

## **Investigating the Effect of HRM Practices on Work Engagement Among SMEs in Malaysia**

Emmanuel Abugu<sup>1</sup>, Emmanuel Ogundare<sup>2</sup>

<sup>1</sup>Universiti Poly-Tech, Faculty of Business and Accountancy (FABA)

Department of Business,

Kuala Lumpur, Malaysia

<sup>2</sup>De Montfort University, School of Accounting, Finance and Economics,

Gateway House, Leicester LE1 9BH

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### **Abstract**

The important of employees to any organisation cannot be overemphasised. Human resource management (HRM) practices can either positively or negatively impact the employee's behaviour and motivation. This study investigates the effect of HRM practices among Malaysian SMEs on the work engagement of their employees. The study is based on two underlying theories - Job demands-resources theory and social exchange theory. The study's conceptual framework developed using the theories was tested quantitatively. The main focus of the study is SMEs in Malaysia and the unit of analysis is at the level of individual employee working with the SMEs. There are five dimensions of HRM practices utilised in the study namely: Training & Development, Performance Appraisal, Compensation & Benefits, Career Development and Recruitment & Selection. The three constructs - Vigour, Absorption and Dedication were used to measure work engagement. The total number of questionnaires distributed were 755 and usable questionnaires were 481 representing 62% response rate. Confirmatory factor analysis (CFA) and structural equation modeling (PLS-SEM) were used to analyse the data and both SPSS and SmartPLS software were used. The findings show that four variables of HRM practices significantly affect work engagement in a positive direction. This study advances the literature on work engagement HRM practices as well as expands the SET and JD- R theories.

**Keywords:** work engagement, training & development, performance appraisal, compensation & benefits, career development, recruitment & selection

### **1. Introduction**

#### *1.1 Introduce the Problem*

The success of any organisation greatly depends on its workforce. Employees have largely been referred to as the organisation's main assets and serve as the pivot that keeps it together. Human resource professionals and leaders now recognise the importance of human resources to the performance of their organisations due to deregularisation, digitisation, and technological

innovation (Bharadwaj, Khan & Yameen, 2021). Work engagement is crucial in this context since human resource management (HRM) procedures have the potential to either favourably or negatively affect an employee's behaviour and motivation. A highly engaged employee will be extremely driven to contribute to the growth of the organisation, and this will have a significant impact on the organisation's financial and non-financial performance. However, the main effect could be the intention to leave, which would make it difficult for these organisations to retain their workforce, if employees felt that HRM practices were unfavourable or insufficient. One of the most effective strategies to increase retention rates is through work engagement (Nel & Linde, 2018). High levels of work engagement have been shown to reduce voluntary turnover (Bailey, Madden, Alfes & Fletcher, 2017). Poor engagement appears to be a worldwide issue, according to reports (Albrecht, Bakker, Gruman, Macey & Saks, 2015). Research demonstrated that HRM practices increased workers' degree of engagement at work (e.g., Muduli, Verma & Datta, 2016; Turner, 2020). HRM practices comprise a collection of discrete but internally consistent practices intended to leverage an organisation's human capital pursuant to its business objectives (Memon et al., 2020). Evidence from literature alluded to the fact that HRM practices are the key to achieving both individual and employee level outcomes, such as product and process innovation (Haneda & Ito, 2018), corporate social performance (Rothenberg, Hull & Tang, 2017) and employee turnover (Nie, Lämsä & Pučetaitė, 2018), etc. According to empirical data, workers in one organisation frequently compare their job experience—including work environment, compensation and benefits, leadership style, training, assessment, career development opportunities, and decision-making—with that of another. The informal psychological contract states that workers consciously anticipate certain duties from their employers in return for their dedication and hard work (Agarwal, Baral & Rastogi, 2025). Employers and employees share unwritten beliefs, opinions, and points of agreement (Gulzar et al., 2024). Although in a different context, researchers have previously examined the connection between work/employee engagement and human resource management (HRM) methods. The researchers suggested that Human resource management (HRM) practices could create engaged or disengaged employees with varying implications for the organisation including impact on firm performance, employee motivation and job satisfaction, intention to quit, etc. While Karam, Gardner, Gullifor, Tribble & Li, (2017), examined the relationship between opportunity-enhancing HR practices and work engagement employees' satisfaction, Memon et al. (2020) investigated the relationship between HRM practices and work engagement among oil and gas professionals. Aktar & Pangil (2018) examined the relationship between the two variables among bank employees and Aboramadan, Albashiti, Alharazin & Dahleez, (2020) investigated the relationship between HRM practices and work engagement in Palestinian universities. High levels of work engagement have been shown to lower voluntary turnover, according to empirical research (Albrecht et al., 2015; Bailey et al., 2017). According to Menon et al. (2020), work engagement results in personally satisfying work-related experiences, good health, and a state of mind that is positively connected with progressive work efforts. These favourable feelings and experiences enhance work-related results, lead to a favourable opinion of the employer, and strengthen the employee's loyalty to the company (Shuck, Twyford, Reio Jr & Shuck 2014). "More satisfied with their jobs, feel more committed to the organisation, and do not intend to

leave the organisation" are characteristics of positively engaged people (Schaufeli & Salanova, 2008, p. 388).

### *1.2 Explore Importance of the Problem*

It is impossible to overstate the importance of work engagement and employee retention in this delicate and unprecedented period of disruption to organisational routines. Many businesses consider increasing employees' awareness of work engagement and its advantages to be crucial, and they rank it as one of their top goals. Among other beneficial business outcomes, business units with high staff engagement enjoy greater productivity, increased customer loyalty and engagement, improved safety, less attrition, and increased profitability (Harter et al., 2020). Despite the fact that job engagement has drawn a lot of attention from scholars in recent decades, data indicates that employees worldwide, and in Malaysia specifically, have a low level of work engagement (Memon et al., 2020). Organisations were struggling to develop strategies to engage employees even before the COVID-19 pandemic (Soñta, 2021). It has been generally noted that low employee engagement is common throughout the world. The Gallup study on the status of the global workplace from 2021 states that between 2019 and 2020, employee engagement fell by 2%, from 22% to 20%, with a high rate of concern, stress, anger, and unhappiness. Overall, employee involvement in Southeast Asia—which includes Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam—was only 23% in 2020, a 4% decrease from 27% in 2019. Due to the COVID-19 pandemic, the region saw a high rate of job loss (42% compared to the global average of 32%) and employees received lower-than-normal compensation from their employers and enterprises (67% compared to the global 50% rate). In the region, 42% of respondents think they were impacted by the COVID-19 epidemic (Gallup, 2021). As illustrated in Figure 1 below, India currently has the most engaged employees followed by Indonesia and Philippines at 89%, 86% and 83%, respectively. Both Thailand and Vietnam, are above Malaysia in the region with 76% and 73%, respectively, however, the country tied with Singapore at 67%. These figures demonstrate that there are still many rooms for improvement, and it is imperative for those charged with governance in various organisations and even national governments to begin to look for more inclusive ways of engaging their employees. There is a general saying that “in many companies, the most valuable assets go home to their spouses in the evening.” According to the study, the following factors will influence employee engagement in Malaysia in 2020: opportunities for learning and growth (67%), recognition for good work (62%), a clear connection between my work and the company's strategic objectives (62%), my manager's assistance in my professional development (59%), and trust in senior leadership to make the best decisions for the company (62%). When employee input is taken seriously and implemented, employee engagement increases dramatically to 79%. When feedback is ignored, it drops to 47%. Last year's engagement drivers, on the other hand, included chances for learning and development, manager support for career advancement, recognising a clear connection between work and strategic objectives, getting recognised for exceptional work, and having faith in senior leadership to make the right choices. Voluntary turnover is more likely when there are a lot of disengaged workers. In order to lower the high rate of voluntary turnover, a large portion of the present discussion centers on what motivates employees to be engaged. Due to their contributions to employment, GDP, and the nation's

overall economy, small and medium-sized businesses (SMEs) are very significant in Malaysia (Hanifah, Abd Halim, Vafaei-Zadeh & Nawaser, 2022). Together, SMEs made up more than 97.4% of all enterprises in Malaysia. SME Corp Malaysia (2022) reports that SMEs made up RM518.1 billion, or around 37.4%, of the GDP in 2021 compared to RM512.9 billion, or 38.1%, in 2020. Studies examining the three reflecting constructs of vigor, adoption, and dedication as indicators of employee engagement are particularly lacking in the Malaysian setting. The concept of work engagement, defined as "a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption" (Schaufeli et al., 2002, p. 74), has gained prominence in the management literature due to its demonstrated ability to support a range of organisational and employee outcomes, including job satisfaction, engagement, and retention (Aboramadan et al., 2020; Albrecht & Marty, 2020; Rai & Maheshwari, 2020). Research on work engagement in Malaysia is similarly lacking, particularly studies that look at the three reflecting constructs of vigour, adoption, and dedication as indicators of an employee's level of involvement. The concept of work engagement, defined as "a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption" (Schaufeli et al., 2002, p. 74), has gained prominence in the management literature due to its demonstrated ability to support a number of organisational and employee outcomes, including job satisfaction, organisational citizenship behavior, organisational engagement, and a high employee retention rate (Aboramadan et al., 2020; Albrecht & Marty, 2020; Rai & Maheshwari, 2020). A deeper comprehension of the factors that precede work engagement is necessary due to the increasing interest in this topic (Matsuo, 2022). Performance-related antecedents of work engagement have so far gotten very little attention in the literature, despite the fact that many characteristics (such as personality traits, learning goal orientation, personal resources, and job autonomy) have been studied as antecedents. Only recently has research started to explore whether employees' work engagement increases or decreases when they are subjected to high performance demands (Dorta-Afonso, Romero-Domínguez & Benítez-Núñez, 2023; Stirpe & Revilla, 2024). Therefore, only a limited range of the performance-related factors that influence work engagement—particularly with regard to performance pressure—have been taken into account.

### *1.3 Describe Relevant Scholarship*

#### Definitions of key terms

##### HRM practices

HRM practices are collectively defined as comprising "*a collection of multiple, discrete practices with no explicit or discernible link between them, or the more strategically-minded system approach views HRM practices as an integrated and coherent 'bundle' of mutually reinforcing practices*" (Boselie et al., 2005, p. 6). HRM plays an important role in aligning sustainability with the organisation's internal practices, which contributes to the firm's competitiveness (Macini et al., 2022). Through HRM practices, strategic and operational support can be provided by integrating the area with organisational sustainability and producing synergistic results (Jamali et al., 2015). According to Piening et al. (2013), supportive HRM practices increase positive attitudinal and behavioural outcomes. Guest (2017) concluded that

investing in employees, providing them with a voice, support and an engaging work in a positive environment should foster work-related well-being.

### Work engagement

Although there are numerous definitions of work involvement in the literature, the definition provided by Schaufeli et al. (2002) has been the most widely used and mentioned, appearing in 86% of the research Bailey et al. (2017) reviewed. Work engagement is described as "a positive fulfilling work-related state of mind characterised by vigour, dedication, and absorption" by Schaufeli et al. (2002, p. 702).

### Vigour

Vigour is defined as "*mental resilience while working, persistence when faced with issues and a willingness to invest effort in one's role performance*" (Strom et al., 2014, p. 71).

