

## **Role of Female Leadership in Employee Job Satisfaction: Transformation or Transaction?**

*(Peranan Kepimpinan Wanita Pada Kepuasan Kerja: Transformasi atau Transaksi?)*

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### *ABSTRACT*

*Females generally experience limited opportunities for promotion to leadership positions. A good model of leadership could motivate subordinates in organizations and hence promote effective and efficient operational performance. This serves as a crucial point as the demand for emotional and psychological support in the workplace has been increasing among employees. Few studies had emerged in which female leadership placed itself into employee satisfaction and organisational performance as practical and eminent. This study examines the impact of female transformational leadership and transactional leadership on employee job satisfaction in Malaysia, using transformational-transactional leadership theory. It can validate whether majority of the leadership theories developed in the western and developed world are applicable in the context of developing countries like Malaysia. The data collection is sourced from 306 employees who work for female leaders in the Malaysian small and medium sized enterprises. This study employs Partial Least Square Structural Equation Modelling for data analysis. The results show that both transformational leadership as well as transactional leadership positively affect employees' job satisfaction. The finding provides implication for an effective female leadership formation as well as recommendation to female entrepreneurs for enhanced employees' job satisfaction.*

*Keywords: Female leadership; transformational leadership; transactional leadership; job satisfaction; gender equality; malaysian small & medium sized enterprises*

### *ABSTRAK*

*Secara amnya, golongan wanita kurang mendapat promosi ke jawatan kepimpinan. Model kepimpinan yang baik boleh memotivasikan pekerja bawahan dalam organisasi dan seterusnya mempromosikan prestasi operasi yang berkesan dan efisien. Ini penting dalam dunia pasca pandemik COVID-19 di mana pekerja terutama memerlukan sokongan emosi dan psikologi. Namun demikian, kajian yang melibatkan konteks kepimpinan wanita dalam kepuasan pekerja adalah amat kekurangan. Kajian ini mengkaji kesan kepimpinan transformasi wanita dan kepimpinan transaksional terhadap kepuasan kerja pekerja dalam konteks Malaysia, menggunakan teori kepimpinan transformasi-transaksional. Ia mampu mengesahkan sama ada kebanyakan teori kepimpinan yang dibangunkan di dunia barat dan negara maju boleh digunakan dalam konteks negara membangun seperti Malaysia. Data yang dikumpulkan diperolehi daripada 306 orang pekerja yang bekerja di bawah kepimpinan wanita dalam perusahaan kecil dan sederhana di Malaysia. Kajian ini menggunakan Pemodelan Persamaan Struktur Kaedah Kuasa Dua Terhad untuk menganalisa data. Keputusan kajian menunjukkan bahawa kepimpinan transformasional; dan kepimpinan transaksional mampu memberi kesan positif dan signifikan terhadap kepuasan kerja pekerja. Penemuan ini memberikan implikasi untuk pembentukan kepimpinan wanita yang berkesan serta cadangan kepada usahawan wanita untuk meningkatkan kepuasan kerja pekerja.*

*Kata kunci: Kepimpinan wanita; kepimpinan transformasi; kepimpinan transaksi; kepuasan kerja; kesamarataan jantina; perusahaan bersaiz kecil dan sederhana malaysia*

### **INTRODUCTION**

The extent of organizations' success relies on employees' job satisfaction and effectiveness of leaders (Malik et al. 2017). A good model of leadership could encourage leadership achievement (Sciocluna Lehrke & Sowden 2017). Otherwise, organisational and even societal chaos would occur. Take the recent protest of the Malaysian National Union of Bank Employee (NUBE) against

bank CEOs as an example (Business and Human Rights Resource Centre 2024). The former accused the latter for the denial of work life balance, NUBE's activities, job security, fair remuneration, and others alike. Additionally, the Covid-19 pandemic disrupted traditional work structures (Diab-Bahman & Al-Enzi 2020), resulting in heightened stress, burnout, and uncertainty among employees (Yıldırım & Solmaz 2022; Xueyun et al. 2024). These phenomena highlight the importance of having leaders who provide support, clear communication, and a sense of purpose in rebuilding trust, engagement and satisfaction.

On the other hand, many countries, including Malaysia, are striving to achieve United Nations Sustainable Development Goal 5, which aims to promote gender equality and empower all women and girls. For instance, *Dasar Wanita Negara dan Pelan Tindakan Pembangunan Wanita 2025-2030*, is one of the most recent policies to empower women to participate meaningfully in decision-making roles and strategic leadership positions (Jabatan Pembangunan Wanita 2025). Despite the efforts of the government and policy makers, the involvement of women in top leadership positions has decreased constantly. Based on a sample of 86 businesses in Malaysia, Grant Thornton Malaysia (2025) reported that women senior management decreased from 40.4% in 2023 to 39.6% in 2024 and further worsened to 36.2% in 2025. Meanwhile, the same report also indicated that the number of businesses without female senior management increased dramatically from 2.8% in 2024 to 9.3% in 2025. Indirectly, all these statistics imply that female management is unfavorable in Malaysia. What's wrong with the female leadership style in Malaysia? Which female leadership styles should be adopted in order to make employees feel more satisfied with their job?

Furthermore, based on the data released by the Ministry of Economy (2024), micro, small and medium enterprises, as part of the SME sector, contributed RM613.1 billion to Malaysia's GDP, accounting for 39.1 per cent of the overall economy. Female involvement in micro, small and medium enterprises now represent 21% of SMEs in Malaysia (Women Entrepreneurs Review 2025). In other words, female entrepreneurs are becoming a significant force in the country's economic landscape. Therefore, it is crucial to identify which female leadership style should be adopted by female entrepreneurs for the enhancement of employees' job satisfaction and work performance.

