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The determinants of talent retention in the information technology services sector in Malaysia

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ABSTRACT

This research aims to investigate the factors influencing talent retention within Malaysia's IT services sector. Specifically, it seeks to determine the impact of reward programs, career development, and work-life balance on talent retention. Conducted in a descriptive, non-contrived setting, this study employs a convenience sampling method. Self-administered online questionnaires are utilized for quantitative data collection. The research employs a correlation method to examine the association between reward programs, career development, work-life balance, and talent retention. Questionnaires, adapted from prior research, are distributed via WhatsApp and email, targeting a minimum sample size of 384. Data analysis is conducted using SPSS, a software suite designed for social science research. The study reveals that two out of the three hypotheses establish a significant relationship between rewards programs, career development, work-life balance, and the retention of talented workers in Malaysia's IT services sector. These findings suggest that attention to rewards programs and career development significantly influences talent retention in the Malaysian IT industry. The study recommends further exploration of variables that might exert a more substantial impact on talent retention within the Malaysian IT services sector. This research contributes valuable insights into the critical determinants of talent retention in Malaysia's IT services sector. The identified relationships between rewards programs, career development, and work-life balance offer practical guidance for industry professionals, informing strategies to enhance talent retention practices.

Contribution/Originality: The study's originality lies in its focused approach, contributing valuable insights and recommending further exploration of influential variables in talent retention within the Malaysian IT sector.

1. INTRODUCTION

In the post-COVID-19 pandemic situation, Mercer (2021) reported that employers are faced with a growing shortage of skilled workers amidst the transition of back-to-work in the office. Many companies in Southeast Asia are having the challenge of attracting and retaining talent. Their primary turnover reasons are dissatisfaction with salaries or limited career advancement. Kamalaveni, Ramesh, and Vetrivel (2019) research findings found that employers do encourage a healthy work-life balance, but to retain employees, options like reward management and

career development opportunities are important as well. Work-life balance, rewards and compensation, and workplace environment all have significant positive impact on employee retention, according to research by Zainal et al. (2022) on the Malaysian service sector. Employee compensation, employee engagement, career development, training, work environment, and effective leadership are some of the independent variables that have an influence on talent retention, according to the research from Kamalaveni et al. (2019); Baharin and Hanafi (2018); Khalid and Nawab (2018); Sudhakaran and Senthilkumar (2019); and Kadiresan, Khuan, Arumugam, Rasu, and Theseira (2019). Back in 2019, around 62.7 percent of Malaysia's labor force was employed in the services sector, which accounted for most of the employment in the country. And nearing the ten-year average, 27 percent of workers were employed in the industrial sector. The services sector absorbed the decline in agricultural employment from 2007 to below 10.28 percent (O'Neil, 2022). In Hosen (2022) research introduction, the high rate of employee turnover in corporations has been a big problem in Malaysia for a long time.

Recently, in the 2022 third quarter employment analysis by the Department of Statistics Malaysia (2022) of labor demand by economic activity, the services sector had the highest composition of jobs, at 51.9%, or 4.50 million. Agriculture (16.1%; 31,000 vacancies), services (15.7%; 30,000), and manufacturing (56.1%) all had the highest percentage of open positions. The services industry, which employed 16,000 people, accounted for 51.5% of all new jobs produced; thus, it shows the momentum gaining in the services industry. According to data released by the Department of Statistics Malaysia (2022) for the third quarter of 2022, the country's gross domestic product (GDP) increased by 14.2%, a significant increase from the previous quarter's 8.9% GDP growth. The same year's first quarter saw similarly substantial growth as the country moved closer to endemic areas and reopened country boundaries. Meanwhile, the Malaysian Department of Statistics reported that the services sector, the primary contributor to GDP growth, increased by 16.7% in the third period of 2022, up from 12.0% in the second period.

According to the findings of a study conducted by Jayashree, Reza, Malarvizhi, Gunasekaran, and Rauf (2022), the implementation and sustainable development of Industry 4.0 in Malaysia are highly dependent on IT resources, leadership, team cohesion, and external support. The authors' study offers practical advice for practitioners, namely that to accept digitalization and ensure the country's long-term viability, they should prioritize the development of IT infrastructure, flexible and cohesive management, and the formation of competent and reliable implementation teams (Jayashree et al., 2022). According to the study by Salvadorinho, Pintor, Moreira, Freire, and Teixeira (2022), the digital paradigm known as Industry 4.0 is the digitalization and integration of production processes from the point of customer order to the point of downstream product services, providing connectivity and interoperability to areas where the cultivation of new skills is required. Thus, the accumulation of organizational knowledge databases and the need to retain workers have become critical. Numerous scholars have studied the subject of talent retention but do not focus much on the IT services sector. In Malaysia, with the growth of the services sector and adoption of the Industry 4.0, the IT platform is an important element that requires a specific skillset and experience of human resources. With that, this study is being conducted to help close the educational gap and improve managers' knowledge of organizational strategies and the determinants that may be used to attract and hold on to talents in the IT services sector in Malaysia. The determinants of the rewards program, career development, and work-life balance will be discussed next.

2. LITERATURE REVIEW

2.1. Underlying Theory

This research is being done against the background of Social Exchange Theory (SET), which suggests that the variables of rewards program career development, and work-life balance may have a significant impact on talent retention. Social Exchange Theory investigates social behavior using theoretical microeconomic concepts (Urbonavicius, Degutis, Zimaitis, Kaduskeviciute, & Skare, 2021). The fundamental tenet of Social Exchange Theory is that people behave in ways that maximize benefits while minimizing costs. As a result, the discussion in

this study on talent retention is built on the Social Exchange Theory (Yin, 2018). People are frequently motivated to obtain some valued reward (love, services, or goods) through social transactions, but they must give up something valuable to do so (time, freedom, or money), Redmond (2016). The Social Exchange Theory hypothesis, as explained in social behavior, states that actors begin and maintain connections because of anticipated rewards, which encompass not only material advantages but also emotional and social incentives like friendship (Tran, Gorton, & Lemke, 2022). Similarly, in the theoretical research framework from Cahigas, Prasetyo, Persada, Ong, and Nadlifatin (2022), they explained that Social Exchange Theory focuses on how individuals interact with one another when exchanging resources, both tangible and intangible, which only happens when a large reward is offered. Employee development investment is a prerequisite for organizational effectiveness, and according to Social Exchange Theory, it has a beneficial impact on recognizing employees' new skills, degree of commitment, and motivation in achieving the organization's goals (Zainal et al., 2022). From the Baharin and Hanafi (2018) literature review, the Social Exchange Theory hypothesis suggests that when organizations invest in talents, they are more likely to get a positive return; talents stay longer with the company; they feel encouraged and supported in their contributions; and productivity increases. Social Exchange Theory also serves as a solid foundation for comprehending the relationship that exists between companies and their employees (Diah, Hasiara, & Irwan, 2020). The Social Exchange Theory is applicable to this study and applied to the framework of this research to describe how the factors of rewards program, career development, and work-life balance have a significant association with talent retention in Malaysia's information technology services industry.

