

The Impact of Mentoring and Role Models on Female Employee Retention in Malaysia's Logistics and Transportation Industry

Ratha Letchimanan, Siri Roland Xavier*

Universiti Tun Abdul Razak

DOI: <https://dx.doi.org/10.47772/IJRISS.2024.8120368>

Received: 15 December 2024; Accepted: 27 December 2024; Published: 24 January 2025

ABSTRACT

This study explored the factors influencing female employee retention in Malaysia's logistics and transportation industry, focusing on work-life balance (WLB), work environment (WE), rewards and compensation (RAC), and the roles of role models and mentoring. Using Social Exchange Theory, a quantitative approach was taken with 455 participants chosen through various sampling methods. The findings revealed that both WLB and RAC positively impact female employee retention (FER), with RAC showing a stronger effect. However, their combined influence was not significant, suggesting they should be addressed separately in retention strategies. A positive work environment also significantly affected FER, but the interaction between WE and RAC did not enhance retention. Role models and mentoring did not moderate the relationships between WLB, WE, RAC, and FER; instead, they function as independent support factors. The study highlighted the representation of Indians in managerial roles, attributing this to factors like higher education, longer tenure, and strong mentorship. Limitations included regional focus and potential response bias. Future research should explore these topics using diverse methodologies. In conclusion, this research contributes to understanding female employee retention in the logistics and transportation industry, underscoring the need for targeted strategies that foster diversity, equality, and inclusion in a predominantly male field.

Keywords: Female employee, Work-life balance, Work environment, Rewards and Compensation

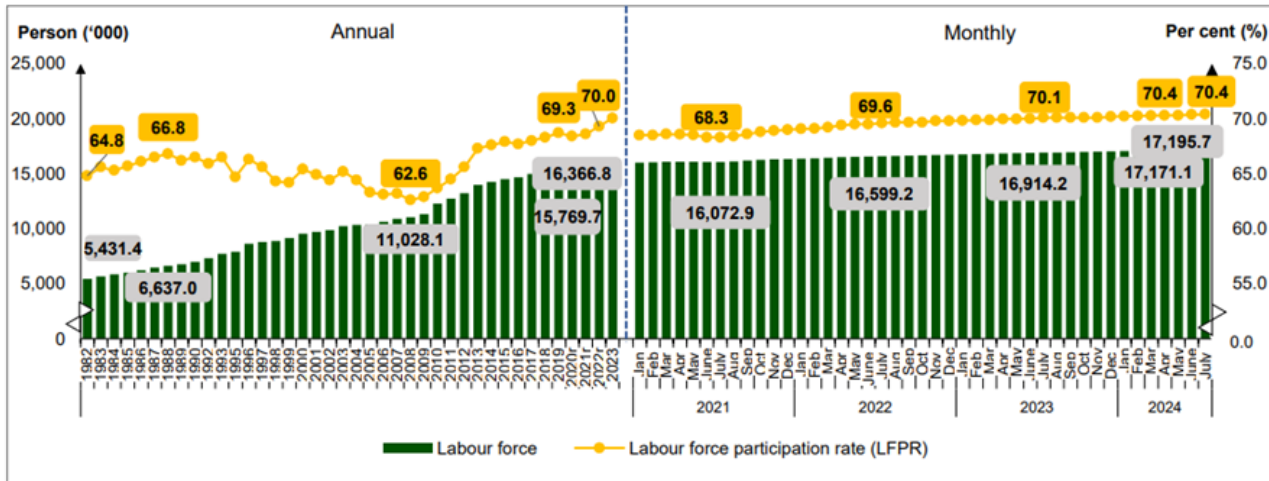
INTRODUCTION

The logistics and transportation industry is essential to the global economy, facilitating trade and requiring skilled individuals. However, retaining female employees poses a significant challenge (Shah et al., 2021). Historically male-dominated, this sector faces institutional barriers that hinder women's professional advancement, leaving them at a disadvantage. Issues such as gender discrimination, lack of mentoring, and poor work-life balance negatively impact female job satisfaction (Musa et al., 2020). Cultural norms further complicate matters, as traditional gender roles often force Malaysian women to prioritize family over career (Lim et al., 2019). Understanding the specific needs and concerns of women in this industry is vital for creating a supportive work environment (Sukri et al., 2023).

Malaysia's logistics market is growing due to rising demand from manufacturing industries, featuring major players like DHL, Tesco, and FedEx (<https://www.kenresearch.com/blogs/logistics-business-in-malaysia>). The transport and storage sector contributed 3.8% to GDP in 2019, with MYR 57.2 billion in gross value added and 667,600 employees, making up 4.4% of the workforce. By 2022, it accounted for 3.7% of GDP, with a gross value added of around MYR 57.1 billion and about 600,000 employees (DOSM).

Malaysian women participated in the labour force at a rate of 55.5% in 2021, compared to 80.9% for men (DOSM, 2022). Malaysia ranked 13th among East Asia and the Pacific nations in the Gender Gap Index and ranked 104th out of 153 countries globally. The below table shows the labour force participation rate by gender from 1982 until July 2024. In July 2024, Malaysia's labour force grew by 0.1% month-on-month to reach 17.20 million people. The LFP rate was relatively steady at 70.4%. Annually, the labour force increased by 1.7% compared to July 2023.

