

# Pay Dispersion Research: A Critical Review and Prospects

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**Abstract:** As a pivotal yet contentious mechanism influencing organizational innovation, pay gap dynamics present significant complexity in contemporary innovation-driven economies. While extant research has examined pay dispersion effects from multiple perspectives, prior studies predominantly adopt a unidimensional approach - focusing either on motivational benefits or detrimental consequences - while neglecting nuanced multilevel variations and differential impacts across employee groups. Through systematic literature synthesis, this study elucidates the critical equilibrium between individual pay satisfaction and enterprise-wide performance enhancement, revealing pay gaps' dual role as both incentive catalysts and potential disruptors. Our analysis underscores the imperative for strategic precision in pay gap implementation to optimize the balance between equity preservation and innovation stimulation.

**Keywords:** Pay dispersion; Compensation structure; Organizational justice; Motivation; Equity theory.

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## 1. Introduction

Within the complex ecosystem of organizational management, compensation systems serve as fundamental drivers of employee motivation and organizational performance. As a core strategic mechanism, compensation not only stimulates workforce diligence and engagement but also functions as a critical tool for talent acquisition and human capital optimization [1]. However, this mechanism presents a paradoxical nature: when compensation distribution violates principles of fairness, it may transform from a motivational asset into a constraint on both individual development and organizational advancement [2].

Crucially, compensation's motivational efficacy extends beyond absolute remuneration to encompass relative pay differences among employees - a frequently underestimated dimension in incentive design. While pay differentiation may foster healthy competition, excessive disparities risk undermining organizational cohesion, impairing teamwork, and ultimately diminishing both individual and collective performance. The pervasive nature of compensation disparity across organizational forms has consequently generated substantial scholarly interest in its multilevel consequences.

Existing empirical evidence reveals significant heterogeneity in findings. Some studies demonstrate conditional performance benefits of compensation disparity, while others highlight detrimental outcomes including increased turnover intentions [3]. The individual-level effects are particularly complex: while some employees respond to pay differentiation with enhanced motivation, others experience heightened dissatisfaction and withdrawal tendencies. Notably, the relationship between pay disparity and fairness perceptions remains contested in the literature.

This theoretical and empirical ambiguity underscores the pressing need to identify contextual moderators that amplify or mitigate pay disparity effects. Such investigation represents both a crucial theoretical frontier and a practical imperative for developing optimal compensation strategies that balance organizational objectives with employee well-being.

## 2. The Conceptual Scope of Pay Disparity

Pay disparity (pay dispersion) is a core human resource management issue, referring to the inconsistency in salary levels among different individuals within an organization [4]. This disparity theoretically reflects two fundamental principles of salary distribution: a larger gap tends to embody the principle of fairness based on performance, emphasizing the distribution according to contributions; while a smaller gap tends to express the principle of equality, pursuing a more balanced distribution pattern.

The classification of pay disparity is based on different comparison dimensions and can be divided into two dimensions. The primary dimension is based on the comparison scope, distinguishing between internal pay disparity (internal pay dispersion) and external pay disparity (external pay dispersion) [5]. The internal disparity focuses on the enterprise itself, describing the salary gap between employees of different job levels or performance levels; the external disparity involves cross-enterprise comparison, by comparing with industry standards or the salary levels of competitors, to assess the salary position of the enterprise's employees. The second dimension is based on the direction of the comparison job level, distinguishing between horizontal and vertical pay disparity [6]. Horizontal pay disparity explores the gap in salary among individuals within the same job level, reflecting the market value assessment of the same position; vertical pay disparity focuses on the salary gradient between organizational levels, reflecting the relationship between job promotion and salary growth. Within high-performance human resource management systems, vertical pay disparity is designed to incentivize both employees and teams, while simultaneously acting as a substitute for traditional motivation and skill-enhancement strategies [3]. The widening equity incentive gap between executives and core employees poses significant risks to organizational innovation. Research indicates that excessive disparities can undermine employee motivation, disrupt team cohesion, and trigger talent attrition, ultimately impairing the firm's