2.2. Rewards Program

The total reward concept from Armstrong and Murlis (2007) is referred to as "includes all kinds of possible direct and indirect, intrinsic and extrinsic rewards," with all aspects of the employees' rewards being interlinked and treated as a coherent whole. In a similar manner, the foundations of reward management are transactional and relational incentives, which can be maximized when an organization combines relational and transactional rewards (Armstrong & Murlis, 2007). Wage has been said to be an initial drive for many employees, but it is not a lasting one (Arokiasamy, 2019). For key personnel retention, extrinsic perks like sales incentives, performance bonuses, pay rises, and loyalty awards are crucial (Kadiresan et al., 2019). The biggest types of rewards for employees in Malaysia are wages and fringe benefits as an incentive, which led to increased employee engagement, talent retention, motivation, and productivity (Zainal et al., 2022).

2.3. Career Development

Career development is the assistance an organization provides to an employee's professional development, particularly when the employee transitions to a new position or project (Gartner, 2022). During the COVID-19 pandemic in 2020, Malaysia's unemployment rate was 4.5%, the highest in nearly three decades, as many employees were made redundant, sacked, or made redundant as firms suffered financial losses (Murad, 2021). There was a need for employers to accelerate and assess their ability to retain talents by considering how to make the employees stay with intangible drivers such as improving the working culture, a flexible workplace, or career progression (HR Asia, 2021). The pandemic has caused many talents in Malaysia to make changes to their career direction, and that has prompted employers to re-evaluate retention strategies, policies, and working cultures, as reported by Yeo (2021). According to the literature study by Kadiresan et al. (2019), when employees frequently face a high degree of stress on the job, their motivation and work engagement decrease. Nevertheless, with suitable career development measures, employees are more likely to stay for the growth prospects. The employee tends to lose faith and try to seek alternative possibilities from other organizations due to waiting for a long time to get promoted, the company is unable to provide higher prospects for learning and growth, or there is an unpredictable and unjust promotion path.

2.4. Work-Life Balance

The phrase "work-life balance" describes how paid labor, in all its forms, and personal life, which includes but is not limited to family life (De Groo, 2017). Rather than having a negative effect on the job, work overload prevents employees from spending time with their families (as revealed in the study by Zainal et al. (2022) on the hypothesis of the role of work-life balance on employee retention) and can reduce voluntary turnover. Similarly, Sudhakaran and Senthilkumar (2019) research found that if an employee does not strike the right balance between work demand and family, and the job stress passes to family time, turnover intention will increase. In the Hee and Ann (2019) research, they found out that the younger Malaysian workforce style of living is that the focus of life is not work; in fact, they are content with a mixture of family gatherings, voluntary work, holidays, personal recreation, and community activities. In another study by Khaled (2019), it was shared that if an organisation has an effective work-life balance policy, the employee's productivity will increase because of the work-life balance. In the report by Murad (2021), based on a 2020 survey by the Malaysian Employers Federation (MEF), the results show that retention strategies by employers were geared towards offering competitive salaries, benefit packages, training, promotion, career growth opportunities, and flexible work arrangements, to attract and retain employees. Figure 1 illustrates the conceptual framework adopted in this study.

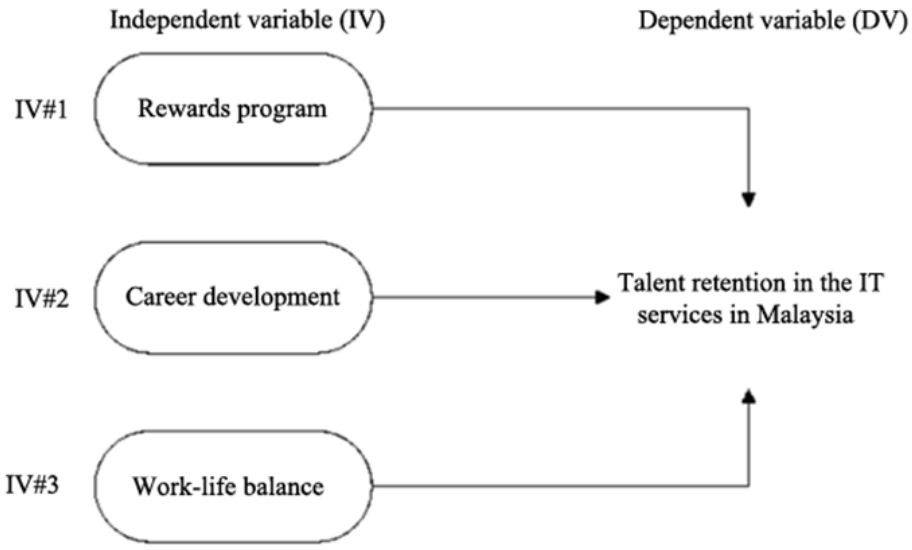

Figure 1. Conceptual framework.

3. METHODS

3.1. Participants and Procedures

This study examined the talent determination factors in the Information Technology (IT) service sector in Malaysia. The sample size for a research study is influenced by a few factors, such as the level of confidence in the data, the degree of accuracy the collected data reflects on the characteristics of the total population, the acceptable level of error margin, and the correctness of any required estimation and analysis (Pearlson, 2019). The sample size must be adequate for data accuracy and the expected degree of confidence, with a sample size of 30 to 500 being useful as a rule of thumb based on the type of sampling strategy used as well as the research purpose and research questions under examination (Sekaran & Bougie, 2016). As a result, Krejcie and Morgan (1970) table for obtaining a small sample size from a given population is used to generate the suggested sample size for this study: N (population size of more than 1 million) would have S (small sample size) of 384. The respondent was given an online questionnaire to fill out to collect the data. To make it easier for respondents to respond at any time and from any location, digital versions of the questionnaires were converted and uploaded to Google Forms and Monkey Survey. The questionnaire utilized in this study will have three parts: the demographic profile, voluntary work

satisfaction as the dependent variable, and independent factors. The questionnaire employed in this study is a self-administered questionnaire with three components.