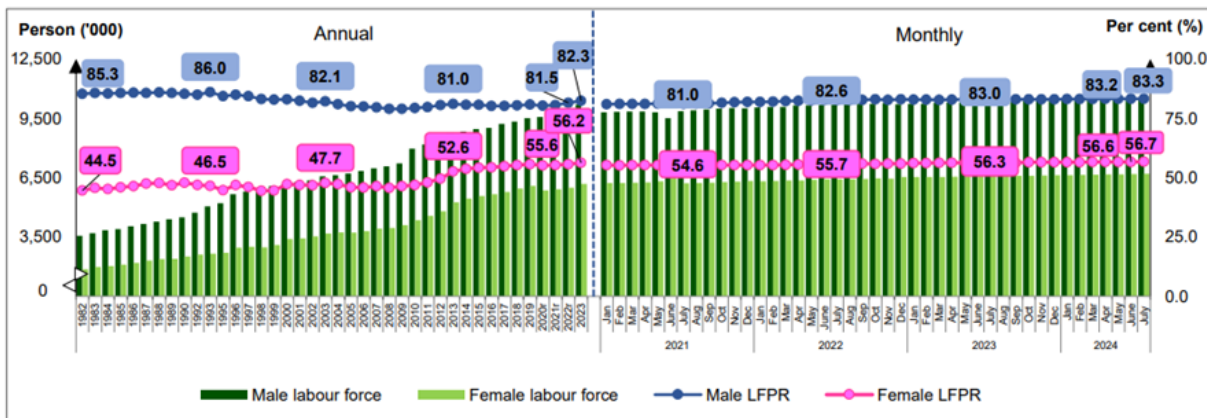
Figure 1.0 Labour force and LFPR, 1982 - 2023 and January 2021 - July 2024



(Source: Department of Statistics Malaysia Official Portal, 2024)

The figure below shows the LFPR by gender comparison. Both male and female labour force is showing up trending. Women in the work force increased substantially from 44.5% in early 1982 to 56.7% in July 2024. Male labour force participation rate, on the other hand, started with 85.3% in early 1982 to 83.3% in July 2024.

Figure 1.1: Labour force and LFPR by sex, 1982 - 2023 and January 2021 - July 2024



(Source: Department of Statistics Malaysia Official Portal, July, 2024)

In Malaysia, addressing these challenges is especially important as the country strives to strengthen its global competitiveness. Retaining female employees improves workplace equality and contributes to achieving bigger economic goals (Department of Statistics Malaysia, 2023).

Research Objective and Questions

The main objective of this study is to identify key factors influencing female employee retention in Malaysia's logistics and transportation industry. Specifically, it will explore the relationship between major determinants of retention and the moderating roles of role models and mentoring.

The specific objectives include:

1. Examining the relationship between work-life balance and reward and compensation in female employee retention.
2. Analysing the relationship between the work environment and reward and compensation in retention.
3. Investigating how role models and mentoring moderate the effects of work-life balance, work environment, and rewards on retention.

4. Identifying which ethnicity has the highest representation among managers in the industry.

These objectives thus predicate the following research questions.

RQ1: Is there a relationship between work-life balance and reward and compensation in female employee retention in the logistics and transportation industry in Malaysia?

RQ2: Is there a relationship between work environment, reward, and compensation in female employee retention in Malaysia's logistics and transportation industry?

RQ3: Is there a moderating effect of role models and mentoring on the work-life balance, work environment, and reward and compensation towards female employee retention in Malaysia's logistics and transportation industry?

This study highlights key implications for the logistics and transportation industry regarding female employee retention. It stresses the need for gender-specific support systems, like mentoring programs, and advocates for gender equity in the Malaysian workforce. The industry can boost retention, job satisfaction, and competitiveness by addressing barriers to female advancement.

LITERATURE REVIEW

Employees represent one of an organisation's most valuable assets, significantly contributing to its overall success through innovations and productivity. Dessler (2020) defines employees as individuals within an organisational structure. Retention, on the other hand, refers to the organisation's capacity to attract and keep employees over the long term, thereby minimising voluntary turnover. As noted by Alharbi and Ameer (2020), effective retention strategies often focus on fostering a work-life balance and enhancing job satisfaction—both essential elements for ensuring employees remain with the company. Retention has long been a complex challenge; as workplace dynamics evolve, organisations must continuously explore ways to refine their policies to retain their employees effectively.

In today's highly globalised and digitalised corporate landscape, employee retention has emerged as a critical factor in establishing a company's competitive advantage (Frye et al., 2020; Sudibjo et al., 2019).

Challenges with Female Employee Retention

Retaining female employees presents distinct challenges, particularly in male-dominated industries, where they encounter more barriers than their male counterparts. These challenges include: 1) gender bias and discrimination (Hassan & Rahman, 2020), 2) work-life balance issues (Alharbi & Ameer, 2020), 3) limited or non-existent career development opportunities (Singh & Gupta, 2021), 4) organisational culture (McKinsey & Company, 2020), and 5) workplace culture (Alharbi & Ameer, 2020).

A diverse workforce enhances a company's reputation, which ultimately contributes to its financial performance (McKinsey & Company, 2022). In line with the principles of Diversity, Inclusion, and Equality, organizations must focus on retaining female employees. Research by Tirta and Enrika (2020) indicates that companies that actively support gender equality and diversity are viewed as more socially responsible, positively influencing brand loyalty and public perception.

Factors Influencing Female Employee Retention

Worklife Balance

Kossek and Lee (2022) along with Zhang and Wang (2021) characterize work-life balance (WLB) as a fluid process that allows employees to merge their work and personal lives through flexible policies, options for remote work, and a supportive work culture. Organizations that adapt their policies to foster flexible work arrangements will likely be able to keep female employees (Zainal et al., 2022; Kossek et al., 2022; Mukhtar et al., 2021). A safe and healthy workplace that is free from harassment and promotes respect can enhance job

satisfaction and reduce intentions to leave the job (Alshahrani et al., 2022). Furthermore, research indicates that the work environment influences the relationships between compensation and employee retention. Previous studies have corroborated this finding (Sishuwa & Phiri, 2020).

Organisational Culture

A supportive organisational culture that values diversity, equity, and inclusion is likely to enhance employee retention. Cultivating an environment that prioritises employee well-being and fosters support is particularly significant for women (Chhabra, 2022). Likewise, female workers in the logistics and transportation sector may encounter cultural obstacles that lead to elevated turnover. Addressing these challenges can lead to better retention rates (Ng & Sears, 2022).

