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Crafting employee engagement through talent management practices in telecom sector

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Orientation: Solving the dearth of skilled employees and maintaining the engagement policy are key concerns of the Malaysian telecom sector. Therefore, talent management practices have created a mainstream process for telecom employers to be proactively involved in talent engagement.

Research purpose: This study aimed to elucidate the vital talent management practices towards employee engagement in telecom sector, incorporating psychological empowerment as a mediator.

Motivation for the study: Studies linking talent management with career development, rewards and recognition, training and development, are still not established in terms of employee engagement in the context of Malaysian telecom sector.

Research design, approach and method: An online survey was conducted through the purposive sampling technique to collect data from telecom firms in Malaysia. The survey resulted in 242 responses, which were analysed through Partial Least Squares – Structural Equation Modelling (PLS-SEM) and PLS-Predict. In PLS-SEM, data were evaluated for hypothesis testing. After hypothesis result was obtained, the PLS-SEM model was assessed for its predictive validity through PLS-Predict.

Main findings: The results explored that talent management factors positively and significantly predicted employee engagement through psychological empowerment, except training and development. The PLS-Predict resulted a higher value of predictive power for our model.

Practical/managerial implications: This study may lead to practical applications to support human resource management practitioners towards comprehending the impact of talent management practices, either directly or indirectly, in engaging the right talent.

Contribution/value-add: This study will fill the untapped area of improving employee engagement by adding psychological empowerment as a mediator between employee engagement and talent management practices.

Keywords: talent management practices; psychological empowerment; employee engagement; telecom sector; social exchange theory; PLS-SEM; PLS-predict.

Introduction

During the 1970s and 1980s, employees' satisfaction was the key focus area for human resource management (HRM), which had little impact on or no link to organisational productivity. Thereafter, the focus went beyond employee commitment, as commitment is a vital factor predicting engagement (Aktar & Pangil, 2018).

As a result of increasing global competition in businesses, HRM strategy began to change with HRM leaders effectively balancing both individual and organisational needs. At the end of the 1980s, employees were encouraged to be engaged in their job roles and as well as being focused on their talents to achieve organisational goals. These were the main conceptualization aspects of employee engagement (EE).

Employment engagement emerged for the first time in management theory in 1990. Various scholars have given a different definitions of EE since then; therefore it is sometimes difficult to comprehend the exact meaning of the term 'engagement' . Engagement is often delineated in the management literature as a 'positive, fulfilling, work-related state of mind, which is categorised by vigour, dedication and absorption' (Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 74).

With the advent of EE in the academic domain, many scholars opined that EE is a crucial factor for organisational success. The HR policymakers also affirm that EE initiative improves organisational productivity, enhances customer satisfaction and decreases turnover intention (Aktar & Pangil, 2018; Sheikh, Christina, & Sharina, 2020). However, claims have been made repeatedly that nowadays engaged employees are shortening and disengaged workforce is deepening. According to the recent Gallup (2017) survey, 85% of employees are disengaged throughout the world, resulting in a greater level of financial loss (around $7 trillion). The survey also reported that only 19% of staff are engaged throughout the Southeast Asian countries (e.g. Malaysia, Singapore, Thailand, etc.) (Gallup, 2017).

According to the Department of Statistics Malaysia (DOSM), the information and communications technology (ICT) sector is the major contributor to the Malaysian economy, especially the telecom sector with the highest value of gross output and value-added of Malaysian Ringgit (RM)87.4 billion and RM49.5 billion, respectively, (DOSM, 2019a, 2019b). Although EE is one of the leading contributor to the productivity and effectiveness of the Malaysian telecom sector (Khan & Bukhari, 2020), the telecommunication companies are facing several challenges to engage and retain the right talent (MCMC, 2015; Sheikh et al., 2020; TalentCrop, 2018).

A recent report revealed that in 2020, the Malaysian ICT sector was confronted with a deficient workforce totalling to 9000 employees. If the employers do not address this issue urgently, the demand for talented employees will increase manifold by 2025 (KKMM, 2018). According to Alias, Nor and Hassan (2016), the Malaysian ICT organisations should focus on strategic initiatives such as talent management practices (TMPs) for not only attracting the right talent but increasing the engagement levels to retain them. Sheikh et al. (2020) also stated that to retain the right talent, telecom professionals in Malaysia should put in more efforts to manage the engagement level.

The talent shortage problem that the Malaysian telecom sector is experiencing has enlarged the skill-gap amongst its employees. The importance of TMP is critical in this aspect. A study evidenced that TMP is imperative for attracting, developing, engaging and maintaining a strong talent pool. The research also found that the term 'talent management (TM)' is broadly practiced in today's business world, however, more studies are required to evaluate the impact of TMP on organisational strategy. Employers therefore, need to reconsider their policies towards TM to improve their EE strategy (Pandita & Ray, 2018).

Several factors of TM have become crucial for the telecom sector in Malaysia to manage top talent. According to a survey conducted by the Academy of Sciences Malaysia (ASM), 51% of companies revealed the low-skilled workforce factor as the prominent reason for employee disengagement in the telecom sector, whilst 25% stated the incapability of meeting employees' expected salary. Thus, training and development (TD) and rewards and recognition (RR) may be crucial in fostering EE (ASM, 2018). Another survey in the context of Malaysia's Information Technology (IT) and telecom sector found that 57% of staff are concerned about career development (CD) to be more engaged at the workplace (Cooper, 2015).

Although previous researchers over the past decades have studied the influence of TMP on EE (Alias et al., 2016), there is a paucity of studies that link TM with CD, RR and TD in terms of EE in the Malaysian telecom sector. Some earlier researchers have also suggested psychological empowerment (PE) as an intervening factor between TMP and different outcomes at the individual level (Khan, Yasir, Majid, & Afridi, 2019). However, this relationship is less comprehensible because of its underlying mechanisms. In this context, the previous studies had undertaken numerous theories such as social exchange theory (SET) to understand the EE mechanism. According to Khoreva and Vaiman (2015), SET posits that when employers give priority to skilled workers to be involved through TMP, they reciprocate by engaging at the organisation.