Recently, a stream of research has supported the argument of Bass and Avolio (1994) that female leaders are more transformational than the male counterpart which it makes greater positive impacts to employees and organization (Buljan Šiber et al. 2023; Khan et al. 2023). This is because female and male differ across a range of behavioural traits such as risk preferences, competitiveness and rational orientation, and are affected by the cultural environment including cultural norms, socialization processes, and institutional contexts (Costa Jr et al. 2001; Alghamdi et al. 2018). With higher degree of empathy and consideration, it is believed that female leadership style could be more effective in improving organizations' retention rate as traditional methods like monetary reward, compensation, and promotions are ineffective to hiring and retaining workers (Andrade 2023).

However, much of the existing literature on the relationship between leadership styles and job satisfaction treats leadership as gender-neutral (Abd Rahman 2021; Allozi et al. 2022; Karim 2024) and they mainly focus on large organisational contexts (Idrisu & Mohammed 2025; Khan et al. 2025). Although emerging studies highlighted that female leaders tend to exhibit higher level of empathy, relational orientation, and supportive behaviours (Rahman et al. 2014; Xie et al. 2021; Ma et al. 2023), empirical evidence examining the relationship between female leadership styles and employee job satisfaction remains limited, particularly within the context of Malaysian SMEs. Additionally, the unique structural and resource constraints of SMEs may shape leader and employee dynamics differently, suggesting that findings from larger organization may not be directly applicable.

To address the existing research gap, this study aims to examine the impacts of female transformational leadership and transactional leadership on employee job satisfaction in the Malaysian SMEs. This study employs Partial Least Square Structural Equation Modelling for data analysis on a sample of 306 employees who work under female leaders in the Malaysian small and medium sized enterprises. The empirical models in this study is drawn based on the theories developed by Bass (1985).

According to the leadership theory developed by Bass (1985), it consists of transformational, transactional and laissez-faire leadership. Transformational leadership is linked to intrinsic satisfaction because it motivates employees through internal factors such as meaningful work, personal growth, and self-fulfillment (Jessen & Bro 2018). On other hand, transactional leadership is associated with extrinsic satisfaction as it relies on external rewards or performance-based incentives (Abd Razak & Ismail 2018; Skopak & Hadzaihmetovic 2022). However, laissez-faire leadership is a completely ineffective leadership due to its passive "wait-and-see" feature (Bass 1990). Hence, this leadership style is more appropriate for highly skilled professions where subordinates need minimal supervision and limited guidance or feedback. Therefore, the theory is not included in the discussion as it may not be appropriate for our targeted respondents who are from different backgrounds and fields.

Based on Cuthbert et al. (2023), the externalisation of gender inequality issues highlights the need for further investigation. Accordingly, this study contributes to the existing leadership literature by examining leadership theories in Malaysia, with a specific focus on female leadership. This has extended the existing leadership literature in the context of developing countries that mainly focused on political aspect rather than the administrative counterpart (Ohemeng et al. 2018)

For managerial implication, this study provides insight into female leaders in leadership style practice. The female leaders in Malaysian SMEs may create a supportive and collaborative working environment by inspiring and motivating the employees to achieve the organisational aims as well as their personal goals. Additionally, the rewarding system is also crucial in stimulating higher employees' job satisfaction.

## LITERATURE REVIEW

### LEADERSHIP AND JOB SATISFACTION: THEORETICAL PERSPECTIVE

#### CLASSICAL THEORIES

Apart from the three pioneering theories of leadership - trait theory, behavior approach and contingency approach, documented in Passakonjaras and Hartijasti (2020), the classical theories governing relationship between leader and worker job satisfaction has seen evolution from servant leadership (Greenleaf 1979), to Kouzes and Posner's (2006) five practices of exemplary leadership to role modelling, inclusive discussion culture and legislated equality (Metcalf et al. 2022). Servant leadership theory focuses on altruistic values to interact with subordinates for their growth – developing others (Greenleaf 1979). Despite its classical nature, the theory is vital to today's organizations that are less than suitable in adopting top-down authoritative approaches by female leaders (Andrade 2023).

However, servant leadership was criticized for its ineffectiveness in assisting others progress in career path due to its difficulty in providing critical and negative feedback and its over-idealistic feature (Alvesson & Einola 2019), thereby negating its concept of “developing others”. According to Andrade (2023), experience, personality, values as well as success and failures determine the effectiveness of leadership on employees' job satisfaction, but not the style associated with support and empathy. The leadership obstacle is also noted in Kouzes and Posner (2006)'s theory, underscoring the importance of humanistic engagement. Accordingly, servant leadership would only be appealing if the follower is complemented by tough love (Andrade 2023) that involves criticism aimed from growth, constructive feedback and the mechanism through which the feedback could assist followers to grow. The critique regarding servant leadership provides an important insight to this study – employees' job satisfaction will be stimulated by not only psychological factors but it is also determined by monetary rewards. This study investigates the role of both transformational and transactional leadership styles in employees' job satisfaction.