Career development

Opportunities for training, mentorship, and chances for promotion can greatly influence employee retention. Women are more inclined to remain with organisations that support their career growth (Bennett et al., 2023).

Rewards and Compensation

Compensation packages and benefits designed specifically for the unique needs of female employees, including childcare support, are essential for employee retention (Miller & Roberts, 2022). According to research by Tirta and Enrika (2020), which surveyed 50 Millennials in Indonesia, these individuals possess different work values compared to previous generations. Unlike findings from many earlier studies, they express a desire for positions that offer higher compensation to meet increased living and educational expenses. Research by Musa et al., (2020) indicates that female employees are more inclined to leave companies that fail to provide fair compensation in the logistics and transportation sector.

Barriers to Creating a Positive Work Environment

Unsafe conditions, lack of inclusivity, and outdated technology hinder the development of a positive work environment. Bullying and a toxic organizational culture lead to decreased productivity and higher turnover rates. In the logistics sector, safety concerns and high job demands create significant obstacles to establishing an effective work environment (Zainal et al., 2022). Addressing these issues is crucial for improving employee satisfaction and organizational performance.

Table 1.0 Barriers to achieving conducive Work Environment (WE)

Barrier	Description	Citation
Lack of Organisational support	Perception when the employee's needs and concerns are not being addressed	Zainal et al. (2022)
Poor Communication	Ineffective communication leads to misunderstanding	Naz et al. (2020).
Rigid work structure	Micromanaged work organisation culture	(Nguyen & Duong, 2020)

Role of Mentoring in Female Employee Retention

Effective mentoring plays a vital role in ensuring the retention of women in the workforce, particularly in traditionally male-dominated industries like logistics and transportation. By providing guidance, support, and opportunities for professional growth, mentoring helps create an inclusive environment that empowers women to thrive and succeed in these challenging sectors. Singh and Gupta (2021) highlight that women engaged in mentoring relationships tend to experience greater job satisfaction and commitment, which subsequently lowers their intention to leave, aligning with findings from Reis and Grady (2020). The visibility of accomplished

women in leadership positions positively influences an organisation's culture regarding diversity support, another critical element for retention (Shah et al., 2021).

Table 2.0 Barriers to effective Role Models and Mentoring (RMM)

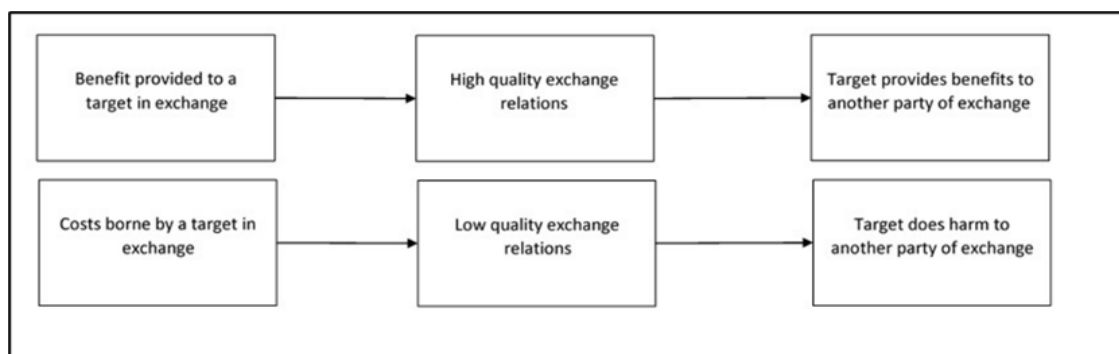
Barriers	Description	Citation
Lack of access to mentors	unavailability of access to a pool of mentors	(Nguyen & Duong, 2020)
Gender bias and stereotype	The perception is that females don't have to grow in their careers, and leadership positions are meant for males only.	(Shah et al., 2021)
Overburdening of existing female role models	With very few females in leadership roles in male-dominated industries, it can be overwhelming for the female to support the other females.	(Nguyen et al., 2020)
Organisational culture and support	The mentoring program may not be taken as a strategic development tool but rather for the sake of having it	(Smith & Tan, 2022)

According to Khan et al. (2020), mentoring enables employees to thrive within the organization by providing essential support from senior management, thereby turning the work environment into a conducive space. Role models who have overcome salary limitations can motivate younger or new employees (Nguyen & Duong, 2020). Although pay is significant, female employees who are guided by strong role models tend to remain more engaged and dedicated to their positions, even when the financial compensation is lower than in other industries (Ali & Anwar, 2021), which aligns with the findings of Smith & Tan (2022).

Social Exchange Theory

Social Exchange Theory (SET) is relevant for investigating the factors influencing female employee retention in Malaysia's logistics and transportation sector, mainly through the moderating influence of role models and mentoring (Priyanka et al., 2024). Developed by George Homans in 1958, social exchange theory has since served as a foundational framework for studies on employee turnover and retention (Coyle-Shapiro & Conway, 2005). Richard Emerson (1976) elaborated on Homans' concept by highlighting the exchange processes involving power dynamics and more extensive social frameworks.

Figure 2.0 Model of Social Exchange Theory



(Source: Davlembayeva & Alamanos, 2023)

Zainal et al. (2022) conducted a comprehensive study in Malaysia focused on the critical issue of employee retention within the logistics industry. Their research, titled "Employee Retention in the Service Industry in Malaysia," delves into the factors influencing whether employees choose to remain with their organisations. The

authors (Davlembayeva & Alamanos, 2023; Hyder et al., 2024; and Priyanka et al., 2024) grounded their investigation in Social Exchange Theory (SET), which posits that the perceived balance of give-and-take in workplace relationships significantly affects employee loyalty. To gather data, they employed a well-structured survey that assessed key elements such as work-life balance, compensation packages, rewards, and the level of organisational support perceived by employees. The study's primary aim was to uncover insights into employees' intentions to stay with their employers. The findings revealed that organisations focusing on fostering a positive work environment, implementing robust work-life balance policies, ensuring equitable compensation and rewards, and promoting employee development plans are likelier to cultivate loyalty among their staff. These recommendations align closely with the principles of SET, highlighting the importance of nurturing supportive relationships in the workplace to enhance employee retention.

