

The Relationship between Sustainable Human Resource Management and Employee Loyalty in Manufacturing Industry in Malaysia

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Abstract

This study examines the relationship between Sustainable Human Resource Management (SHRM) practices and employee loyalty in Malaysia's manufacturing sector. As sustainability becomes a business priority, HRM plays a crucial role in fostering long-term commitment and trust among employees. The research focuses on five key SHRM components: recruitment, training and development, performance management, employee relations, and remuneration. A quantitative survey of 384 employees from manufacturing firms in Selangor revealed a significant positive correlation between SHRM practices and employee loyalty. Sustainable recruitment and performance management emerged as critical factors, while training, remuneration, and employee relations further reinforced employee commitment. These findings highlight the importance of integrating sustainability into HR policies to reduce turnover and enhance workforce engagement. By aligning HR strategies with corporate sustainability goals, organizations can create a more supportive and resilient workforce, ultimately driving long-term business success.

1. Introduction

The manufacturing industry is vital to Malaysia's economic growth, contributing significantly to GDP and employment. As the sector evolves, Sustainable Human Resource Management (SHRM) has gained importance by integrating environmental, social, and economic goals into HR policies to enhance sustainability and employee well-being (Ehnert, 2009). Given the industry's focus on efficiency, SHRM can influence employee loyalty, which is essential for reducing turnover, retaining skilled workers, and improving performance (Meyer & Allen, 1991). SHRM practices, such as fair labour policies, employee development, and work-life balance, foster a positive work environment and enhance loyalty (Jabbour & Santos, 2008). Additionally, aligning corporate social responsibility (CSR) with HR strategies strengthens employees' identification with their organizations (Kim *et al.*, 2010). However, Malaysia's manufacturing sector faces high turnover, with a 24% rate in 2019, making it the highest contributor to workforce instability (Kin *et al.*, 2022). Recent reports indicate that by mid-2022, 30% of Malaysian employees switched jobs, primarily due to salary concerns (Randstad, 2022), while 60% of employers struggle to retain top talent (Chung, 2023). These challenges highlight the need for effective SHRM strategies to enhance employee loyalty and sustain competitive advantage.

Employee loyalty in Malaysia's manufacturing industry is a critical factor influencing organizational performance, retention rates, and overall economic contribution. The sector accounts for 25% of Malaysia's GDP, 70% of its exports, and provides 4.6 million jobs, making employee retention essential for sustainability and competitiveness (MIDA, 2019). Research indicates that job satisfaction, autonomy, organizational justice, and a sense of belonging significantly impact loyalty and retention (Voon *et al.*, 2011; Tajuddin, Ali, & Kamaruddin, 2015; Hussain *et al.*, 2013). Sustainable Human Resource Management (SHRM) practices, which integrate environmental, economic, and social goals into HR policies, offer a strategic approach to enhancing employee commitment (Jackson, Schuler, & Jiang, 2014). Initiatives such as fair labor practices, continuous training, and inclusive workplace policies have been linked to higher retention rates (Kramar, 2014). Studies suggest that SHRM practices positively influence employee loyalty (Guerci, Longoni, & Luzzini, 2016), but their impact in Malaysia's manufacturing industry remains underexplored. Given the economic uncertainties, including those brought by the COVID-19 pandemic, there is a pressing need for empirical research on how SHRM practices affect employee loyalty in this sector (Ibrahim *et al.*, 2021a; 2021b). Understanding this relationship can help HR managers formulate effective retention strategies that ensure workforce stability and contribute to the industry's long-term growth. Therefore, to achieve the research objectives the level of sustainable human resource management practices implemented and employee loyalty in the manufacturing industry in Malaysia. Consequently, the relationships between sustainable human resource management and employee loyalty in the manufacturing industry in Malaysia.

2. Literature Review

2.1 Employee Loyalty

Employee loyalty means employees are dedicated to their company, performing better and staying longer (Foreman & Money, 1995). It has two components: behaviour and attitude (Cachón-Rodríguez *et al.*, 2021). Loyal employees act as brand ambassadors (Ali *et al.*, 2016) and show consistent positive behaviour (Wolter *et al.*, 2017). Loyalty is tied to retention and commitment to company goals (Blanco-Gonzalez *et al.*, 2020; Zhou & Yu, 2003). A supportive environment, growth opportunities, and rewards foster loyalty (Dong, C., 2006), helping companies retain employees.