Table 1 outlines the instrumentation design used in the study. It includes the sections, variables, the number of items for each variable, the source of the items, and whether they were adopted or adapted. Section A focuses on demographic variables and consists of 4 items. The items in this section were adapted from Sekaran and Bougie (2016). Section B, the dependent variable, is Talent Retention, comprising 5 items. These items were adapted from Bakar, D'Cruz, and Singh (2018) and Zainal et al. (2022). Section C covers the independent variables, including reward program, career development, and work-life balance. Each of these variables consists of 4 items. The items for these variables were adapted from various sources, including Zainal et al. (2022); Bakar et al. (2018); Macák, Štůsek, and Venclová (2015); Chin (2018) and Johari, Tan, and Zulkarnain (2018).

Table 1. Instrumentation design.

Section	Variables	Items	Source	Adoption/Adaptation
A	Demographic	4	Sekaran and Bougie (2016)	Adaptation
B (Dependent variable)	Talent retention	5	Bakar et al. (2018) and Zainal et al. (2022)	Adaptation
C (Independent variable)	Reward program	4	Zainal et al. (2022) and Bakar et al. (2018)	Adaptation
	Career development	4	Macák et al. (2015) and Chin (2018)	Adaptation
	Work-life balance	4	Johari et al. (2018) and Zainal et al. (2022)	Adaptation

3.2. Measurement and Measure

Various measurement instruments are available for conducting tests, and the Statistical Package for Social Sciences (SPSS) is used to analyze the relationship between variables and interpret the results into secondary data. Following data collection, the application does Factor Analysis, Descriptive Analysis, Analysis of Variance (ANOVA), Cluster Analysis, and Categorical Data Analysis. The descriptive analysis and hypothesis testing are separated into two components.

This research's major goal is to determine what personal factors influence workplace discrimination. Measurements are defined in this chapter as a tool or approach for analyzing the data obtained from respondents (Sickles & Zelenyuk, 2019). The primary goal is to see if there is a link between the independent variables, factors, and the dependent variable, workplace discrimination. SPSS 22.0 software will be used to evaluate the raw data collected. Descriptive analysis is a good way to summarize data. As a result, a descriptive analysis will be performed using the SPSS software to assess the obtained data. The raw data collected will be analyzed using SPSS 22.0 software. A descriptive analysis is an effective method for summarizing data. Therefore, a descriptive analysis will be done using the SPSS program to evaluate the gathered data.

4. DATA ANALYSIS

Table 2 highlights the response rate of 71%. A total of 400 sets of questionnaires were distributed to employees of the textile sector in Bangladesh using an online medium called Google Forms. Participants, however, only provided 289 responses. Unfortunately, only 284 replies are appropriate for the following stage since five responses were spoiled and cannot be processed due to an incomplete response as necessary.

Table 2. Summary of questionnaire distribution.

Total distribution	Total received	Total usable	Total spoilt	Response rate
400	289	284	5	71%

4.1. Descriptive Statistics

Table 3 provides an overview of the demographic characteristics, encompassing gender, age, level of education, and years of service at the current organization. The table reveals that there were a total of 109 survey participants. The gender distribution showed that the majority were male (N =66, 60.6%), with female respondents making up the remaining portion (N = 43, 39.2%). Regarding age, respondents were categorized into four groups: 20 to 29 years, 30 to 39 years, 40 to 49 years, and over 50 years. The largest proportion of participants fell into the over-50-year-old category (N = 34, 31.2%), followed closely by the 30 to 39-year-old (N = 33, 30.3%) and 40 to 49-year-old (N = 27, 24.4%) groups. The 20 to 29-year-old age group constituted the minority, with 15 respondents (13.8%). Years of experience were converted into years of service within the current organization and categorized into five groups: two years or less, two to five years, five to ten years, ten to fifteen years, and more than fifteen years. The distribution among these categories was as follows: 16 respondents had worked for less than two years (15.4%), 19 respondents had a tenure of two to five years (18.3%), 21 respondents fell into the five to ten-year category (20.2%), 16 respondents had worked for ten to fifteen years (15.4%), and 32 respondents had more than fifteen years of service (30.8%).

Table 3. Demographic profile of respondents.

Demographic	Categories	Frequency, n=284	Percentage (%)
Gender	Male	66	39.4
	Female	43	60.6
Age	20-29	15	13.8
	30-39	33	30.3
	40-49	27	24.8
	50 years old and above	34	31.2
Level of education	Secondary education	1	0.9
	Diploma education	11	10.1
	Bachelor education	65	59.6
	Postgraduate education	25	22.9
	Professional qualification	7	6.4

4.2. Reliability and Validity Test

A reliability study is performed to determine the level of potential imprecision error in the measurement procedure (Nugraha, Puspitasari, & Amalia, 2020). As mentioned, it is critical to do reliability testing to ensure the uniformity of all measurement devices employed. Furthermore, in reliability analysis, the acceptable value is determined using Cronbach's Alpha, and it is critical to identify the Cronbach's Alpha value to evaluate the reliability of the responses obtained, rating instruments used for evaluation, and tool stability (Bujang, Omar, & Baharum, 2018).

Based on Table 4, the Cronbach Alpha value of all variables with retained items from factor analysis is above the threshold, which is 0.6. A point to note here is that the Cronbach's Alpha value for IV3 (work-life balance) was 0.160 with all four items included. If the Cronbach's Alpha is too low (below 0.60), it would be feasible to discover which of the research measurement's items needed to be deleted to increase inter-item consistency. This would be the case if Cronbach's Alpha was below 0.60 (Sekaran & Bougie, 2016). To appropriately calculate the item-specific Cronbach's Alpha value, it is necessary to determine which item is unproductive. The results indicate that the Cronbach's Alpha value for the Work-Life Balance independent variable question 2: "Due to work, my personal life suffers" is 0.833 under Cronbach's Alpha if Item Deleted. This suggests that this is the component that should be eliminated; after doing so, the Cronbach's Alpha score would rise to 0.833 (Jain & Chetty, 2021). With these analyses, the study is now proceeding with valid and reliable data.