### Dedication

Dedication is defined and characterised as "*one's enthusiasm, sense of inspiration and response to challenges at work*" (Strom et al., 2014, p. 71).

### Absorption

Absorption is defined and concerned with "*being happy, fully concentrated, and deeply engrossed in one's work, with trouble detaching from work*" (Strom et al., 2014, p. 71).

More empirical research is necessary to close this glaring gap because the existing empirical studies on HRM practices and employee retention that are pertinent to SMEs in Malaysia are not very encouraging. Employee/work engagement research in the literature is theoretically supported by three theories: social exchange theory, conservation of resources (COR) (Hobfoll, 2002, 2011), and job demands-resources (JD-R) (Bakker & Demerouti, 2007, 2017). These theories all agree that increased work engagement is made possible by additional employer-provided resources. Research on Human resource management (HRM) practices, work engagement and employee retention have been conducted on the basis of social exchange theory (SET) in literature. While de Souza Meira & Hancer (2021) applied SET to investigate the relationship between HRM practices and work engagement in the hospitality industry, Mohanty & Arunprasad (2021) applied SET to investigate employee engagement and test its application in the context of Indian power companies. Similarly, Razzak et al. (2022) investigated the relationship between nonfamily employees and work engagement while utilising the SET theory. Empirical studies have also previously applied the conservation of resources (COR) theory as the study's underpinning theory. Wang et al. (2020) in their study applied COR theory to investigate the relationships between abusive supervision, employees' work engagement and job satisfaction in the context of hospitality industry in Taiwan. Similarly, Yousaf et al. (2020) applied to COR theory to investigate the relationships between occupational stress, job engagement and employee retention for front-line hospitality industry employees in the People's Republic of

China. On the other hand, Karatepe et al. (2019) applied the theory to investigate the relationships work engagement, self-efficacy and family support in the context of the frontline bank employees in Russia. Still investigating frontline employees, Teo et al., (2021) applied JD-R theory and COR theory as the theoretical underpinnings to investigate the relationships among high commitment HR management (HCHRM) practices, psychological capital (PsyCap), job autonomy, job and burnout in the context of frontline food service employees in Australia.

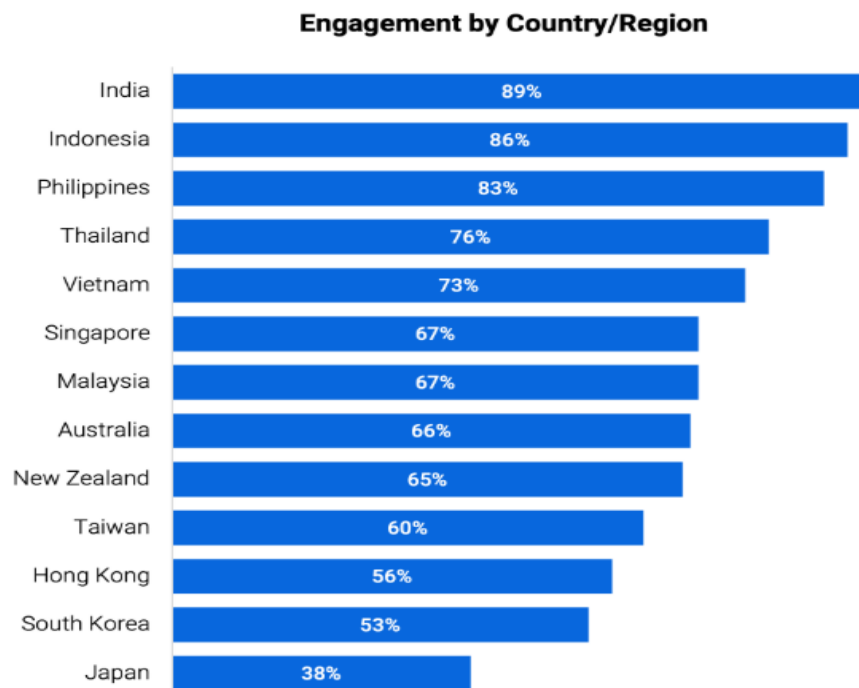


Figure 1: Countries or regions with highest engagement: Source: Qualtrics (2024)  
Evaluation of relevant theory

### Job-Demands-resources Theory

The job demands–resources (JD-R) model is a heuristic model that outlines how two sets of working conditions can result in employee wellbeing. Job resources are the working conditions that the job at hand provides to each employee, whereas job demands are the aspects of the job that may cause stress if they surpass an employee's capacity for adaptation (Bakker & Demerouti, 2017). The JD-R model's fundamental tenet is that, although job demands may cause workers' physical and mental resources to be depleted, job resources can serve as motivators and promote good attitudes, behaviours, and overall well-being (Bakker & Demerouti, 2017). According to Toth, Heinänen, and Puumalainen (2021), one of the main tenets of the JD-R model is that job resources can mitigate the negative effects of job demands on workers' well-being. The most crucial resources in the organisational setting are social and organisational support. Such assistance, which is frequently referred to as perceived organisational support (POS), might manifest itself in the form of initiatives carried out by the company and the



worker's superiors. Employee impressions of how the company values their efforts and looks out for their well-being are indicated by POS (Turek, 2020). The most popular model for defining the causes and effects of work engagement at the moment is the JD-R model. The addition of personal resources as antecedents of job engagement is another change made to the model (Toth et al., 2021). The hypothesis states that burnout and weariness may result from an increase in work demands (JD) (Bakker & Demerouti, 2017; Teo et al., 2021). JR could promote employee welfare, work engagement, and personal development, for instance (Bakker & Demerouti, 2017; Teo et al., 2021). Job autonomy is an illustration of JR. The degree of flexibility and discretion that employees have in their positions, which enables them to independently determine what they can accomplish and how they can do it, is referred to as job autonomy. Employees may be encouraged to obtain and apply job-related resources to deal with stressful situations if they endure a prolonged and continuous time of high JD and low JR (Bakker & Demerouti, 2017; Teo et al., 2021). According to Hobbfol, Halbesleben, Neveu, and Westman (2018), low JR and high JD can cause a decline in energy levels, low work identification, and a lack of perceived efficiency at work. These situational events also initiate a loop of resource loss, which is an indication of burnout. In conclusion, the JD-R perspective suggests that having enough resources could result in favorable outcomes and enable staff members to invest and acquire additional resources (Hobbfol et al., 2018). The JD-R model states that job resources may be found at the task level, at the organisation of work level, in interpersonal and social relationships, or in the organisation as a whole (Katou, Koupkas & Triantafillidou, 2022). The JD-R model's primary takeaway is that it separates two concurrent mediating processes. The first, known as the stress process, makes the case that excessive job demands cause work burnout, which in turn results in poor work outputs. The second, known as the motivating process, contends that through work engagement, workplace resources result in favourable work results. Bakker & Demerouti (2017) and Borst, Kruijen & Lako (2019) have expanded the resource dimension of this fundamental JD-R model by include personal resources alongside job resources. The JD-R hypothesis describes how employees affect their own working conditions and how working conditions affect employees (Bakker & Demerouti, 2018). High job demands are a sign that an organisation is expecting workers to put in constant effort in order to achieve predetermined objectives. Employee fatigue and health issues could result from this procedure, though (Katou et al., 2022). Research on work engagement has gained popularity in the past two decades (Rai & Chawla, 2022). Work engagement has been found to have strong implications for organisational growth and sustainability, individual performance, organisational citizenship behaviour, creativity and innovation (Al Mehrzi & Singh, 2016; Ismail, Iqbal & Nasr, 2019). The JD-R framework portrays how job resources, job demands, psychological states (such as work engagement) and work-related outcomes are interrelated, which can be rationally applied across different occupational contexts to enhance well-being and health of employees as well as their organisational efficiency (Rai & Chawla, 2022). JD-R model is an integrative theoretical model that explains what enhances work engagement and, at the same time, reduces burnout. Every job environment consists of certain job resources and job demands. Demerouti, Bakker, Nachreiner & Schaufeli (2001, p. 501) explained job demands as "aspects of the job that require sustained physical or mental effort and are, therefore, associated with certain physiological and psychological costs". They restrain employees' performance and reduce energy. On the other

hand, job resources are associated with positive psychological and physiological aspects of work offered by an organisation (i.e., job autonomy, rewards, supervisory support and developmental feedback, etc.) that help in achieving goals (Dixit & Upadhyay, 2021). As per the JD-R model, job demands are aspects of the job that require sustained cognitive or emotional efforts by the job incumbent and they consist of both quantitative demands, such as workload, and qualitative demands, such as task difficulty (Rai & Chawla, 2022). The JD-R model by Schaufeli & Bakker (2004) argued that “job resources stimulate a fulfilling, positive work-related state of mind (i.e., work engagement), either through the achievement of work goals or the satisfaction of basic needs and in turn, this affective motivational state fosters positive organisational outcomes, such as organisational commitment and performance” (Bauer, Hämmig, Schaufeli & Taris, 2014, p. 47). Recently, considerable advances have been noticed in the empirical investigations based on the JD-R model, testing mediation method to substantiate the motivation progression of the theory positing mediating role of work engagement between job resources and work/organisational outcomes in different countries, cultures and occupational groups (e.g., Shahpouri, Namdari, & Abedi 2016; Orgambidez-Ramos & de Almeida, 2017). Moreover, few studies have also studied the moderation mechanism featuring interaction of job resources and job demands in predicting work engagement to explore the buffering role of job resources in the engagement–job demand relationship (Dlouhy & Casper, 2021).

Operationalisation of variables

#### HRM practices

Previous researchers have investigated how HRM practices impact employee behavioural intention using different constructs. The HRM practices are usually investigated as an independent variable and mostly as multi-dimensional constructs rather than uni-dimensional. For instance, Memon et al. (2021) adopted the JD-R theory and measured HRM practices using constructs such as training satisfaction, performance appraisal satisfaction and pay satisfaction as shown on Figure 2 below. The study found positive significant relationships between training satisfaction, performance appraisal satisfaction and work engagement. Gadi & Kee (2021) on the other hand used five reflective constructs to measure HRM practices including training and development, recruitment and selection, performance appraisal, reward recognition and career recognition. Domi & Domi (2021) in their study operationalized HRM practices as two constructs namely HR recruitment and selection and HR training. The study adopted resource-based view (RBV) model. Similarly, Capelleras, Domi & Belletti (2021) operationalized skill-enhancing HR practices using HR hiring and HR training as the two main constructs. The study adopted human capital theory.