Despite the criticisms about limitation in aspects of uplifting and improving followers, transformational leadership and transactional leadership (Bass 1985) are still highly appealing for increasing employees' job satisfactions in today's organizations (Passakonjaras & Hartijasti 2020, Hui & Long 2024, Marliana et al. 2024). Transformational leadership emphasizes shared authority and inspires followers through role modelling and vision (Khan et al. 2025). On the other hand, transactional leadership adopts a top-down approach centred on exchanges between leaders and subordinates (Kiss 2026). Practically, these leadership styles are in us, depending on condition and need (Bass 1985; Islam & Noor 2025). Transformational leaders motivate and inspire employees by fulfilling their needs, moving from lower to higher levels as outlined in Maslow's hierarchy of needs. Meanwhile, transactional leaders reward performance through contractual exchanges. Taken together, leadership shifts from dominance to empowerment across these leadership styles (Dambe & Moorad 2008).

#### MODERN THEORIES

Rafferty and Griffin (2006) extended the transformational leadership style by incorporating the concept of vision – the charismatic expression of a positive direction for future via inspirational communication and development of confidence. Workers who obtain support, inspiration, and quality guidance tend to experience job as satisfying and sense of belonging, thereby improving their performance and effectively contributing to the achievement of organisational goals (Mickson & Anlesinya 2020). This is in sharp contrast to the case where subordinates concur with, accept, or adhere to the leader in return for praise, rewards, and resources, or to evade punitive measures (Mickson et al. 2021). Rewards and recognition are granted based on subordinates' successful execution of their tasks and responsibilities (Podsakoff et al. 1982). Consequently, the leader plays a crucial role in elucidating objectives, delineating compliance standards, and establishing consequences for subordinates who fail to adhere to those standards (Bass et al. 2003), thereby entailing vigilant oversight for deviations, errors, and faults, followed by prompt remedial measures upon their occurrence.

Collectively, it was found that transactional leadership promotes stability and transformational leadership which brings about significant changes for the organization and its subordinates (Cook & Hunsaker 2001), could theoretically complement each other in increasing employees' job satisfaction. Leaders who exclusively employ transformational leadership without transactional leadership will only serve to motivate and inspire their team members to be intellectually stimulated and creative. They will not be as concerned with the organisational structures and work processes that can facilitate the effective dissemination of knowledge and information within the business (Bryant 2003). On the contrary, leaders who demonstrate transformational leadership traits followed by transactional leadership, is said to have the optimal leadership profile (Bass & Avolio 1994) in increasing employee's job satisfaction. Anyhow, due to variation in cultural values, effective leadership differ across nations (Shahin & Wright 2004). Effective leaders need to modify their approach as they deal with various situations, people, and issues (Atwater & Bass 1994).

## LEADERSHIP STYLE AND JOB SATISFACTION: EMPIRICAL PERSPECTIVE

Employees' job satisfaction, the affective and cognitive extent of pleasure for work (Edwards et al. 2008), is always central in both the practical business planning and operation as well as economic research. This is because it is closely associated with employees' performance, behaviours, and business strategies (Desler 2010). The extent of employees' job satisfaction could be in turn, influenced by leadership style (Mickson & Anlesinya 2020). Effective leaders can influence subordinates to move towards achieving organisational goals (Mgaiwa 2023) as there are well-grounded people who can accurately articulate their visions to the followers (Smith 2006; Derue et al. 2011).

The pioneering Bass (1985)'s Transformational and Transactional Leadership Theories were analyzed from the angles of sectors, industries, and regions. In the medical sector, transformational leadership is preferred than the transactional counterpart, in increasing employees' job satisfaction (Negussie & Demissie 2013). Similar finding was revealed in the Pakistani Islamic banking sector (Malik et al. 2017). However, Kariuki et al. (2021) identified an important conceptual gap in the banking-sector related study, namely the inappropriate deployment of constructs, particularly in the microfinance context. This implies the potential flaws of findings in the existing literature (the two leadership styles on job satisfaction). Transformational leadership is also appealing in the information technology sector (Sunarsi et al. 2021) as well as the commercial sector (Riaz & Haider 2010). By contrast, transactional leadership is preferred than the transformational counterpart in the context of public sector (Nguyen et al. 2022). The contradictory findings in these different sectors indicate that the relative effectiveness of the two leadership styles in motivating employees is sector-specific. Moreover, these inconsistencies highlight the role of contextual factors in shaping leadership outcomes. In SMEs, resources are limited and interactions between leaders and employees are closer, which may influence how leadership styles are enacted. However, evidence on leadership styles and job satisfaction in female-led SMEs in Malaysia remains limited. Hence, investigating this relationship in the context of female-led SMEs may provide new insights across gender and organisational context.

Empirical findings regarding the leadership - job satisfaction linkage are also varying based on regions. In the Asian region, transformational leadership style is effective in stimulating employees' job satisfaction (Passakonjaras & Hartijasti 2020; Oktafia et al. 2024). These findings suggest that in Asia, job satisfaction is not generally experienced due to goal-oriented reward system of transactional leadership. Instead, individuals derive contentment from positive transformations and the fulfilment of their potential under the inspirational guidance and motivation of transformational leaders (Sunarsi et al. 2021).

In the African continent, however, only transactional leadership is workable (Mickson & Anlesinya 2020; Yohannes & Wasonga 2023; Mgaiwa 2023;). This could be due to relatively poor condition in the latter that monetary reward is prioritised, compared to rewards in psychological terms. Transactional leaders offer concrete rewards such as bonuses, gifts, or promotions when subordinates fulfil or surpass expectations (Skopak & Hadzaihmetovic 2022). This appreciation profoundly motivates and satisfies employees' need for survival, leading to enhanced job satisfaction (Karim 2024). Supporters of transactional leadership also include Mickson et al. (2021) as well as Abd Rahman (2021).