2.2 Sustainable Human Resource Management (SHRM)

Sustainable Human Resource Management (SHRM) is an extension of strategic human resource management, focusing on long-term HRM strategies and practices that enable the achievement of financial, social, and ecological goals. Definitions of SHRM emphasize the long-term viability and business performance of organizations, highlighting the importance of fostering stronger employment connections to achieve long-term success. Many studies agree that human resource functions are critical to achieving sustainability, recognizing the value of employees beyond immediate financial usefulness.

2.2.1 Types of SHRM

The concept of sustainable human resource management (SHRM) encompasses various practices that contribute to an organization's sustainability. These practices include "green HRM," which focuses on environmentally conscious hiring and training, "socially responsible HRM," which prioritizes fair career opportunities and work-life integration, and "triple bottom line HRM," which balances environmental, social, and economic goals. Additionally, "common good HRM" involves employee participation in decision making, grievance handling, job security, and support for employees in need. These practices are essential for achieving sustainability and improving employee satisfaction and retention.

2.2.2 SHRM Practises

Sustainable Human Resource Management (SHRM) integrates economic, social, and environmental sustainability into HR practices to improve employee well-being, commitment, and organizational success. It aligns with the triple bottom line by promoting a balanced organizational environment and reducing social inequities. SHRM practices include sustainable recruitment, focusing on diversity and social responsibility; sustainable training, developing green skills for future competencies; sustainable performance management, incorporating sustainability goals in employee evaluations; sustainable employee relations, fostering effective communication and eco-friendly initiatives; and sustainable compensation, offering competitive pay and wellness programs. These practices enhance workforce stability, long-term engagement, and organizational sustainability (Cohen *et al.*, 2012; Tooranloo *et al.*, 2017; Kramar, 2014; Boselie, 2010; Deadrick & Stone, 2014).

2.3 Relationship Between SHRM and Employee Loyalty in the Manufacturing Industry

The relationship between Sustainable Human Resource Management (SHRM) and employee loyalty is critical to organizational success in the industrial sector. Research indicates that SHRM strategies positively impact employee loyalty when social capital serves as a mediator (Cachón-Rodríguez *et al.*, 2022). In the postal industry, sustainable HRM practices—such as employee support, sustainable engagement, and environmental responsibility—enhance satisfaction and loyalty (Strenitzerová & Achimský, 2019). Similarly, in manufacturing, factors like fair compensation, benefits, management communication, recognition, and support are key drivers of employee commitment. Given that employee loyalty is crucial for productivity and operational efficiency, manufacturing firms can enhance retention and performance by aligning SHRM with employee well-being, engagement, and sustainability. However, the effectiveness of SHRM depends on how employees perceive and experience these practices. Thus, integrating sustainable HRM into organizational strategy fosters contentment, involvement, and long-term loyalty, ultimately driving efficiency, innovation, and competitiveness in the manufacturing sector.

2.3.1 Previous study reviews on SHRM and Employee Loyalty in Manufacturing Industry

Previous studies highlight the significant relationship between Sustainable Human Resource Management (SHRM) practices and employee loyalty in the manufacturing industry. Rizwan, Abbas, and Aftab (2014) found that sustainable recruitment and selection foster loyalty by ensuring a strong person-organization fit, leading to higher job satisfaction and lower turnover. H1: Sustainable recruitment positively influences employee loyalty. Similarly, Rahman and Kabir (2020) emphasized that sustainable training and development enhance employee engagement and motivation, strengthening organizational commitment. H2: Sustainable training positively influences employee loyalty. Ahmed and Qamar (2019) demonstrated that integrating sustainability metrics into performance management systems encourages employees to align with the company’s mission, reinforcing their sense of purpose and attachment. H3: Sustainable performance management positively influences employee loyalty. Levenson (2018) highlighted that sustainable employee relations, built on trust, communication, and fairness, cultivate a positive workplace culture, reducing attrition rates. H4: Sustainable employee relations positively influence employee loyalty. Lastly, Armstrong and Taylor (2014) argued that sustainable compensation and benefits, including incentives for environmentally responsible behavior and work-life balance, enhance job satisfaction and long-term commitment. H5: Sustainable compensation positively influences employee loyalty. Collectively, these studies affirm that SHRM practices play a crucial role in enhancing employee loyalty, underscoring the need for organizations to integrate sustainability into HRM strategies to foster retention and long-term workforce stability.

