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THE INFLUENCE OF TOTAL REWARD STRATEGIES AND JOB SATISFACTION ON THE RETENTION OF GENERATION Z ENGINEERS IN THE MANUFACTURING SECTOR OF BAYAN LEPAS, PENANG: AN EMPIRICAL STUDY

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ABSTRACT

The high turnover associated with motivation among the Generation Z engineers is a major concern to the manufacturing industry in Malaysia especially in Bayan Lepas, Penang. Despite of total reward strategies (TRS) being in place, the rate of employee retention is low. In this study, the influence of TRS and job satisfaction on the retention of Generation Z engineers have been addressed. A quantitative research design was utilized with questionnaires developed in a structured manner and distributed to 100 engineers aged between 21-28 years, working in manufacturing companies in Bayan Lepas. Data were analyzed using correlation, and multiple regression analysis using the SPSS. The results revealed that both job satisfaction and TRS are significant predictors of employee retention. These findings are in support of Social Exchange Theory, which emphasizes that organizations must provide both financial and psychological rewards to increase retention. The empirical findings and provides practical implications for improving retention strategies in manufacturing sector in Malaysia.

Keywords: employee retention, job satisfaction, manufacturing sector, social exchange theory, total reward strategies

INTRODUCTION

At of the fourth quarter of 2023, the manufacturing industry in Malaysia generated 24.1 percent of the gross domestic product (GDP) and employed 2.59 million people (Department of Statistics Malaysia, 2024). Many multinational engineering and technology firms in Penang, commonly called the Silicon Valley of the East which located in Bayan Lepas and thus, requires a constant supply of young engineering talent. Nevertheless, there has been an increasing issue especially in the Bayan Lepas industrial area, where a notable number of the Generation Z (Gen Z) engineers are leaving their positions.

According to TalentCorp (2023), 43 percent of Gen Z engineers have intentions of resigning within one year, and resorting to reproduction of engineers at the age of 23-28 years in Bayan Lepas is 28 percent, which is much higher than the country average of 17 percent (Malaysia Productivity Corporation, 2024). The turnover rate is quite high in this industry which poses a significant challenge to the industry as they are associated with substantial costs. There are costs of recruitment and training, loss of technical expertise that is, which would have been productive. To meet these challenges, most of the organizations have implemented the Total Reward Strategies (TRS) that entail the financial reward (e.g.: salary and bonuses), plus the non-financial rewards (e.g.: recognition, work progress chances, and work-life balance). Nevertheless, despite those efforts, retention levels are still low which implies that perhaps organizations have not been able to target what Gen Z employees value most.

Job satisfaction is a key psychological element that is making an employee committed to a certain organization. Yet, many organizations failed to treat it as a strategic focus for employee retention, often viewing it merely as an outcome of reward strategies rather than an independent variable influencing retention. When employees are satisfied with their jobs, they tend to exhibit higher levels of commitment to their organization and are less likely to leave (Spector, 1997; Hom & Griffeth, 1991).

This paper provides an analysis of the relationship between total reward strategies (IV1) and the relationship between job satisfaction (IV2) with the retention of Gen Z engineers (DV) within the manufacturing industry in Malaysia. This research will provide solution by analyzing the effect of these two independent variables (TRS and job satisfaction) on retention and hence, provide viable conclusions on how to curb turnover of young engineers, and how companies can improve human resource retention strategies in this sector. Although the manufacturing industry boasts large amounts of investment, companies in Bayan Lepas still find it difficult to retain Gen Z engineers. Most of these companies were focus more on monetary payment and overlook the importance of work and life balance, transition and growth that are incredibly appreciated by Gen Z. Moreover, job satisfaction is barely considered as the strategy of retention itself.

There is a dearth of studies that examine the combined effects of TRS and job satisfaction on the retention of Gen Z engineers. This study seeks to fill that gap by analysing the synergistic impact of these two factors. Thus, the research aims to answer the following questions:

RQ1: How do total reward strategies affect the retention of Gen Z engineers?

RQ2: How does job satisfaction influence the retention of Gen Z engineers?

REVIEW OF LITERATURE

Total Reward Strategies

TRS includes non-financial and financial aspects that are meant to recruit, encourage and retain a workforce. Rewards can be of financial such as salaries, bonus, and other monetary awards, and non-financial rewards like recognition, flexibility, and advancement opportunities. Deloitte (2023) shared that 61 percent of employed Gen Z workers worldwide value flexibility and meaningful work more than base pay. Similarly, Tarigan et al. (2022) also found that Gen Z workers in Indonesia prefer personalized rewards and learning experience over the traditional forms of financial compensation. This illustrates the change in priorities of this generation where non-financial rewards are becoming more important in the decision of this generation to remain with their employer.