Table 4. Reliability analysis results.

Construct	Cronbach's alpha	Number of items
Talent retention	0.811	4
Reward program	0.854	4
Career development	0.822	4
Work life balance	0.833	3

4.3. Factor Analysis

Factor analysis is a statistical method employed to reduce many independent variables into a smaller set of common factors, which are then used as indicators for subsequent analyses (Maskey, Fei, & Nguyen, 2018). This method is based on general linear model (GLM), which means that it assumes linearity, the absence of multicollinearity, the inclusion of relevant variables, and real correlations between variables and factors.

This study uses two methods, principal components analysis (PCA) and exploratory factor analysis (EFA), to make it easier to show how many scale or normally distributed variables interact with each other (Leech, Barrett, & Morgan, 2015). The Kaiser-Meyer-Olkin (KMO) measure assesses the suitability of factor analysis for the study's sample. A high KMO value (ranging from 0.5 to 1) indicates the appropriateness of factor analysis, while a low value (below 0.5) suggests inadequacy, indicating that the sample size is insufficient for EFA (Research With Fawad, 2023). Sampling adequacy information aids researchers in grouping survey items and better comprehending the constructs under investigation. Sample adequacy measures, frequently evaluated through KMO, determine how closely one item correlates with others in the exploratory factor analysis correlation matrix (Taherdoost, Sahibuddin, & Jalaliyoon, 2014).

Bartlett's test of sphericity (BTS) is employed to examine the assumption that variables in the population are uncorrelated. A significant BTS result indicates that the variables are sufficiently interconnected, allowing for a successful exploratory factor analysis (ResearchWithFawad, 2023). In practical terms, the null hypothesis is accepted if the BTS significance is > 0.05, while the alternative hypothesis is accepted if the BTS significance is < 0.05 (Hair et al., 2018).

The outcomes presented in Table 5 demonstrate that the dataset for the dependent variable is reasonably appropriate for conducting factor analysis. This is evident from the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, which stands at 0.785, suggesting that the data is suitable for such analysis. Furthermore, Bartlett's test of sphericity yielded a remarkably significant p-value (<0.001), indicating substantial correlations among the variables within the dataset. These findings provide support for the feasibility of employing factor analysis to explore potential underlying factors or dimensions in the data.

Table 6, on the other hand, displays the results related to the independent variables. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy for the independent variable dataset is 0.823, indicating a high degree of suitability for factor analysis. Additionally, Bartlett's test of sphericity produced a highly significant p-value (<0.001), signifying notable correlations among the independent variables. These results show that the dataset for the independent variables is a good one for factor analysis. This means that there are important underlying factors that can be looked at using this method of analysis.

In summary, the KMO measure of sample adequacy and Bartlett's test of sphericity affirm the appropriateness of applying factor analysis to the dataset.

Table 5. KMO and Bartlett's test (Dependent variable).

KMO and Bartlett's test		
Kaiser-Meyer-Olkin measure of sampling adequacy.		0.785
Bartlett's test of sphericity	Approx. chi-square	169.930
	Df	10
	Sig.	<0.001

Table 6. KMO and Bartlett's test (Independent variables).

KMO and Bartlett's test		
Kaiser-Meyer-Olkin measure of sampling adequacy.		0.823
Bartlett's test of sphericity	Approx. chi-square	744.178
	Df	66
	Sig.	<0.001

4.4. Factor Loading

The commonly employed method for factor extraction, known as principal component analysis (PCA), is a feature found in statistical software packages like SPSS. According to Maskey et al. (2018), PCA is a suitable approach for data reduction when the objective is to condense many measurable variables into a smaller set of composite variables that effectively represent them. In this study, factor loading is conducted using SPSS software. Convergent validity will be confirmed when all items exhibit factor loadings exceeding 0.5, as recommended by Tabachnick and Fidell (2019). Items with loadings of 0.5 or higher are considered practically significant and should be considered when determining a factor, as indicated by Maskey et al. (2018). Communality refers to the degree to which a variable shares variation with all other variables under consideration. A low communality value suggests that certain variables do not align well with the factor solution and should be considered for removal from the analysis. According to Research With Fawad (2023), values less than 0.50 are typically candidates for removal.

In Table 7a, the factor loading for the dependent variable ranges from 0.339 to 0.671. In addition, the factor loadings for independent variables range from 0.573 to 0.840 in Table 7b. Maskey et al. (2018) said that it was very important to get rid of the items with factor loadings less than 0.5 because they messed up the factor structure. This is because the main goal of component analysis is to find a group of the theoretically important factors that are easy to understand and explain most of the differences. In general, according to academics such as Tabachnick and Fidell (2019), each variable could include at least three items. The communality value should be greater than 0.5 for these variables to be considered for further factor analysis; otherwise, these variables will be eliminated from subsequent factor analysis steps.

Table 7a. Factor loading for the preliminary test (Dependent variable).

Communalities		
Items	**Initial**	**Extraction**
DV1	1.000	0.566
DV2	1.000	0.339
DV3	1.000	0.671
DV4	1.000	0.636
DV5	1.000	0.614

Note: Extraction method: Principal component analysis.

Table 7b. Factor loading for the preliminary test (Independent variables).

Items	Initial	Extraction
IV1*1	1.000	0.772
IV1*2	1.000	0.573
IV1*3	1.000	0.685
IV1*4	1.000	0.772
IV2*1	1.000	0.746
IV2*2	1.000	0.840
IV2*3	1.000	0.587
IV2*4	1.000	0.737
IV3*1	1.000	0.586
IV3*2	1.000	0.605
IV3*3	1.000	0.777
IV3*4	1.000	0.794

Note: Extraction method: Principal component analysis.