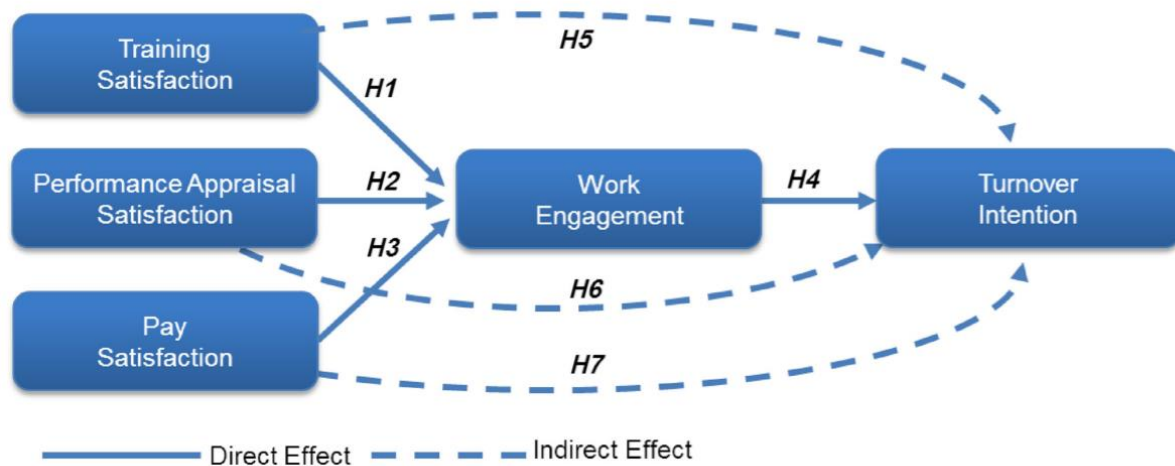


Figure 2: Research model by Memon et al. (2016)

Aktar & Pangil (2018) used six constructs to measure HRM practices. The constructs are career advancement, performance feedback, job security, training and development, rewards and recognition and employee participation. The results of the study showed that career advancement, employee participation, job security, performance feedback, rewards and recognition, training and development had significant positive relationship with employee engagement. The study utilised the SET theory. Sokolov & Zavyalova (2021) on the other hand measured HRM practices using constructs such as ability-enhancing HRM practices, motivation-enhancing HRM practices and opportunity-enhancing HRM practices.

### Work engagement

Work engagement is also commonly referred to as employee engagement or job engagement in literature and researchers have used either work engagement or employee engagement to explain a positive fulfilling work-related state of mind among employees characterised by vigour, dedication, and absorption (Wang, Zhu, Dormann, Song & Bakker, 2020). Previous researchers have investigated how work engagement impacts various employee behavioural intention including employee retention using different constructs. Work engagement has been investigated as independent variable, mediating variable and dependent variable in literature and it has been measured using both unidimensional and multi-dimensional constructs. While Khan, Mubarik, Ahmed, Islam, Khan, Rehman & Sohail (2021) in their study investigated work engagement as a dependent variable using unidimensional construct, Ashfaq & Hamid, (2020) on the other hand, investigated work engagement as a mediating variable using a uni-dimensional construct measured by seven scale items.

Aboramadan, Dahleez & Hamad (2020) in their study investigated work engagement as one of the dependent variables and found out that the relationship between servant leadership and work engagement is fully mediated by job satisfaction. The researchers measured work engagement

using the nine-item scale adapted from Schaufeli, Bakker & Salanova (2006). Similarly, Cenkci, Bircan & Zimmerman (2021) investigated work engagement as unidimensional construct measured by nine scale items.

#### Critical evaluation of empirical studies

##### HRM practices and work engagement

Scholars had previously investigated the direct relationship between HRM practices and work engagement from many contexts using different theoretical background and constructs to investigate and measure the variables. In Malaysia, Memon et al. (2021) and Gim, Ooi, Teoh, Lim & Yeap (2022) in their studies examined the direct relationship between HRM practices and work engagement from the contexts of Malaysian oil and gas (O&G) professionals and ISO 14001 certified organisations in Malaysia respectively. Both studies measured work engagement with the nine-item Utrecht Work Engagement Scale (UWES-9) adopted from Schaufeli et al. (2006). There are also similarities in the constructs used to measure the HRM practices. While Memon et al. (2021) investigated training satisfaction, performance appraisal satisfaction and pay satisfaction as HRM practices, Gim et al. (2022) investigated training and development, pay and rewards systems, recruitment and selection process and performance appraisal. The studies found that majority of the constructs of HRM practices were significantly and positively related to work engagement. In other words, as training and development, pay and rewards systems, recruitment and selection process and performance appraisal appear to be satisfactory to the employees, their engagement level which is measured in terms of their vigour, absorption, and dedication at work increases. Researchers from the Middle East had conducted empirical studies to investigate the direct relationship between HRM practices and work engagement including countries such as Turkey (Aybas & Acar, 2017), Bahrain (Alzyoud, 2018), Jordan (Rumman, Al-Abbadi & Alshawabkeh, 2020), Palestine (Aboramadan et al., 2020), Egypt (Saad, Gaber & Labib, 2021) and Iran (Sepahvand & Bagherzadeh Khodashahri, 2021). While the study by Aybas & Acar (2017) was based on private companies from different sectors in Turkey, the study by Alzyoud (2018) was conducted in the context of manufacturing sector in Bahrain, the study by Rumman, Al-Abbadi & Alshawabkeh (2020) was conducted in the context of Jordanian family restaurant, the study by Aboramadan et al. (2020) was based on academics and administrative staff from Palestinian universities, the study by Saad et al. (2021) was conducted in the context of banking sector in Egypt and the study by Sepahvand & Bagherzadeh Khodashahri (2021) was conducted in the context of managers and employees working in Iran. Different constructs were used by the researchers to measure HR practices dimensions, however, the most commonly used constructs are training and career development (Aybas & Acar, 2017; Alzyoud, 2018; Rumman, Al-Abbadi & Alshawabkeh, 2020; Aboramadan et al., 2020; Saad et al., 2021 and Sepahvand & Bagherzadeh Khodashahri, 2021), compensation and benefits (motivation factors) (Aybas & Acar, 2017; Alzyoud, 2018; Rumman, Al-Abbadi & Alshawabkeh, 2020; Aboramadan et al., 2020; Saad et al., 2021 and Sepahvand & Bagherzadeh Khodashahri, 2021) and performance appraisal (Aboramadan et al., 2020, Sepahvand & Bagherzadeh Khodashahri, 2021). Some of the researchers also added another word such as

strategic HRM practices (Sepahvand & Bagherzadeh Khodashahri, 2021) and human resource development practices (HRDP) instead of HRMP (Rumman, Al-Abbadi & Alshawabkeh, 2020). It is noticeable from literature that the variable work engagement is commonly referred to as either work engagement (Aybas & Acar, 2017; Aboramadan et al., 2020), employee engagement (Alzyoud, 2018; Rumman et al., 2020; Saad et al., 2021) or job engagement (Sepahvand & Bagherzadeh Khodashahri, 2021). There are also similarities and differences in the way the researchers from Middle East measured work engagement with majority utilising the scale by Schaufeli, et al. (2002) (Alzyoud, 2018; Rumman, Al-Abbadi & Alshawabkeh, 2020; Sepahvand & Bagherzadeh Khodashahri, 2021) and the scale UWES-9 by Schaufeli, et al. (2006) (Aybas & Acar, 2017; Bagherzadeh Khodashahri, 2021). In these scales, work engagement (JE) was measured using vigour, dedication, and absorption dimensions. All the studies' findings indicated that HRM practices had a positive and significant impact on employee engagement. While Guan & Frenkel (2018) conducted their study in China from the context of Chinese manufacturing firms, Aktar & Pangil (2018) conducted theirs in Bangladesh in the context of private commercial banks in Bangladesh. While the former measured HR practice using a 12-item scale based on Bowen & Ostroff's study (2004) and developed by Frenkel et al. (2012a, 2012b), the latter measured HRM practices as career advancement, performance feedback, job security, training and development, rewards and recognition and employee participation. Both studies confirmed that there is a significant direct positive relationship between HRM practices and employee engagement. Studies investigating the direct relationship between HRM practices and work engagement have also utilised different theories, however, the most commonly utilised theories include conservation of resources theory (Aybas & Acar, 2017; Alzyoud, 2018; Gim et al., 2022), Social Exchange Theory (Aktar & Pangil, 2018; Rumman et al., 2020; Aboramadan et al., 2020) and JD-R theory (Memon et al., 2021). While JD-R model is an integrative theoretical model that explains what enhances work engagement and, at the same time, reduces burnout, SET suggests that interactions between two parties must be reciprocated interdependently and has been widely used in studies relating to workplace behaviour (de Souza Meira & Hancer, 2021). On the other hand, COR theory argues that individuals use various resources for completing work tasks such as time, cognitive attention, physical energy, but they must replenish those resources during breaks in order to avoid stress (Gim et al., 2022). The summary of the review of relevant studies is presented on Table 1 below.

Table 1: Relationship between HRM practices and WE

Author(s)/year of publication	Context	RQ/RO	Theory	Construct(s)/dimensions	Methodology	Findings
Gim et al. (2022)	ISO 14001 certified organisations in Malaysia	Examine the direct relationship between resource management (HRM) performance attributions and work engagement	Attribution theory and conservation of resources theory	HRM performance attributions are measured by Training and development, pay and rewards systems, recruitment and selection process and performance appraisal. Work engagement was measured with the nine-item Utrecht Work Engagement Scale (UWES-9) adopted from Schaufeli et al. (2006).	Survey questionnaire and PLS-SEM	HRM performance attributions were positively related to work engagement.
Aktar & Pangil (2018)	Private commercial banks in Bangladesh	To examine the mediating role of OC on the relationship between (HRM) practices and employee engagement.	SET	HRM practices constructs are career advancement, performance feedback, job security, training and development, rewards and recognition and employee participation. This study adapts three-dimensional 17-item scale from Schaufeli et al. (2002) to measure employee engagement.	Survey questionnaire and Smart PLS-SEM	There is a significant direct positive relationship between HRM practices and employee engagement.
Memon et al. (2021)	Malaysian oil and gas (O&G) professionals.	To examine the impact of employees' satisfaction with HRM practices on work engagement.	JD-R theory	HRM practices constructs used are training satisfaction, performance appraisal satisfaction and pay satisfaction. The 9-item of Utrecht work engagement scale (UWES-9), developed by Schaufeli et al. (2006), was adapted to measure work engagement.	Survey questionnaire and PLS-SEM	Results show that constructs training satisfaction and performance appraisal satisfaction are the key drivers of employee engagement at work.
Saad et al. (2021)	Banking sector in Egypt.	To examine the impact of HRM practices on employee engagement.	N/A	Constricts used to measure HRM practices were selection and hiring, training and development, job design and reward and payment. 10 items were adapted from Purcell (2010) to measure EE.	Survey questionnaire and regression analysis.	The findings indicated that HRM practices had a positive significant impact on employee engagement.
Alzyoud (2018)	Manufacturing sector in Bahrain.	To investigate the influence of HRM on employee engagement.	The COR theory	The study measured work engagement using the Scale of Schaufeli, et al. (2002) while HRM practices measurements include employee communication, employee development and rewards and recognition.	Survey questionnaire and regression analysis.	HRM practices significantly influenced employee work engagement
Sepahvand & Bagherzadeh Khodashahri (2021)	Managers and employees working in Iran	To investigate the moderating role of job engagement in the impact of SHRM practices on the employee retention	N/A	While Job engagement (JE) was measured using vigour, dedication, and absorption dimensions, Strategic HRM practices dimensions include recruitment and selection, training and career development, performance appraisal and compensation and benefits.	Survey questionnaire and Smart-PLS2	There is a positive association between SHRM practices and JE.