2.4 Conceptual framework

The conceptual framework illustrated in Figure 1 presents the relationship between five independent variables and one dependent variable. The independent variables include sustainable recruitment and selection, sustainable training and development, sustainable performance management, sustainable employee relations, and sustainable compensation and benefits. These variables are proposed to influence the dependent variable, namely employee loyalty.

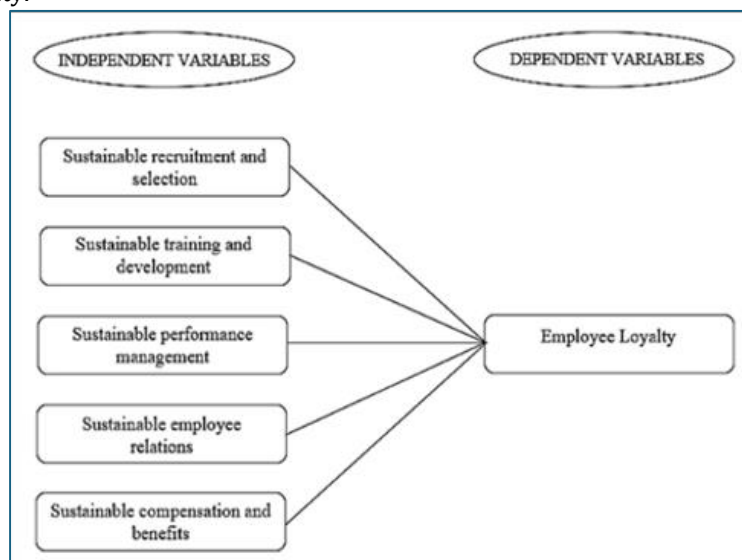


Figure 1 Conceptual Framework

3. Research Methodology

3.1 Research Design

The research design outlines the methods and procedures to collect and analyse data. This study will use a descriptive approach, collecting data via a Google Forms survey distributed through WhatsApp. Respondents will rate items on a 1-5 Likert scale. The data will be analysed to address research objectives and explore correlations between variables.

3.2 Research Flow Chart

The flowchart shown in Figure 2 provides a visual display of the flow of the activities that make up a process. This visual review procedure is a framework that will assist the researcher to comprehend clearly the methodologies and activities on every stage. Furthermore, the flowchart aids the researcher in carrying out the research properly.