To explore this addressing gap, our study aims to examine the relevance of TMP (e.g. CD, RR and TD) towards EE based on SET, incorporated in PE as a mediator and empirically test it among the workforces in the telecom sector in Malaysia.

Literature review

Social exchange theory

We have focused on the SET developed by Blau (1964), which is relevant for this study. Based on Saks's (2006) opinion, a strong theoretical rationale for explicating EE has been found within SET. According to Khoreva, Vaiman and Zalk (2017), to perceive the effectiveness of TMP, which leads to positive employee behaviour, SET provides a suitable lens for better understanding the scenario. Stein and Min (2019) evidenced that SET directs a positive relation between HRM practices and PE, which leads to employees' positive outcomes. Social exchange theory explains that engagement emerges as the approach of exchanging or 'refunding' the belief that employers 'offer' to their staff (Ugwu et al., 2014). Hence, this study combines TMP and PE with the theory of social exchange to determine their direct or indirect impact on EE.

Connections between talent management practices and employee engagement

The term 'TMP' covers talent transformation, TD programmes, talent involvement, RR and talent deployment (Pandita & Ray, 2018). As TMP is closely tied with different facets of HRM, therefore, organisations should consider the significance of TMP whilst planning for EE strategies.

An important factor of TMP goes towards CD to manage the right talent. As defined by Arthur, Hall and Lawrence (1989), CD is a set of programmes intended to accomplish employees' needs in terms of creating a better career path in the

organisation. According to Pandita and Ray (2018), when scholastically exploring TM, scholars widen the notion to involve CD strategy in an organisation for a long time. The authors further explained that when employees undergo career advancement programmes, their self-confidence build-up towards their career which stimulates them to be more involved in their work roles. Hence, CD as an effective TM factor has a positive relationship with EE (Alias et al., 2016). Aktar and Pangil (2018) and Anitha (2014) also revealed a positive impact of CD on EE.

Rewards and renumeration as a tool of TMP is also considered as a means for effectively engaging the workforce. In line with Bandura's (1977) concept, reward controls behavioural outcomes outwardly because it leads to future reimbursements to those who deserve it. Whilst recognition, is a significant driver of behaviour beyond any benefits being related to it. These constructs consist of vital TMP including compensations, company benefits and location (Tymon, Stumpf, & Doh, 2010). Rewards and recognition opportunities create employees' positive feelings about their jobs and thereby influence EE. A growing number of researchers have linked RR as an efficient dimension of TMP with individual outcomes. For example, Alias et al. (2016) and Ghosh, Rai, Chauhan, Baranwal and Srivastava (2016) confirmed that RR positively influences EE. Along similar lines, a more recent study found RR has a positive impact on EE (Aktar & Pangil, 2018).

Training and development is another significant factor of TMP that is to be deliberated in the way of enhancing workforces' engagement. According to Aguinis and Kraiger (2009), training is meant as a systematic way that affects one's knowledge, abilities and behaviours leading to efficiency. On the other hand, development is referred to as a systematic action that influences one's knowledge, abilities and behaviours leading to self-development.

Keeping the ability to learn effectively through TD programmes expands persons' skills and abilities, makes them strongly engaged and highly satisfied at their jobs. They also provide a better scope for self-development (Aguinis & Kraiger, 2009). Researchers have found that TD is positively and significantly linked to EE (e.g. Aktar & Pangil, 2018; Presbitero, 2017).

Extending the aforesaid reasoning, we propose the following hypotheses:

H1a: CD positively influences EE.

H2a: RR positively affects EE.

H3a: TD has a positive impact on EE.

Linking talent management practices, psychological empowerment and employee engagement

Psychological empowerment is reflected on individuals' task orientation within a set of four cognitive factors including: meaning, competence, self-determination and impact (Spreitzer, 1995). In line with Jose and Mampilly's (2014) opinion, PE helps to improve employees' thoughts of meaning, competence self-determination and impact, and therefore higher levels of engagement.

There are several well-established research works which validate that PE is positively associated with greater engagement levels at the workplace. Nawrin (2016), for instance, explained that psychologically empowered staffs convey the key attributes of engagement on the job and organisational level. More specifically, past researchers found that PE positively and significantly predicted EE (Arefin, Alam, Islam, & Rahaman, 2019).

Several studies found TMP as the key player to increase PE. Although there are different controversial results, many researchers empirically found that TMP (CD, RR, TD) positively and significantly influence PE (Arefin et al., 2019; Matsuo, 2019; Moradi & Dashti, 2016). In the direction of mediating effect of PE, the relationship between TMP and employee outcome has been documented in various research works, but contradictory outcomes have been found in the context of relationship amongst these variables. However, PE has a direct or partial or full mediating effect on the relationship between TMP and employee outcome, which has been discoursed in prior studies (Arefin et al., 2019; Khan et al., 2019). Given these shreds of evidence, we hypothesise that:

H1b: CD has a positive effect on PE.

H2b: RR has a positive effect on PE.

H3b: TD is positively connected with PE.

H1c: PE mediates the connection between CD and EE.

H2c: PE mediates the effect of RR on EE.

H3c: PE plays as a mediator in the connection between TD and EE.

H4: PE is positively linked to EE.