innovative capacity [7]. This phenomenon aligns with relative deprivation theory, where perceived inequity reduces engagement among lower-paid employees [8]. The impact of pay disparities varies by an employee's position relative to the team average salary. Above-average earners: A moderate increase in pay disparity correlates with enhanced task performance, likely due to status reinforcement and tournament-style motivation [9]. Below-average earners: Similar disparity increases lead to performance declines, driven by perceived unfairness and diminished morale [10]. Notably, low-wage employees exhibit higher turnover intentions as disparities grow, exacerbating talent drain. These findings underscore the need for balanced compensation designs that reconcile merit-based incentives with distributive fairness to optimize team-wide productivity.

### **3. Theoretical Perspectives on Pay Dispersions**

#### **3.1. Explanation Based on Tournament Theory**

From the perspective of tournament theory, pay gaps serve as a critical mechanism to enhance employee performance and organizational effectiveness. This theory frames compensation structures as rank-order tournaments, where pay disparities serve to motivate employees to increase their efforts in pursuit of higher rewards and status [9]. The relative performance evaluation method, which allocates pay based on comparative output, provides the foundation for this competitive framework [9]. Empirical evidence from sports economics—such as studies on golf and bowling [11]—confirms that larger prize differentials significantly improve athlete performance, validating the theory's core premise.

Within corporate settings, tournament theory conceptualizes promotion pathways as hierarchical competitions where pay gaps serve as implicit incentives, with employees vying for advancement and associated salary increases in a system where only top performers secure the rewards [9]. This competitive framework enhances motivation by establishing clear pay differentials that create tangible performance goals and drive higher productivity, while simultaneously reducing supervision costs as the competitive dynamic substitutes for direct monitoring and fosters self-driven effort [12]. Furthermore, when optimally calibrated, pay gaps between executives and staff can create a balanced incentive structure that both motivates grassroots employees and improves managerial oversight, ultimately fostering organizational innovation and performance growth [12].

In summary, tournament theory provides a powerful analytical framework for understanding how pay gaps can promote individual and organizational performance by stimulating competition and cooperation among employees. It not only reveals the importance of pay differences in incentive design but also indicates how to reasonably set pay gaps in practice to achieve the best incentive effect and organizational goals.

#### **3.2. Explanation Based on Equity Theory**

Based on the profound insights of equity theory, the impact of salary disparity on employee behavior and organizational effectiveness constitutes a complex and delicate issue. Under this theoretical framework, individuals constantly weigh their input-output ratios in their minds and compare them with those of their peers. When this self-assessment process

reveals significant inequality, an individual's sense of fairness is challenged, potentially triggering negative emotions such as anger and dissatisfaction. In an organizational context, this perceived unfairness is particularly pronounced, especially when salary differences are significant. Employees tend to make upward comparisons, feeling the gap between themselves and their higher-paid colleagues. Such comparisons not only breed jealousy and a sense of unfairness but also have a profound impact on the psychological state and behavior of low-paid employee. These emotional responses not only directly dampen employees' motivation and ability to innovate but also indirectly threaten the organization's innovation capacity and long-term development by reducing teamwork and increasing the likelihood of turnover.

At a more profound level, the phenomenon of "relative deprivation" arising from unequal compensation distribution significantly exacerbates these dynamics. Employees develop a sense of deprivation when they perceive a substantial discrepancy between their actual remuneration and what they subjectively consider to be a "fair" compensation level. In the specific context of China's labor market, the pronounced salary disparity between executives and frontline employees has not only widened socioeconomic inequalities but also contributed to labor market instability [13]. This compensation inequality creates a dual negative effect: it simultaneously diminishes job satisfaction among both employees and managers while reducing overall work productivity. These findings underscore the critical importance of addressing compensation inequality not merely as an organizational issue, but as a crucial socioeconomic challenge that directly impacts social stability and sustainable economic development.