Job Satisfaction

Job satisfaction plays a crucial role in retention, particularly among Gen Z. As showed by a study conducted by Park and Johnson (2022), they found that among Korean Gen Z employees, job satisfaction is being powered strongly by the factors of autonomy, purpose, and workplace culture over the salary level. It implies that to unify both job satisfaction and psychological drivers, an organization needs to incorporate them in their human resource practices. In addition, Schroth (2019) has conducted an extensive study on Gen Z employees and concluded that Gen Z employees are more satisfied with a job when they believe that the work they do helps to create social value. This proves the need to encourage employees to choose the jobs that will not only fulfil them entirely but also help them benefit the society.

Employee Retention

Employee retention has been a major issue in the manufacturing industry, especially among Gen Z employees. Syal et al. (2024) found that apart from financial compensation, Gen Z retention can also be achieved with the help of constructive growth opportunities, mentoring, and strong sense of purpose. These conditions are in line with the tenets of Self-determination Theory that states the satisfaction of intrinsic needs like autonomy and relatedness improved retention to a great extent. Moreover, a study by Evelyn Hendriana et al. (2023) demonstrates that the relevance of employer branding and work-life balance to making Gen Z choose to remain in an organization. These results are an indication of why organizations should consider people-friendly engagement strategies that are not entirely based on pay.

Relationship between TRS and Employee Retention

Research findings on the subject have always found positivity in the benefit of total reward strategies (TRS) on retention because they meet the monetary or psychological needs. Talent retention is more likely to be kept when the workplace able to provide investment in holistic reward strategies enabling work with finances as key to Gen Z employees in workplaces that allow them to explore their personal growth alongside the opportunity to achieve work-life balance.

Relationship Between Job Satisfaction and Employee Retention

Job satisfaction is a critical factor to employee retention. The level of loyalty and engagement is also higher with satisfied employees who are therefore not likely to quit their organizations. On the other hand, job

dissatisfaction usually results in poor engagement and increased turnover especially in the younger employees such as Gen Z, who are more sensitive on how their values align with their work-life.

Theoretical Foundation

The theory which the present work is based on comprises of Maslow Hierarchy of Needs and Social Exchange Theory. Based on the model set by Maslow, Total Reward Strategies (TRS) cater to the physiological and safety needs of an employee and subsequently allows him or her to fulfil the needs in the higher level namely esteem and self-actualization. These intrinsic needs help in retention of employees since their needs are met to promote job satisfaction and a feeling of belonging. A theory that can be used to explain the reciprocity of employer and employees is known as Social Exchange Theory (Blau, 1964). The employees find the value of association with an organization in the rewards that they gain. Where companies present enticing Total Reward Strategies, which may include good salary packages, appreciation and work life balance, employees view them as positive inputs. These in turn have higher chances of demonstrating positive behavior (increased job satisfaction and stronger intention to remain in the organization etc) hence greater retention occurs (Spector, 1997; Hom & Griffeth, 1991).

Research Hypotheses and Conceptual Framework

This study tests the following hypotheses, grounded in the Social Exchange Theory (Blau, 1964):

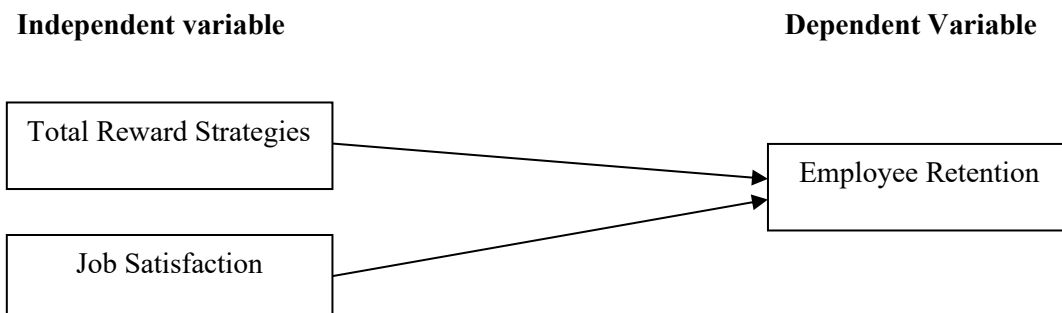
H1: Total reward strategies positively related to employee retention among Gen Z engineers.

H2: Job satisfaction positively related to employee retention among Gen Z engineers.

