. While a single pay audit or regulation cannot always eliminate salary disparities, managers and HR professionals play an important role in creating an equitable and transparent workplace for all employees. Of course, HR professionals should work with marketing department and

other relevant teams to promote company policies and build strong working relationships with stakeholders throughout the organization (Hamdan et al., 2025).

It is very clear that barriers and challenges do exist for American women, and female workers throughout much of the world. “Although significant progress has been made over the past 50 years, women still hold only a fraction of leadership positions and board seats at major companies, and the gender pay gap persists. While young women are aware of these systemic problems, the more nuanced forms of sexism that persist today often take them by surprise” (Ammerman, 2025, para 1). According to Ammerman (2025), many persistent actions have created and maintained gender imbalances where women get pushed out of the leadership pipeline, each time for different reasons. As such, there should be relevant organizational and managerial strategies that are designed to weaken and ultimately break down these barriers to enabling modern professionals to finally shatter the persistent glass ceiling. While the gap between the percentage of women and the percentage of men in the workforce is the smallest on record nowadays, women remain underrepresented in positions of power and status, with the highest-paying jobs the most gender-imbalanced. Even in fields where the numbers of men and women are roughly equal, or where women make up the majority, leadership ranks remain male-dominated (Ammerman and Groysberg, 2021). As coaches, mentors, and “cultural allies”, men should consciously intervene and regularly advocate for developmental opportunities for all workers, especially women and other minorities. To stop the persistence of inequalities in management ranks and compensation, the following are some additional recommendations:

1. Manage for gender equity and inclusion.
2. Develop an objective lens for recruiting and rewarding employees.
3. Foster a culture, where everyone matters.
4. Affirm the value of and publicly recognize the contributions of teams.
5. Speak up about biased or hurtful comments.
6. Embrace difficult conversations (Ammerman et al., 2021)

It is a good idea to conduct “pay audits” every couple of years and address any inequities immediately through a plan and creativity. Compensation for male and female professionals and managers should be innovative and structured to align with the long-term strategic goals of the organization (Isibor et al., 2025). One key best practice is to offer a combination of a base salary, performance-based bonuses, stock options, and other long-term incentives. This approach ensures that the compensation package not only motivates managers but also ties their interests to the company’s performance (Noe et al., 2023). Performance-based incentives, such as bonuses or profit-sharing, are a widespread practice that links compensation to both individual and organizational outcomes, ensuring workers are incentivized to exceed expectations. Additionally, equity-based compensation like stock options or restricted stock units helps employees and managers alike to feel personally invested in the company’s future success, thereby aligning their goals with those of shareholders. A comprehensive benefits package, which may include retirement plans, health insurance, and executive perks, is important for ensuring job satisfaction and loyalty, while also enhancing the overall compensation package.

It is true that a high salary can be a strong motivator, but it is not the sole factor influencing worker performance. According to empirical studies (Noe et al., 2023), intrinsic factors such as job satisfaction, autonomy, and opportunities for career advancement often play a more significant role in driving high performance, especially at higher levels of management and leadership ranks. While financial incentives can attract talented professionals and motivate short-term performance, they may not guarantee long-term or sustainable results if other elements of job satisfaction are overlooked. For example, some women or men may seek not just monetary rewards but also opportunities for influence and challenge within the company. Therefore, a high salary may not always lead to high performance if the organization fails to provide relevant and personalized intrinsic rewards. Organizational managers should track all policy implementations and results for learning and continuous improvements while avoiding the sunk cost fallacy or escalation of commitment paradigm. The “*sunk cost fallacy*” is a mistake that some powerful managers or organizations make when they double down on their commitment, regarding a previous bad decision, based on the misconception that the costs already incurred can be recovered in due time. An “*escalation of commitment*” is the increase of additional investments, efforts and valuable resources by high-level managers and organizations in a proven failed course of action with the assumption that things will eventually work out. If existing policies and procedures are not effective in attracting, motivating high

performance, and retaining top talent, then managers should change it instead of simply committing more resources into it and falling into the trap of sunk cost fallacy.