From the macro to the micro level, maintaining salary fairness is essential for ensuring the efficient operation of organizations and the harmonious development of society. At the enterprise level, an unfair salary distribution mechanism not only increases human resource costs but also undermines overall operational efficiency [14]. Conversely, at the individual level, a fair salary system can stimulate employees' enthusiasm and loyalty, strengthening organizational cohesion; while an unfair salary system undermines the psychological contract of employees, becoming a catalyst for negative behaviors and talent loss. Therefore, developing and implementing more reasonable and fair salary distribution strategies is not only of great significance for alleviating social inequality and enhancing organizational competitiveness but also an indispensable part of promoting the sustained and healthy development of the economy and society.

#### **3.3. Explanation Based on Social Comparison Theory**

Social comparison theory offers a profound perspective on how salary disparities shape employees' attitudes and organizational atmosphere. This theory posits that individuals often position themselves by comparing themselves to others in the process of perceiving their self-worth and abilities, especially in situations of increased environmental uncertainty. Such comparisons not only involve upward (comparing to those better off) and downward (comparing to those worse off) dimensions but also influence an individual's self-evaluation through assimilation effects (moving closer to the comparison object) or contrast effects (moving away from

the comparison object.

In the workplace, employees tend to use salary as a crucial yardstick to measure their status and achievements, choosing colleagues as the most immediate comparison objects, especially within departments. Due to the shared working environment, similar job responsibilities, and easily accessible salary information, colleagues become the most prominent social comparison reference points. Therefore, when significant salary differences occur within a department, especially when lower and middle-income employees perceive inequality with higher-income colleagues, it triggers a strong sense of relative deprivation, leading them to feel unfairly treated. This perceived unfairness not only manifests as individual psychological dissatisfaction but also extends to the organizational level, eroding the harmony and cooperative atmosphere within the department. Moreover, as salary gaps increase, the rate of decline in employee performance accelerates. As a fundamental organizational unit, the unity and cooperative spirit within a department are the cornerstones of maintaining efficient operation. The dissatisfaction and sense of relative deprivation caused by salary disparities disrupt the emotional balance among employees, leading to reduced cooperation and increased conflicts [15]. Particularly important is that organizational affective commitment, a key indicator of the psychological bond between employees and the organization, is undermined when the departmental atmosphere deteriorates. When employees feel unfairly treated, their emotional attachment to the organization weakens, loyalty declines, and they may reduce their extra effort input or even consider leaving, posing a serious threat to the organization's long-term stability and innovation capacity [16].

In conclusion, from the perspective of social comparison theory, the expansion of salary differences within a department not only triggers negative social comparisons among employees, generating perceived unfairness and a sense of relative deprivation but also directly impacts the internal harmony and emotional commitment of the department, thereby posing potential risks to the overall efficiency and stability of the organization. Therefore, when designing salary systems, organizations need to carefully consider the social comparison effect, striving to build a fair and reasonable salary structure to maintain team cooperation, enhance employee satisfaction, and increase organizational loyalty.

### **3.4. Explanation Based on Behavioral Theory**

When exploring the impact of salary disparity on employee behavior and organizational effectiveness, behavioral theory focuses on analyzing the shaping effect of salary fairness on individual motivation and organizational culture. This branch of theory holds that significant salary differences not only concern the distribution of material rewards but also profoundly influence employees' psychological states and the cooperative atmosphere within the organization. According to the core principle of equity theory, when employees evaluate their own salaries, they compare them with those of others. Once they perceive injustice, they will develop negative emotions, such as a sense of unfairness and a decrease in the willingness to cooperate. It is worth noting that, compared to simply pursuing the average distribution of results, behavioral theory places greater emphasis on the fairness of the distribution process, that is, ensuring that each employee feels a sense of parity between their efforts and rewards, which can

effectively enhance team members' sense of fairness and satisfaction.