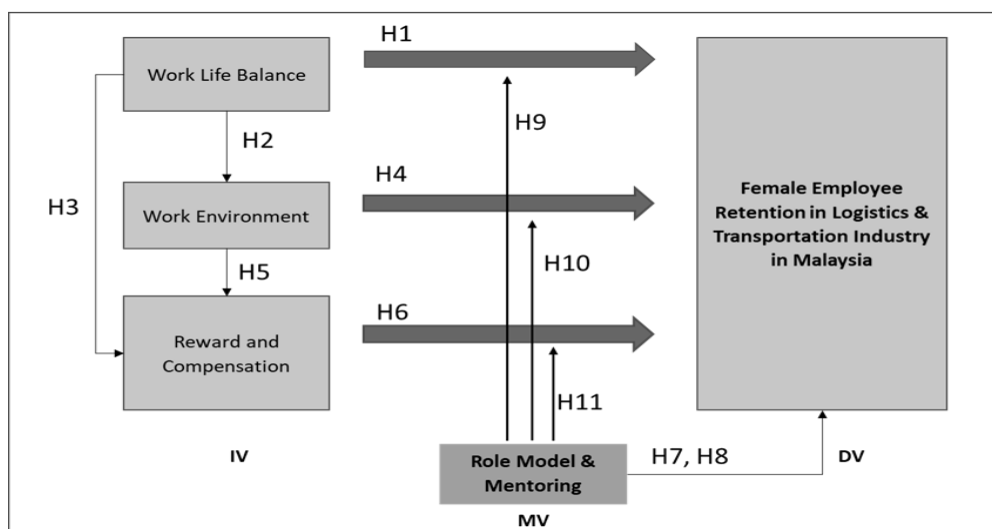
In a related study, Kamau et al. (2021) explored the various factors influencing employee retention specifically in the transport and logistics sector, presenting their findings in the paper entitled "Factors Influencing Employee Retention in the Transport and Logistics Industry." This research similarly utilized SET as a theoretical framework, particularly examining the impact of perceived organizational support on employee retention decisions. The authors, Kamau, Muathe and Wainaina in 2021 conducted a structured survey involving 171 participants from diverse demographic backgrounds within the transport and logistics industry. Their analysis indicated that employees who feel a strong sense of organizational support—manifested through job satisfaction, opportunities for training, and avenues for professional development—are more likely to feel an obligation to reciprocate by remaining with their organization. The study underscored the critical role of organizational commitment and work satisfaction as mediators in the relationship between perceived support and employee retention. Employees who feel valued within their roles are more inclined to develop robust commitments to their organizations, ultimately leading to higher retention rates. This finding resonates well with the principles outlined by the SET framework.

According to the tenets of SET, employees are driven by a cost-benefit analysis in their organizational commitments; if they perceive that the costs of staying outweigh the benefits, they are likely to withdraw their commitment (Blau, 1964; Priyanka et al. and Hyder et al., 2024). Additionally, research by Esthi (2020) and Beckel & Fisher (2022) indicates that female employees tend to find less satisfaction in work environments that are perceived as exclusionary or lacking support, a sentiment echoed in Zainal et al.'s (2022) findings. This highlights the imperative for organisations to prioritise inclusivity and support to retain a diverse and committed workforce.

Research Framework

The independent variables are based on Social Exchange Theory, which encompasses physiological needs at the base of the hierarchy, followed by safety and social factors in subsequent levels. The independent variables were selected meticulously due to their importance and potential impact on this research study regarding the retention of female employees in Malaysia's logistics and transportation sector.

Figure 2.1 Proposed research framework, including hypothesis



These hypotheses have a significant and wide-ranging effect on the study of female retention in the logistics sector.

H1: Work-life balance significantly impacts female employee retention in Malaysia's logistics and transportation sectors.

H2: Work-life balance and work environment significantly impact female employee retention in the logistics and transportation industry in Malaysia

H3: Work-life balance and rewards and compensation significantly impact female employee retention in the logistics and transportation industry in Malaysia

H4: The work environment significantly affects female employee retention in the logistics and transportation industry in Malaysia.

H5: Work environment, and rewards and compensation significantly impact female employee retention in Malaysia's logistics and transportation industry.

H6: Reward and Compensation have a significant effect on female employee retention in the logistics and transportation industry in Malaysia

H7: Role models and mentoring significantly affect female employee retention in the logistics and transportation industry in Malaysia.

H8: Female role models and mentoring significantly affect female employee retention in the logistics and transportation industry in Malaysia.

H9: Role models and mentoring have a moderating effect on work-life balance for female employee retention in the logistics and transportation industry in Malaysia

H10: Role models and mentoring have a moderating effect on the work environment on female employee retention in the logistics and transportation industry in Malaysia

H11: Role model and mentoring have a moderating effect on rewards and compensation on female employee retention in the logistics and transportation industry in Malaysia

RESEARCH METHODS

The quantitative approach stands out as the most suitable choice when researchers aim to extend their findings to broader populations, forecast potential outcomes, or explore the intricate dynamics of cause-and-effect relationships (Bauer et al., 2021). This particular study adopted a cross-sectional survey methodology, which is effective for examining multiple independent variables (IVs) such as Work Life Balance (WLB), Reward and Compensation (RAC), and Work Environment (WE) in relation to the dependent variable (DV), specifically focusing on Female Employee Retention (FER). Additionally, the study considered the influence of Role-Modeling and Mentoring (RMM) as a moderating variable (Bryman, 2021). This methodological approach offers a holistic view of how these various factors interplay and ultimately affect the decisions surrounding FER (Creswell & Poeth, 2018). Notably, the study is classified as a predictive correlational study, aimed at identifying patterns and predictions based on the collected data.