Research framework

Studying and evaluating the findings from signified literature reviews as detailed above, the authors have proposed the research framework as illustrated in Figure 1. This framework underlines the influence of TMP (e.g. CD, RR, TD) on EE with the existence of PE as a mediator. They propose the hypotheses for TMP factors as: CD with three hypotheses (i.e. H1a for CD→EE, H1b for CD→PE, H1c for CD→PE→EE), RR also with three hypotheses (i.e. H2a for RR→EE, H2b for RR→PE and H2c for RR→PE→EE) and TD also showing three paths (i.e. H3a for TD→EE, H3b for TD→PE, H3c for TD→PE→EE), whilst PE has one hypothesis, that is, H4 for PE→EE.

Research methodology

To build the methodology base, research onion by Saunders, Lewis and Thornhill (2016) was considered to design philosophy, approach and strategies for this research. The

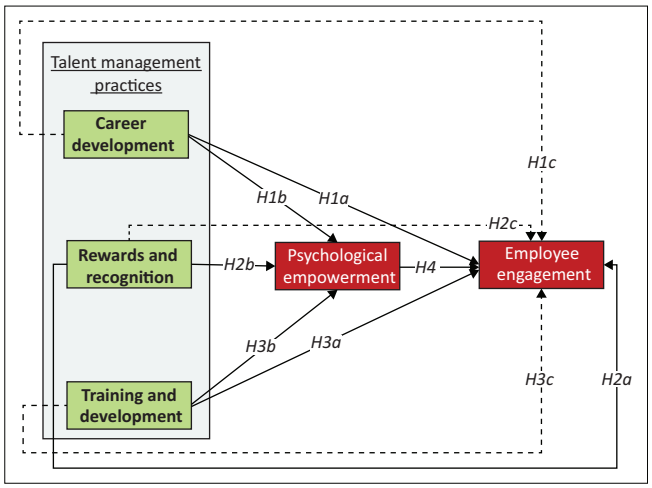


FIGURE 1: Proposed research framework.

positivism philosophy was adopted to choose the research design. In the positivist paradigm, causal research which deals with the cause and effect relationships amongst the variables is undertaken as practiced in this research. For the research approach, we adopted SET from various viewpoints in measuring certain factors, which impact employee behaviour, therefore, the deductive approach was selected for this quantitative research.

Sampling and data collection

In this study, we carried out an online survey with a cross-sectional approach for collecting the primary data. The respondents were chosen from telecom companies in Malaysia. The purposive sampling technique was preferred to reach the respondents who are the best option to collect the required data (Sekaran & Bougie, 2016). We explained the main objective of the research to the companies' internal team correspondence to obtain permission for the data collection.

The online survey link was sent to the respondents who were employed in different departments such as Administration and customer care, financial and technical. The survey continued for 8 weeks and a total of 242 responses were gathered. The respondents participated anonymously and voluntarily in which they were convinced of the confidentiality of their responses. The minimum sample size for Partial least squares-structural equation modelling (PLS-SEM) was projected as per the rule of 5-times the number of measurement items in the proposed model (Hair, Sarstedt, Ringle, & Mena, 2012). Therefore, 242 collected responses were considered adequate for conducting the PLS-SEM analysis.

Measuring instruments

This study mainly covers three major constructs including TMP (e.g. CD, RR, TD), PE and EE. We adopted the items for each construct from the validated studies. Career development was measured adopting six items taken from Imandin, Bisschoff and Botha's (2015) study. 05 measurement items for RR were drawn from the Saks's (2006) study. Training and development was measured adapting five items developed by Edgar and Geare (2005). A total of 12 items were derived from Spreitzer's (1995) study for evaluating PE. Employee engagement was assessed using nine items, which are the widely used instruments to measure EE (Schaufeli et al., 2002).

The questionnaire had two sections with demographic particulars of respondents (such as gender, age, qualification, experience, department, etc.) in Part-A and Part-B consisted of variable questions or items. These items were assessed through a 5-point Likert-scale (i.e. 1 = strongly disagree to 5 = strongly agree). A total of 37 question items based on the five variables of the proposed model were used to collect the responses for testing the hypotheses.

Data analysis techniques

The PLS-SEM analysis method was used to analyse study data. In PLS-SEM, data reliability, validity, factor loadings, variance inflation factor (VIF), regression path coefficients and hypothesis testing were employed. Finally, to assess the predictive validity of the PLS-SEM model, we also conducted the PLS-Predict algorithm through two error metrics, that is, mean absolute error (MAE) and root mean square error (RMSE) with the Q-square-root of both PLS and linear regression model (LM). Towards the data analysis, SmartPLS v3.3 was employed.

Results

Demographic results

Of the 242 respondents, 61.8% of the respondents were males whilst females represented 38.2%. A total of 42.7% of respondents were Chinese, whilst the rest of them were either Malay, Indian or of other nationalities. Based on the education level, about 60% of the respondents had a bachelor's degree. In the context of job level, the majority of the participants (74%) held the position of executive or senior officer level. On the basis of age group, 39.7% of the participants were from the age group 21–30 years, 44.3% from 31–40 years, whilst others were from the age group of 41 to 50 years or above 50-years. Also, most of the participants had 1–5 years of job experience at telecom companies. Most of the sample population was employed in the technical department i.e., 38.2%. In terms of renumeration, 39.7% of the respondents were from the salary bracket of RM ≤ 3000, followed by 35.9% who received RM3001 – RM6000 of the salary and the remaining 24.5% had been paid either RM6001 – RM9000 or above RM9000 as salary.

Reliability and validity

Using SmartPLS software 3.3 version, our findings showed that both Cronbach's alpha and composite reliability values of each construct lie between 0.80 and 0.90, respectively. According to Hair, Babin, Anderson and

TABLE 1: Reliability, discriminant validity, factor loadings and collinearity statistics.