Aybas & Acar (2017)	Private companies from different sectors in Turkey.	To investigate a model of psychological capital as a mediator and moderator in HR practices-employee work engagement relationship.	COR theory	While work engagement (WE) was measured using vigour, dedication, and absorption dimensions by employing the shortened nine item version of the Utrecht work engagement scale (UWES-9) (Schaufeli et al., 2006), HR practices dimensions include skill enhancing, motivation enhancing, opportunity enhancing and working conditions.	Questionnaire and SEM	All perceived HR practices predict work engagement.
Guan & Frenkel (2018)	Chinese manufacturing firms	To examine the relationship between employee perceptions of HR practice and employee performance.	Human resource management (HRM) process theory	While work engagement was measured using the short nine-item version of the Dutch Utrecht Work Engagement Scale developed by Schaufeli et al. (2006), HR practice was measured using a 12-item scale based on Bowen and Ostroff's study (2004) and developed by Frenkel et al. (2012a, 2012b).	Questionnaires. CFA and the PROCESS Model.	The results confirmed that strong HR system is directly related to work engagement.
Rumman et al. (2020)	Jordanian family restaurant.	To detect the impact of HRD practices on employee engagement.	Social exchange theory	HRDP was measured using constructs namely employee training, employee empowerment, employee promotion while EE was measured using the Schaufeli (2002), Saks (2006) dimensions.	A quantitative descriptive-analytical using questionnaire and SEM.	There are positive significant relationships between human resource development practices and employee engagement.
Aboramadan et al. (2020)	Academics and administrative staff) from Palestinian universities.	To investigate the impact of HRM practices on organisational commitment in Palestinian universities, and to examine the mediating effect of work engagement as a black-box mechanism.	Social exchange theory (SET)	While HRM practices dimensions include selection and recruitment, training and development, performance appraisal, rewards and compensations and job security, work engagement was measured using the shortened version of Utrecht work engagement (nine-item scale) which is used and validated by Schaufeli et al. (2002, 2006).	Survey questionnaire, CFA and SEM	Direct influence was found between only three HRM practices namely recruitment and selection, performance appraisal and rewards and compensation and work engagement.



### Gap in literature

Gim et al. (2022) state that UWES-9 has been used consistently to measure work engagement (WE) as a unidimensional scale, as advised, because the three underlying dimensions of vigour, dedication, and absorption were found to be highly correlated and therefore lacking discriminant validity (Schaufeli et al., 2006). This is despite the fact that work engagement comprises three underlying dimensions. Recent research (Albrecht, Breidahl & Marty, 2018; Karatepe, Rezapouraghdam & Hassannia, 2020; Teo, Bentley & Nguyen, 2020) have shown similar operationalisation. Therefore, conceptual gap still exists in defining a uniform measurement for work engagement in research. Similarly, there is a gap literature in the area of dimensions used in measuring HRM practices given the lack of clarity and universally accepted dimensions. A deeper comprehension of the factors that precede work engagement is necessary due to the increasing interest in this topic (Matsuo, 2022). Performance-related antecedents of work engagement have so far gotten very little attention in the literature, despite the fact that many characteristics (such as personality traits, learning goal orientation, personal resources, and job autonomy) have been studied as antecedents. Research on whether workers' work engagement increases or decreases when they are subjected to high performance demands has just lately begun to be conducted (Mitchell et al., 2019; Zhang et al., 2017). Therefore, only a limited range of the performance-related factors that influence work engagement—particularly with regard to performance pressure—have been taken into account. More empirical research is necessary to close this glaring gap because the existing empirical studies on HRM practices and employee retention that are pertinent to SMEs in Malaysia are not very encouraging. Employee/work engagement research in the literature is theoretically supported by three theories: social exchange theory, conservation of resources (COR) (Hobfoll, 2002, 2011), and job demands-resources (JD-R) (Bakker & Demerouti, 2007, 2017). All of these theories agree that increased employee engagement is made possible by more resources supplied by the company. Empirical research has employed theories like the job demands-resources (JD-R) theory and the social exchange theory to examine the connection between employee retention, work engagement, and human resource management (HRM) practices. Because of its adaptability and widespread acceptance in the research literature, the JD-R model has since developed into a theory (Bakker & Demerouti, 2014). According to Bakker and Demerouti (2014), the JD-R theory postulates that job demands and job resources are the two fundamental elements of job stress, and that each occupation is linked to a distinct pattern of job stress. "The job demands-resources model has emerged as one of the more prominent models in explaining the antecedents and outcomes of employee engagement," claims Turner (2020, p. 48). According to social exchange theory, one's behavior depends on how other people respond (Blau, 2017).

Studies investigating the relationships among the variables HRM practices and work engagement had previously utilised the JD-R theory. These studies include but not limited to Memon et al. (2016), Agarwal & Gupta (2018), Memon et al. (2021), Toth et al., (2021), etc. The studies by Memon et al. (2016 and 2021) basically applied the JD-R theory to examine the relationship between HRM practices and employee retention in the context of oil and gas professionals in Malaysia. Agarwal & Gupta (2018) on the other hand applied the JD-R theory to investigate the relationships between motivating job characteristics, work engagement, conscientiousness, and managers' turnover intentions. Toth et al. (2021) applied JD-R theory to investigate the relationship between job demands and work engagement in highly complex knowledge work. There is also a dearth of research on work engagement in the context of Malaysia especially studies investigating the three reflective constructs of vigour, adoption and dedication as measures of employee engagement. The concept of work engagement, defined as "a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption" (Schaufeli et al., 2002, p. 74), has gained prominence in the management literature due to its demonstrated ability to support a number of organisational and employee outcomes, including job satisfaction, organisational citizenship behavior, organisational engagement, and a high employee retention rate (Aboramadan et al., 2020; Albrecht & Marty, 2020; Rai & Maheshwari, 2020).

Measurement of study variables

HRM practices

Despite some consensus in the measurement of HRM practices, there are no universally agreed measurements in literature thereby giving rooms for researchers to add variables as they deem fit but with the support of empirical evidence. This study adopted five constructs to measure HRM practices namely training & development, performance appraisal, compensation & benefits, career development and recruitment & selection. These variables have been well investigated in literature. Figure 3 below shows the dimensions used by Aktar & Pangil (2018) in their study to measure HRM practices.

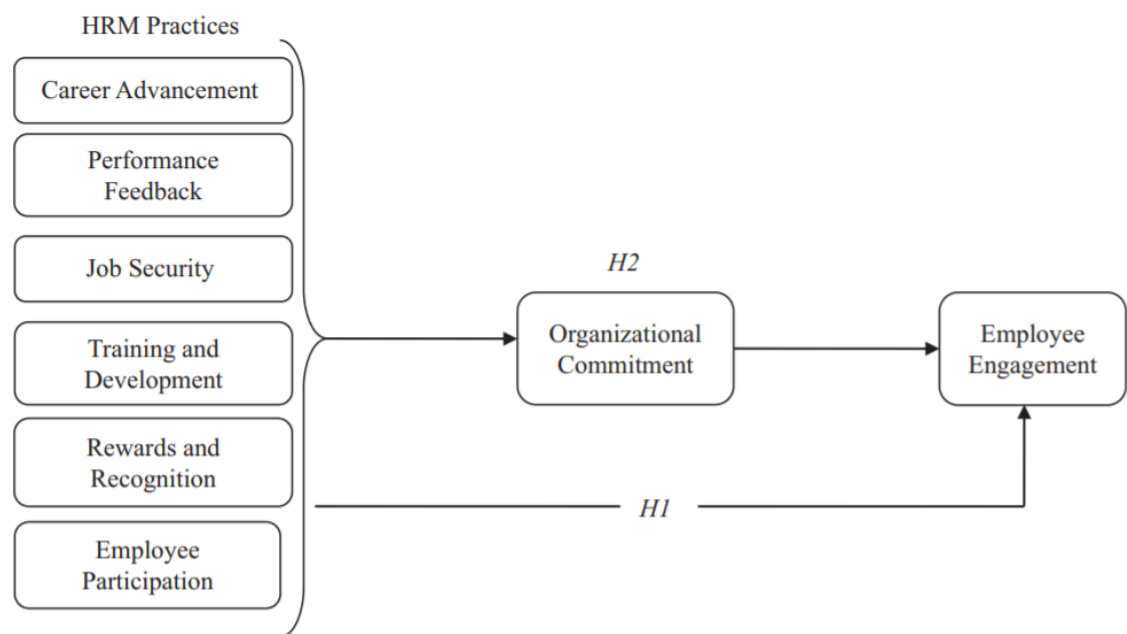


Figure 3: Research framework Aktar & Pangil (2018).

The dimensions of HRM practices and the number of items used to measure them are presented on Table 2 below.

Table 2: HRM Practices

S/N	Dimensions of HRM practices	Number of items
1	Training & Development (TD)	6
2	Performance Appraisal (PA)	6
3	Compensation & Benefits (CB)	7
4	Career Development (CD)	7
5	Recruitment & Selection (RS)	5
	<b>Total</b>	<b>31</b>

Work engagement

Researchers have mostly examined work engagement as a mediator or dependent variable in multi-dimensional constructs. The three characteristics of job engagement—vigour, absorption, and dedication—tend to load together and have a strong correlation with one another, according to Schaufeli et al. (2002) and Wang et al. (2020). A seven-point rating system was used for the items (1 being not at all and 7 being excessively). Montgomery (2020) asserts that, as illustrated in Figure 4 below, work engagement has also been described in the literature as either physical, cognitive, or emotional.

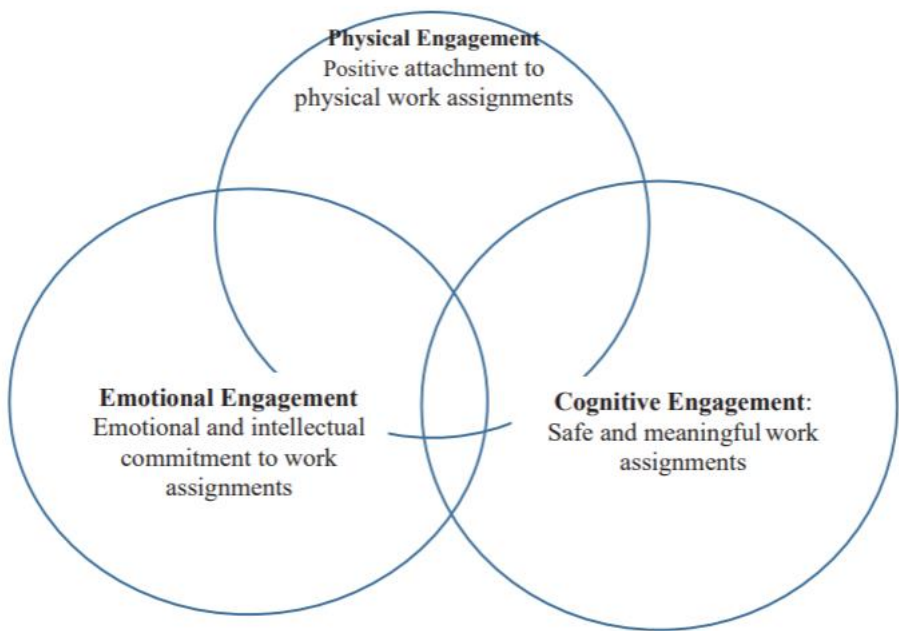


Figure 4: Facets of employee engagement: Source: Shuck, Adelson, & Reio, 2017, p. 954.