The target population for this research consists of employees from a diverse array of companies, spanning both the logistics and transportation sector, as well as other non-logistic industries within Malaysia. By including individuals with varied roles and levels of experience, the study aims to attain a rounded understanding of the key factors that influence FER.

For data collection, a structured survey served as the primary instrument, which proved advantageous for applying both descriptive and inferential statistical analyses (Saunders et al., 2015). The survey was conveniently

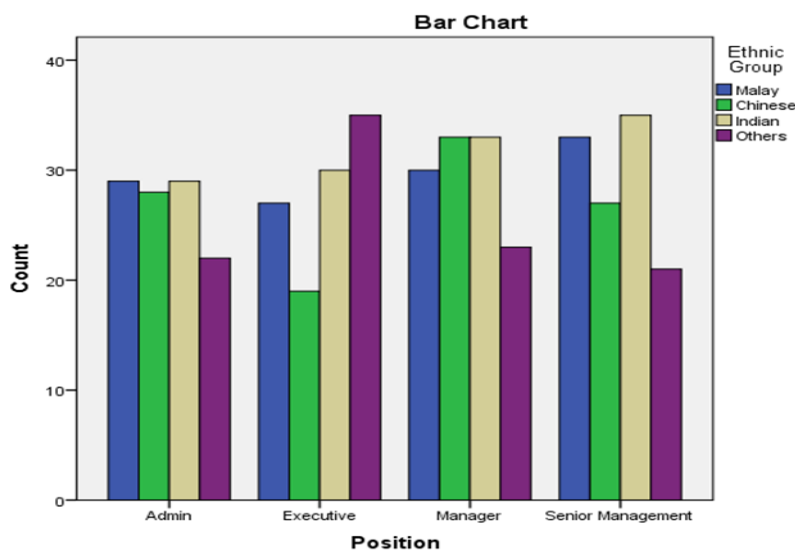
distributed through a Microsoft Forms link, enabling participants to complete it online. This approach not only streamlined the data collection process but also significantly boosted response rates among employees. The questionnaire consisted of positively framed statements addressing the independent, dependent, and moderating variables related to FER, with responses measured on a five-point Likert scale.

For the analysis of the collected data, Smart PLS Version 4 was utilized, leveraging PLS-SEM as a sophisticated second-generation method tailored for quantitative data assessment. This particular technique is especially beneficial for examining the relationships between constructs that encompass both latent and observed variables, providing deeper insights into the data (Hair et al., 2019).

RESULTS

The figure below details the demographics of ethnic groups and positions.

Figure 4.0 Demographic frequency figure by ethnic group and position



Ethnic group with the highest number of managers (Manager & Senior Management).

Table 4.1 Demographic Frequency Table by Ethnic Group and Position by Manager and Senior Management

		Ethnic Group				Total	Percent
		Malay	Chinese	Indian	Others		
Position	Admin	29	28	29	22	108	24%
	Executive	27	19	30	35	111	24%
	Manager & Senior Management	63	60	68	45	236	52%
Total		119	107	127	102	455	
Percent		26%	24%	28%	22%		

The table provides a detailed overview of the distribution of participants categorized by their ethnic group and job position within Malaysia's logistics and transportation industry. It highlights the presence of various ethnicities across different levels of employment, showcasing a balanced representation among those occupying administrative, executive, and managerial or senior management roles.

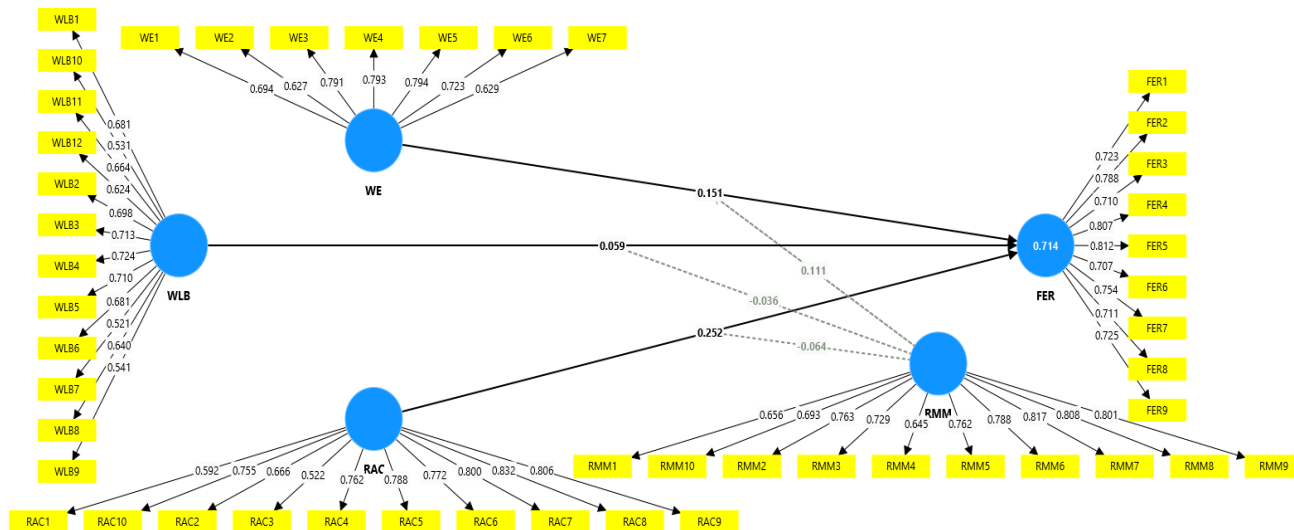
This rich tapestry of ethnic diversity within the workforce is crucial for gaining insights into the dynamics of the industry. By analysing this demographic data, organizations can craft targeted retention and development strategies that cater to the unique backgrounds and professional needs of their employees. Such tailored

approaches not only foster a more inclusive work environment but also enhance overall organizational performance by leveraging the strengths that diverse perspectives bring to the table.