The conceptual framework posits that organizations offering attractive reward systems (TRS) and improved job satisfaction will results in employee retention.

Figure 1

Conceptual Framework



METHODOLOGY

This is a quantitative research study that adopts a cross-sectional design to evaluate the effect of Total Reward Strategies (TRS) and job satisfaction on employee retention among Gen Z engineers in Bayan Lepas Industrial Zone. Questionnaire with 5-point Likert scale were distributed through Google Forms with the assistance of HR departments and engineering managers of the target companies. Survey helped to collect behavioral and attitudinal data with efficiency and in predetermined time. The purposive sampling allowed researcher to select Gen Z engineers aged between 21-28 years. A total of 100

questionnaire was returned, yielding 83.3 percent response rate. The hypotheses were tested through multiple regression using SPSS.

Research Instrument

As the questionnaire was distributed online, it was prepared in the Google form format. The questionnaire consists of four sections namely, demographic information, total reward strategies, job satisfaction, and employee retention. Total reward strategies items were adapted from Armstrong and Brown (2029) involving financial and non-financial rewards such as pay, bonuses, and work-life balance. Job satisfaction items were adapted from Spector (1997) measuring the satisfaction relating to autonomy, purpose, and work culture. Employee retention items were adapted from Hom and Griffeth (1991) Retention Intention Items which measure employees' commitment and likelihood to stay.

RESULTS

Demographic Characteristics of Respondents

Demographic characteristic of respondents is discussed in this section which include gender, age, race, education level, years of service, department, and type of company.

Gender

As shown in Table 1, out of 100 respondents, 55% were female.

Table 1

Gender (n=100)

Gender	Frequency	Percentage (%)
Male	45	45
Female	55	55

Age

Table 2 showed the age distribution of the respondents in this study. Most of the respondents (48%) were aged between 26 and 28 years old which indicates that nearly half of the Gen Z engineers represented the elder part of this age group. It then followed by respondents aged between 24 and 25 years (37 per cent) and respondents aged between 21 and 23 years old (15%).

Table 2

Age (n=100)

Age Range	Frequency	Percentage (%)
21–23	15	15
24–25	37	37
26–28	48	48

Race

As shown in Table 3, majority of respondents were Malay (51%). It then follows by Chinese (33%) and Indian (12%).

Table 3

Race (n=100)

Race	Frequency	Percentage (%)
Malay	51	51
Chinese	33	33
Indian	12	12
Others	4	4

Education Level

In terms of education level, majority of respondents (98%) are degree holder. This was in line with the current norm of hiring technical positions in Malaysia where bachelor’s degree is the most common entry-level qualification to be an engineer in the manufacturing industry.

Table 4

Educational Level (n=100)

Education Level	Frequency	Percentage (%)
Degree	98	98
Master	2	2

Years of Service

Table 5 showed respondents’ years of service with the organization. Out of 100 respondents, 38% have served their organizations between 1 and 2 years and between 3 and 5 years. Furthermore, 12% of the respondents had less than one year, while another 12% had more than five years of service. These results show that most of the Gen Z engineers in this study were at their early or mid-stage of their careers.

Table 5

Year of Service (n=100)

Years of Service	Frequency	Percentage (%)
Less than 1 year	12	12
1–2 years	38	38
3–5 years	38	38
More than 5 years	12	12

Department

Table 6 showed the department where the respondents attached. Most of the respondents (44%) surveyed were attached with engineering department. This followed by Quality Control (21%), Maintenance (14%) and Production (15%).

Table 6

Department (n=100)

Department	Frequency	Percentage (%)
Engineering	44	44
Quality	21	21
Production	15	15
Maintenance	14	14
Others	6	6

Company Type

As shown in the Table 7, majority of the respondents (70%) were employed by multinational companies, while another 30% of respondents worked for local companies. This distribution reflects the significant presence of multinational corporations within the Bayan Lepas industrial zone, often referred to as Malaysia's "Silicon Valley," illustrating the globalized nature of the region's engineering job market.

Table 7

Company Type (n=100)

Company Type	Frequency	Percentage (%)
Multinational	70	70
Local	30	30

Correlation Analysis

Table 8 presents the Pearson correlations of variables for the 100 respondents. Table 8 revealed significant positive relationship between total rewards strategies and job satisfaction ($r = 0.393, p < .001$), suggesting that the higher the total reward strategies implemented, the higher the employees feel satisfied with their job. Also, there were significant positive relationships between total reward strategies and employee retention ($r = 0.446, p < .001$). The results imply that the higher the total reward strategies implemented, the higher the employee retention. Job satisfaction also was found significantly positively related to employee retention ($r = 0.599, p < .001$). The results indicate that the more the employees feel satisfied with their job, the more they will stay with the organization.