Empirical research further supports these theoretical assumptions. For instance, Pfeffer's study revealed that significant salary differences among university faculty members significantly reduced their satisfaction with work, colleagues, and salary. Research on American public university teachers also demonstrated that the disparity in salary distribution was negatively correlated with individuals' perceived salary fairness, further confirming the importance of salary fairness in maintaining employees' psychological contracts.

Within the behavioral economics framework, scholars have proposed nuanced insights into the motivational effects of pay disparities by incorporating employees' psychological perceptions. When employees perceive a significant discrepancy between their actual pay and what they consider fair compensation, their work motivation tends to decrease substantially [17, 18]. This phenomenon, termed "fair wage-effort hypothesis", underscores the importance of implementing compressed pay structures to sustain employee morale and productivity. Further advancing this discussion, relative deprivation theory elucidates how pay disparities trigger employee dissatisfaction through social comparison mechanisms. Relative deprivation refers to the psychological distress individuals experience when perceiving themselves as disadvantaged relative to a reference group. This concept was later applied to organizational contexts, demonstrating particular relevance for compensation research [19]. The theoretical framework was operationalized through the development of the Yitzhaki Index, which quantifies deprivation levels and facilitates empirical analysis of pay disparity effects [20].

In summary, behavioral theory emphasizes from a psychological perspective that the expansion of salary disparity may trigger negative psychological reactions in employees, including reduced work motivation, increased feelings of unfairness, and the adoption of coping strategies such as reduced work input and participation in political intrigues. The cumulative effect of these individual behaviors will ultimately weaken the overall effectiveness and innovation potential of the organization. Therefore, when designing salary systems, organizations must carefully consider the insights of behavioral theory and strive to create a fair salary environment that both incentivizes efficient work and maintains internal harmony.

## **4. The Antecedents and Consequences of Pay Dispersion**

### **4.1. Antecedents of Pay Dispersion**

The strength of the pay-performance linkage significantly shapes pay gap dynamics. When pay closely reflects performance, the negative association between horizontal pay disparities and employee satisfaction intensifies [21]. This occurs because transparent performance-based differentiation makes pay gaps more salient, directly affecting perceived fairness. Empirical studies further indicate that performance-contingent pay gaps influence employees' pay satisfaction and retention intentions [2]. Thus, rigorous and equitable performance management systems are critical to legitimizing pay disparities. Beyond performance, the legitimacy of pay criteria (e.g., task interdependence, perceived pay status) mediates how pay gaps affect employee attitudes. For

instance, gaps perceived as meritocratic strengthen job engagement and organizational commitment, whereas arbitrary disparities erode trust [22].

The structure of pay gaps—not just their magnitude—determines their impact. Digital transformation exemplifies this duality: it simultaneously reduces excessive gaps (by curbing principal-agent costs) and expands merit-based gaps (by rewarding skill differentials). Analysis of Chinese A-share firms reveals that digitalization boosts total employee compensation by enabling rent-sharing, disproportionately benefiting high-skilled workers [23]. However, power asymmetry distorts this process. Executives often capture disproportionate rents, widening internal pay disparities [24]. While digitalization narrows inter-firm pay gaps via technology spillovers (enhancing external fairness), intra-firm inequities may rise, exacerbating perceived injustice.

In conclusion, the formation of the pay gap is influenced by multiple factors. The correlation between performance and pay, the composition of the pay gap, the improvement of enterprise performance and changes in the employee structure brought about by digital transformation, etc., are all important factors influencing the pay gap. To formulate reasonable pay policies, enterprises need to comprehensively consider these factors to ensure the rationality and fairness of the pay gap, thereby enhancing employees' satisfaction with pay and their work enthusiasm.