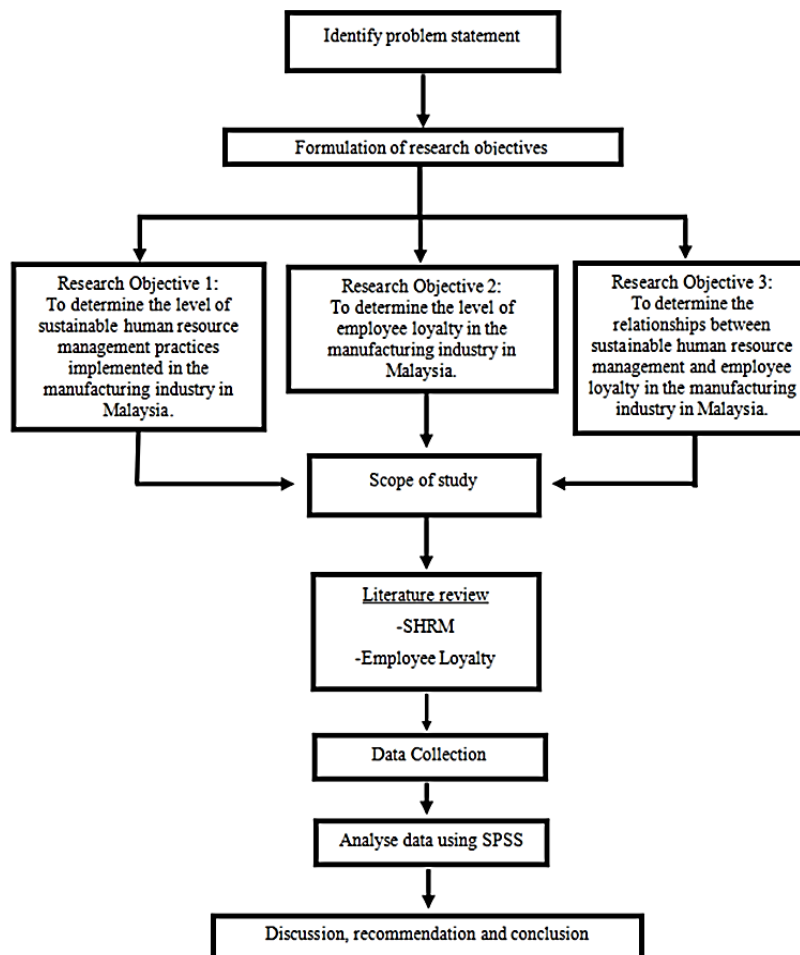


Figure 2 Research Flow Chart

3.3 Research Population and Sample

The sample size for this study was based on the 2.34 million employees in Selangor's manufacturing sector. Using non-probability and convenience sampling, 384 employees were selected randomly, based on Krejcie and Morgan's (1970) sample size table, ensuring accurate data collection.

3.3.1 Sampling Method

Sampling methods are divided into non-random and random sampling. Non-random sampling focuses on smaller, specific samples, while random sampling gives all population members an equal chance of selection (Taherdoost, 2018). This study used convenience sampling, a non-random method, chosen for its simplicity and ease of implementation.

3.4 Research Instrument

The study used questionnaires and scales as research instruments. Questionnaires are essential for surveys, and scales allow respondents to rank traits. Choosing the right instrument is crucial for data credibility and reliability. The researcher must ensure the instrument's validity and reliability before use to ensure credible findings. The questionnaire collects data on sustainable HRM practices and employee loyalty in Malaysia's manufacturing industry. It has three parts: Part A gathers demographic information, Part B focuses on sustainable HRM practices, and Part C addresses employee loyalty.

3.5 Data Collection

Data collection involves gathering information to address research questions and test hypotheses (Kabir, 2016). This study used primary data, collected through questionnaires distributed to employees in Selangor, to assess the extent of SHRM practices and employee loyalty in manufacturing industry. Primary data is gathered first hand, ensuring accuracy and reliability (Kabir, 2016). This study collected data via questionnaires from respondents in industrial enterprises to measure SHRM practices and employee loyalty.

3.6 Pilot Study

A pilot study was conducted to test the questionnaire's feasibility and clarity. This helped ensure that respondents could easily complete it, and the data was cleaned and analysed for reliability using Cronbach's Coefficient Alpha.

3.7 Analysis Data

The data was analysed using SPSS software, which converted responses into tables and graphs. This helped in understanding the findings from the survey respondents. Descriptive statistics were used to summarize the demographic data, SHRM practices, and employee loyalty levels. This method helped in presenting the data through tables and percentages, providing a clear understanding of the findings and setting the stage for further analysis.

3.7.1 Reliability Analysis

Reliability analysis checks if a scale consistently measures the intended construct (Statistics Solutions, 2022). Cronbach's alpha, ranging from 0 to 1, evaluates scale reliability, with higher values indicating greater consistency. As shown in Table 1, a score of 0.60 or above is considered acceptable for this study, while below 0.60 suggests inconsistency.

Table 1 Cronbach's coefficient alpha

| Alpha Coefficient | Range Value |
|-------------------|-------------|
| > 0.50 | Unaccepted |
| 0.50 < 0.59 | Poor |
| 0.60 < 0.69 | Acceptable |
| 0.70 < 0.89 | Good |
| 0.90 < 1.00 | Excellent |

3.7.2 Normality Analysis

Normality tests are used in order to determine whether or not a data set can be adequately described by a normal distribution and to quantify the likelihood that a random variable underlying the data set will be normally distributed. The Kolmogorov-Smirnov Test and the Shapiro-Wilk Test are two popular types of tests for determining normality.

3.7.3 Spearman's Correlation Analysis

Spearman's Rho, or Spearman's correlation coefficient, is a non-parametric statistical test that measures the strength and direction of the relationship between two ranked variables. Unlike Pearson's correlation, which assumes linearity and normally distributed data, Spearman's Rho assesses whether variables tend to increase or decrease together without requiring a linear relationship. It is particularly useful for ordinal data or when parametric test assumptions are not met. As shown in Table 2, the correlation coefficient, denoted as r_s , ranges

from -1 to +1, where -1 indicates a strong negative correlation, +1 signifies a strong positive correlation, and 0 represents no correlation (Field, 2018).

