The moderating role of gender in the relationships among job characteristics, perceived organizational support, engaging leadership, and work engagement in the Indian IT sector

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ABSTRACT

Understanding the complex relationships among job characteristics (JC), perceived organizational support (POS), engaging leadership (EL), work engagement (WE), and the moderating influence of gender is essential for organizations aiming to create inclusive and dynamic work environments. By addressing gender-related disparities in these areas, organizations can promote fairness, diversity, and employee well-being, leading to increased WE and organizational success. This study investigates the moderating role of gender on the relationships between JC, EL, POS, and WE. Primary data was collected from 360 Indian IT employees and analyzed using PLS-SEM. The study found that JC, POS, and EL significantly influence WE, with gender serving as a moderator. This suggests that the effects of these factors on WE may vary based on an individual's gender.

1. Introduction

The relationship between job characteristics (JC), perceived organizational support (POS), engaging leadership (EL), and work engagement (WE), along with the moderating role of gender, reflects a complex interaction within organizations. Job characteristics, such as autonomy, task variety, and feedback, significantly influence how employees perceive their roles and their level of engagement at work. Research suggests that some job features may be interpreted differently based on gender, with societal expectations and organizational practices shaping these perceptions. WE refers to an individual's energy and commitment to their tasks, while employee engagement includes a broader emotional and cognitive commitment to the organization's goals, encompassing factors such as job satisfaction and fulfillment, which indicate deeper involvement in both professional roles and loyalty to the organization (Xu et al., 2013; Schaufeli et al., 2002; Robijn et al., 2020; Honnamane et al., 2023)

POS, which reflects how much employees believe their organization values their contributions and cares about their well-being, plays a key role in influencing WE. Research suggests that there may be gender differences in how POS is perceived, with women often reporting lower levels of support than men due to prevailing gender biases and stereotypes in the workplace. EL, defined by leaders who inspire, motivate, and empower their employees, is also crucial in promoting WE. Gender may act as a moderating factor in how effective EL behaviors are, with studies suggesting that leadership styles and behaviors can differ between male and female leaders, potentially influencing their ability to foster employee engagement and motivation. WE, characterized by individuals' energy, dedication, and absorption in their work, is shaped by a combination of JC, POS, and EL. While research shows that men and women may experience WE differently due to factors such as job roles, leadership styles, and career goals, the complex nature of this relationship and the moderating effect of gender require further investigation (Xiao and Duan, 2014; Liu, 2016; Honnamane et al., 2023).

Gender influences how individuals perceive and interact with their work environment, affecting their engagement with JC, such as leadership

opportunities and work-life balance programs. Women may place more importance on flexibility and work-life balance due to societal expectations, while men may focus more on career progression. Gender also acts as an important moderator between EL and WE. Leadership behaviors associated with traditional masculine traits might be more positively received in male leaders, while feminine traits may be valued more in female leaders, influencing the effectiveness of leadership in engaging employees. Gender also affects how individuals POS and engage with their work, shaped by societal expectations and internal organizational dynamics. Research indicates that gender norms impact how individuals interpret support initiatives, resulting in different perceptions of support between men and women. Understanding these dynamics is crucial for organizations that aim to promote high levels of WE among all employees (Liu, 2016; Robijn et al., 2020; Honnamane et al., 2023).

Grasping the intricate web of connections among JC, POS, EL, WE, and moderating role of gender assumes paramount importance for organizations endeavoring to cultivate inclusive and stimulating work environments. By acknowledging and redressing gender-related imbalances in these realms, organizations can champion principles of equity, diversity, and employee welfare, thereby fostering elevated levels of WE and organizational prosperity.

The following sections of the manuscript are structured as follows: Section 2 provides a detailed review of relevant literature. Section 3 explains the data used and the methodology applied. Section 4 presents our empirical findings, and the study concludes in Section 5.