Structural Equation Modelling (SEM) Analysis

The comprehensive SEM analysis thoroughly examined all of the research questions and hypotheses in a unified manner. By employing this model, we were able to simultaneously assess direct effects and moderating effects, which provided an in-depth understanding of the intricate relationships among the variables involved. This approach allows for a holistic view of how different factors interact and influence one another within the study.

Figure 4.2 SEM Analysis



Hypothesis Testing

The table below outlines the hypothesis testing results

Table 4.2 Hypothesis testing result

Hypothesis	Relationship	Path Coefficient	p-Value	Result
H1	WLB → FER	0.410	0.000	Supported
H2	WLB → FER	0.129	0.019	Supported
H2	WE → FER	0.435	0.000	Supported
H2	WLB+WE → FER	0.564	<0.001	Supported
H3	WLB → FER	-0.027	0.569	Not supported
H3	RAC → FER	0.659	0.000	Supported
H3	WLB+RAC → FER	0.632	NA	Not supported
H4	WE → FER	0.501	0.000	Supported
H5	WE → FER	0.076	0.122	Not Supported
H5	RAC → FER	0.594	0.000	Supported
H5	WE+RAC → FER	0.594	NA	Not Supported
H6	RAC → FER	0.646	0.000	Supported
H7	RMM → FER	0.753	0.000	Supported
H8	Female RMM → FER	0.752	0.000	Supported
H9	RMM*WLB → FER	0.0572	0.4866	Not Supported
H10	RMM*WE → FER	0.0234	0.3768	Not Supported
H11	RMM*RAC → FER	0.0064	0.7994	Not Supported

The findings of this study reveal that various factors, including Work-Life Balance (WLB), Work Environment (WE), and Resilience Against Challenges (RAC), either individually or in combination with Resilience Management Measures (RMM), have a positive impact on the retention of female employees. However, it is important to note that the anticipated moderating effects of RMM on these relationships—specifically those involving WLB, WE, and RAC—did not yield statistically significant results. This suggests that while RMM plays a role in promoting employee retention, it does so independently and does not alter the influence that WLB, WE, or RAC have on retention outcomes within the Malaysian logistics and transportation sector.

The primary objective of this research was to investigate the various factors that affect female employee retention in Malaysia's logistics and transportation industry. To achieve this, the study delved into the relationships among WLB, WE, and RAC, while also assessing the moderating function of RMM. Utilizing Structural Equation Modeling (SEM), the investigation tested a total of 11 hypotheses to effectively address the posed research questions.

Research Questions and Hypothesis Testing

The research process entailed a thorough evaluation of each research question along with its corresponding hypothesis. To achieve this, we employed various statistical methods including Structural Equation Modeling (SEM), multiple regression analysis, and other inferential statistical techniques. These analyses were crucial in exploring and identifying the independent variables (IVs) that had a significant positive impact on the retention of female employees within the logistics and transportation sector in Malaysia. This detailed examination aimed to uncover insights into the factors contributing to employee retention in this specific industry.

RQ1: Is there a relationship between work-life balance and reward and compensation in female employee retention in the logistics and transportation industry in Malaysia?

H1: Work-life balance has a significant effect on female employee retention in the logistics and transportation industry in Malaysia.

The results indicate a moderate positive effect and a statistically significant relationship between work-life balance (WLB) and Female Employee Retention (FER), with a path coefficient (β) of 0.410 and a p-value of less than 0.001. These findings support the hypothesis, suggesting that improvements in work-life balance significantly enhance family emotional responsiveness.

H3 : Work-life balance and rewards and compensation significantly impact female employee retention in the logistics and transportation industry in Malaysia.

The results show a strong positive path coefficient ($\beta = 0.632$) for the combined effects of Work-Life Balance (WLB) and Reward and Compensation (RAC) on Female Employee Retention (FER). However, the relationship is not significant, as the p-value is not applicable (N/A). Therefore, we cannot support the hypothesis, indicating that the combined impact of WLB and RAC does not significantly influence FER.

H6: Reward and Compensation have a significant effect on female employee retention in the logistics and transportation industry in Malaysia.

The results indicate a strong positive effect and a statistically significant relationship between RAC and FER, characterized by a path coefficient (β) of 0.646 and a p-value of less than 0.001. This supports the hypothesis, suggesting that improvements in RAC significantly enhance FER.

RQ2: Is there a relationship between work environment and reward and compensation in female employee retention in the logistics and transportation industry in Malaysia?

H2: Work-life balance and work environment significantly impact female employee retention in the logistics and transportation industry in Malaysia.

The results show a strong positive effect and a statistically significant relationship between the combined effects of work-life balance (WLB) and Work Environment (WE) on Female Employee Retention (FER). The path

coefficient (β) is 0.564, with a p-value of less than 0.001. This supports the hypothesis, indicating that improvements in both worker engagement and work-life balance substantially enhance employee retention.

H4: Work environment has a significant effect on female employee retention in the logistics and transportation industry in Malaysia.

The results show a strong positive and statistically significant relationship between Work Environment (WE) and Female Employee Retention (FER), with a path coefficient (β) of 0.510 and a p-value under 0.001. This supports the hypothesis that enhancing WE significantly boosts FER.

Work environment and rewards and compensation significantly impact female employee retention in the logistics and transportation industry in Malaysia.

The results show a strong positive path coefficient ($\beta = 0.594$) for the combined effects of WE and RAC on FER, but the relationship is not significant (p-value N/A). Thus, the hypothesis is unsupported, indicating that WE and RAC do not significantly influence FER.

H6: Reward and Compensation have a significant effect on female employee retention in the logistics and transportation industry in Malaysia.

Results show a strong positive effect and significant relationship between RAC and FER, with a path coefficient (β) of 0.646 and a p-value under 0.001. This supports the hypothesis that improvements in RAC enhance FER.