Table 2 Spearman's rho correlation coefficient

| Range of Correlation Coefficient | Level of Correlation Coefficient |
|----------------------------------|----------------------------------|
| $\pm 0.80 < \pm 1.00$ | Very strong |
| $\pm 0.60 < \pm 0.79$ | Strong |
| $\pm 0.40 < \pm 0.59$ | Moderate |
| $\pm 0.20 < \pm 0.39$ | Weak |
| $\pm 0.00 < \pm 0.19$ | Very weak |

4. Results and Discussion

4.1 Survey Return Rate

The study targets 2.34 million manufacturing employees in Malaysia (Department of Statistics Malaysia, 2023). Based on Krejcie and Morgan (1970), 384 employees were randomly selected from Selangor. All 384 questionnaires were distributed via social media, with a 100% response rate. The return rate is summarized in Table 4.1.

Table 3 Survey return rate

| Population | Sample Size | Questionnaire Distributed | Valid Questionnaire Returned | Percentage (%) |
|--------------|-------------|---------------------------|------------------------------|----------------|
| 2.34 million | 384 | 384 | 384 | 100 |

4.2 Reliability Test for Pilot Study

The researcher conducted a pilot study with 30 respondents to assess the reliability of 33 items as shown in Table 4. The overall Cronbach's Alpha value was 0.754, with individual values for independent variables: Sustainable Recruitment and Selection (0.968), Sustainable Training and Development (0.962), Sustainable Performance Management (0.959), Sustainable Employee Relations (0.970), and Sustainable Compensation and Benefits (0.957). The dependent variable, Employee Loyalty, had a Cronbach's Alpha of 0.976. Since all variables had values above 0.60, the researcher concluded that the questions were reliable and could be used for the actual research study.

Table 4 Reliability analysis for pilot study

| Variables | Number of Respondents | Number of Items | Cronbach's Alpha Value |
|---------------------------------------|-----------------------|-----------------|------------------------|
| Sustainable Recruitment and Selection | 30 | 5 | 0.968 |
| Sustainable Training and Development | 30 | 6 | 0.962 |
| Sustainable Performance Management | 30 | 6 | 0.959 |
| Sustainable Employee Relations | 30 | 6 | 0.970 |
| Sustainable Compensation and Benefits | 30 | 4 | 0.957 |
| Employee Loyalty | 30 | 6 | 0.976 |
| Total | | 33 | 0.754 |

4.3 Descriptive Analysis

4.3.1 Demographic Profile

Table 5 below shows the demographic profile of total 384 respondent analysed and illustrated in the table. The demographic information of the respondents was analysed and presented in this section was included gender,

age, job titles, department and length of employment. The analysed information will help to present clear distribution of the respondents. The next part will be presented on the detailed analysis for each item.

Table 5 Demographic Profile of Respondents

| Demographic Profile | Category | N = 384 | Percent (%) |
|----------------------|--------------------------------|---------|-------------|
| Gender | Male | 184 | 47.9 |
| | Female | 200 | 52.1 |
| Age | 18 - 24 | 96 | 25.0 |
| | 25 - 44 | 121 | 31.5 |
| | 45 - 59 | 90 | 23.4 |
| | 60 and above | 77 | 20.1 |
| Job Titles | Operational / Entry Level | 84 | 21.9 |
| | Supervisory / Team Leader | 83 | 21.6 |
| | Mid-level Management | 67 | 17.4 |
| | Senior Management / Executives | 80 | 20.8 |
| | Support & Specialist Roles | 70 | 18.2 |
| Department | Production | 88 | 22.9 |
| | Quality Control | 92 | 24.0 |
| | Human Resource | 28 | 7.3 |
| | Supply Chain / Logistics | 91 | 23.7 |
| | Maintenance / Engineering | 85 | 22.1 |
| Length of Employment | Less than 1 year | 92 | 24.0 |
| | 1 - 3 years | 109 | 28.4 |
| | 4 - 6 years | 13 | 3.4 |
| | 7 - 10 years | 76 | 19.8 |
| | More than 10 years | 94 | 24.5 |