2. Literature review

Employee engagement refers to the extent of employees' involvement in their work, including their mental, physical, and emotional commitment. It covers aspects such as productivity, loyalty, commitment, and a sense of ownership. This concept has a broader scope than WE, which focuses specifically on employees' energy and dedication to their tasks. Employee engagement reflects a more complete understanding of how employees connect with both their work and the organization (Xu et al., 2013; Xiao and Duan, 2014; Liu, 2016; Schaufeli et al., 2002; Honnamane et al., 2023). The impact of gender on EL and WE is intricate and characterized by divergent perceptions and encounters shaped by gender dynamics in organizational contexts. Empirical evidence proposes that gender can shape leadership approaches and conduct, with females frequently demonstrating traits associated with transformative and participatory leadership. However, the interplay between gender and WE is intricate and influenced by societal norms, corporate culture, and individual inclinations. Gender stereotypes and prejudices might affect perceptions of leadership efficacy and engagement prospects,

underscoring the necessity for inclusive leadership strategies and organizational regulations fostering gender parity and nurturing a conducive workplace environment for all staff members (Gupta et al., 2017; Honnamane et al., 2023).

Gender plays a complex role in how employees POS and experience WE, influenced by societal norms, corporate culture, and individual traits. Research shows that gender can affect perceptions of organizational support, with differences between men and women due to biases and stereotypes. Gender dynamics can also influence patterns of WE, shaped by factors such as job roles, leadership styles, and career goals. Understanding and addressing these gender-based differences in POS and WE is crucial for creating an inclusive workplace that promotes equal opportunities and fosters the engagement and well-being of all employees, regardless of gender (Honnamane et al., 2023).

Gender significantly shapes job characteristics and work involvement, with research showing that men and women may experience different aspects of their jobs and engage with their duties in different ways, influenced by societal norms, workplace practices, and personal preferences. While some job attributes align with traditional gender roles, such as women being associated with caregiving and men with leadership, the relationship between gender and WE is complex. It is shaped by factors like job satisfaction, independence, and opportunities for career growth. Addressing gender disparities in job characteristics and WE is essential for fostering inclusive workplaces that embrace diversity and provide equal opportunities for all employees to thrive both professionally and personally (Honnamane et al., 2023).

The investigation of gender as a moderating factor is not limited to the literature on WE. Taluka and Juma (2016) examined the influence of perceived trust on the acceptance of mobile payment services in rural Tanzania using Partial Least Square-Structural Equation Modeling (PLS-SEM). Their study revealed a strong positive relationship but found that gender and age did not significantly moderate this link, highlighting the need for initiatives to reduce uncertainties around mobile payment systems across different demographic groups. Gelashvili et al. (2021) explored the relationship between ecological, social, and economic aspects of sustainability, analyzing the potential moderating effect of gender. They found a positive association between sustainability measures and gender in shaping the relationship between social and environmental sustainability, with important implications for industrial sectors.

Honnamane et al. (2023) examined the factors and outcomes of employee engagement in the Indian Information Technology (IT) sector using primary data from 453 Indian IT employees and applying PLS-SEM. Their findings revealed a positive and significant relationship between engaging leadership, perceived organizational support, and job characteristics as key factors influencing WE.

This study added to the existing literature by highlighting the critical role of engaging leadership, particularly in the aftermath of the COVID-19 crisis, through the perspective of employee engagement. Fig. 1 is an adapted version of Honnamane et al. (2023) to explore the moderating role of gender on job characteristics, engaging leadership, perceived organizational support, and WE using PLS-SEM. Our hypotheses, based on an extensive literature review, are:

Hypothesis 1: Gender plays a moderating role in relationship between JC and WE.
Hypothesis 2: Gender plays a moderating role in relationship between EL and WE.
Hypothesis 3: Gender plays a moderating role in relationship between POS and WE.

3. Data and research methodology

The development of India's IT sector, from its early beginnings in the 1950s to the present, has been marked by significant milestones. These include the founding of key companies like Tata Consultancy Services, Infosys, Wipro, and HCL, as well as the liberalization reforms of the 1990s that increased foreign investment. The sector saw rapid growth with the widespread adoption of the Internet in the 1990s and early 2000s, and it continues to advance with innovations in digital technologies like artificial intelligence, cloud computing, and cybersecurity. This progress has established the IT sector as a vital part of India's economy and a major source of employment (IBEF, 2024). The target group for this study includes employees from the top 10 IT companies in Bangalore, as listed on the National Stock Exchange of India.