In summary, the extant empirical literature revealed that the effects of transformational and transactional leadership styles on job satisfaction varies among sectors and regions. This finding corroborates to the one-size-does-not-fit-for-all notion. Additionally, the context of existing empirical studies is confined to sectors such as education, banking and public sector. This study fills in the gap by analyzing transformational and transactional leadership – job satisfaction linkage, in the SMEs context which include the above-mentioned sectors as well as others. Accordingly, greater generalizability of finding can be realized.

## THE GENDER PERSPECTIVE

In the study on leadership and employee job satisfaction by Mickson and Alesinya (2020), it was found that the incorporation of gender as control variable affected the result of the said relationship, implying that gender does play an important role in employee job satisfaction in relation to leadership styles. Despite its limitation in number, leadership in gender differences has been analysed from the angles of society-level mechanism (Metcalf et al. 2022) and organisational aspects (Bass 1985; Bass et al. 1996; Rana et al. 2016; Yohannes & Wasonga 2023). In the pioneering work of Bass et al. (1996), for instance, female is no less than a transformational leader than the male counterpart. The assertion is still applicable in the modern world. For instance, Khan (2024) found that female leaders are more driven than their male counterparts to possess a range of leadership behaviours that are especially useful in modern contexts, specifically transformational and contingent reward behaviours. While Yohannes and Wasonga (2023) in the Ethiopian school context and Ghani et al. (2018) in the Malaysian government linked corporation's context are also supporters of female's superiority in transformational and transactional leadership. As opposed by Alghamdi et al. (2018), the researchers in the Saudi Arabian nursing industry found contradicting result, reflecting the persistent gender stereotype in this middle east's "sex-role spillover" in male-dominant and gender-segregated society. The results revealed a significant effect of gender of manager on 600 nurses in 6 public general hospitals in Saudi Arabia. Notably, nurses reported greater job satisfaction and perceived transformational leadership style when working for male managers. These findings imply that apart from leadership styles, gender does also matter in determining employees' job satisfaction.

There were also cases where no significant gender differences were identified (Nazim & Mahmood 2018; Rana et al. 2016 in the Pakistani schools’ context) for leadership style – job satisfaction relationship. Taken together, it is found that despite the varying (depending on nature and cultural background of the particular societies under studied) findings (among the literature) between female and male superiority in both transformational and transactional leadership styles’ effectiveness on employees job satisfaction, majority of the scholars found females’ superiority (in possessing the two leadership styles’) in increasing employees’ job satisfaction. Accordingly, the conceptual framework, showcasing the hypothesised linkages among female transformational leadership, transactional leadership, and employees job satisfaction are illustrated in Figure 1.

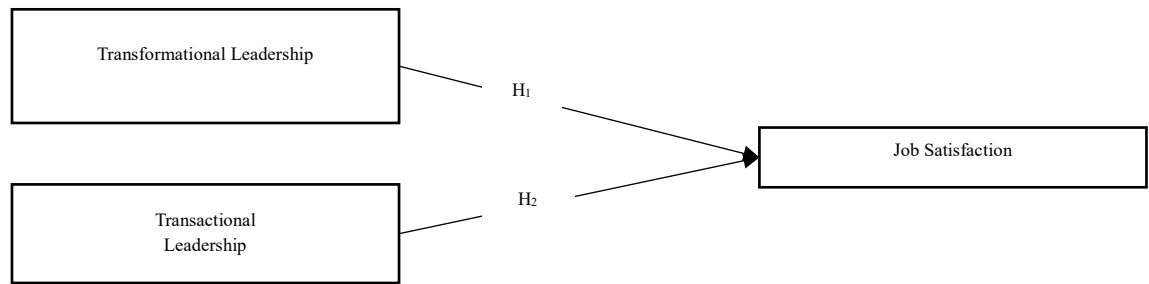


FIGURE 1. Conceptual framework

Based on above discussion, the following hypotheses are proposed:

- H<sub>1</sub> Female transformational leadership style has a positive effect on employee job satisfaction among employees in Malaysian SMEs.
- H<sub>2</sub> Female transactional leadership style has a positive effect on employee job satisfaction among employees in Malaysian SMEs.

It is also hypothesised that leaders’ gender (difference) does matter in understanding leadership style (Ayman & Korabik 2010) and employee’s preference. Joseph-Richard and McCray (2023) who found varying leadership effectiveness between female and male leaders further supported the formation of the hypothesis.

This study presents a comprehensive theoretical, empirical as well as methodological framework for knowledge advancement by examining the effects of Malaysian SMEs’ female transformational and transactional leadership styles on employees’ job satisfaction. Following Meng and Neil (2023) who promote gender equity diversification in organisational leadership, analysing gender from the leaders’ point of view extends the existing literature that focuses on gender of employees (Bass et al. 1996; Rahman et al. 2014; Mberia & Midigo 2016; Nazim & Mahmood 2018; Mickson & Anlesinya 2020).

Majority theories of leadership share a common assumption that they can be adopted universally as they tend to place attention on similarities instead of difference. According to Kim and Lee (2011), for instance, while transformational leadership behavior tends to nurture employees’ job satisfaction by instilling confidence and emphasising the value of task-related outcomes, transactional leadership tends to demotivate employees. Nonetheless, the “widely accepted” transformational leadership theory and the U.S. based theories are inappropriate in the oriental context, compared to the transactional counterpart (Pillai et al. 1999). Also, low-skilled workers prefer the latter than the former leadership style (Hofstede 1984).