4.5. Multiple Regression

Adjusted R-squared serves as a more dependable measure of model fit since it can be easily adjusted. Multiple regression analysis, an essential part of the general linear model, examines the relationship between a single dependent variable and multiple independent variables. The adjusted R-square, a crucial statistic, helps gauge the number of independent variables needed for accurate predictions and prevents overestimation of the explained variance (Hair et al., 2018; Saunders, Lewis, & Thornhill, 2019). The Pearson coefficient (R), a correlation measure between two variables on interval or ratio scales, quantifies the degree of their relationship (Allison, 1999).

In this study, multiple linear regressions were performed to evaluate the alignment of the research model with the conceptual framework. An R-square above 0.40 indicates an acceptable fit, with a strong fit being close to 1 (Sekaran & Bougie, 2016). R-squared, often used in linear regression models, expresses the proportion of dependent variable variance collectively accounted for by independent variables, offering a simple 0-100% measure of their relationship's strength. For example, an R-square of 0.70 signifies that 70% of the dependent variable's variance is predictable from the independent variables (ResearchWithFawad, 2023). Adjusted R-squared, a modification that considers additional independent influencing factors, is employed for greater accuracy and reliability.

In Table 8, the R-value is 0.696, signifying a positive relationship between variables. The R-square, at 0.484, surpasses 0.4, confirming a significant association between talent retention and the independent variables: rewards program, career development, and work-life balance. The adjusted R-square is 0.470, indicating these three independent variables accurately explain 47.0% of the talent retention variance, with other factors contributing to the remaining variance.

Table 8. Model summary (Multiple regression).

Model summary				
Model	**R**	**R^2**	**Adjusted R^2**	**Std. error of the estimate**
1	0.696[a]	0.484	0.470	0.501

Note: a. Predictors: (Constant), work life balance, career development, rewards program.
Dependent variable: Talent retention

4.6. Beta Coefficient

Table 9 presents the beta, t, and significance values of the independent variable. A beta coefficient nearing 1 suggests a substantial influence on the dependent variable, while a value of 0 indicates no significant impact (Sekaran & Bougie, 2016). Beta coefficients signify the strength of each independent variable's influence on the dependent variable; a higher absolute value indicates a greater effect (Sekaran & Bougie, 2016). The beta coefficient represents the extent of the outcome variable's change for each unit change in the predictor variable. If not statistically significant, the variable doesn't predict the outcome; if significant and positive, the variable increases by the beta coefficient for each unit increase in the predictor (independent) variable.

Table 9 illustrates the significance of three independent variables in the study: Reward Programs ($p<0.001$) and Career Development ($p=0.019$), with p-values below 0.05, are identified as predictors of talent retention. This suggests a substantial impact on Malaysia's IT services industry. However, the independent variable Work-Life Balance ($p = 0.062$) is not statistically significant ($p > 0.05$), leading to the rejection of H3, indicating no significant association with talent retention.

According to Saunders et al. (2019), the beta coefficient is a statistical tool that can be utilized to determine the extent to which one predictor variable influences the result variable. The Rewards Program has the greatest beta coefficient of 0.413, making it the most significant predictor of talent retention in Malaysia's IT services sector. This means that a 0.413% improvement in talent retention will enhance the rewards program by 1 unit. The career development, whose beta coefficient is 0.239, follows. Lastly, the work-life balance has a beta coefficient of 0.153 and has no effect on talent retention in the IT service industry because the p-value (sig.) is greater than 0.05.

The following equation can be formulated from Table.

$$y = 1.238 + 0.413X1 + 0.239\ X2 + 0.153\ X3.$$

y = Talent retention in the information technology (IT) services sector in Malaysia.

X1 = Rewards program.

X2 = Career development.

X3= Work life balance.

Table 9. Coefficients.

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	1.270	0.276	1.238	4.610	<0.001
	Reward program	0.350	0.087	0.413	4.031	<0.001
	Career development	0.233	0.098	0.239	2.373	0.019
	Work life balance	0.120	0.064	0.153	1.886	0.062

Note: Dependent variable: Talent retention.

Table 10. Summary of hypotheses testing.

Hypothesis	Accepted/ Rejected
H_1: In the Malaysian IT services industry, the relationship between rewards program and talent retention is significant	Accepted (p=<0.001, <0.05)
H_2: In the Malaysian IT services industry, the relationship between career development and talent retention is significant.	Accepted (p=0.019, <0.05)
H_3 In the Malaysian IT services industry, the relationship between work-life balance and talent retention is significant	Rejected (0.062, >0.05)

4.7. Hypothesis Testing

Hypotheses' testing in this research is summarized in Table 10.

H_1: In the Malaysian IT services industry, the relationship between rewards programs and talent retention is significant.

According to the beta coefficient of 0.413 and p-value of less than 0.001, both of which are statistically significant at the 0.05 level, the rewards program has a strong positive impact on talent retention in the Malaysian IT services industry. Raising the bar on the rewards program per employee will help keep the best people around. Acceptance of H1 is made.

H_2: In the Malaysian IT services industry, the relationship between career development and talent retention is significant.

According to the data, the beta coefficient value for the working environment is 0.123, and the p-value is 0.032; the beta coefficient for professional growth is 0.239, and the p-value is 0.019, both of which are significant at the 0.05 level. This finding suggests that organizations in the Malaysian IT services industry might benefit from implementing a career development plan for their IT personnel to keep their best and brightest employees. Hence, we must accept the second hypothesis (H2).

H_3: In the Malaysian IT services industry, the relationship between work-life balance and talent retention is significant.

Findings showed that the beta coefficient of work-life balance was 0.153, with a p-value of 0.062, which is not statistically significant at the 0.05 level. Thus, hypothesis 3 (H3) is not accepted. This indicates that the work-life balance issue does not play a significant role in retaining talent in the IT services sector in Malaysia.

5. DISCUSSION AND IMPLICATIONS

In this digital evolution with Industry 4.0 adoption, it is utmost important for corporations to succeed, to maintain, and to gain the upper hand over their competitors by retaining and recruiting talents (Bakar et al., 2018). According to a study by Baharin and Hanafi (2018), organizations must adapt and gradually modify their HR policies and practices to encourage employees to remain, which may in turn attract prospective talent to join the organisation. A high rate of turnover can have a lot of negative repercussions on a business, and to replace

departing employees, companies must first allocate extra money for recruiting, selecting, and training new recruits (Hee & Ann, 2019).