## 4.2. Consequences of Pay Dispersion

The multi-dimensional impacts of pay gaps reveal a complex and double-edged nature, manifesting distinctly at the individual, team, and organizational levels.

At the individual level, pay gaps exert differential effects on employees' pay satisfaction and performance. Theoretical models, such as the labor-capital game framework, suggest that moderate pay disparities can enhance motivation by leveraging relative deprivation perceptions, thereby improving organizational performance when differences are transparently defined. However, excessive gaps may foster feelings of exploitation, eroding loyalty and productivity. Empirical studies corroborate this nonlinearity: while skill-based gaps minimally affect satisfaction when performance correlation is high [21], horizontal disparities significantly reduce it [25]. Moreover, extreme inequities exacerbate talent turnover [3] and undermine job satisfaction, ultimately impairing firm competitiveness.

From a team perspective, pay gaps exhibit heterogeneous effects. Employees earning above or equal to the team average benefit from economic security and status-driven motivation, enhancing performance [9]. Strategic pay gradients can thus incentivize high performers. Conversely, narrowing gaps alleviates perceived injustice among lower-paid members, bolstering self-esteem, job satisfaction, and team cohesion—key drivers of collective efficiency.

At the organizational level, the pay gap–innovation linkage follows an inverted U-curve. Moderate disparities stimulate innovation by rewarding effort, whereas excessive ones distort incentives due to misaligned returns [26]. Vertical (internal) gaps initially boost but eventually suppress innovation, whereas horizontal (external) executive gaps consistently promote it [27]. Notably, widening equity incentive gaps correlate with poorer patent quality and market value, threatening sustainable innovation [7].

## 5. Conclusion, Implications and Future Prospects

### 5.1. Conclusion

Based on the existing literature, the role of salary disparity in organizational management is a double-edged sword, with both positive and potential negative impacts. On the one hand, the tournament theory [9] supports salary disparity as an incentive mechanism, emphasizing its ability to stimulate employees' competitive spirit and enhance work effort, especially among senior executives and core employees, where appropriate salary differences can boost innovation and corporate performance. On the other hand, behavioral and equity theories caution that excessive salary disparity may lead to employees perceiving unfairness, reducing job satisfaction, cooperation willingness, and increasing turnover rates, and even affecting organizational innovation and overall performance.

### 5.2. Theoretical Significance and Practical Implications

Theoretically, the study of salary disparity deepens our understanding of the complex interactions between incentive mechanisms, organizational fairness perception, employee psychological states, and organizational performance. It highlights the need to balance fairness and efficiency when designing salary systems, aiming to stimulate competition and innovation while preventing negative effects. Practically, these studies offer valuable guidance to managers, suggesting that companies should consider both internal and external factors when formulating salary policies, implement differentiated salary strategies, such as adjusting salary disparities based on employees' skills, contributions, and market salary levels. At the same time, clearly defining salary structures and promotion paths can enhance employees' perception of salary system transparency and fairness, reduce perceived injustice, and thereby improve employee satisfaction and organizational cohesion.

### 5.3. Future Prospects

Future research on salary disparity should continue to expand in several directions. Firstly, cross-cultural comparative studies can further reveal the different impacts of salary disparity on employee behavior and organizational performance under different social and cultural backgrounds. Secondly, with the prevalence of remote work and global teams, exploring the new forms of salary disparity in digital environments and their effects on team collaboration, employee loyalty, and organizational identity becomes particularly important. Thirdly, the temporal nature of responses to salary disparity should be incorporated into future salary disparity research [2]. Furthermore, given the development of artificial intelligence and automation technologies, future research can explore how technological progress changes the nature of work and salary structures, and how to design salary systems that adapt to new work environments to promote fairness and efficiency. Finally, long-term tracking studies can help assess the long-term effects of salary disparity strategies, including their impacts on employees' career development trajectories, corporate sustainability, and social economic inequality, thereby providing a scientific basis for building a more fair and efficient salary management system.

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