To conclude, it is hypothesised that both transformational and transactional leadership styles of female leaders’ positively influence employees’ job satisfaction. Also, gender plays a role in understanding leadership style (Ayman & Korabik 2010) and employee’s preference. This study presents a comprehensive theoretical, empirical as well as methodological framework for knowledge advancement by examining the effects of Malaysian SMEs’ female transformational and transactional leadership styles on employees’ job satisfaction. Analysing gender from the leaders’ point of view extends the existing literature that consists of studies focusing on gender of employees but not leaders (Bass et al. 1996; Rahman et al. 2014; Mberia & Midigo 2016; Nazim & Mahmood 2018; Mickson & Anlesinya 2020). Looking at the latter is novel in gender literature as there were limited research on women leadership, though they are no less transformational than the men counterpart (Bass et al. 1996).

## RESEARCH METHODOLOGY

### RESEARCH DESIGN

This study employed a quantitative approach to examine the effect of female leadership on employees’ job satisfaction and work engagement within Malaysian small, medium, and enterprise (SMEs). The context of the study focuses on employees working

under the leadership of female entrepreneurs in Malaysia. The research used a cross-sectional survey design to collect data from employees across different SMEs.

#### SAMPLING AND DATA COLLECTION PROCEDURE

The population for this study comprised employees working under female leadership in Malaysian SMEs. Purposive sampling was used to ensure that participants had relevant experience and exposure to the issue studied, supporting the study's internal relevance. The primary selection criterion was that the employer must be female. Questionnaires were distributed both online (via Google Forms) and in print. The duration of data collection was initiated in May 2025 and ended in September 2025 using two methods: online Google Forms and print questionnaires. More than 400 responses were collected, of which 306 were valid after screening for missing data. The data were then prepared for analysis using PLS-SEM to examine the relationships between female leadership style and employee outcomes.

#### MEASUREMENT DEVELOPMENT

The questionnaire was developed in three languages (Chinese, Malay, and English) and structured in three sections. The first section collected demographic information of respondents and details about their company. The second section measured transformational and transactional leadership under female leaders. The third section measured employees' job satisfaction. Responses were collected using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The questionnaire was validated through a pilot study of 30 sets to ensure that items were clearly understood by respondents.

A 30-item scale was used to measure multidimensional transformational leadership, developed by Eagly et al. (2003) and Bass et al. (2008). It consists of five dimensions including idealised attributes, idealised behaviors, inspirational motivation, intellectual stimulation, and individualised consideration. Sample items include "My manager goes beyond self-interest for the good of the group" and "My manager emphasizes the importance of having a collective sense of mission." The inter-item consistency score was 0.967, indicating very good reliability.

For transactional leadership, it was measured using a nine-item scale developed by Eagly et al. (2003) and Bass et al. (2008). Sample items include "My manager expresses satisfaction when I meet expectations" and "My manager discusses in specific terms who is responsible for achieving performance targets." The Cronbach's alpha for this nine-item scale was 0.901, indicating very good reliability.

A nine-item scale was employed to operationalise job satisfaction, constructed by Vorina et al. (2017). Sample items include "I am satisfied with the amount of salary" and "I am satisfied with my relationship with colleagues." The inter-item consistency was 0.901, indicating good reliability.

#### DATA ANALYSIS

All data was analysed using PLS-SEM 4.0 to examine the relationships among components. Although the sample size (N=306) is not small, PLS-SEM remains appropriate because it performs well under moderate sample sizes, supports prediction-oriented research, and is tolerant of non-normal indicators. The method also allows simultaneous evaluation of construct reliability/validity (e.g., CR, AVE) and hypothesis testing in a single framework. The sample size of 306 achieved the minimum requirement of 384 observations (Kreigic & Morgan 1970) required to achieve 80% statistical power at an effect size of 0.15 (Faul et al. 2009). This indicates that the sample size is sufficient and provides adequate power to detect the expected effect size and ensure statistical significance. Indicator loadings, VIF, and path coefficient consistency were also examined.

The PLS-SEM analysis was conducted in two distinct phases to ensure methodological rigor. In Phase 1, the outer (measurement) model was assessed to confirm that the indicators measured their intended latent constructs reliably and validly (e.g., factor loadings, Cronbach's alpha/CR, AVE, discriminant validity such as HTMT, and collinearity/VIF). Establishing measurement quality first is essential because weak reliability or poor validity can bias structural estimates. In Phase 2, after the measurement model met the pre-set criteria, the inner (structural) model was evaluated to test the hypothesized relationships (e.g., path coefficients and their significance via bootstrapping,  $R^2$  and  $Q^2$ /predictive relevance). This two-step procedure prevents interpreting causal paths based on unreliable measures and strengthens the credibility of the study's conclusions.

The reliability and validity of the latent variables in the measurement model (outer model) were assessed by reliability, convergent validity, and discriminant validity assessments. The measurement items were adapted from Multifactor Leadership Questionnaire (MLQ) in prior studies to ensure content relevance and comparability. Minor wording adjustments were made to suit to female leadership context and to improve clarity, without changing the underlying construct meaning. Before data analysis, reliability and validity thresholds were pre-specified based on widely used guidelines: Cronbach's alpha ( $\alpha$ ) and Composite Reliability (CR)  $\geq 0.70$ , Average Variance Extracted (AVE)  $\geq 0.50$ , and standardised factor loadings  $\geq 0.70$  (items between 0.40–

0.69 were considered for removal only if they reduced CR/AVE). Discriminant validity was assessed using HTMT ( $< 0.85 / < 0.90$ ) and/or Fornell–Larcker criteria. These criteria were applied consistently to determine adequacy of the measurement model.