The three independent variables (rewards program, career development, and work-life balance) were identified as having a positive association with talent retention (the dependent variable) in the Malaysian IT services business. Using the multiple regression model and SPSS v2.9 software to analyze the connection or relationship between the independent variables and the dependent variable, the following hypotheses are supported:

The tests results support Hypothesis 1, which establishes a significant relationship between rewards programs and talent retention in the Malaysian IT services industry. The beta coefficient is 0.413%, and the p-value is less than 0.001%, indicating statistical significance at the 0.05 level. This unequivocally shows that reward programs exert a substantial influence on talent retention in this industry, aligning with Bakar et al. (2018) findings that awards and compensations significantly impact staff retention in Malaysia's Klang Valley energy sector.

Based on the research findings hypothesis 2 is accepted, as there is a significant relationship between career development and talent retention in Malaysian IT services industry. From the multiple regression result, the career development beta coefficient value is 0.239 with a p-value of 0.019; both are significant at the 0.05 level. This makes career development a determinant that has a significant positive relationship with talent retention in the Malaysian IT services sector. This supports Chin (2018) conclusion that career development significantly influences employee retention. Furthermore, numerous studies emphasize the importance of effective career planning, which entails employees actively participating in setting their goals. This approach ensures their learning and development, and ultimately contributes to both employee retention and the overall success of the organization.

On the third factor of work-life balance, however, the H3 hypothesis is not accepted, indicating that there is no substantial association between this factor and talent retention in the IT services market. The work-life balance beta coefficient result is 0.153 with a p-value of 0.062, which is not significant at the 0.05 level. This contradicts the finding from the Zainal et al. (2022) study that work-life balance has a beneficial effect on employee retention. The researchers also stated that leaders should be cognizant of their duties to ensure that their employees are not working too hard or interfering with their personal affairs, as this could lead to medical issues that have a detrimental effect on mood, output, and work performance.

6. RECOMMENDATION

This study has demonstrated that factors such as rewards programs and career development significantly impact talent retention in the IT services sector in Malaysia. It is imperative for companies with IT departments or those involved in IT service provision to prioritize talent retention, management, and the attraction of new talent through robust human resource strategies that emphasize career development and reward programs.

The regression analysis conducted in this study highlights the enduring importance of rewards programs in talent retention, not limited to the IT industry alone. According to Turnea (2018) research on the impact of total rewards on employee retention, the value employers place on compensation, benefits, performance, and recognition plays a pivotal role in influencing employees to stay. A separate study in the energy industry in Klang Valley, Malaysia, conducted by Bakar et al. (2018) also affirms the significant impact of organizational awards and compensations on employee retention. Pay and remuneration have long been recognized as essential factors in attracting and retaining employees, particularly in today's competitive economic landscape, where strategic benefit planning is crucial (Zainal et al., 2022). The authors emphasize the importance of effective pay management in enhancing employee performance and retention. According to a study by Khalid and Nawab (2018), employee compensation significantly mediates the relationship between employee engagement and retention, underscoring the necessity of developing these strategies in both the manufacturing and service sectors to increase employee involvement in decision-making. Another key contributor to talent retention is a well-structured career development plan for employees. The findings from Kadiresan et al. (2019) within the Malaysian automotive

industry suggest that investing in the professional development of employees leads to higher rates of employee retention. Chin (2018) study discovered that employees become more productive, thereby enhancing overall organizational efficiency. In response to the rapidly changing corporate landscape, careers have evolved, with job stability becoming less common and organizations emphasizing the development of employees' employability as a key people management strategy. Training and development programs are inversely associated with staff turnover in Malaysian corporations, as indicated by Hosen (2022) research. This implies that employees are less likely to leave organizations when they actively participate in various learning and growth initiatives related to their roles and professions, enhancing their competence.

Despite this study's results showing that work-life balance does not significantly affect talent retention in Malaysia's IT industry, companies should not disregard the importance of this factor. Balancing a successful career with personal and family responsibilities can impact employees' happiness (Hee & Ann, 2019). According to Zainal et al. (2022) research, organizational leaders must ensure that employees are not overworked to the point of negatively affecting their personal lives, health, morale, productivity, and job satisfaction. Providing a work-life balance can lead to increased employee engagement and productivity during business hours. On the other hand, Sumanarathna and Samarakoon (2019) research found that the shorter workweek, flexible working hours, and corporate leave policies did not significantly influence the intentions of female IT sector employees in Sri Lanka to stay. They suggested that training, career development, and workload management have a more positive impact on employee retention. According to Zainal et al. (2022), a pleasant work environment with convenience and cleanliness is a key factor in employee retention. The researchers emphasized that family-friendly policies that allow employees to work on their terms contribute to a healthy work environment that influences employees' decisions to stay.

It is recommended that managers and employers in the service sector recognize and promote factors such as delegation, counseling, authority, and responsibility in the organizational environment for knowledge workers, as discussed in Khalid and Nawab (2018) study. This would help create a positive impression of the company's commitment to employee retention. Organizational change can significantly impact employees' work-life experiences, acting as a moderator for work-life factors, affecting their performance at work and in their personal lives, ultimately influencing whether employees choose to stay or leave (Le, Newman, Menzies, Zheng, & Fermelis, 2020).

In conclusion, the study provides several recommendations for Human Resource and IT management teams:

a) Continuously seek employee feedback on opportunities for improvement and ways to enhance current offerings.

b) Foster better communication, interaction, and team building by maintaining a bright and clean work environment.

c) Consistently evaluate the performance of employees at all job grades, using objective metrics for career advancement and job-promotion eligibility.

d) Establish a system for recognizing and rewarding outstanding performance.

e) Maintain a competitive salary scale for key positions supporting IT services.

f) Promote and organize technical consultation, training, and certification to attract and retain talent.

7. CONTRIBUTION

Employee retention is a crucial human resources concern in business studies. Understanding the multifaceted reasons behind employee departures, often linked to workplace pressures, is essential. Research, such as that by Zainal et al. (2022), underscores the significance of retaining knowledgeable and experienced personnel for an organization's economic competitiveness. This study delves into the interplay between rewards programs, career advancement, and work-life balance in relation to employee retention within Malaysia's IT service sector, providing

valuable insights for both IT and HR management teams. The findings of this research hold implications that can benefit both sectors.