Variables	Items	α	CR	AVE	Discriminant validity					Loadings	VIF
					CD	*RR*	*TD*	*PE*	*EE*		
Career Development (CD)	CD-1	0.887	0.914	0.641	-	-	-	-	-	0.829	2.288
	CD-2									0.867	2.820
	CD-3									0.795	1.912
	CD-4									0.805	2.188
	CD-5									0.797	2.198
	CD-6									0.699	1.497
Rewards and Recognition (RR)	RR-1	0.865	0.903	0.651	**0.708**	-	-	-	-	0.747	1.596
	RR-2									0.868	2.362
	RR-3									0.874	2.524
	RR-4									0.760	1.823
	RR-5									0.774	1.788
Training and Development (TD)	TD-1	0.899	0.926	0.714	**0.768**	**0.626**	-	-	-	0.862	2.820
	TD-2									0.816	2.356
	TD-3									0.900	3.218
	TD-4									0.823	2.205
	TD-5									0.820	2.330
Psychological Empowerment (PE)	PE-1	0.925	0.936	0.549	**0.371**	**0.354**	**0.313**	-	-	0.719	2.146
	PE-2									0.694	2.003
	PE-3									0.769	2.327
	PE-4									0.770	2.759
	PE-5									0.734	2.285
	PE-6									0.742	2.243
	PE-7									0.786	2.394
	PE-8									0.766	2.707
	PE-9									0.735	2.282
	PE-10									0.677	1.907
	PE-11									0.741	2.358
	PE-12									0.752	2.425
Employee Engagement (EE)	EE-1	0.917	0.932	0.603	**0.397**	**0.334**	**0.289**	**0.794**	-	0.760	2.313
	EE-2									0.709	2.049
	EE-3									0.780	2.232
	EE-4									0.794	2.339
	EE-5									0.820	2.764
	EE-6									0.785	2.560
	EE-7									0.780	2.212
	EE-8									0.781	2.560
	EE-9									0.774	2.340

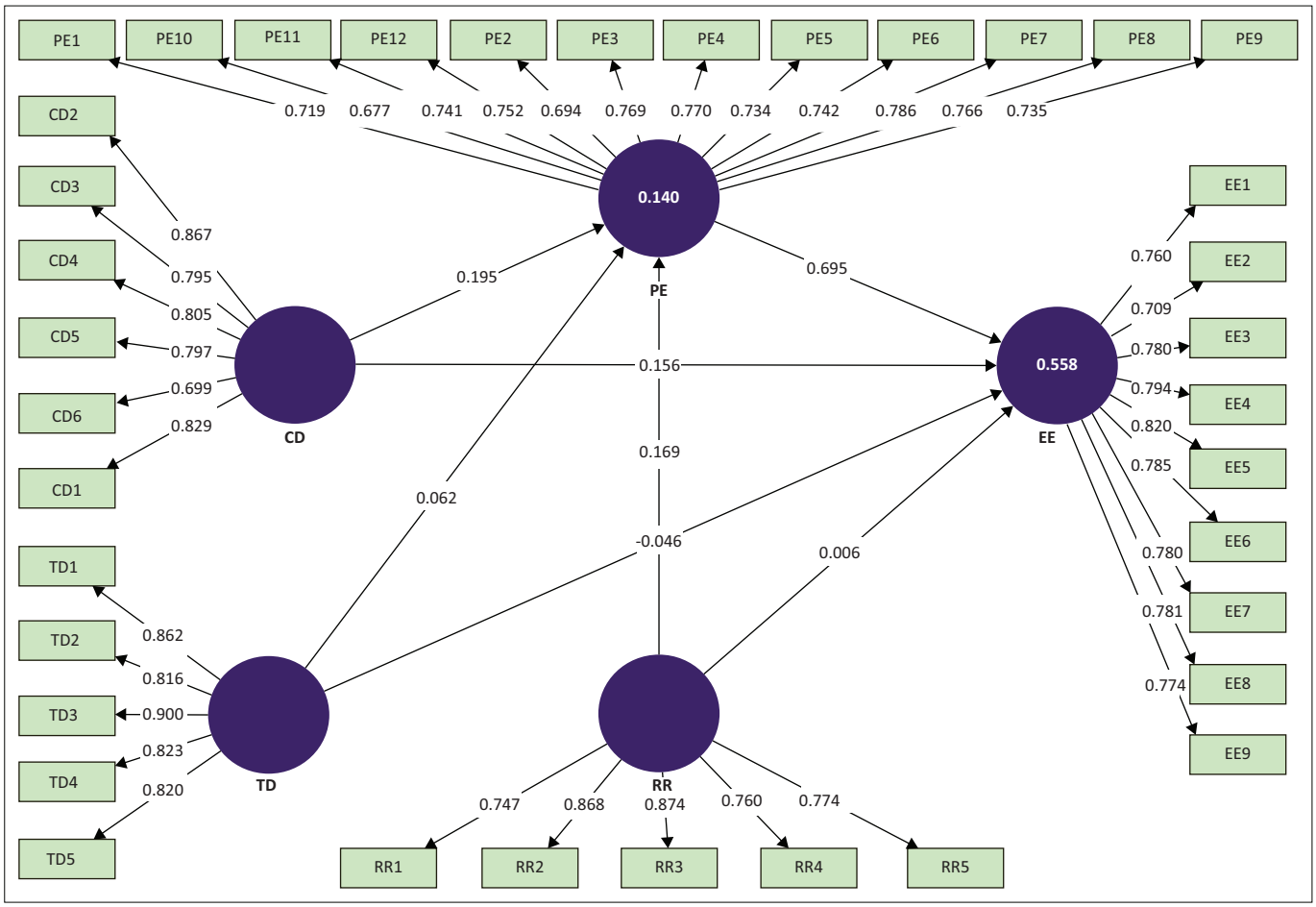
VIF, variance inflation factor; CR, composite reliability; AVE, average variance extracted.