Table 6 analyses the relationship between Sustainable Human Resource Management (SHRM) practices and employee loyalty in the manufacturing industry based on responses from 384 employees. Among the five SHRM areas assessed, Sustainable Employee Relations received the highest average score (3.08), indicating relatively positive perceptions of workplace relationships. In contrast, Sustainable Compensation and Benefits had the lowest average (2.92), suggesting that pay and benefits may not fully meet employee expectations. Other areas, including Sustainable Recruitment and Selection (3.02), Sustainable Training and Development (3.01), and Sustainable Performance Management (2.97), showed moderate satisfaction. Overall, employee loyalty averaged 3.00, reflecting a neutral to slightly positive sentiment toward these practices. These findings highlight the need for organisations to enhance SHRM strategies, particularly in compensation and benefits, to improve employee satisfaction and long-term commitment.

Table 6 Summary of analysis of average mean of each practise

| Items | N | Sum | Mean | Std. Deviation |
|---------------------------------------|-----|---------|--------|----------------|
| Sustainable Recruitment and Selection | 384 | 1158.20 | 3.0161 | 0.92770 |
| Sustainable Training and Development | 384 | 1156.83 | 3.0126 | 0.93364 |
| Sustainable Performance Management | 384 | 1140.67 | 2.9705 | 0.94204 |
| Sustainable Employee Relations | 384 | 1183.50 | 3.0820 | 0.96441 |
| Sustainable Compensation and Benefits | 384 | 1123.00 | 2.9245 | 0.97178 |
| Level of Employee Loyalty | 384 | 1152.67 | 3.0017 | 0.92886 |

4.4 Reliability Test

Table 7 presents the Cronbach's alpha values for six key variables related to sustainability and employee loyalty, based on 33 items. The overall Cronbach's alpha of 0.818 indicates strong internal consistency, confirming that the items collectively measure a coherent construct. Among the variables, Sustainable Employee Relations recorded the highest reliability (0.971), followed by Sustainable Performance Management (0.969), Sustainable Training and Development (0.968), Employee Loyalty (0.967), Sustainable Recruitment and Selection (0.959), and

Sustainable Compensation and Benefits (0.959), all demonstrating excellent reliability. These high values suggest that the constructs are measured consistently, ensuring the trustworthiness and validity of the study's findings.

Table 7 Reliability analysis

| Variables | Number of Items | Cronbach's Alpha Value |
|---------------------------------------|-----------------|------------------------|
| Sustainable Recruitment and Selection | 5 | 0.959 |
| Sustainable Training and Development | 6 | 0.968 |
| Sustainable Performance Management | 6 | 0.969 |
| Sustainable Employee Relations | 6 | 0.971 |
| Sustainable Compensation and Benefits | 4 | 0.959 |
| Employee Loyalty | 6 | 0.967 |
| Total | 33 | 0.818 |

4.5 Normality Analysis

The normality test determines whether the study population follows a normal distribution, which influences the choice between parametric and non-parametric tests. If data is normally distributed, Pearson's correlation is used; otherwise, Spearman's Rho is applied. Given the sample size exceeds 50, the Kolmogorov-Smirnov test was conducted to assess normality. A p-value greater than 0.05 indicates normal distribution, while a value below 0.05 suggests non-normality. Table 8 shows that the p-value for employee loyalty is < 0.001 , confirming that the data is not normally distributed. Additionally, both the Kolmogorov-Smirnov and Shapiro-Wilk tests yielded significant values below 0.001, reinforcing the decision to use non-parametric analysis in this study.

Table 8 Result of normality test for Employee Loyalty

| Variable | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|---|---------------------------------|-----|-----------|--------------|-----|-----------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Employee Loyalty (Dependent variables) | 0.079 | 384 | < 0.001 | 0.985 | 384 | < 0.001 |

a. Lilliefors Significance Correction

4.5.1 Normal Q-Q Plot

Normal Q-Q Plot is used to determine the normality level of the dependent variable. Figure 3 shows the normal Q-Q Plot for the dependent variable, which is employee loyalty. The graph shows that the position of the dots is far and not parallel to the straight line, which explains that the data are abnormal.