7.1. Contribution to the Academia

Referring to Section 2.4 of the Literature Gap, most of the research conducted in Malaysia focused on the healthcare, energy, food, automotive, finance, and services industries (Baharin & Hanafi, 2018; Bakar et al., 2018; Hee & Ann, 2019; Kadiresan et al., 2019; Zainal et al., 2022). Theoretical research on the justification process between a business and its employees has been increasingly relevant, but the Malaysian IT service sector has received very little attention. From a theoretical standpoint, this study should be able to fill a knowledge gap regarding how to construct the best framework for talent retention and serve as a reference for future researchers who wish to pursue further research on the various influencing factors on talent retention in the Malaysian IT service industry.

7.2. Contribution to the Industry

While there is a scarcity of studies on staff retention across various industries in Malaysia's service sector, this research aspires to fill this gap by offering insights applicable to diverse sectors. The hope is that the study's outcomes will assist Malaysian IT enterprises in crafting comprehensive retention strategies. The authors anticipate that their findings will prompt businesses to enhance retention rates by providing increased career advancement opportunities, more attractive incentive plans and compensation packages, flexible working hours, and positive work environments that foster employee appreciation.

8. LIMITATIONS

This study has identified certain limitations. Firstly, the distribution of questionnaires relied heavily on email, WhatsApp, and social media within the Klang Valley, potentially limiting the representation of all levels of Malaysian IT workers. Consequently, this may impact the findings regarding how employees perceive work-life balance and their intention to leave. Secondly, a low response rate during the dissemination procedure suggests possible disinterest or time constraints among recipients. Despite applying the SET theory, this study underscores the significance of work-life balance, a positive work environment, and financial incentives for retaining employees in Malaysia. However, a scarcity of studies focusing on Malaysia's IT sector is noted. Lastly, the absence of variables like Information and Communication Technology (ICT) demand and workplace conditions may have altered the study's conclusion on the substantial relationship between work-life balance and talent retention.

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REFERENCES

Allison, P. D. (1999). *Multiple regression: A primer*. Thousand Oaks, CA: Pine Forge Press.

Armstrong, M., & Murlis, H. (2007). *Reward management: A handbook of remuneration strategy and practice*. London: Kogan Page Publishers.

Arokiasamy, A. R. A. (2019). Exploring the internal factors affecting job satisfaction in the fast food industry in Malaysia. *International Journal of Advanced and Applied Sciences*, *6*(11), 11-20. https://doi.org/10.21833/ijaas.2019.11.003

Baharin, N. L., & Hanafi, W. N. W. (2018). Effects of talent management on employee retention: A case study of hospitality industry. *Global Business and Management Research*, *10*(3), 697–708.

Bakar, S. M. S. A., D'Cruz, T. A., & Singh, H. S. T. S. (2018). Employee retention factors in the energy sector in Klang Valley, Malaysia. *INTI Journal*, *1*, 1-11.

Bujang, M. A., Omar, E. D., & Baharum, N. A. (2018). A review on sample size determination for Cronbach's alpha test: A simple guide for researchers. *The Malaysian Journal of Medical Sciences*, *25*(6), 85. https://doi.org/10.21315/mjms2018.25.6.9

Cahigas, M. M., Prasetyo, Y. T., Persada, S. F., Ong, A. K. S., & Nadlifatin, R. (2022). Understanding the perceived behavior of public utility bus passengers during the era of COVID-19 pandemic in the Philippines: Application of social exchange theory and theory of planned behavior. *Research in Transportation Business & Management*, *45*, 100840. https://doi.org/10.1016/j.rtbm.2022.100840

Chin, C. L. (2018). The influence of job satisfaction on employee turnover intention in the manufacturing industry of Malaysia. *Journal of Arts & Social Sciences*, *1*(2), 53-63.

De Groo, S. (2017). *Work-life Balance in the modern workplace*: Kluwer Law International BV.

Department of Statistics Malaysia. (2022). *eStatistik*. Retrieved from https://newss.statistics.gov.my/newss-portalx/ep/epFreeDownloadContentSearch.seam?cid=17389

Diah, A. M., Hasiara, L. O., & Irwan, M. (2020). Employee retention of pharmaceutical firms in Indonesia: Taking investment in employee development and social and economic exchange as predictors. *Systematic Reviews in Pharmacy*, *11*(1), 564-572.

Gartner. (2022). *Gartner glossary – career development*. Retrieved from https://www.gartner.com/en/human-resources/glossary/career-development

Hair, F. H., Black, W. C., Babin, B. J., Anderson, R. E., Black, W. C., & Anderson, R. E. (2018). *Multivariate data analysis* (7th ed.). Hampshire, UK: Cengage Learning.

Hee, O. C., & Ann, Y. S. (2019). Factors influencing employee turnover in the food manufacturing industry in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, *9*(1), 482-491. https://doi.org/10.6007/ijarbss/v9-i1/5423

Hosen, M. E. (2022). Factors affecting employee turnover in multinational companies in Malaysia. *Malaysian Management Journal*, *26*, 31-54. https://doi.org/10.32890/mmj2022.26.2

HR Asia. (2021). *Key drivers of employee turnover in Malaysia*. Retrieved from https://hr.asia/featured-news/key-drivers-of-employee-turnover-in-malaysia

Jain, R., & Chetty, S. P. (2021). *How to handle a negative Cronbach's alpha value?* Retrieved from https://www.projectguru.in/how-to-handle-a-negative-cronbachs-alpha-value/

Jayashree, S., Reza, M. N. H., Malarvizhi, C. A. N., Gunasekaran, A., & Rauf, M. A. (2022). Testing an adoption model for Industry 4.0 and sustainability: A Malaysian scenario. *Sustainable Production and Consumption*, *31*, 313-330. https://doi.org/10.1016/j.spc.2022.02.015

Johari, J., Tan, F. Y., & Zulkarnain, Z. I. T. (2018). Autonomy, workload, work-life balance and job performance among teachers. *International Journal of Educational Management*, *32*(1), 107-120. https://doi.org/10.1108/ijem-10-2016-0226

Kadiresan, V., Khuan, W. S., Arumugam, T., Rasu, F., & Theseira, A. S. (2019). Employee engagement and retention in automotive industry in Malaysian context. Job stress as a moderator. *International Journal of Engineering and Advanced Technology*, *8*, 607-617. https://doi.org/10.35940/ijeat.f1108.0986s319

Kamalaveni, M., Ramesh, S., & Vetrivel, T. (2019). A review of literature on employee retention. *International Journal of Innovative Research in Management Studies*, *4*(4), 1-10.