Wang et al. (2020) claim that there are three components to work engagement: devotion, vigour absorption, and engagement. Since the three underlying characteristics of vigour, devotion, and absorption were shown to be highly linked and hence lacking discriminant validity, the Utrecht job Engagement Scale (UWES)-9 has been used consistently to measure job engagement as a unidimensional scale, as advised. Each dimension is covered by three things in the UWES's nine-item form, whereas the 17-item version covers vigour with six items, dedication with five, and absorption with six. While the majority of the studies (Van Wingerden & Poell, 2019; Bannay et al., 2020; Memon et al., 2021; Permata & Mangundjaya, 2021; Yucel et al., 2023) used the nine-item Dutch version of Schaufeli et al. (2006)'s Utrecht Work Engagement Scale (UWES) to measure work engagement, other studies used the 17-item version created by Schaufeli et al. (2002). Each of the three elements of work engagement is covered by one item in the most recent three-item version of the UWES (Schaufeli & De Witte, 2017). Table 3 below lists the characteristics of work engagement along with the number of items used to measure them.

S/N	Dimensions of work engagement	Number of items
1	Vigor	3
2	Dedication	3
3	Absorption	3
	<b>Total</b>	<b>9</b>

Table 3: Work Engagement  
Conceptual framework

Based on the dimensions of HRM practices and work engagement discussed above, the conceptual framework is presented in Figure 5 below.

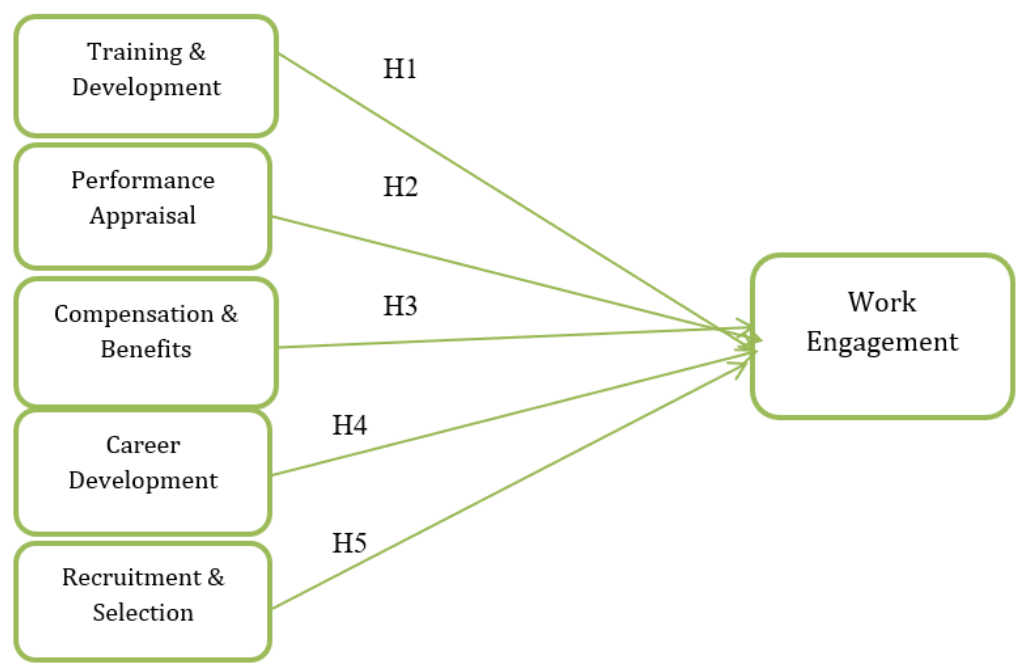


Figure 5: Conceptual framework

1.4 State Hypotheses and Their Correspondence to Research Design

This study aims to examine the effect of five dimensions of HRM practices on work engagement of employees in Malaysia SMEs.

Research objective

RO1: To examine the effect of five dimensions of HRM practices on work engagement of employees in Malaysia SMEs.

Research question

RQ1: What is the effect of five dimensions of HRM practices on work engagement of employees in Malaysia SMEs?

Hypotheses Development

Training and development versus work engagement

Studying HRM performance in relation to training and development, researchers like Memon et al. (2021) and Gim et al. (2022) in Malaysia discovered that training satisfaction is one of the main factors influencing employee engagement at work. In other nations, like Bahrain (Alzyoud, 2018), Iran (Sepahvand & Bagherzadeh Khodashahri, 2021), Bangladesh (Aktar & Pangil, 2018), Egypt (Saad et al., 2021), and others, researchers also discovered that HRM practices, namely training and development, had a good and significant impact on employee engagement. To put it another way, employees who received a lot of training and had opportunities for professional advancement exhibited positive behaviour or a happy attitude at work, which in turn produced favourable work-related results.

Workers who are happy with the comprehensive training their companies offer are more likely to be engaged at work, enthusiastic, and fully committed to their jobs. Thus, the following hypothesis, H1, is postulated:

H1: Training and development dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia.

Performance appraisal versus work engagement

Studies conducted in Malaysia by Memon et al. (2021) and Gim et al. (2022) looked at the HRM practice of performance appraisal and came to the conclusion that it is one of the main factors influencing employee engagement at work. In other nations, like Bahrain (Alzyoud, 2018), Iran

(Sepahvand & Bagherzadeh Khodashahri, 2021), Bangladesh (Aktar & Pangil, 2018), Egypt (Saad et al., 2021), and others, researchers similarly discovered that HRM practices, including performance appraisal, significantly improved employee engagement. In other words, employees will behave or think positively at work, which will result in positive work-related outcomes, if they believe that the performance appraisal system is effective and has features like clear appraisal objectives, well-defined appraisal criteria, constructive post-appraisal interviews, continuous feedback, etc. Workers who are happy with the performance review processes their companies offer are more likely to be engaged at work, be enthusiastic, committed, and fully committed to their jobs. Thus, the following hypothesis, H2, is postulated.

H2: Performance appraisal dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia.

#### Compensation and benefits versus work engagement

Compensation and benefits are usually measured in terms of satisfaction received or assumed by employees. Researchers such as Memon et al. (2021) and Gim et al. (2022) in Malaysia referred to rewards satisfaction as pay satisfaction and pay and rewards systems, respectively and examined the HRM practice— rewards satisfaction and concluded that it is of the key drivers of work engagement in organisation settings. In other countries such as Bangladesh (Aktar & Pangil, 2018), Egypt (Saad et al., 2021), Bahrain (Alzyoud, 2018), Iran (Sepahvand & Bagherzadeh Khodashahri, 2021), etc., researchers also found that HRM practice – rewards satisfaction had a positive significant impact on work engagement. In other words, when employees perceive the rewards and compensation, they are receiving from their current organisation to be adequate and competitive as well as having flexibility to vary as performance changes, then they exhibit positive behaviour or a positive state of mind at work leading to positive work-related outcomes. Employees who are satisfied with the rewards and compensation provided by their organisations tend to have high levels of work engagement and are energetic, dedicated and immersed to their work. Therefore, hypothesis H3 below is postulated:

H3: Compensation and benefits dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia.

#### Career development versus work engagement

Career development is the series of activities or the on-going/lifelong process of developing one's career which includes defining new goals regularly and acquiring skills to achieve them (Vondracek, Lerner & Schulenberg, 2019). Career development usually refers to managing one's career in an intra-organisational or inter-organisational scenario (Vondracek et al., 2019). It involves training on new skills, moving to higher job responsibilities, making a career change within the same organisation (Ali, Mahmood & Mehreen, 2019). Career development opportunities can include new positions, supplementary projects, mentorships, job swaps, and shadowing (Kraichy & Walsh, 2021). In their study, Contreras et al. (2021), investigated the mediating impact that opportunities for professional development in a healthcare context play in the effects of support from co-workers and supervisors on work engagement. Findings indicate that co-worker and supervisor support have an impact on healthcare staff members' work engagement. The study also offers proof of how to promote work engagement among nursing staff members by creating a suitable atmosphere that offers opportunities for career progression and assistance. Additionally, Singh (2022) investigated the mediating function of information sharing in the context of self-initiated expatriates (SIEs) and looked at the relationships between work engagement, affective commitment, and career happiness. Through information sharing, the results showed that work engagement has a substantial direct and indirect impact on affective commitment and career satisfaction. In view of the above, therefore, hypothesis H4 below is postulated:

H4: Career development dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia.



## Recruitment and selection versus work engagement

Recruitment is a way to create a team of qualified professionals to apply for work in the institution. The selection is the second step in the organisation and consolidation of the labour force. This is a way to choose a suitable candidate who is traced to the required procedure of the organisation (Abbasi, Tahir, Abbas & Shabbir, 2022). There are few studies that have investigated the relationship between the dimension of HRM practice recruitment and selection and employee retention in the context of SMEs in Malaysia. Based on the precepts of social exchange theory (SET) and the motivational process of the Job Demands-Resources (JD-R) model, Karatepe & Olugbade (2016) in their study proved that the simultaneous implementation of recruitment & selection, job security, teamwork and career opportunities foster work engagement. The study was conducted in the context of employee-supervisor dyads in the international chain hotels in Nigeria. Safavi & Karatepe (2018) also found out that employee's favourable perceptions of recruitment & selection and career opportunities help them to overcome obstacles and work up to their ability. In other words, when employees perceive the recruitment & selection processes to be effective, then they exhibit positive behaviour or a positive state of mind at work leading to positive work-related outcomes. Employees who are satisfied with the opportunities provided by the HR recruitment & selection processes provided by their organisations tend to have high levels of work engagement and are energetic, dedicated and immersed to their work. Therefore, hypothesis H5 below is postulated

:

H5: Recruitment & selection dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia.

## 2. Method

This study used a quantitative approach. Numerical data will be gathered using a Likert 7-point scale, with 1 denoting "strongly disagree" and 7 denoting "strongly agree." 5 = Somewhat agree, 6 = Agree, 7 = Strongly agree, 4 = Neither agree nor disagree, and 3 = Somewhat disagree. Statistical measures are used to modify the data in a scientific manner. The nature of the research questions, aims, and hypotheses proposed for this study make the quantitative approach appropriate. Standardised questionnaires or experiments are used by researchers to gather numerical data for quantitative investigations. Because quantitative research is carried out in a more controlled setting, the researcher frequently has more control over the study variables, setting, and research topics. Relationships between variables and results can be determined through quantitative research. In quantitative research, a hypothesis is developed, which is a description of the predicted outcome, relationship, or result from the research question.

### 2.1 Population size and sampling technique

The research population for this study comprises of 7.31 million people employed by SMEs in Malaysia by 2021. Small and Medium Enterprises are the backbone of Malaysian economy, representing 97.4% of overall business establishments in the year 2021. In Malaysia, sales turnover and number of full-time employees are the two criteria used in determining the definition of SME with the "OR" basis as follows:

1. For the manufacturing sector, SMEs are defined as firms with sales turnover not exceeding RM50 million OR number of full-time employees not exceeding 200.
2. For the services and other sectors, SMEs are defined as firms with sales turnover not exceeding RM20 million OR number of full-time employees not exceeding 75 (SME Corp, 2021).

Under the new definition, all SMEs must be entities registered with SSM or other equivalent bodies. It however, excludes:

1. Entities that are public listed on the main board; and
2. Subsidiaries of:
  - a) Publicly listed companies on the main board.
  - b) Multinational corporations (MNCs);
  - c) Government-linked companies (GLCs);
  - d) Syarikat Menteri Kewangan Diperbadankan (MKDs); and
  - e) State-owned enterprises (SME Corp, 2021).