Primary data collection was conducted through an online survey questionnaire administered to employees in Bangalore's IT sector, yielding a sample size of 360 responses gathered between April and September 2022. PLS-SEM was employed as a statistical method to analyze relationships between latent and observed variables, combining elements of factor analysis and structural equation modeling, commonly used across various disciplines, including marketing, behavioral finance, management, psychology, and sociology, to test theoretical models and hypotheses concerning variable relationships. PLS-SEM was chosen due to its capacity to handle intricate models and its adaptability to diverse data types. Fig. 1 illustrates the theoretical model employed in our study. It is an improvised version of Honnamane et al. (2023) to study the Moderating Role of Gender on JC, EL, POS, and WE.
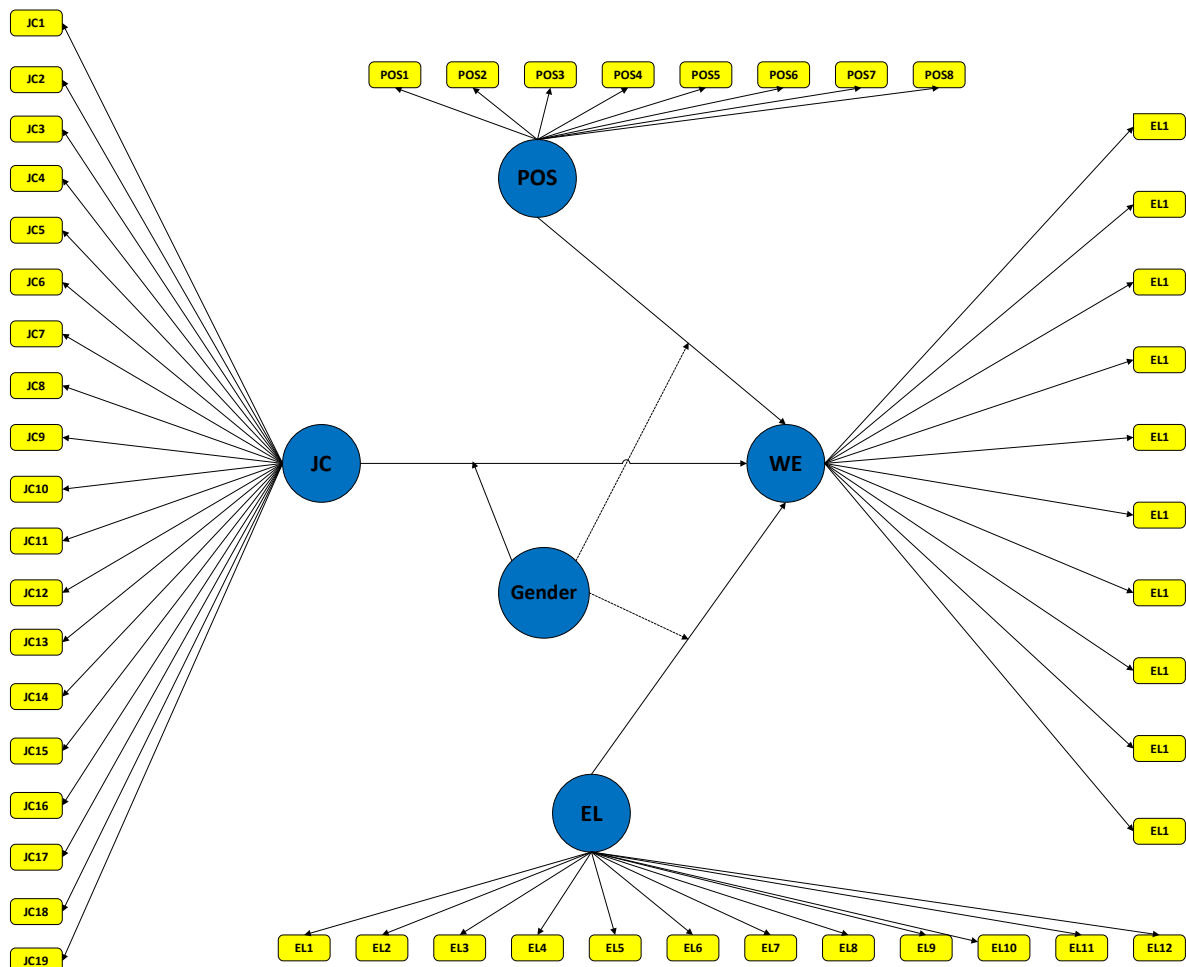