A practical example of effective compensation for talented professionals is the strategy of some modern technology companies. Many tech firms offer a mix of high base salaries, performance bonuses, and equity-based compensation, particularly stock options. This strategy aligns each employee's interests with the company's long-term success by ensuring that their financial rewards are tied to the company's performance. Of course, their success is not solely due to their compensation packages. A company's organizational culture, which should promote innovation, collaboration, and professional growth, often plays a critical role in ensuring high performance among talented professionals and managers. Overall, compensation must be integrated with a transparent, consistent, supportive, equitable, and inclusive work environment to be truly effective in a sustainable manner.



Figure 4 –Delegating more Tasks to a Bewildered Worker
(Source: created using ChatGPT 4.0)

The cartoon image in Figure 4 showing a male boss visually communicating and implying to a flabbergasted female worker, “Now that we have hired you, we would like to restructure this position by giving you additional responsibilities.” The employee seems surprised since she probably already feels overworked and stressed. As shown by the stunned worker's face, being inconsistent, unfair, and giving workers twice the workload and no additional salary or recognition is a quick way of creating a vicious pay cycle that deteriorates morale, satisfaction, and possibly performance. Of course, most employees enjoy being given more responsibility, authority, and accountability based on merit, enhanced qualification, and seniority, but it must

be followed by equivalent increases in direct or indirect compensation.

A transparent and consistent strategy-based salary can serve as a motivator for high performance, but it is most effective when combined with performance-based incentives, equitable compensation, and a work environment that supports each worker's personal goals. By aligning compensation with both the company's goals and the personal aspirations of modern men and women, organizations can encourage, grow, and obtain high performance through sustainable virtuous pay cycles.

Conclusion

This study focused on the importance of teaching compensation and rewards topics to modern working adults and, more specifically, it emphasized the existing salary inequity for equally qualified male and female candidates. Awareness of this inequity is important so current and future managers can ensure it does not happen to them or their workers. Despite the limitation of a small sample population of graduate students, the findings of this study underscore the importance of periodic assessments and audits to make sure everyone has a good work environment that pays them a fair salary based on merit and virtue, not traditional stereotypes which unconsciously favors males. Future researchers can study compensation equity with working adults in non-academic arenas to highlight best practices in creating sustainable virtuous pay cycles.

A fair compensation strategy is essential for fostering equity, motivation, and long-term organizational success. By ensuring that all men and women in the organization's workforce receive fair and equal pay for their contributions, companies can boost employee morale, reduce turnover, and enhance productivity that can be sustained through continued virtuous cycles. A virtuous, transparent and equitable compensation system also strengthens the organization's reputation, thereby attracting top talent and promoting a culture of trust and inclusion. Furthermore, compliance with equal pay regulations mitigates legal risks and demonstrates corporate social responsibility. Ultimately, fair compensation drives employee engagement and organizational growth while reinforcing ethical business practices.

In this modern era of technological innovations making remote and telework possible, firms and individuals are either learning, thriving and growing to attract and retain top talent, or they are experiencing complacency and dying due to biased traditions of vicious pay cycles; so, if managers can strategically choose one option, they should aim to learn, thrive and grow. Lou Holtz has been quoted as having said that, “*Ability* is what you're capable of doing; *motivation* determines what you do; and *attitude* determines how well you do it.” The purpose of a “virtuous pay and compensation” program should be strategic to attract and retain a talented workforce with the requisite ability to achieve an organization’s predetermined mission and goals, while having high “motivation” with a positive “attitude” toward a brighter future. As emphasized by the Zen philosophy, an effective virtuous compensation strategy should focus employees’ mind, commit their spirit, and control their behaviors with precision and grace. Organizations succeed because their human capital’s head and heart have the right knowledge, control, attitude, and grounded spirit to be a source of calm amid market chaos in a consistent and sustainable manner. Consequently, if the head and heart are in the right place, there's very little that a talented workforce or human capital cannot do with the right attitude and strategic compensation system.

Compliance with Ethical Standards:

- *Conflict of Interest:* There are no conflicts of interest.
- *Informed consent:* Not relevant for the study as data were already available.
- *Funding information:* This study was self-funded.
- *Ethical approval:* The research followed proper institutional research protocols.
- *Data availability.* Data can be requested from the first author.
- *Authors' contributions.* All authors contributed equally to this research.

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