Figure 6 below shows the detailed categorisation of Malaysian SMEs.

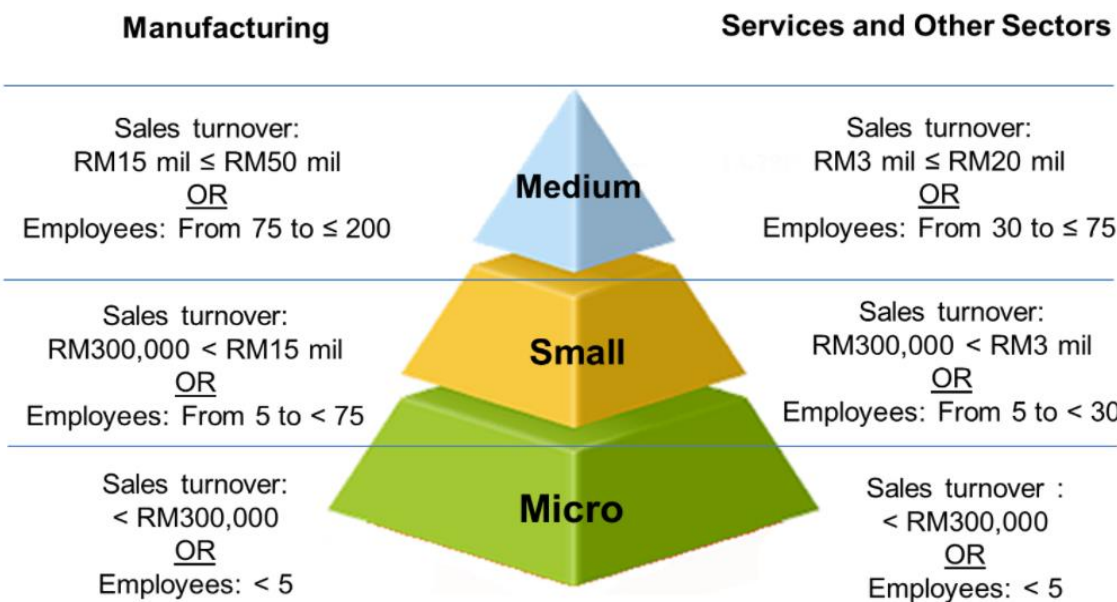


Figure 6: Detailed categorisation of Malaysian SMEs: source: (SME Corp, 2021)

SMEs’ employment in Agriculture sector continued to register an increase of 1.5 per cent to record 791 thousand persons (2020: 779 thousand persons). SMEs’ employment in the agriculture sector contributed 42.2 per cent from overall employment in this sector in 2021 (2020: 41.8%). Meanwhile, the contribution of SMEs’ employment in Mining & quarrying sector was 27.9 per cent, with 21 thousand workers in 2021. SMEs’ employment in this sector rebounded marginally by 0.3 per cent from negative 1.3 per cent in 2020 (Department of Statistics Malaysia, 2022). There were 1.21 million workers in the MSMEs’ Manufacturing sector, which comprised 46.2 per cent of Manufacturing’s total employment (2020: 46.5%). Although the share of SMEs’ employment in this sector declined in 2021, the number of employments increased by 2.0 per cent (2020: -0.4%). It was contributed by two sub-sectors, namely Food, beverages and tobacco (2020: 1.0%; 2021: 4.2%) and Petroleum, chemical, rubber and plastic products (2020: 1.5%; 2021: 3.5%) (Department of Statistics Malaysia, 2022). SMEs’ employment in the Construction sector contributed 48.2 per cent (2020: 48.1%) of overall employment in this sector with 668 thousand persons in 2021. The Construction sector was the only sector that remained on the declining trend, albeit improved negative by 0.7 per cent (2020: -4.9%). The number of SMEs’ employment for the Services sector accounted for 4.62 million persons, contributing 49.5 per cent of overall employment in this sector. In terms of annual change, SMEs’ employment in Services sector grew marginally by 0.7 per cent as compared to negative 0.6 per cent in 2020. The increase was largely contributed by two sub-sectors namely Wholesale & retail trade, food & beverage and accommodation (1.2%) and Other Services (2.0%) (Department of Statistics Malaysia, 2022).

Stratified random sampling was used to extract sample from the overall population because the method highlights the differences between groups in a population, as opposed to simple random sampling, which treats all members of a population as equal, with an equal likelihood of being sampled (Rahman, Zahid, Khan, Al-Faryan & Hussainey 2024). This study employs proportionate stratified random sampling. Strata were formed based on sub-sectors (shared attributes) in the main two sectors namely Manufacturing and Services & Other Sectors.

The four sub-sectors of the Manufacturing Sector and Services & Other Sectors provide the basis for the sample size. Data on the division of the Services & Other Sectors into smaller sectors was not available. As a result, the entire sector is grouped together. Agriculture (791,000), Mining & Quarrying (21,000), Manufacturing (1,211,000), and Construction (668,000) are the sub-sectors of the manufacturing sector with the highest employment numbers. There are 4,620,000 workers in the Services & Other Sectors overall. The formula (Sample size/Population size) \* Stratum size was used to determine the proportionate stratified random sample (Bryman, 2016; Mukaram, Rathore, Khan, Danish & Zubair, 2021). 385 employees make up the study's sample size. The proportionate stratified random sample is shown in Table 4 below.

Table 4: Population and Sample

S/N	Sectors/Strata	Population	Percentage	Sample
1	Agriculture	791,000	10.82%	42
2	Mining & Quarrying	21,000	0.29%	1
3	Manufacturing	1,211,000	16.56%	64
4	Construction	668,000	9.14%	35
5	Services & Other Sectors	4,620,000	63.19%	243
Total		7,311,000	100%	385

Formula = Sample size/Population size) \* Stratum size

385

2.2 Data Collection

This study used a survey questionnaire as its primary data source. A self-administered questionnaire that was given to the target demographic in person was used to gather data. After visiting the SMEs in person, the researcher got the owners' permission to use the survey questionnaire. The staff were reminded that taking part in the survey is entirely voluntary. Employees were given printed surveys, and photos were taken for documentation. The last round of data collecting started on November 20, 2023, and concluded on March 14, 2024.

Employees in one of the three federal capital territories and thirteen states (13) that comprised Malaysia provided the data. The total number of questionnaires issued by state and sector is displayed in Table 5 below.

Table 5: Number of employees per state and sector

STATE	SERVICE	CONSTRUCION	MANUFACTURING	AGRICULTURE	MINING	TOTAL
SELANGOR	75	7	6	8	0	96
W/P KL	55	49	7	0	0	111
JOHOR	42	35	10	0	0	87
PULAU PINANG	28	24	8	0	0	60
SARAWAK	27	24	6	0	0	57
PERAK	26	21	9	0	0	56
SABAH	27	23	7	0	0	57
KEDAH	18	15	8	0	0	41
KELANTAN	17	15	7	0	0	39
PAHANG	16	13	9	0	0	38
NEGERI SEMBILA	13	11	8	0	0	32
TERENGGANU	12	10	9	0	0	31
MELAKA	12	10	10	0	0	32
PERLIS	10	8	0	0	0	18
W/P LABUAN	0	0	0	0	0	0
W/P PUTRAJAYA	0	0	0	0	0	0
TOTAL	378	265	104	8	0	755

2.3 Data analysis plan

Confirmatory factor analysis (CFA) and structural equation modelling (SEM) were used in this investigation. The latter is a theory-driven data analysis method for assessing predetermined hypotheses regarding causal relationships between latent and/or measurable variables. Although there are many ways to articulate such hypotheses, the most popular ones are latent variable path analysis models, confirmatory factor analysis models, and measurable variable path analysis models. SEM is considered an analytical process that includes model conception, parameter identification and estimate, data-model fit assessment, and possible model re-specification, rather than just a statistical tool for analysing these and other more complicated types of models. Nowadays, PLS-SEM is a widely used analytical tool in numerous worldwide journals and scientific study (Purwanto & Sudargini, 2021). An example of of component-based SEM analysis with formative construct features is partial least squares, or simply partial least squares. In the discipline of econometrics, PLS was initially employed to process data as a substitute for SEM approaches, which had a weak theoretical foundation. PLS is not a model test; rather, it is a

prediction analysis technique (Purwanto & Sudargini, 2021). IBM SPSS and SmartPLS 4.0 software were used for statistical analysis.

3. Results

Employees of SMEs operating in Malaysia's thirteen states and three federal territories make up the study's population. A total of 755 questionnaires were distributed. Kula Lumpur distributed the greatest number of surveys (111), closely followed by Selangor (96). With just 18 participants, PERLIS was the state with the lowest representation. Additionally, the 755 participants came from the manufacturing, construction, service, and agricultural industries. With 378 participants, the service sector was the most represented, closely followed by construction (265). With just eight participants, agriculture was the least represented sector. There were 481 respondents, or 62% of the total, who correctly answered the questions. It was discovered throughout the data filtering procedure that 35 of the collected surveys were unusable because of handwriting that was invalid and other problems. There were 446 questionnaires used in all for the data analysis. Table 6 below displays the diagrammatic form of the analysis.

Table 6: Analysis of study population

Description	Total Number	Percentage
Questionnaire distributed	775	100%
Questionnaire received	481	62%
Ineligible questionnaire	35	5%
Eligible questionnaire	446	58%

3.1 Demographic analysis

The breakdown of the eleven (11) demographic analysis is presented on Table 7 below.

Table 7: Demographic analysis

S/N	Demographics	Items	Frequency	Percentage	Cumulative Percentage
1	Voluntary participation	I agree to participate voluntary	446	100%	100%
		I do not agree	0	0%	100%
		Total	446	100%	
2	Age group	Below 21 years age	45	10%	10%
		21 – 30 Years Old	153	34%	44%
		31 – 40 Years Old	148	33%	78%
		Above 40 Years Old	100	22%	100%
		Total	446	100%	
3	Gender	Male	205	46%	46%
		Female	241	54%	100%
		Total	446	100%	
4	Marital status	Single	186	42%	42%
		Married	240	54%	96%
		Widowed	7	2%	97%
		Divorced	13	3%	100%
		Total	446	100%	
5	Education qualification	Diploma	197	44%	44%
		Bachelor	146	33%	77%
		Masters	65	15%	91%
		PhD	24	5%	97%
		Professional qualifications	14	3%	100%
		Total	446	100%	
6	Income range/month	Less than RM2,000	87	20%	20%
		RM2,001 -3,000	131	29%	49%
		RM3,001 to 5,000	145	33%	81%
		RM 5,000 above	83	19%	100%
		Total	446	100%	
7	Designation	Clerical officer	153	34%	34%
		Supervisor	143	32%	66%
		Manager	92	21%	87%
		Senior Manager	42	9%	96%
		Director	16	4%	100%
		Total	446	100%	
8	Length of service	Less than 2 years	112	25%	25%
		2 – 5 years	138	31%	56%
		6-10 years	109	24%	80%
		Above 10 years	87	20%	100%
		Total	446	100%	
9	Employment type	Contract	69	15%	15%
		Part-time	85	19%	35%
		Full-time	292	65%	100%
		Total	446	100%	
10	Company status	Micro	117	26%	26%
		Small	143	32%	58%
		Medium	186	42%	100%
		Total	446	100%	
11	Ownership structure	Local	290	65%	65%
		Foreigner	87	20%	85%
		Mixed	69	15%	100%
		Total	446	100%	

3.2 Validity and reliability

The Cronbach alpha ( $\alpha$ ) coefficients of all 40 items on the survey questionnaire as well as that of each variable in the study are shown on Table 8 below. In total, there are seven variables



comprising five independent variables, one mediating variable and one dependent variable. While the Cronbach alpha ( $\alpha$ ) coefficients of all 40 items is 0.972 depicting excellent reliability, that of other individual seven variables range between 0.864 (very good) and 0.907 (excellent).