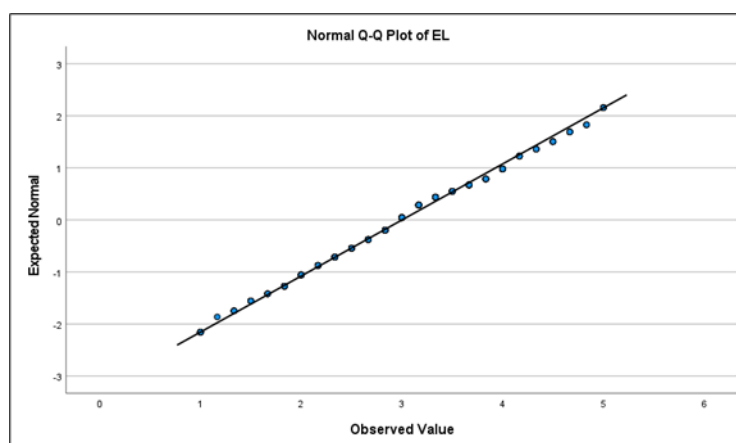


Figure 3 Normal Q-Q Plot

4.6 Spearman's Rho Correlation

This section presents the results of Spearman's Rho correlation analysis, which was used to examine the relationships between the independent variables (sustainable HR practices) and the dependent variable (employee loyalty). The analysis reveals correlation values ranging from -0.042 to 1.000, indicating weak to moderate relationships. The strongest relationship is between sustainable employee relations and employee

loyalty ($r = 0.036, p < 0.001$), while the weakest is between sustainable performance management and employee loyalty ($r = -0.042, p < 0.001$). However, all correlations are statistically insignificant, with p-values above the typical threshold of 0.05. For instance, sustainable recruitment and selection ($r = 0.004, p = 0.936$) and sustainable training and development ($r = 0.003, p = 0.956$) show negligible, statistically insignificant relationships with employee loyalty. Similarly, other practices such as sustainable performance management ($r = -0.042, p = 0.409$), sustainable employee relations ($r = 0.036, p = 0.486$), and sustainable compensation and benefits ($r = -0.047, p = 0.354$) exhibit weak, insignificant correlations. The employee loyalty variable itself shows a perfect correlation ($r = 1.000, p = 0.000$), as expected. Overall, the analysis suggests that while there may be some relationship between sustainable HR practices and employee loyalty, these relationships are not statistically significant and are unlikely to have a meaningful impact on employee loyalty.

Table 9 Spearman’s Rho Correlation Between Independent Variables and Employee Loyalty

| Variables | Correlation with Employee Loyalty | | |
|---------------------------------------|-----------------------------------|-----------------|-----|
| | Correlation | Sig. (2-tailed) | N |
| Sustainable Recruitment and Selection | $r = 0.004^{**}$ | 0.936 | 384 |
| Sustainable Training and Development | $r = 0.003^{**}$ | 0.956 | 384 |
| Sustainable Performance Management | $r = -0.042^{**}$ | 0.409 | 384 |
| Sustainable Employee Relations | $r = 0.036^{**}$ | 0.486 | 384 |
| Sustainable Compensation and Benefits | $r = -0.047^{**}$ | 0.354 | 384 |
| Employee Loyalty | $r = 1.000^{**}$ | 0.000 | 384 |

**Correlation is significant at the 0.001 level (2-tailed)

This research targeted employees in the manufacturing sector in Selangor and Kuala Lumpur, where approximately 2.34 million employees were engaged in the industry in 2022. Using Krejcie and Morgan’s (1970) formula, a sample size of 384 employees was selected, all of whom participated in the study via a questionnaire distributed through WhatsApp. The questionnaire was divided into three sections: demographics, sustainable HR practices, and employee loyalty. The analysis showed that most respondents were female (200 respondents), with 184 male participants. The majority were aged between 25–44 years (98 respondents), worked at operational/entry levels (84 respondents), and were from the quality control department (92 respondents). The respondents’ tenure mostly ranged from 1–3 years (109 respondents). Reliability tests confirmed the consistency of the measurement scales, and Spearman’s Rho correlation was used to analyze the relationships between variables. The results revealed no significant relationship between sustainable HR practices and employee loyalty, indicating that the implementation of SHRM practices in Malaysia’s manufacturing sector is not strong enough to meaningfully impact employee loyalty.