Fig. 1: Model to study the moderating role of gender on JC, EL, POS, and WE

4. Empirical findings

Table 1 elucidates the reliability and validity of the results of the study. The reliability and validity analysis reveals satisfactory internal consistency for constructs EL, JC, and POS with Cronbach's alpha values above 0.7 and composite reliability measures ranging from 0.624 to 0.776, while WE exhibits slightly lower reliability with Cronbach's alpha of 0.518 and composite reliability of 0.554. Constructs EL, JC, and POS demonstrate acceptable convergent validity with average variance extracted (AVE)

values above the threshold (Hair et al., 2010). Table 2 presents the outcomes of HTMT (Heterotrait-Monotrait) ratio analysis, unveiling discriminant validity among the constructs with values consistently falling below 0.9 thresholds, signifying that each construct delineates separate conceptual domain indicating paucity of significant intersection among the constructs EL, Gender, JC, POS, WE, Gender x POS, Gender x JC and Gender x EL thereby bolstering distinct nature of these variables within the study's framework.

Table 1: Reliability and validity results

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	AVE
EL	0.713	0.728	0.829	0.557
JC	0.753	0.776	0.828	0.449
POS	0.604	0.624	0.768	0.455
WE	0.518	0.554	0.733	0.416

Table 2: Discriminant validity of HTMT (Heterotrait-Monotrait) ratio analysis

	EL	Gender	JC	POS	WE	Gender x POS	Gender x JC	Gender x EL
EL								
Gender	0.13							
JC	0.654	0.103						
POS	0.7	0.144	0.582					
WE	0.93	0.241	1.002	0.883				
Gender x POS	0.311	0.03	0.295	0.964	0.432			
Gender x JC	0.294	0.013	0.859	0.34	0.604	0.342		
Gender x EL	0.872	0.032	0.315	0.314	0.486	0.337	0.346	

Table 3 shows the path coefficients that illustrate the relationships between EL, POS, and JC with WE, focusing on the moderating effect of gender. The coefficient for "EL" to "WE" is negative (-0.177), meaning that an increase in EL is associated with a decrease in WE. The coefficient for "Gender" to "WE" is positive (0.135), suggesting that individuals of a particular gender show higher levels of WE. "JC" has a positive coefficient (0.265), indicating that better job characteristics are linked to increased WE. POS also has a positive coefficient (0.147), showing that perceived support from the organization is associated with higher WE.

Table 3: Path coefficient results

	Path coefficients
EL -> WE	-0.177
Gender -> WE	0.135
JC -> WE	0.265
POS -> WE	0.147
Gender x EL -> WE	-0.027
Gender x POS -> WE	0.032
Gender x JC -> WE	0.079

Fig. 2 illustrates the interaction effect of gender on EL, POS, and JC. The interaction between "Gender" and "EL" has a negative coefficient (-0.027), indicating that the relationship between EL and WE differs by gender, with EL potentially having a stronger negative effect on WE for certain genders. The interaction between "Gender" and "POS" has a positive coefficient (0.032), suggesting that the relationship between POS and WE may vary by gender, with POS possibly having a stronger positive effect on WE for some genders. Similarly, the interaction between "Gender" and "JC" has a positive coefficient (0.079), implying that the relationship

between JC and WE may differ by gender, with JC potentially having a stronger positive effect on WE for certain genders. Overall, the results suggest that gender moderates the relationships between EL, POS, JC, and WE, meaning the impact of these factors on WE may vary based on an individual's gender.

The study's results show that EL has a negative effect on WE, meaning that as EL increases, WE decreases. This aligns with the idea that traditional masculine traits may be more valued in male leaders, potentially affecting their ability to engage employees effectively. Both JC and POS have positive effects on WE, indicating that favorable job conditions and organizational support are linked to higher WE. This supports the view that employees' perceptions of their jobs and organizational support shape their WE. The positive coefficient for gender suggests that individuals of a specific gender show higher levels of WE, which aligns with societal expectations and workplace dynamics, influencing how they perceive and engage with their work environment.