Therefore, all measurement items are considered reliable.

Table 8: Cronbach’s Alpha Coefficients

S/N	Constructs	Number of items	Cronbach’s Alpha Coefficient
1	All items	40	0.972
2	Training & Development (TD)	6	0.907
3	Performance Appraisal (PA)	6	0.899
4	Compensation & Benefits (CB)	7	0.864
5	Career Development (CD)	7	0.901
6	Recruitment & Selection (RS)	5	0.896
7	Work Engagement (WE)	9	0.887

3.3 Correlation analysis

The Pearson’s correlation coefficients among the variables are shown on Table 9 below. Associations among all variables are significant ranging from moderate to strong correlations. Independent variable - Training and Development (TD) had 58.6% (moderately strong correlation) and 59.1% (moderately strong correlation) association with Performance Appraisal and Compensation & Benefits, respectively. Similarly, it had moderately strong correlation with Career Development (60.2%), Recruitment & Selection (52.3%) and Work Engagement (50.9%), respectively. Performance Appraisal had moderately strong correlation with all other variables except with Work Engagement recording weak correlation (49.8%). Compensation & Benefits had moderately strong correlation with Career Development (68.6%), Recruitment & Selection (61.9%), and Work Engagement (61.0%) respectively. Similarly, Career Development had moderately strong correlation with Recruitment & Selection (64.1%) and Work Engagement (63.1%), respectively. Recruitment & Selection also had moderately strong correlation with Work Engagement (58.1%).

Table 9: Correlation

	Correlation matrix of the variables					
	TD	PA	CB	CD	RS	WE
TD	1					
PA	0.586**	1				
CB	0.591**	0.558**	1			
CD	0.602**	0.602**	0.686**	1		
RS	0.523**	0.578**	0.619**	0.641**	1	
WE	0.509**	0.498**	0.610**	0.631**	0.581**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

Note: TD = Training & Development; PA = Performance Appraisal; CB = Compensation & Benefits; CD = Career Development; RS = Recruitment & Selection; WE = Work Engagement.

3.4 CFA

Depending on whether a specific threshold is met for a given analysis, results are highlighted in SmartPLS. All items have standardized factor loadings greater than 0.5, as indicated in Table 10 below, with the exception of one of the seven constructs used to measure Compensation & Benefits (CB). This was left in place in accordance with Stevens' (2002) suggestion that a factor loading's value should be greater than 0.4 for interpretive purposes. According to Hair et al. (2022), two of the nine measures used to gauge work engagement had scores higher than 0.5 but lower than 0.7. Nevertheless, this is still acceptable. In a similar vein, the AVE and CR of every item fall between 0.531 and 0.707. As a result, all AVE and CR above the minimal values of

0.50 and 0.70, respectively, and so satisfied the necessary rule of thumb. All of the variables' Cronbach's Alpha (CA) coefficients were higher than the 0.7 cut-off, indicating the validity and reliability of the data used in this investigation.

Table 10: Construct reliability and validity

Constructs	Items	Loadings	AVE	CR	CA
Training & Development (TD)	TD1	0.829	0.686	0.929	0.908
	TD2	0.867			
	TD3	0.860			
	TD4	0.796			
	TD5	0.822			
	TD6	0.793			
Performance Appraisal (PA)	PA1	0.792	0.666	0.923	0.899
	PA2	0.827			
	PA3	0.844			
	PA4	0.833			
	PA5	0.795			
	PA6	0.803			
Compensation & Benefits (CB)	CB1	0.792	0.558	0.896	0.861
	CB2	0.799			
	CB3	0.779			
	CB4	0.772			
	CB5	0.816			
	CB6	0.742			
	CB7	0.469			
Career Development (CD)	CD1	0.766	0.628	0.922	0.901
	CD2	0.761			
	CD3	0.816			
	CD4	0.831			
	CD5	0.810			
	CD6	0.786			
	CD7	0.776			
Recruitment & Selection (RS)	RS1	0.813	0.707	0.923	0.896
	RS2	0.872			
	RS3	0.842			
	RS4	0.866			
	RS5	0.808			
Work Engagement (WE)	WE1	0.765	0.531	0.910	0.889
	WE2	0.802			
	WE3	0.797			
	WE4	0.741			
	WE5	0.613			
	WE6	0.650			
	WE7	0.704			
	WE8	0.755			
	WE9	0.709			

Figure 7 below shows the CFA model of the direct relationships among the dimensions of HRM practices and work engagement.

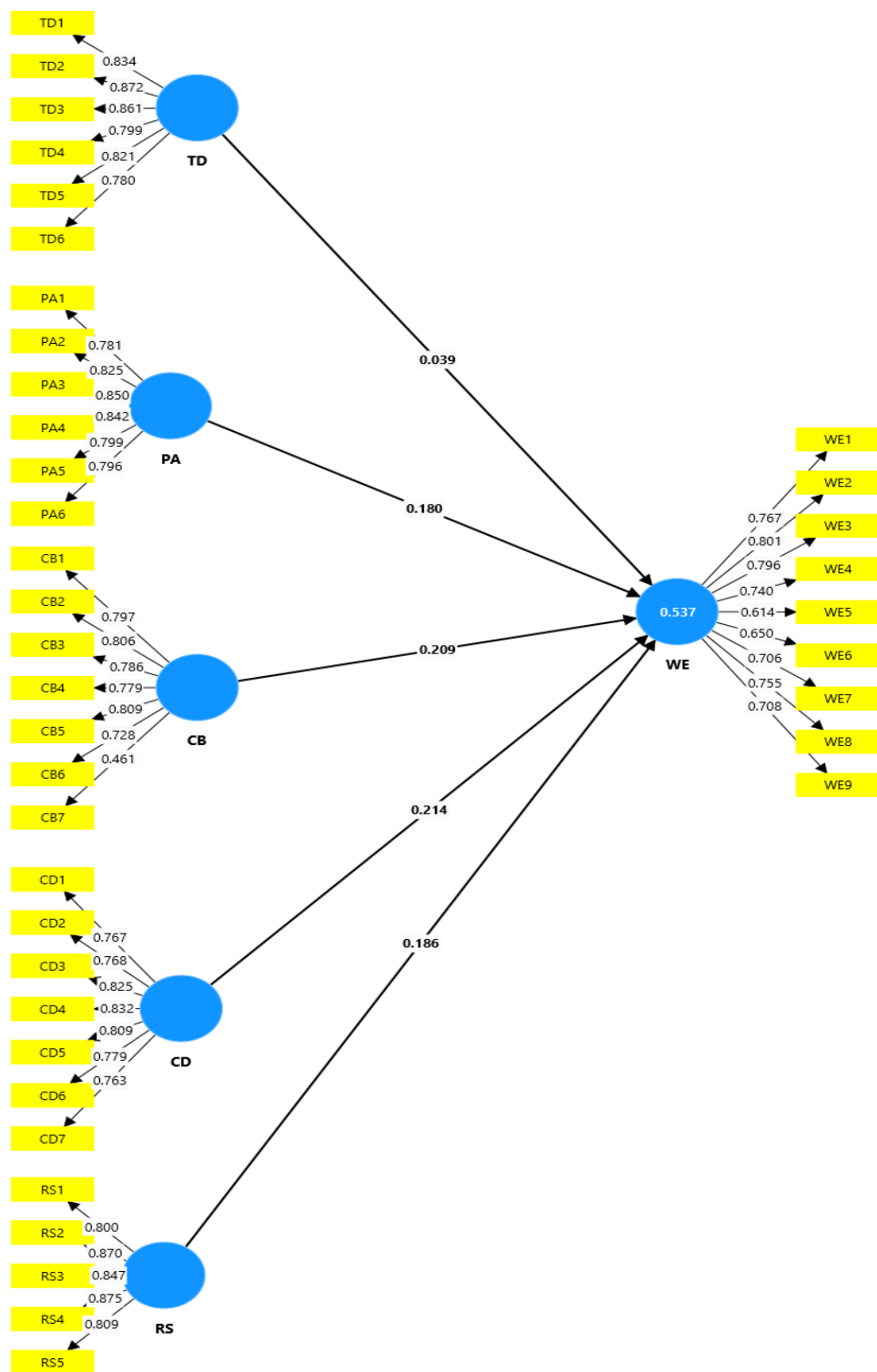


Figure 7: CFA

3.5 SEM

The path coefficient and t-value for the link between constructs are found using bootstrapping. The start dialog for the bootstrapping process lets you choose the significance level (e.g., 0.05). All bootstrap p values that are less than or equal to this value are shown in green in the bootstrapping result report, whereas p values that are greater than this value are shown in red. Hair et al. (2022) advise use a bootstrapping technique with 5000 resamples to obtain the route coefficients and associated t-values in order to determine the significance of the relationships. The resulting t-value is then compared to the critical t-value at a predefined significance level. Because a two-tailed test makes use of both the distribution's positive and negative tails, this study used the two-tailed test. Stated differently, it assesses the likelihood of either positive or negative differences. The computed difference expressed in standard error units is known as the t-value. The evidence against the null hypothesis increases with the t-value's magnitude. If the t-value is more than 1.96 in absolute value with a threshold of significance of 0.05, the researcher can reject the null hypothesis ( $H_0: \beta=0$ ) (Hair et al., 2014). 95% power was used in the study (0.05). The null hypothesis that the coefficient is equal to zero (no effect) is tested by the p-value for each word. If the p-value is less than 0.05, the null hypothesis can be rejected. The p-value is

5% if the 95% of the t distribution is nearer the mean than the t-value on the coefficient under investigation. Another name for this is a 5% significance level. 95% of the t distribution was used in this investigation (Hair et al., 2014). The generally recognised threshold for rejecting the null hypothesis is a p-value of 5% or less. Assuming the model is correctly specified, the researcher can conclude that the variable is having some effect with a 95% probability of being correct because a p-value of 5% (or.05) indicates that there is only a 5% chance that the results the researcher generates would have appeared in a random distribution (Hair et al., 2014). Table 11 below presents the study's findings, which indicate that the independent variables (HRM practice dimensions) contributed 53.7% to the variation in the dependent variable, Work Engagement. The R2 values for the direct relationships between the five HRM practice dimensions and WE are 0.537. In other words, the remaining 46.3% (WE) are explained by other factors that are not tested in this study.

Table 11: Summary of coefficient of determination values

Predictor Construct	Target Construct		R <sup>2</sup>	Predictive Accuracy
TD -> WE PA -> WE CB -> WE CD -> WE RS -> WE	Work Engagement (WE)		0.537	Moderate

3.6 Hypotheses testing

The summary of path coefficient and t-values is presented on Table 12 below.