Table 8

Correlation Analysis

Variables	r	p-value	Interpretation
TRS ↔ JS	0.393	< 0.001	Moderate positive correlation
TRS ↔ R	0.446	< 0.001	Moderate-to-strong positive
JS ↔ R	0.599	< 0.001	Strong positive correlation

Multiple Regression Analysis

As shown in Table 9, 41.1% ($R^2 = 0.411$, $F=33.89$, $p<0.01$) of the variance in employee retention was significantly explained by perceived total reward strategies and job satisfaction. In the model, total reward strategies ($\beta=0.249$, $p<0.004$) and ($\beta=0.501$, $p<0.001$) were found positively related to employee retention. The results suggest that employee retention can be increased by implementing total reward strategies and ensure employees are satisfied with their job.

Table 9
Linear Regression Analysis

Predictor	B	Std. Error	Beta	t	p-value	Interpretation
Constant	1.198	0.337	—	3.55	< .001	Intercept baseline retention score
Total Reward Strategies	0.226	0.077	0.249	2.937	0.004	Significant positively predicts retention
Job Satisfaction	0.501	0.085	0.501	5.916	< .001	Stronger significant predictor of retention

DISCUSSIONS

Theoretical Implications

The current findings have contributed to the current body of knowledge on employee retention in several ways. First, findings from the current study have given new empirical evidence on the relationship between total reward strategies and job satisfaction when tested among Gen Z engineers in manufacturing sector. Two factors (total reward strategies and job satisfaction) were found related to employee retention.

Second, the inclusion of Need Theory developed by Maslow and Self-Determination Theory (SDT) into the framework of total reward strategies provides some light into the understanding of shaping behavioral intentions of a transforming workforce based on the perceptions of reward. The current study further contributes to previous studies like Schroth (2019) on intrinsic motivation among Gen Z group and expands the Two-Factor Theory of Herzberg, referring to an industrial setting in the study of engineers.

Practical Implication

The findings of this research offer valuable insights for HR practitioners and policymakers within manufacturing industries in which high turnover rates of Gen Z employees can be considered a major challenge. To increase employee retention, organization need to consider the strengths of an employee which may include offering not just monetary reward, but also providing them with professional enhancements, appreciations, work life harmony, and valuable work experiences. Also, by focusing on employee job satisfaction, organization increase worker interest and element a dedicated, high-performance group of employees. Employers need to align their total reward strategies to values of Gen Z so that they can minimize their turnover and enhance the stability of workforce as such through focusing on purpose, having freedom, and making social contributions.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The research design adopted in this study has some limitations that might influence the interpretations and generalizations of the findings. These issues are discussed next.

The study was aimed at understanding the influence of total reward strategies, and job satisfaction on employee retention among Gen Z engineers in the manufacturing sector. But the study was conducted in Bayan Lepas industrial zone only. The study does not include other manufacturing in other industrial zones. Thus, the findings only captured perceptions of Gen Z engineers from one industrial zone regarding factors that might influence their intention to remain with the organization. Therefore, this study can be extended in the future by including other Gen Z engineers from manufacturing in other industrial zones in the effort to explore the influence of total reward strategies and job satisfaction which might offers greater understanding on the issues of employee retention among Gen Z engineers.

Apart from that, this study only tested two variables namely, total reward strategies and job satisfaction in the effort to understand employee retention. Since these factors contribute 41.1% of the variance in employee retention, this provides opportunity for future research to explore other potential variables to further extend the understanding of employee retention issues.

This study adopted quantitative approach with cross-sectional design. With this approach, the study does not able to answer the question of why total reward strategies and job satisfaction influence employee retention in manufacturing sector. This can be explored by utilizing qualitative approach where interview can be conducted.

In short, even though there are some limitations related to the approach used and given the exploratory nature of the study, the results do provide with useful findings that should be interest of both researchers and practitioners.

CONCLUSION

In conclusion, this study was conducted to investigate the role of total reward strategies and job satisfaction on employee retention among Gen Z engineers in manufacturing sector. The study found that both variables tested were related to employee retention indicating that having a better reward strategies and focusing on enhancing job satisfaction would increase the employee retention among Gen Z engineers. With these new insights, it is hoped that a more complete understanding of the influence of these factors can be achieved in addressing employee retention issue especially among the Gen Z engineers in the manufacturing sector.

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