RQ3: Is there a moderating effect of role models and mentoring between work-life balance, work environment, and reward and compensation towards female employee retention in the logistics and transportation industry in Malaysia?

H7: Role models and mentoring have a significant effect on female employee retention in the logistics and transportation industry in Malaysia.

The results show a strong positive effect between RMM and FER, with a path coefficient (β) of 0.753 and a p-value under 0.001. This supports the hypothesis that improvements in RMM significantly enhance FER.

H8: Female role models and mentoring have a significant effect on female employee retention in the logistics and transportation industry in Malaysia.

The results show a significant positive relationship between Female RMM and FER, with a path coefficient (β) of 0.752 and a p-value under 0.001, supporting the hypothesis that improvements in Female RMM enhance FER.

H9: Role model and mentoring have a moderating effect on work-life balance on female employee retention in the logistics and transportation industry in Malaysia

The interaction term (WLB*RMM) was not significant ($\beta = 0.0105$, $p = 0.7242$), and the R^2 change was minimal (0.0001, $p = 0.7242$). This suggests that while RMM directly affects retention, it does not moderate the WLB-FER relationship, thus the hypothesis is unsupported.

H10: Role model and mentoring has a moderating effect on the work environment on female employee retention in the logistics and transportation industry in Malaysia

The interaction term (WE*RMM) was not statistically significant ($\beta = 0.0234$, $p = 0.3768$), with a minimal R^2 change (0.0006, $p = 0.3768$). This suggests that RMM influences retention directly but does not moderate the WE-FER relationship. Thus, the hypothesis is unsupported.

H11: Role model and mentoring has a moderating effect on rewards and compensation on female employee retention in the logistics and transportation industry in Malaysia

The interaction term (RAC*RMM) was not statistically significant ($\beta = -0.0064$, $p = 0.7994$), with a negligible R^2 change (0.0000, $p = 0.7994$). RMM significantly affects retention but does not moderate the relationship between RAC and FER, indicating the hypothesis is not supported.

CONCLUSION

The research findings highlight significant factors influencing female employee retention in Malaysia's logistics and transportation industry, specifically focusing on work-life balance (WLB), role models and mentoring (RMM), and workplace environment (WE). Female employees in this sector encounter several hurdles; therefore, establishing a nurturing atmosphere with supportive WLB policies and flexible arrangements is essential. Alongside these provisions, fair and transparent compensation becomes paramount to keep these women motivated and committed to their respective organisations. Moreover, the study underscores the important role of role models and mentoring as powerful independent predictors. These elements can effectively address the challenges faced by women, offering them crucial guidance, support, and encouragement as they navigate their careers. Interestingly, while the research initially proposed that RMM would enhance the relationship between WLB, WE, and Reward and Compensation (RAC), the outcomes indicated no significant moderating impact. Instead of acting as a moderating factor, RMM appears to function predominantly as an independent support mechanism. Consequently, organisations benefit from mentoring programs and promoting role models, which can enhance overall employee well-being and contribute to a more conducive working environment and culture.

When exploring research question one (RQ1), findings reveal that there is no notable effect from the combined influences of WLB, RAC, and WE on female employee retention (FER). This lack of dependency indicates that supportive work-life policies, equitable and transparent compensation, and a positive workplace culture each serve as independent contributors to retaining female staff in this industry. Similarly, the analysis of research question two (RQ2) affirms that while WE and RAC do not collectively bolster female retention, the anticipated interaction did not materialise. Research question three (RQ3) unexpectedly showed no significant moderating effect on retention, suggesting that although RMM independently supports FER, it does not enhance the synergistic effects of WLB, RAC, and WE.

In summary, this research significantly contributes to the theoretical understanding of female employee retention by validating the distinct effects of WLB, WE, and RAC within the logistics and transportation industry. Social Exchange Theory (SET) serves as the foundation for comprehending the reciprocal dynamics between female employees and their organisations, illustrating how the independent role of RMM is instrumental in fostering higher retention rates.

The results bolster the principles of SET, revealing that female employees demonstrate greater loyalty and commitment when their employers provide equitable work environments, maintain transparency in compensation, and offer accessible mentorship programs featuring female role models. These findings advocate for developing strategic retention approaches and underline the broader cultural and societal implications for policymakers.

Future research endeavours should encompass longitudinal studies to capture shifts in retention over time and qualitative investigations that delve into the experiences of female employees working in male-dominated industries. Such studies will enrich our understanding and ultimately inform more effective retention strategies.

REFERENCES

1. Alharbi, A. A., & Ameer, R. (2020). The impact of work-life balance on employee retention in Saudi Arabia: The mediating role of job satisfaction. *Sustainability*, 12(16), 6523.
2. Alshahrani, F., Aljohani, N., & Abed, S. (2022). Work environment and employee retention: Evidence from the logistics sector. *Journal of Logistics Management*, 32(3), 119-134.
3. Bauer, G. R., Churchill, S. M., Mahendran, M., Walwyn, C., Lizotte, D., & Villa-Rueda, A. A. (2021). Intersectionality in quantitative research: A systematic review of its emergence and applications of theory and methods. *SSM-population health*, 14, 100798.
4. Bennett, A., Ellis, R., & Taylor, P. (2023). Professional development and female employee retention: Insights from the service sector. *Human Resource Development Quarterly*, 34(1), 47-62
5. Bryman, A. (2021). *Social Research Methods*. Oxford University Press.