Black (2018), Cronbach's alpha and composite reliability values standing between 0.80 and 0.90 are deliberated as highly reliable and acceptable. Therefore, all the constructs in the research model were identified as having a better level of reliability. Furthermore, convergent validity was assessed through average variance extracted (AVE). The AVE values confirmed that all indicators were valid as they exceeded the minimum threshold value of 0.5 (Hair et al., 2018).

Based on the multitrait-multimethod (MTMM) matrix, the heterotrait-monotrait (HTMT) criterion was assessed to establish the discriminant validity of the variables. According to Henseler, Ringle and Sarstedt (2015), if the HTMT ratio is less than 0.85, it is confirmed that the discriminant validity has been determined by the reflective constructs. In the test of this study, the HTMT approaches reliably detected the discriminant validity between two reflective constructs. Table 1 represents the reliability level and convergent validity level (composite reliability and Cronbach's alpha, AVE) and discriminant validity level (HTMT ratio), respectively, for all the proposed constructs.

Outer loadings

To measure outer loadings for all the items, we used the SmartPLS. Our results revealed that the outer loadings of the items ranged from 0.70 to 0.90, which were viewed as appropriate items. Here only CD-6, PE-2 and PE-10 did not found the criteria, whereas the value range for the items was not above 0.70. As the outer loadings above 0.70 are acceptable levels for analysis, all the indicators of each construct have been reliably preferred for this study. On the other hand, the outer loading values of 0.50–0.60 are still widely accepted (Soelton et al., 2020). Hence, the items from CD-6, PE-2 and PE-10 were also accepted. The overall outer loadings of each item are shown in Table 1. The collinearity statistics, that is, VIF for each instrument was also calculated for inner model assessment in SmartPLS and found appropriate (i.e. depicted in Table 1) as a



RR, rewards and recognition; TD, Training & Development; EE, Employee Engagement; PE, Psychological Empowerment; CD, Career Development

FIGURE 2: Measurement model from partial least squares-structural equation modelling analysis.

recommended value of > 5 was achieved (Sarstedt, Ringle, & Hair, 2017).

Structural model

The SEM was applied for ensuring the causal relationship amongst TMP (CD, RR, TD), PE and EE. In PLS, R^2 is assessed for measuring the effects of latent variables. The analytical findings of PLS-SEM show that the R^2 (variance explained)for the endogenous variables EE and PE were 0.56 and 0.14, respectively (see Figure 2). This signifies that CD, RR, TD and PE, could explain 56% of the variance for EE. the findings also revealed that 14% of the variance for PE could be explained by CD, RR, TD. Table 2 denotes the direct and indirect effects with R^2 and Adjusted R^2 in the endogenous variables.

Furthermore, each proposed hypothesis was tested using SEM. Findings from Table 2 show that a significantly positive connection exists between CD and EE ($\beta = 16\%$, $p < 0.05$). Thus, hypothesis H1a was validated.

In addition, based on the prediction in Table 2, a weak positive direct impact of RR on EE has been found, whilst TD negatively influences EE. However, these findings are not statistically significant ($p > 0.05$). Hence, hypotheses H2a and H3a are not supported. On the other hand, CD and RR are positively and significantly associated with PE ($p < 0.05$), supporting hypotheses H1b and H2b. Our findings also confirm that TD positively but not significantly impact PE. Therefore, hypothesis H3b is not confirmed. Interestingly, the PE is found to be a strong predictor of EE ($\beta = 70\%$, $p < 0.001$). Thus, H4 is robustly accepted. To determine the mediation, it has already been found that the indirect effect of CD and RR are significant ($p < 0.05$), whilst TD has an insignificant effect ($p > 0.05$). These findings support hypotheses H1c and H2c, but do not confirm hypothesis H3c. The overall significance level for each hypothesis is indicated in Figure 3.