Khaled, B. A. (2019). Impact of work-life balance, happiness at work, on employee performance. *International Business Research*, *12*(2), 99-112. https://doi.org/10.5539/ibr.v12n2p99

Khalid, K., & Nawab, S. (2018). Employee participation and employee retention in view of compensation. *Sage Open*, *8*(4), 1-17. https://doi.org/10.1177/2158244018810067

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607-610. https://doi.org/10.1177/001316447003000308

Le, H., Newman, A., Menzies, J., Zheng, C., & Fermelis, J. (2020). Work–life balance in Asia: A systematic review. *Human Resource Management Review*, *30*(4), 100766. https://doi.org/10.1016/j.hrmr.2020.100766

Leech, N. L., Barrett, K. C., & Morgan, G. A. (2015). *IBM SPSS for intermediate statistics* (5th ed.). East Sussex: Routledge.

Macák, T., Štůsek, J., & Venclová, K. (2015). Factors influencing career success of employees in agribusiness. *AGRIS on-line Papers in Economics and Informatics*, *7*(4), 79-89.

Maskey, R., Fei, J., & Nguyen, H.-O. (2018). Use of exploratory factor analysis in maritime research. *The Asian Journal of Shipping and Logistics*, *34*(2), 91-111. https://doi.org/10.1016/j.ajsl.2018.06.006

Mercer. (2021). *Dissatisfaction with pay and benefits, limited career advancement are key drivers of employee turnover in ASEAN, says Mercer's latest survey*. Retrieved from https://www.asean.mercer.com/newsroom/key-drivers-of-employee-turnover-inasean.html

Murad, D. (2021). *Has the 'great resignation' hit Malaysia?* Retrieved from https://www.thestar.com.my/news/focus/2021/11/28/has-the-great-resignation-hitmalaysia

Nugraha, N. M., Puspitasari, D. M., & Amalia, S. (2020). The effect of financial ratio factors on the percentage of income increasing of automotive companies in Indonesia. *International Journal of Psychosocial Rehabilitation*, *24*(1), 2539-2545.

O'Neil, A. (2022). *Employment by economic sector in Malaysia 2019*. Retrieved from https://www.statista.com/statistics/319036/employment-by-economic-sector-in-malaysia/

Pearlson, K. E. (2019). *Managing & using information systems: A strategic approach* (7th ed.). Australia and New Zealand: JW Wiley.

Redmond, M. (2016). *Social exchange theory*. Retrieved from https://www.researchgate.net/publication/317730132_Social_Exchange_Theory

ResearchWithFawad. (2023). *How to perform exploratory factor analysis (EFA) using SPSS*. Retrieved from https://researchwithfawad.com/index.php/lp-courses/data-analysis-using-spss/how-to-perform-exploratory-factor-analysis-using-spss/

Salvadorinho, J., Pintor, P., Moreira, J., Freire, M., & Teixeira, N. F. L. (2022). How to leverage distributed data to create an HR 4.0 platform to support workforce management? A proposed solution based on three industrial contexts. *Procedia Computer Science*, *204*, 488-496. https://doi.org/10.1016/j.procs.2022.08.060

Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). New York: Pearson Education Limited.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach* (7th ed.). West Sussex: Wiley & Sons.

Sickles, R. C., & Zelenyuk, V. (2019). *Measurement of productivity and efficiency*. Cambridge: Cambridge University Press.

Sudhakaran, P., & Senthilkumar, G. (2019). Retention of valuable talent: Developing an effective retention strategy for technology professionals in India using structural equation modelling. *International Journal of Recent Technology and Engineering*, *8*(3), 2833-2843. https://doi.org/10.35940/ijrte.c5219.098319

Sumanarathna, B., & Samarakoon, S. (2019). The effect of work-life balance policies on the retention intention of executive women employee in information technology (IT) industry in Sri Lanka. *Journal of Human Resource Management*, *14*(1), 1-16. https://doi.org/10.4038/kjhrm.v14i1.63

Tabachnick, B. G., & Fidell, L. S. (2019). *Using multivariate statistics* (7th ed.). New York: Pearson.

Taherdoost, H., Sahibuddin, S., & Jalaliyoon, N. (2014). Features' evaluation of goods, services and e-services; electronic service characteristics exploration. *Procedia Technology*, *12*, 204-211. https://doi.org/10.1016/j.protcy.2013.12.476

Tran, P. N., Gorton, M., & Lemke, F. (2022). Buyers' perspectives on improving performance and curtailing supplier opportunism in supplier development: A social exchange theory approach. *Industrial Marketing Management*, *106*, 183-196. https://doi.org/10.1016/j.indmarman.2022.08.009

Turnea, E.-S. (2018). Attraction and retention of the employees. A study based on multinationals from Romania. *Procedia-Social and Behavioral Sciences*, *238*, 73-80.

Urbonavicius, S., Degutis, M., Zimaitis, I., Kaduskeviciute, V., & Skare, V. (2021). From social networking to willingness to disclose personal data when shopping online: Modelling in the context of social exchange theory. *Journal of Business Research, 136*, 76-85. https://doi.org/10.1016/j.jbusres.2021.07.031

Yeo, B. (2021). *Gen Z, millennial employees to lead the great Malaysian resignation exodus, study says.* Retrieved from https://focusmalaysia.my/gen-z-millennial-employees-to-lead-the-great-malaysian-resignation-exodus-study-says/. [Accessed 4 September, 2022]

Yin, N. (2018). The influencing outcomes of job engagement: An interpretation from the social exchange theory. *International Journal of Productivity and Performance Management, 67*(5), 873-889. https://doi.org/10.1108/ijppm-03-2017-0054

Zainal, N. S. B., Wider, W., Lajuma, S., Ahmad Khadri, M. W. A. B., Taib, N. M., & Joseph, A. (2022). Employee retention in the service industry in Malaysia. *Frontiers in Sociology, 7*, 928951. https://doi.org/10.3389/fsoc.2022.928951