The second stage involved the assessment of the structural model (inner model) to confirm that only trustworthy and valid measures of constructs were utilised to examine the nature of the relationships within the overall model. Notably, support staff from SMEs were invited to participate in this survey. The respondents comprised non-managerial employees who worked directly under female leaders within their respective organizations. These employees, who work under female leadership (style), were required to provide their perceptions of their immediate supervisors’ leadership styles. In this study, the leaders referred to the respondents’ direct supervisors or managers, ensuring that participants had sufficient interaction and familiarity to evaluate their leadership behaviors accurately.

#### DEMOGRAPHIC PROFILE OF RESPONDENTS

Table 2 depicts the demographic profiles of respondents in this study. As shown in the table, majority of the respondents (61%) were female. The largest ethnicity group was Chinese (59.8%) and followed by Malay (31.4%). Around 66% of the respondents were above 31 years old and 63% held a bachelor’s degree or above. About 58.5% of respondents had been with their companies for less than five years and most of the respondents engaged in manufacturing and services sectors.

TABLE 2. Respondents profile

Characteristics	Frequency	Percentage
<b>Gender</b>		
Male	122	39.9
Female	184	60.1
<b>Age</b>		
Less than 20 years	14	4.6
21-30	87	28.4
31-40	101	33.0
41-50	68	22.2
More than 50 years	36	11.8
<b>Ethnicity</b>		
Malay	96	31.4
Chinese	183	59.8
Indian	20	6.5
Other	7	2.3
<b>Highest education attained</b>		
SPM	65	21.2
STPM	6	2.0
Diploma	44	14.4
Bachelor’s degree	94	30.7
Master’s degree	49	16.0
Doctorate	44	14.4
Other	4	1.3
<b>How long have you been attaching with this company?</b>		
Less than 1 year	74	24.2
1-5 year	105	34.3
6-10 years	49	16.0
More than 10 years	78	25.5
<b>Which sector are you currently engage?</b>		
Agriculture	2	0.7
Mining and quarrying	2	0.7
Manufacturing	69	22.5
Construction	22	7.2
Services	80	26.1
Retailing	10	3.3
Other	121	39.5

#### EVALUATION OF MEASUREMENT ITEMS

Prior to the measurement model analysis, the presence of common method bias (CMB) was assessed using Harman’s single-factor test (Podsakoff et al. 2012) and the full collinearity test (Kock 2015). For Harman’s single-factor test, an unrotated exploratory factor analysis was conducted, revealing that the largest factor accounted for 45.7% of the total variance, which is below the 50% threshold. For the full collinearity test, none of the VIF values (Transformational Leadership: 3.056; Transactional Leadership: 2.282; Job Satisfaction: 2.141) fell within the threshold of 3.3 recommended by Kock (2015). Therefore, it is suggested that common method bias was not a concern in this study.

The validity analysis containing reliability, convergent validity, and discriminant validity is illustrated in Table 2. The study employed convergent validity to assess the association between item variants and constructs using factor loading (values exceeding 0.7) and AVE scores (Hair et al. 2018). The acceptable values for Cronbach's Alpha ( $\alpha$ ) and Composite Reliability were both greater than 0.7, indicating that all indicators are reliable and accurate. Besides, the discriminant validity was employed to assess the extent to which a construct was empirically distinct from others based on the measuring items.

TABLE 2. Factor loading, composite reliability, AVE and Cronbach Alpha

Variable	Items	Loading	Composite Reliability	Average Variance Extracted	Cronbach Alpha
Transformational	ATT	0.748	0.949	0.788	0.967
	BE	0.951			
	MT	0.879			
	ST	0.933			
	CO	0.913			
Transactional	B61	0.748	0.883	0.716	0.901
	B62	0.809			
	B63	0.852			
	B64	0.848			
	B65	0.820			
Job Satisfaction	C1	0.712	0.898	0.716	0.901
	C2	0.827			
	C3	0.745			
	C4	0.833			
	C5	0.865			
	C6	0.764			

Discriminant validity was assessed using the Fornell-Larcker criterion and the HTMT ratio (Hair et al. 2014). As shown in Table 3, the square root of the AVE for each construct exceeded its correlations with other constructs, indicating that the Fornell-Larcker criterion was fulfilled. In addition, all HTMT values were below the recommended threshold of 0.85 (or 0.90), further confirming adequate discriminant validity. Therefore, the results demonstrated that all constructs in the model were empirically distinct.

TABLE 3. Fornell and Lacker Criterion and HTMT Criterion

	TFL	TRL	JS
TFL (Transformation Leadership Style)	0.835	0.897	0.747
TRL (Transactional Leadership Style)	0.749	0.829	0.749
JS (Job Satisfaction)	0.722	0.692	0.817

Note: The diagonal are the AVE values and above the diagonal are the HTMT test values.

### HYPOTHESIS TESTING

The structural model results are presented in Table 4. Transformational leadership was positively associated with job satisfaction ( $\beta = 0.298$ ,  $t = 3.101$ ,  $p < 0.001$ ), supporting  $H_1$ . Similarly, transactional leadership showed a positive relationship with job satisfaction ( $\beta = 0.240$ ,  $t = 2.935$ ,  $p < 0.01$ ), supporting  $H_2$ . These findings indicated that both leadership styles contributed positively to employees' job satisfaction.