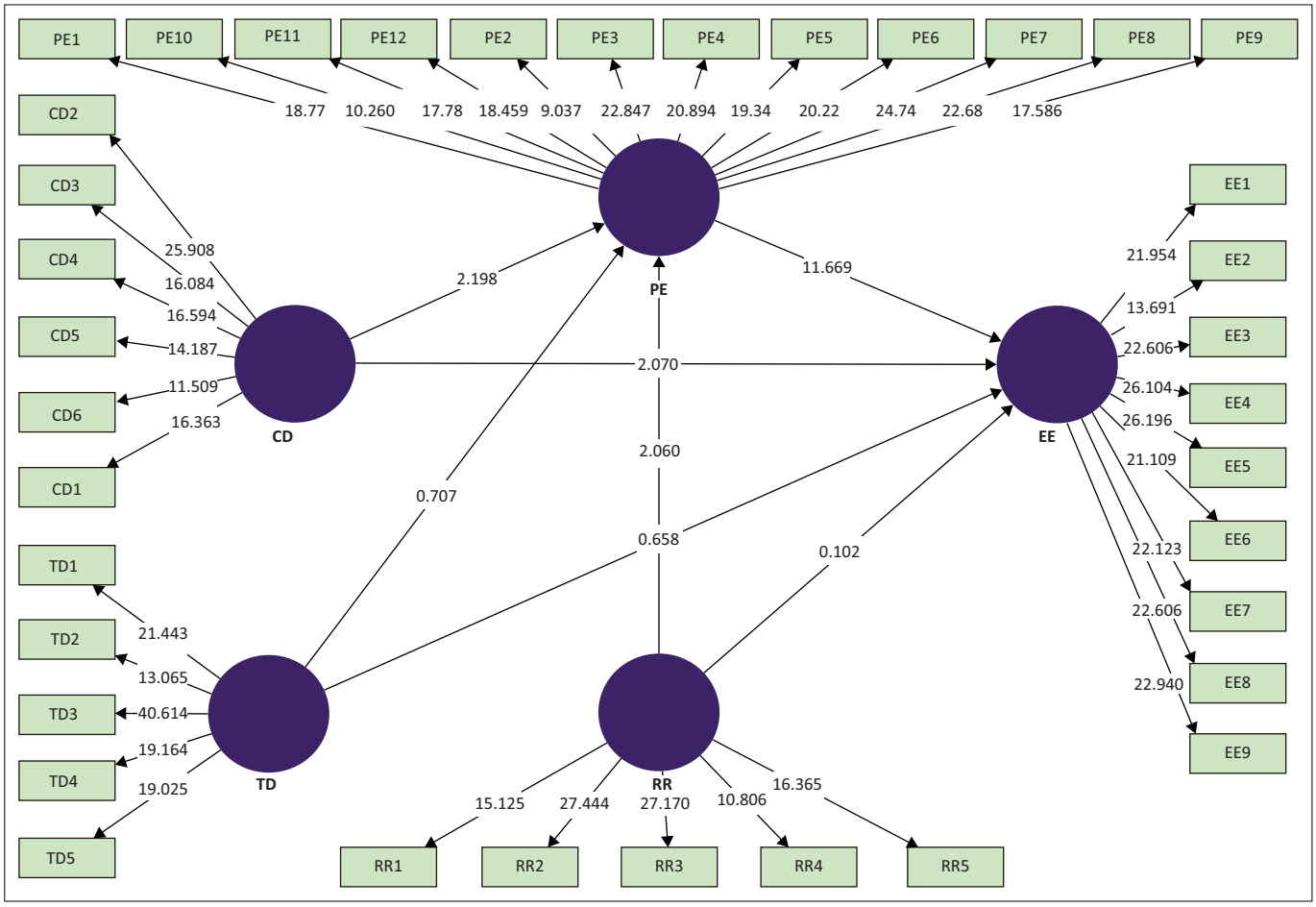
Partial least squares-predict

Towards an assessment of predictive validity of the proposed framework, the novel method of PLS-Predict was utilised. This PLS-predict algorithm adopted from Shmueli, Ray, Velasquez Estrada and Chatla (2016), assessed the predictive ability and concentrated on the overfitting problems by generating the holdout samples to execute the cross-validation. Guidelines to evaluate the predictive power of framework were adopted from García-Fernández, Martelo-Landroguez, Vélez-Colon and Cepeda-Carrión (2018) Hair (2021) Hair et al. (2020) Shmueli et al. (2019). To measure the predictive validity of endogenous variables (PE and EE), two

TABLE 2: Results of hypothesis testing with R^2 and adjusted R^2.

Hypotheses	Path	Path coefficient	*T* statistics	*p*	Results	R-square	Adjusted R^2
H1a	CD → EE	0.156	2.070	0.039	Accepted	EE = 0.558	EE = 0.551
H2a	RR → EE	0.006	0.102	0.919	Rejected		
H3a	TD → EE	-0.046	0.658	0.511	Rejected		
H1b	CD → PE	0.195	2.198	0.028	Accepted	PE = 0.140	PE = 0.129
H2b	RR → PE	0.169	2.060	0.040	Accepted		
H3b	TD → PE	0.062	0.707	0.480	Rejected		
H4	PE → EE	0.695	11.669	0.000	Accepted	-	-
H1c	CD → PE → EE	0.136	2.106	0.036	Accepted	-	-
H2c	RR → PE → EE	0.118	2.047	0.041	Accepted	-	-
H3c	TD → PE → EE	0.043	0.698	0.485	Rejected	-	-

RR, rewards and recognition; TD, training and development; EE, employee engagement; PE, psychological empowerment; CD, career development.



RR, rewards and recognition; TD, training and development; EE, employee engagement; PE, psychological empowerment; CD, career development.

FIGURE 3: Structural model from PLS-SEM analysis.

error metrics, that is, MAE and RMSE were considered. By applying the PLS-predict algorithm to whole data, the predictive validity of the model was assessed through error metrics and Q square root (Q^2). It can be seen from Table 3 that RMSE and MAE values in the PLS section are lower than multiple linear (ML) (i.e. multiple linear regression) sections whilst Q^2 values are greater than ML's respective values, which indicates quite a higher predictive power of our proposed model with non-overfitting problems (Kasilingam & Krishna, 2021). Moreover, the positive Q2 values of endogenous variables (i.e. EE = 0.105 and PE = 0.093) confirm the predictive relevance of our model. The PLS-predict for the model fulfilled the required criteria as depicted in Table 3.

Discussions and practical implications

The objective of this study was to investigate the TMP for predicting engagement levels amongst telecom employees by assessing the mediation effect of PE. In our study, TMP comprises three factors, namely CD, RR and TD. Our findings confirmed that CD had a significantly positive connection on EE ($\beta = 16\%$, $p < 0.05$). Thus, hypothesis H1a (CD→EE) was supported. This outcome is aligned with earlier researchers' findings (Alias et al., 2016; Anitha, 2014). Our findings also indicated that RR positively but not significantly forecasted EE. Besides, a negative and

TABLE 3: Partial least squares-predict.