Based on the evidence, all three hypotheses are validated and accepted. These hypotheses collectively suggest that gender plays a key role in shaping the relationship between workplace factors and WE. Specifically: 1) Gender influences the relationship between JC and WE, meaning certain job aspects may affect engagement differently for men and women. 2) Gender affects the relationship between EL and WE, indicating that leadership behaviors may have different impacts on engagement for male and female employees. 3) Gender moderates the link between POS and WE, suggesting that organizational support may

influence engagement differently for men and women. These findings underscore the importance of considering gender dynamics when examining the relationship between workplace factors and employee engagement.
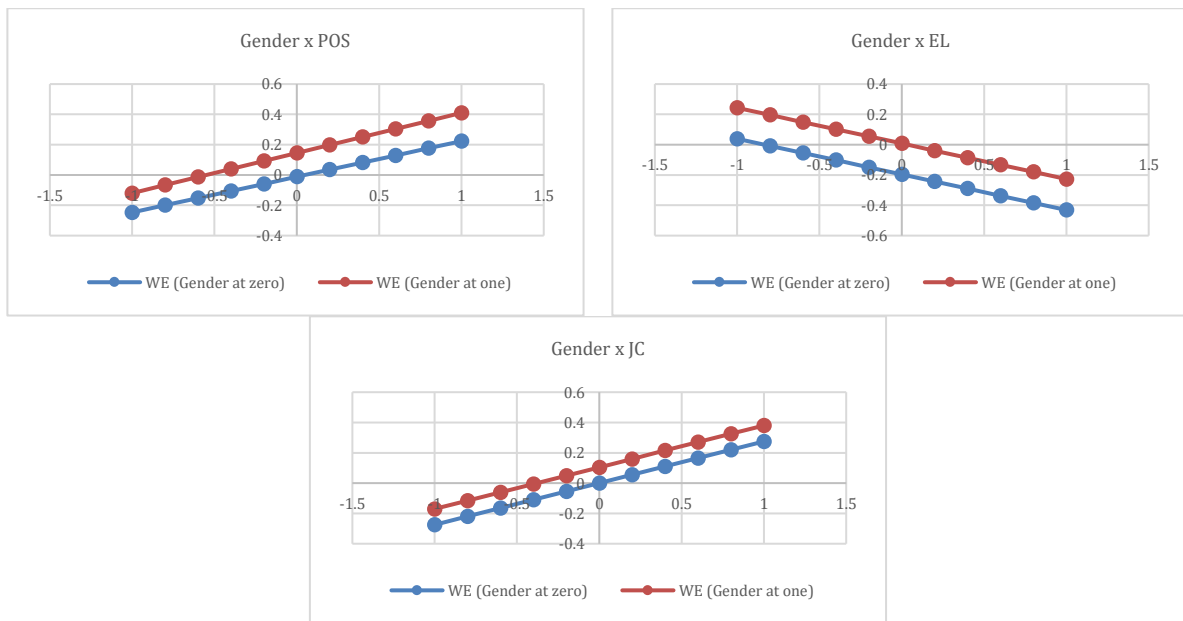

Fig. 2: Interaction effect of Gender x EL, Gender x EL, and Gender x JC

5. Conclusion

The complex interaction between JC, POS, EL, and WE, with gender acting as a moderating factor, creates a challenging dynamic in organizations. Job attributes like autonomy, task variety, and feedback play a significant role in shaping employees' views of their roles and their engagement at work, which may be influenced by societal norms and organizational standards. The key finding of this study highlights the strong impact of job attributes, organizational support, and leadership on WE, with gender moderating these effects, suggesting that the influence of these factors on WE can vary depending on an individual's gender.

However, the study's cross-sectional design and focus solely on employee data limit its ability to capture changing relationships and perspectives from other stakeholders. The use of self-reported data may introduce bias, and the lack of consideration for other demographic factors limits a deeper understanding of these relationships. Future research could explore the moderating or mediating effects of variables like age, education, and work experience to provide more insights into these complex relationships. Further studies could also examine gender dynamics in different sectors and regions with larger sample sizes for a more thorough analysis.

Compliance with ethical standards

Ethical considerations

All participants provided informed consent, and their confidentiality was ensured. The study was approved by the institutional ethics committee of GITAM School of Business (GSB), Hyderabad, and participation was voluntary, with the right to withdraw at any time.

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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