5. Conclusion

This research utilized questionnaires to assess the level of sustainable human resource management (SHRM) practices in Malaysia’s manufacturing industry, focusing on five key areas: sustainable recruitment and selection, sustainable training and development, sustainable performance management, sustainable employee relations, and sustainable compensation and benefits. Respondents rated these practices using a Likert scale. The findings revealed that sustainable employee relations received the highest average score, indicating positive employee perceptions, which aligns with the Resource-Based View (RBV) theory, suggesting that strong employee relationships contribute to a competitive advantage. Conversely, sustainable compensation and benefits scored the lowest, suggesting that employees felt their pay did not meet expectations, consistent with Social Exchange Theory (SET), which emphasizes the importance of fair rewards for employee commitment. Practices like sustainable recruitment, training, and performance management received moderate satisfaction scores, pointing to potential for improvement and aligning with the Triple Bottom Line (TBL) theory, which advocates for balancing social, environmental, and economic goals. The Cronbach’s alpha values showed strong internal consistency, ensuring the reliability of the metrics used, and supporting the validity of the findings related to SHRM practices in the manufacturing sector.

The results show that employee loyalty in Malaysia’s manufacturing sector has a moderate mean value of 3.00, with a standard deviation of 0.93, suggesting a balanced but not unwavering loyalty among employees. While employees express a favourable view of their employers, their loyalty appears conditional, as indicated by moderate scores on long-term retention (2.98) and likelihood to recommend the company to others (3.02). This finding aligns with Social Exchange Theory (SET), which posits that employee commitment is influenced by the mutual exchange of benefits, indicating that employees feel appreciated but may not see enough long-term value

to fully commit. Additionally, the strong Cronbach's Alpha score of 0.967 for employee loyalty confirms the reliability of the measure. The results also reflect aspects of the Theory of Organizational Commitment (Meyer & Allen, 1991), suggesting that employees' moderate loyalty may be due to "continuance commitment," where employees stay with the organization primarily due to the perceived cost of leaving, such as limited job prospects or lack of better opportunities.

The correlation analysis reveals that sustainable human resource management (SHRM) practices such as sustainable recruitment and selection (SRS), sustainable training and development (STD), sustainable performance management (SPM), sustainable employee relations (SER), and sustainable compensation and benefits (SCB) show no statistically significant relationships with employee loyalty in Malaysia's manufacturing sector. The weak correlations, ranging from $r = 0.004$ to $r = -0.047$, suggest that these HR practices have minimal influence on employee loyalty, which challenges the expectations of Social Exchange Theory (SET), which posits that fair and supportive HR practices should foster loyalty. The findings also suggest that other factors, such as organizational culture, leadership style, and external labor market conditions, may have a stronger impact on loyalty. According to the Theory of Organizational Commitment (Meyer & Allen, 1991), employee loyalty is shaped by affective, continuance, and normative commitment, indicating that loyalty may be influenced more by job security, work-life balance, and intrinsic satisfaction than by SHRM practices alone. The study highlights the need for further research to explore additional variables that could mediate the relationship between SHRM practices and employee loyalty, offering a broader understanding of the factors influencing loyalty in this context.

This study examined the impact of sustainable human resource management (SHRM) practices on employee loyalty in Malaysia's manufacturing sector, focusing on Selangor and Kuala Lumpur. While SHRM practices like recruitment, training, performance management, employee relations, and compensation were implemented to varying degrees, their overall effect on loyalty was statistically insignificant. Sustainable employee relations were the most positively received, while compensation received the lowest score, reflecting dissatisfaction with salaries. These results align with Social Exchange Theory (SET), but weak correlations suggest that factors like organizational culture, leadership, and job satisfaction may have a greater influence on loyalty. The study challenges SET and Organizational Commitment Theory, recommending a more comprehensive approach to employee management that includes job security, work-life balance, and leadership. Future research should use mixed-methods and explore additional variables to better understand employee loyalty.

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Conflict of Interest

Authors declare that there is no conflict of interests regarding the publication of the paper.

Author Contribution

The authors confirm contribution to the paper as follows: **study conception and design:** Tivyaa Hussain and R. Chandrashekar; **data collection:** Tivyaa Hussain and R. Chandrashekar; **analysis and interpretation of results:** Tivyaa Hussain and R. Chandrashekar; **draft manuscript preparation:** Tivyaa Hussain and R. Chandrashekar. All authors reviewed the results and approved the final version of the manuscript.

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