Items	PLS			LM			PLS-LM		
	RMSE	MAE	Q^2	RMSE	MAE	Q^2	RMSE	MAE	Q^2
EE1	0.721	0.496	0.042	0.758	0.532	-0.06	-0.037	-0.036	0.102
EE2	0.753	0.534	0.062	0.783	0.585	-0.013	-0.03	-0.051	0.075
EE3	0.72	0.528	0.079	0.746	0.565	0.01	-0.026	-0.037	0.069
EE4	0.759	0.571	0.049	0.799	0.604	-0.053	-0.04	-0.033	0.102
EE5	0.763	0.523	0.091	0.793	0.573	0.016	-0.03	-0.05	0.075
EE6	0.779	0.53	0.075	0.824	0.579	-0.035	-0.045	-0.049	0.11
EE7	0.812	0.57	0.059	0.829	0.611	0.02	-0.017	-0.041	0.039
EE8	0.824	0.578	0.024	0.845	0.612	-0.025	-0.021	-0.034	0.049
EE9	0.818	0.59	0.085	0.857	0.631	-0.005	-0.039	-0.041	0.09
PE1	0.801	0.572	0.031	0.841	0.615	-0.066	-0.04	-0.043	0.097
PE2	0.795	0.574	0.076	0.819	0.586	0.018	-0.024	-0.012	0.058
PE3	0.741	0.519	0.086	0.778	0.563	-0.01	-0.037	-0.044	0.096
PE4	0.822	0.579	0.087	0.861	0.625	-0.001	-0.039	-0.046	0.088
PE5	0.817	0.618	0.045	0.856	0.66	-0.048	-0.039	-0.042	0.093
PE6	0.815	0.601	0.063	0.852	0.646	-0.025	-0.037	-0.045	0.088
PE7	0.767	0.543	0.051	0.792	0.587	-0.011	-0.025	-0.044	0.062
PE8	0.794	0.557	0.018	0.811	0.597	-0.024	-0.017	-0.04	0.042
PE9	0.751	0.533	0.034	0.781	0.572	-0.044	-0.03	-0.039	0.078
PE10	0.765	0.539	0.016	0.798	0.579	-0.072	-0.033	-0.04	0.088
PE11	0.777	0.594	0.042	0.807	0.618	-0.033	-0.03	-0.024	0.075
PE12	0.799	0.583	0.05	0.846	0.618	-0.065	-0.047	-0.035	0.115

RR, rewards and recognition; TD, training and development; EE, employee engagement; PE, psychological empowerment; CD, career development;RMSE, root means squares error; MAE, mean absolute error; PLS-LM, partial least squares-linear regression model.

insignificant connection between TD and EE was found. Therefore, hypotheses H2a (RR→EE) and H3a (TD→EE) were not supported. This statement does not concur with results received in previous studies that RR and TD have a positive effect on EE (Aktar & Pangil, 2018; Alias et al., 2016). Besides, all the three factors of TMP (i.e. CD, RR and TD) positively influenced PE. For example, CD and RR were positively and significantly associated with PE (β = 0.20 and 0.17, respectively), whilst TD had a positive but insignificant impact (β = 0.06). Hence, hypotheses H1b (CD→PE) and H2b (RR→PE) were supported, whilst hypothesis H3b (TD→PE) was not supported. Similar findings were confirmed by earlier researches also (Arefin et al., 2019; Matsuo, 2019; Moradi & Dashti, 2016). Also, the result confirmed that PE changed a greater level of EE (β = 0.70 and $p < 0.001$). This evidence strongly supported hypothesis H4 (PE→EE). Such an outcome coincides with prior researchers' findings (Arefin et al., 2019; Nawrin, 2016).

As per the desirable mediation analysis, the findings of this study showed that EE was not robustly affected by the proposed factors of TMP. The role of PE in mediation practice had a stronger effect on the connection between TMP and EE. For example, this study's findings revealed that CD→PE→EE: (β = 0.14 , $p < 0.05$), RR→PE→ EE: (β = 0.12, $p < 0.05$), TD→PE→ EE: (β = 0.04, $p > 0.05$). These findings confirmed the indirect effect of all the variables except TD. Our results are consistent with prior evidence that the effect of TMP via PE has a solid understanding of employee outcomes in the Malaysian telecom sector (Khan et al., 2019). This is the novelty of our study because of the paucity of researches in terms of the intervening role of PE on the relationship between TMP and EE. According to Pandita and Ray (2018), high-skilled employees tend to engage more in organisational excellence than low-skilled ones. But, only TMP cannot strongly predict EE. The mediating role of PE would be to reinforce the relationship between the two variables. However, our results have proved that TMP positively affects employees' positive behavioural outcomes through PE. According to Pandita and Ray (2018), productivity in an organisation is the function of EE and employees' work satisfaction as well, which can be brought about by an efficient TM strategy via PE (Arefin et al., 2019; Khan et al., 2019). Hence, this study will enable HRM leaders to choose the TMP to engage potential employees through PE.

Precisely, as predictive validity of our model also proved the PLS-Predict, model findings ensured that all the factors in the proposed model have resulted in 56% of change towards EE. The results are consistent with SET that signifies a viable theoretical model. Saks (2006) unveiled that SET explains the reciprocal actions between two persons create an obligation in the stage of mutual interconnection. According to Khoreva et al. (2017), TMP delivers a suitable lens for highly skilled workforces to respond positively. Hence, TMP requires to be combined with SET for a better understanding of the scenario. On the other hand, SET directs a positive association between TMP and PE, which leads to productive employee outcomes (Stein & Min, 2019). Similarly, a strong connection between PE and EE has been found within SET (Kosar, 2017). This theory has provided essential support to develop and test the proposed research model with mediation effects. However, drawing on SET, our findings mainly highlight the importance of TMP to influence EE, either directly or indirectly.

This research contributes to the existing literature by examining the mediation role of PE in the relationship

between TMP and EE. Past literature has mostly focused on the connection between either employees' innovative work behaviour (Khan et al., 2019), organisational citizenship behaviour (Arefin, Arif, & Raquib, 2015) or knowledge sharing intention (Han, Seo, Li, & Yoon, 2016). With this study's contribution, telecommunications managers may therefore focus on PE as a potential meditator to understand their employees' positive intentions to work. As this study has empirically evidenced that TMP can positively affect employees' intention to engage in the work environment via PE, this would benefit telecommunications companies to recognise the link between TMP and PE to ensure EE. Particularly, we suggest that PE could be a strong intermediate factor to strengthen the effect of TMP on EE. This form of internal link amongst TMP, PE and EE may be considered a reliable form to gain a competitive advantage.