6. Chhabra, S. (2022). The impact of organisational culture on female employee retention: A study in the logistics sector. *Journal of Organizational Behavior*, 41(2), 89–104.
7. Coyle-Shapiro, J. A. M., & Conway, N. (2005). Perceived organisational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology*, 90, 774-781. <https://doi.org/10.1037/0021-9010.90.5.774>
8. Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (4th ed.). Sage Publications.
9. Davlembayeva, D., & Alamanos, E. (2023). Social exchange theory: A review. In S. Papagiannidis (Ed.), *TheoryHub Book*.
10. Department of Statistics Malaysia (DOSM). (2022). Labour force survey report Malaysia 2021. Putrajaya: Malaysia.
11. Department of Statistics Malaysia. (2022). Gross domestic product by income approach, Malaysia, 2022. <https://www.dosm.gov.my>
12. Dessler, G. (2020). *Human resource management*. Pearson Education.
13. Esthi, R. B. (2020). Performance of employees: Individual characteristics and work environment in PT Kawai Nip. *Journal of Research in Business and Economics Education*, 2, 360–368.
14. Frye, W., Kang, S., Huh, C., & Lee, M. (2020). What factors influence Generation Y's employee retention in the hospitality industry: An internal marketing approach. *International Journal of Hospitality Management*, 85, 102352. <https://doi.org/10.1016/j.ijhm.2019.102352>
15. Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
16. Hassan, M., & Rahman, M. (2020). Exploring the impact of work-life balance on job satisfaction: Evidence from the logistics sector in Malaysia.
17. Hyder, S., Malik, M.I., Hussain, S. and Saqib, A. (2024), "A social exchange theory perspective on efficacy, co-creation and successful new service development", *Journal of Organizational Effectiveness: People and Performance*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JOEPP-07-2023-0306>
18. Kamau, O., et al. (2021). Teachers' turnover intentions: Role of HRM practices in public secondary schools in Kenya. *Cogent Business & Management*, 8(1). <https://doi.org/10.1080/23311975.2021.1980262>
19. Kossek, E. E., Su, R., & Wu, L. (2022). The gendered nature of work-life balance and the link to organisational support. *Human Resource Management Review*, 32(3), 67-85.
20. Lim, K. P., Lye, C.-T., Yuen, Y. Y., & Teoh, W. M. Y. (2019). Women directors and performance: Evidence from Malaysia. *Equality, Diversity and Inclusion: An International Journal*, 38(8), 841–856. <https://doi.org/10.1108/edi-02-2019-0084>
21. McKinsey & Company. (2020). *Women in the workplace 2020*. <https://www.mckinsey.com/business-functions/organization/our-insights/women-in-the-workplace-2020>
22. Miller, L., & Roberts, T. (2022). The role of compensation in employee retention: A gender perspective. *International Journal of Human Resource Studies*, 12(4), 30-45.
23. Mukhtar, A., & Shahid, K. (2021). Impact of flexible working arrangements on female employee retention. *International Journal of Human Resource Studies*, 11(2), 45-58.
23. Musa, H., Ali, R., & Rahman, R. (2020). Gender disparity in the logistics and transportation sector: A Malaysian perspective. *Asian Journal of Shipping and Logistics*, 36(1), 31-40.
24. Musa, H., Ali, R., & Rahman, R. (2020). Gender disparity in the logistics and transportation sector: A Malaysian perspective. *Asian Journal of Shipping and Logistics*, 36(1), 31-40.
25. Ng, E., & Sears, G. J. (2022). Female employees in male-dominated industries: Challenges, opportunities, and retention strategies. *Journal of Vocational Behavior*, 136, 103-117.
26. Nguyen, Q. A., & Duong, T. M. (2020). Work environment, compensation, and job satisfaction: A study in Vietnam. *Asian Social Science*, 16(2), 1-12.
27. Priyanka, Khera, S.N. and Suri, P.K. (2024), "Towards crafting a cure for employee turnover: a social exchange theory perspective", *Industrial and Commercial Training*, Vol. 56 No. 4, pp. 434-448. <https://doi.org/10.1108/ICT-03-2024-0020>
28. Reis, T. C., & Grady, M. (2020). Moving mentorship to opportunity for women university presidents. *International Journal of Evidence-Based Coaching and Mentoring*, 18(1), 31-42.

29. Shah, S., Khan, M. A., & Zaman, Q. (2021). Factors affecting female employee retention in the logistics sector of Malaysia. *Journal of Human Resources Management Research*, 2021, 1-12.
30. Shah, S., Khan, M. A., & Zaman, Q. (2021). Factors affecting female employee retention in the logistics sector of Malaysia. *Journal of Human Resources Management Research*, 2021, 1-12.
31. Singh, S., & Gupta, R. (2021). The impact of mentoring relationships on employee retention: A study of women's experiences. *International Journal of Human Resource Management*, 32(5), 1037-1055.
32. Sishuwa, Y., & Phiri, J. (2020). Factors influencing employee retention in the transport and logistics industry. *Open Journal of Social Sciences*, 8(6), 145–160. <https://doi.org/10.4236/jss.2020.86013>
33. Smith, L., & Tan, K. (2022). The impact of compensation on employee retention in the logistics industry: A gender perspective. *International Journal of Logistics Management*, 33(1), 45-60.
34. Sudibjo, N., Birgita, M., & Suwarli, N. (2019). Work-life balance and intention to stay. *International Journal of Innovation, Creativity and Change*, 11(8), 2020. https://www.ijicc.net/images/vol11iss8/11822_Sudibjo_2020_E_R.pdf
35. Sukri, S. F., Ngah, A. H., & Yiw, M. T. B. (2023). To stay or not to stay: The mediation roles of job satisfaction and organisational commitment among women in the logistics industry. *Acta Logistica*, 10(1), 35-46.
36. Tirta, A. H., & Enrika, A. (2020). Understanding the impact of reward and recognition, work-life balance, on employee retention with job satisfaction as a mediating variable on millennials in Indonesia. *Journal of Business & Retail Management Research*, 14(3). <https://doi.org/10.24052/jbrmr/v14is03/art-09>
37. Zainal, N. S. B., Ismail, R., & Sulaiman, N. (2022). Pengasingan pekerjaan dan perbezaan upah jantina di Malaysia. *Jurnal Ekonomi Malaysia*, 50(1), 53–66.