TABLE 4. Hypothesis results

Hypothesis	Path	Beta	t statistics	p values	Results
$H_1$	Transformational Leadership Style -> Job Satisfaction	0.298	3.101	0.000	Supported
$H_2$	Transactional Leadership Style -> Job Satisfaction	0.240	2.935	0.000	Supported

### NECESSARY CONDITION ANALYSIS (NCA) EFFECT SIZE

Necessary Condition Analysis facilitates the exploration and validation of hypotheses after a sufficiency analysis, in addition to hypotheses based on necessity logic (Richter et al. 2020). Table 5 displays effect sizes. The ceiling line accuracy is, by definition, 100%. For transactional leadership, the p-values ( $p < 0.001$ ) indicate that these necessity effects are highly statistically significant. This means that transactional leadership is a necessary condition for employees' job satisfaction. Without a minimum level of transactional leadership, higher levels of the job satisfaction cannot be achieved, although transactional leadership alone may not be sufficient to produce high outcomes. This implies that transactional leadership acts as a basic prerequisite - its absence constrains the outcome, but its presence does not automatically ensure excellence. Transformational leadership, however, shows a stronger necessity effect than transactional leadership due to greater effect size. It is therefore a stronger necessary condition than transactional leadership. High levels of the outcome cannot occur without sufficiently high transformational leadership. Transformational leadership is a critical bottleneck factor. Even when all other conditions are favourable, outcomes may remain, the outcome will remain limited unless transformational leadership reaches a required threshold.

TABLE 5. NCA effect sizes

Construct	CE-FDH	p-value	CR-FDH	p-value
Transactional Leadership Style	0.2747	0.0000	0.2472	0.0000
Transformation Leadership Style	0.3295	0.0000	0.3253	0.0000

The  $Q^2$  predict value for both transactional leadership style and transformational leadership style are substantially greater than zero, indicating strong predictive relevance for both leadership styles and the accurate prediction in out-of-sample cases, apart from the estimation sample. Additionally, the moderate and low levels of RMSE and MAE of transactional leadership style and transformational leadership style, respectively, indicate acceptable levels of prediction error for such perceptual or behavioural constructs. Conjointly, the models demonstrate acceptable practical usefulness in predicting transactional leadership style and transformational leadership style in new samples. The NCA's results also showed that transactional leadership style and transformational leadership style are both significant necessary conditions for job satisfaction, due to their medium and large size effect, respectively. These results showed that NCA can complement the PLS-SEM analysis by emphasizing significant determinant and a necessary condition. This further affirms that both hypotheses were well supported by the data.

In summary, the study's results are in line with Bass (1994)'s theory that both transformational and transactional leadership play a role in motivating employees. Through psychological motivation and monetary motivation respectively, they can increase employees' job satisfaction.

## DISCUSSION

This study aims to investigate whether female leaders from Malaysian SMEs adopt transformational leadership, transactional leadership, or both. We found that transformational leadership are significantly and positively associated with job satisfaction. The findings are consistent with Sunarsi et al. (2021), Allozi et al. (2022), Aras and Jufri (2022), and leaders who show transformational styles are always being admired, respected and trusted (Bass et al. 2003). Generally, female leaders frequently exhibit high emotional intelligence, which enables them to establish a personal connection with their subordinates (Duan et al. 2023). This helps to nurture a trusting environment in the office, as subordinates perceive themselves as valued and comprehended. Consequently, they experience higher job satisfaction.

Bass and Avolio (1994) stated that transformational leaders act as coaches or mentors to address individual growth needs, promote communication, and implement "management by walking around" in the workplace. In our study context, respondents perceived that the more their female leaders exhibit transformational style the greater their job satisfaction was. This may be attributed to the feminine traits that facilitate their leadership and collaborative processes associated with femininity. Consequently, female leaders consistently prioritise interpersonal relationships, express their feelings, acknowledge positive behaviour, and consider individual and socioemotional essentials that go beyond technical expertise (Kark et al. 2012). Subordinates are more likely to be satisfied with their jobs when female leaders act as mentors, supporting their professional growth at work and helping to fulfil their needs.

Furthermore, women leaders demonstrate superiority in the areas of morality, inspiration, motivation, control, and relationship-building, surpassing their male counterparts in terms of democracy and efficacy (Mubin et al. 2023). As a result, female leaders effectively motivate and inspire their subordinates to achieve shared objectives by practising transformational leadership (Bass et al. 2003). Subordinates will feel fulfilled and satisfied at work once they achieve the common goals. Therefore, our study revealed that transformational leadership stimulates job satisfaction of subordinates in Malaysian SMEs. Next, Bass et al. (2003) argued that leaders who demonstrated transformational leadership always encouraged their followers to be creative and imaginative. Meanwhile, a stream of studies has supported that female leaders are better than male leaders in cultivating subordinates' creativity and innovation (Subramaniam et al. 2021; Xie et al. 2021; Ma et al. 2023).

The results also showed that transactional leadership is significant in enhancing job satisfaction, corroborates with the finding of Mickson et al. (2021); Abd Rahman (2021); Skopak and Hadzaihmetovic (2022). This implied that female leaders from SMEs who adopt transactional leadership style can be more effective in increasing workers' job satisfaction. This result is in tandem with Mickson and Anlesinya (2020) that given the nature and environment of work in the Ghanian's local government sector, transactional leadership is more effective than the transformational counterpart in stimulating employees' job satisfaction.