The findings of this research also support several interesting practical implications. Firstly, this study would benefit telecommunications leaders and HRM practitioners to understand the link between TMP and EE, which in turn will diminish turnover intentions. According to Wang, Xu, Zhang and Li (2020), studies on EE have become a conduit to guide academics, HR practitioners and organisations to understand behavioural expectations of the right talent towards the current retention policy. Secondly, as engagement occurs at each level in an organisation, strategic planning on enhancing engagement in the workplace may lead to long-term benefits. In such a way, workers may desire to put effort into their job responsibilities that refer to meaningfulness, determination and connection (SHRM, 2016).

The telecom sector is categorised as a highly growing market in the tech-business world, thus, maintaining proper staff settings is an essential concern that may result in sustainable business development. In this respect, through fulfilling the employees' needs, for example, giving career opportunities and providing TD programmes to work in the organisation, telecom employers may sense the positive employee outcomes, that is, high levels of EE and commitment.

On another note, this research would be crucial to provide a detailed strategic plan of looking at EE in the hybrid workplace context. For instance, although most employers put effort into the process of digitalisation, not every employer has kept up successfully with organisations shaping digitally (Attaran, Attaran, & Kirkland, 2019), whilst 75% are still struggling on EE as reported in Social Chorus's survey (Brook, 2019). As most organisations have kept EE as one of their top priorities enabling a technology-driven workplace, it is critical that they know what the employees really desire (Buchanan, Kelley, & Hatch, 2016). Within this context, TMP still remains a focal point in the current HR policy, such that to improve employees' digital competency, proper TD programmes have become indispensable (Attaran et al., 2019). Besides, wherever the workplace remains either traditional or digital, every worker desires an attractive compensation and benefits package (Vulpen, 2020) and, particularly a great career path (Buchanan et al., 2016). As these are the basic needs of an employee therefore organisations and HR practitioners should prudently leverage these facts, which ultimately may drive high EE.

According to Osman, Noordin and Daud (2018), when employees leave the current organisation, their experiences, knowledge and skills that have already been gained will transfer to the new organisation. This is a critical issue in talent mobility. The employers may contemplate the inferences of this study for workforces, which in return boost the sense of inspiration amongst employees and exert an obligation to involve them in work roles with their best effort. Maintaining this reciprocal relationship with employees may integrate inflow of the right talent and increase EE to latch turnover intentions.

Finally, results in this study may lead to strategically enhancing the engagement levels amongst employees. Based on Cropanzano and Mitchell's (2005) opinion, employers should comprehend that engagement is a long-term and ongoing process that involves continual connections to employees' feelings and obligations and a state of mutual relationship. Therefore, this study may facilitate HRM practitioners in maintaining a strong engagement strategy in an organisation by understanding the connection between TM factors and PE by which employees can be willing to involve with their tasks, share their views and contribute to the organisations' success. Henceforth, in order to augment employee productivity, employers should ponder TM strategies and empowerment initiatives in the business landscapes.

Limitations and recommendations

This section paves some limitations of the research and covers the recommendations for further researcher/s. Firstly, the purposive sampling technique may lead to possible biases, in which, the participants may have responded more accurately than their exact feelings. Secondly, we drew relatively small sample sizes from the Malaysian telecom companies, which were not robustly significant to evaluate the influence of each of the factors on EE. Thus, a larger sample size covering different telecom companies could lead to a greater positive generalisation of the results. Furthermore, the response rates in the survey of managerial employees were relatively low because of the time constraints and the limited interaction with employees amidst COVID-19 pandemic restrictions. More representation of managerial employees in the sample could highlight whether TMP affects the management levels in boosting their engagement levels, vis-à-vis their other counterparts.

A longitudinal approach instead of a cross-sectional study might provide more robust findings. Hence, further longitudinal studies need to be conducted, which may result in stronger findings. In addition, as TMP might have influenced ratings on employees' behavioural outcomes (Pandita & Ray, 2018), further study can repeat our research

in other settings for enhancing the generalisability of the findings. Moreover, few researches have particularly shown the intervening effect of PE on the link between TMP and EE. Therefore, further research is needed to strengthen this relationship, which in result may explore additional viewpoints to forecast EE. Lastly, we integrated only three factors, that is, CD, RR and TD with TMP predicting EE. However, digital competency and workforce agility are important aspects of TMP that can greatly affect employees' engagement levels. Thus, future researchers can turn their attention to these two phenomena in terms of EE.

Conclusion

Employee engagement has been a challenging issue for an organisation since the 1990s, and many studies have shed light on this issue. Following the empirical analysis, our study's findings ensured that only PE can measure its mostly respective relationship. On the other side, our findings also proved that although CD had a significantly positive association with EE, the other proposed factors of TMP (i.e. RR and TD) did not adequately discourse to boost EE. The reason behind this phenomenon is that when employees generally do not perceive RR and TD as a booster in workplace morale. In addition, TD did not significantly affect PE. The reason is that if employees are not satisfied with the TD programmes, their empowerment behaviour would be declined. To determine the mediation, PE should be prudently studied; the result from our study did not support the hypothesised mediating relationship of H3c (TD→PE→EE). Overall, this study empirically validated the research framework and confirmed that more than 50% of the hypotheses were significantly supported. This statistical evidence confirms that TMP factors do significantly enhance employee engagement, either directly or indirectly. To summarise, these results may support both practitioners and HRM leaders to comprehend what stimulates workers to commit in their workplace and know the link of efficient TM strategies on PE to engage them.

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Competing interests

The authors have declared that no competing interests exist.

Authors' contributions

H.A. constructed the manuscript and gathered the data. On the other hand, W.A. managed the data analysis. Lastly, I.S. and S.M.H. supervised consolidating this article for publication.

Ethical considerations

This article followed all ethical standards for research without direct contact with human or animal subjects.

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Data availability

Data are available from the authors on request.

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