Although the deviation between transactional and transformational leadership style impact on employee job satisfaction is marginal (Mickson & Anlesinya 2020), this present result serves as a crucial theoretical insight and departure from the widely-accepted notion that transformational leadership is a more effective leadership style, compared to the transactional counterpart, particularly in the context of female leadership. Female leaders always have a relational style that values understanding how others feel, which can make the workplace more helpful and open for communication. Since transactional leadership emphasised offering workers rewards for reaching certain goals, a female leader with good empathy tends to recognise accomplishments that are in line with their subordinates' needs and goals. This makes rewards more meaningful and personal, resulting in the subordinates' satisfaction with their job.

## IMPLICATIONS

The study's results improve knowledge of the intractability of gender equality reducing efforts in workplaces in two ways. First, the analysis provides novel perspective on the difficulties in promoting SMEs workplace change that are related to female leadership. Although SMEs female leaders are supposed to lead efforts to transform workplace culture for advocating gender equality and enhanced employees' job, thereby increasing employees job satisfaction, this research indicates that leaders might not fully comprehend the reasons behind gender discrepancy or have remediation strategies. This study's finding, i.e., that both transformational and transactional leadership are vital in increasing employees job satisfaction corroborates with Helman, Bear, and Colwell (2020) "*tailored measures that create inclusive and respectful workplaces*" might not be completed without the complement of another support.

## THEORETICAL IMPLICATIONS

This study fills in the leadership literature gap by shedding lights on the role of female leadership in increasing employees' job satisfaction. The Theory of Opportunity or Necessity (Irene 2017) asserts that men are opportunities seekers while females tend to secure necessity. Nonetheless, past studies investigated the linkage in general, regardless of gender. This study promotes female transformational and transactional leadership as effective styles in making employees feel satisfied. Following that, the findings advance theoretical understanding of the mechanism by which both the psychologically motivating-based reward and the merit-based counterpart function within a developing economy to stimulate job satisfaction. This is particularly crucial to future research in developing countries context in which monetary reward (other than psychological motivation) is greatly valued. This study also extends the leadership literature by investigating the effect of female transformational and transactional leadership on employees' job satisfaction. The deviation of findings among past studies, due to situational factors (Decuyper & Schaufeli 2021), implies the need for a more nuance empirical analysis. For instance, while Thakur and Sharma (2019) found a significant effect of responsible leadership on organisational citizenship behaviour in the pharmaceutical industry, Luo et al. (2025) found an insignificant relationship in the context of higher educational industry. The contradictory findings postulate that the relationship between leadership styles and employees' job satisfaction is context-specific, depending on industry-specific practices and unique features of firms. Similarly, while transformational leadership is more effective in increasing employees' job satisfaction in developing countries (Decuyper & Schaufeli 2021), transactional leadership has also been found to be effective in these contexts.

## MANAGERIAL IMPLICATIONS

From the management point of view, this study highlights the crucial role of female transformational leadership style and transactional leadership style in increasing employees' job satisfaction. The finding, on one hand, provides insight into leadership style practices for female leaders. They can reference this finding when they consider increasing their subordinates' job satisfaction. Measures like incorporation of job satisfaction related criteria into organisational performance appraisal help in motivating employees, thereby stimulating job satisfaction. Furthermore, female leaders are also advised to create a supportive and collaborative working environment through initiatives such as organising team-buildings, tournaments, and in-house training in which monetary rewards are involved. These complementarities between transformational leadership style and transactional leadership style motivate employees, thereby resulting in higher job satisfaction. On the other hand, the finding provides managerial insights for organisations. Firms can consider the finding when recruiting and & evaluating higher-positioned employees such as chief financial officers as well as managers. Malaysia, a male-dominant (in leadership) developing country, needs female leaders who practise transformational leadership style and transactional leadership styles in organisations as these styles complement each other by stimulating psychological motivation as well as providing monetary reward. Company owners, during the recruitment process, can consider conducting personality and performance related tests to identify candidates who possess characteristics of both empathy (transformational) and fairness (transactional). The complementarities between transactional leadership styles and transformational leadership styles are particularly important for the management of SMEs. Given the limited capital relative to big corporations like multinational corporations, incorporation of non-monetary and psychologically motivational elements into employees' job satisfaction model would be especially optimum in the aspects of operation, recruitment and improvement.

## LIMITATIONS AND FUTURE RESEARCH

Despite the plausibility and practicality of the study, it is not without limitations. First, the investigation on the effect of female leadership style on employees' job satisfaction is unidirectional. In fact, future research could consider investigating the effect of job satisfaction on leadership behavior (in inverse) as the relationship was also found to be bi-directional (Oktafia et al. 2024)

in recent literature. Moreover, this study was conducted in only one nation, with its unique economic and political situation. Hence, future study needs to be conducted in more countries with diverse cultural backgrounds, for generalisability purpose. Examining the sub-dimensions of transformational leadership could also provide value-added to job satisfaction research. Such analysis would identify the relative importance of the specific components of transformational leadership in stimulating employees' job satisfaction, thereby allowing more accurate and more specific adoption of leadership style for greater effectiveness in motivating employees. This study looked at transactional leadership style and transformational leadership style in an aggregate manner. Finally, it is crucial for future researchers of job satisfaction to identify and investigate other determinants as the widely accepted transformational and transactional leadership theories are incomplete drivers of employees' job satisfaction. Beyond transformational and transactional leadership, other aspects like reformative measures and provision of professional development are more crucial in instilling employees' job satisfaction (Yohannes & Wasonga 2023).

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