Table 12: Summary of path coefficient and t-values

S/n	Hypotheses	Relationship	Path Coefficient (β)	t-value	p-value	Decision
H1	There is a positive significant relationship between training & development dimension of HRM practices and work engagement.	TD -> WE	0.039	0.611	0.541	Not supported
H2	There is a positive significant relationship between performance appraisal dimension of HRM practices and work engagement.	PA -> WE	0.180	2.487	0.013	Supported
H3	There is a positive significant relationship	CB -> WE	0.209	2.985	0.003	Supported

	between compensation & benefits dimension of HRM practices and work engagement.					
H4	There is a positive significant relationship between career development dimension of HRM practices and work engagement.	CD -> WE	0.214	2.719	0.007	Supported
H5	There is a positive significant relationship between recruitment & selection dimension of HRM practices and work engagement.	RS -> WE	0.186	3.140	0.002	Supported

The dimension of HRM practices versus Work Engagement

H1: Training and development dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia.

This hypothesis assumes that, as training & development activities increases in SMEs, the employee’s work engagement also increases. In other words, training & development activities influences work engagement in a positive direction. From Table 4.7 above and looking at the three statistical measures earlier mentioned especially the t-value and p-value, it can be deduced that the hypothesis is not statistically supported by the PLS model. The decision is arrived at having checked that the t-value and p-value failed to meet the required rules of thumb. The t-value of 0.611 is significantly lower than 1.96 (95% distribution) and the p-value of 0.541 is significantly higher than 0.05 despite a positive insignificant relationship between the variables. This can be interpreted that the null hypothesis is statistically accepted – no significant relationship between the two variables. Simply put, training & development dimension of HRM practices did not significantly influence work engagement (WE) among SME employees in Malaysia. The Beta value of 0.039 signified a positive relationship of just a small 3.9% strength between the variables. Hence, the hypothesis 1 which states that there is a positive significant relationship between training & development dimension of HRM practices and work engagement is statistically rejected.

The findings of this study did not correspond with that of other researchers who found positive significant relationship between the variables. For example, Aktar & Pangil, (2018), Alzyoud, (2018), Memon et al. (2021), Gim et al. (2022), Saad et al., (2021), Sepahvand & Bagherzadeh Khodashahri, 2021), all found that HRM practice – training and development had a positive significant impact on employee engagement. In other words, extensive training and opportunity for career development led to positive behaviour or a positive state of mind at work among employee that leads to positive work-related outcomes. Employees who are satisfied with the extensive training provided by their organisations tend to have high levels of work engagement and are energetic, dedicated and immersed to their work.



H2: Performance appraisal dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia.

This hypothesis assumes that, as effective performance appraisal system increases in SMEs, work engagement among the employees also increases. In other words, effective performance appraisal system influences work engagement on in a positive direction. From Table 4.7 above and looking at the three statistical measures, it can be deduced that the hypothesis is statistically supported by the PLS model. The decision is arrived at having checked that the t-value and p-value which both met the required rules of thumb. The t-value of 2.487 is higher than 1.96 (95% distribution) and the p-value of 0.013 is lower than 0.05. There is also a positive significant relationship between the two variables. This can be interpreted that the null hypothesis is statistically rejected. Simply put, effective performance appraisal system dimension of HRM practices significantly influenced work engagement (WE) among SME employees in Malaysia. The Beta value of 0.180 showed a positive relationship of 18.0% strength between the variables. Hence, the hypothesis 2 which states there is a positive significant relationship between effective performance appraisal system dimension of HRM practices and work engagement is statistically accepted.

The findings of this study correspond with that of other researchers who found positive significant relationship between the variables. For examples, Aktar & Pangil, (2018), Alzyoud, (2018), Memon et al. (2021), Gim et al. (2022), Saad et al. (2021), Sepahvand & Bagherzadeh Khodashahri, (2021) all found that the HRM practice – performance appraisal had a positive significant impact on employee engagement. In other words, when employees perceive the performance appraisal to be effective appraisal system with attributes such as clear appraisal objectives, well defined appraisal criteria, constructive post appraisal interview, continuous feedback, etc., then they exhibit positive behaviour or a positive state of mind at work leading to positive work-related outcomes. Employees who are satisfied with the performance appraisal systems provided by their organisations tend to have high levels of work engagement and are energetic, dedicated and immersed to their work.

H3: Compensation and benefits dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia

This hypothesis assumes that, as compensation & benefits increases, the employee's work engagement also increases. In other words, low compensation & benefits will decrease work engagement while high compensation & benefits will increase the work engagement among the employees. From Table 4.7 above and looking at the three statistical measures, it can be deduced that the hypothesis is statistically supported by the PLS model. The decision is arrived at having checked that the t-value and p-value met the required rules of thumb. The t-value of 2.985 is higher than 1.96 (95% distribution) and the p-value of 0.003 is significantly lower than 0.05. This can be interpreted that the null hypothesis is statistically rejected, and this confirmed that there is a significant positive relationship between the two variables. Simply put, HRM dimension of compensation & benefits did significantly influence work engagement among employees of SMEs in Malaysia. The Beta value of 0.209 signified a positive relationship of 20.9% strength between the variables. Hence, the hypothesis 3 which states that there is a positive significant relationship between compensation & benefits dimension of HRM practices and work engagement is statistically accepted.

The findings of this study correspond with that of other researchers who found positive significant relationship between the variables. For examples, Aktar & Pangil, (2018), Alzyoud, (2018), Memon et al. (2021), Gim et al. (2022), Saad et al., (2021), Sepahvand & Bagherzadeh Khodashahri, (2021) all found that compensation & benefits dimension of HRM practices had a positive significant impact on work engagement. In other words, when employees perceive the rewards and compensation, they are receiving from their current organisation to be adequate and competitive as well as having flexibility to vary as performance changes, then they exhibit positive behaviour or a positive state of mind at work leading to positive work-related outcomes. Employees who are satisfied with the rewards and compensation provided by their organisations tend to have high levels of work engagement and are energetic, dedicated and immersed to their work.

H4: Career development dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia.

This hypothesis assumes that, as career development opportunity increases, the work engagement among employees also increases. In other words, lack of opportunity for career development will negatively impact work engagement ratio of the firm. From Table 4.7 above and looking at the three statistical measures, it can be deduced that the hypothesis is statistically supported by the PLS model. The decision is arrived at having checked that the t-value and p-value met the required rules of thumb. The t-value of 2.719 is significantly higher than 1.96 (95% distribution) and the p-value of 0.007 is significantly lower than 0.05. This can be interpreted that the null hypothesis is statistically rejected, and this confirmed that there is a significant positive relationship between the two variables. Simply put, HRM dimension of career development did significantly influence work engagement among employees of SMEs in Malaysia. The Beta value of 0.214 signified a positive relationship of 21.4% strength between the variables. Hence, the hypothesis 4 which states there is a positive significant relationship between career development dimension of HRM practices and work engagement is statistically accepted.

Similarly, the findings of this study correspond with that of other researchers who found positive significant relationship between the variables. For examples, Contreras et al. (2021), investigated the mediating impact that opportunities for professional development in a healthcare context play in the effects of support from co-workers and supervisors on work engagement. Findings indicate that co-worker and supervisor support have an impact on healthcare staff members' work engagement. The study also offers proof of how to promote work engagement among nursing staff members by creating a suitable atmosphere that offers opportunities for career progression and assistance. Additionally, Singh (2022) investigated the mediating function of information sharing in the context of self-initiated expatriates (SIEs) and looked at the relationships between work engagement, affective commitment, and career happiness. Through information sharing, the results showed that work engagement has a substantial direct and indirect impact on affective commitment and career satisfaction.

H5: Recruitment & selection dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia.

This hypothesis assumes that, as the effectiveness of the recruitment & selection process increases, the employee's work engagement also increases. In other words, effective recruitment & selection process influences work engagement among employees in a positive direction. From Table 4.7 above and looking at the three statistical measures, it can be deduced that the hypothesis is statistically supported by the PLS model. The decision is arrived at having checked that the t-value and p-value met the required rules of thumb. The t-value of 3.140 is significantly higher than 1.96 (95% distribution) and the p-value of 0.002 is significantly lower than 0.05. This can be interpreted that the null hypothesis is statistically rejected, and this confirmed that there is a significant positive relationship between the two variables. Simply put, HRM dimension of recruitment & selection did significantly influence work engagement among employees of SMEs in Malaysia. The Beta value of 0.186 signified a positive relationship of 18.6% strength between the variables. Hence, the hypothesis 5 which states that there is a positive significant relationship between recruitment & selection dimension of HRM practices and work engagement is statistically accepted.

Similarly, the findings of this study correspond with that of other researchers who found positive significant relationship between the variables. For examples, Karatepe & Olugbade (2016), Safavi & Karatepe (2018), Goyal, Nigam & Goyal (2023), all their studies found that Human Resource Management practices such as recruiting and selection, continuous training and development opportunities, competitive rewards, career advancement, and employee involvement significantly influenced work engagement.

#### **4. Discussion**

RO1: To investigate the relationships between HRM practices and work engagement among SMEs in Malaysia. The independent variable in this study is the HRM practices while the

mediating variable is the work engagement. There are five direct hypotheses associated with the research objective 2 based on the relationships between the five dimensions of HRM practices and the mediating variable. These are shown below:

- H1: Training and development dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia.
- H2: Performance appraisal dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia.
- H3: Compensation and benefits dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia
- H4: Career development dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia.
- H5: Recruitment & selection dimension of HRM practices has significant positive effect on work engagement among employees of SMEs in Malaysia.

While Training & Development (TD) and Performance Appraisal (PA) were measured using six constructs each, Compensation & Benefits (CB) and Career Development (CD) were measured using seven constructs each. Recruitment & Selection (RS) on the other hand, was measured using five constructs. The mediating variable – work engagement was measured using nine constructs (3 each for vigour, absorption and dedication). Likert 7- Scale was utilised in this study where: 1 = Strongly disagree, 2 = Disagree 3 = Somewhat disagree, 4 = Neither agree or disagree, 5 = Somewhat agree, 6 = Agree and 7 = Strongly agree. The validity and reliability of the constructs were tested using Cronbach's alpha coefficients and the assessment of the measurement model were measured using the Outer Loadings, Average and composite reliability. The discriminant validity was measured base on the multitrait-multimethod matrix: the heterotrait-monotrait ratio of correlations (HTMT). Bootstrapping is employed to determine the path coefficient and t-value for the relationship between constructs. The bootstrapping procedure's start dialog allows you to pick the significance level (e.g., 0.05). In the bootstrapping result report, p values over this value appear in red, while all bootstrap p values less than or equal to this value appear in green. In order to ascertain the significance of the correlations, it was recommend using a bootstrapping approach with 5000 resamples to obtain the path coefficients and corresponding t-values. After that, at a predetermined significance level, the resultant t-value is contrasted with the crucial t-value. This study utilises two-tailed because a two-tailed test uses both the positive and negative tails of the distribution.

The results of this study showed that the  $R^2$  value for the direct relationships between five dimensions of HRM practices and Work Engagement (WE) is 0.537 indicating that the independent variables (dimensions of HRM practices) contributed 53.7% to the variation in the moderating variable – Work Engagement (WE). In other words, the remaining 46.3% (WE) are explained by other factors that are not tested in this study. Overall, four out of the five hypotheses (PA -> WE, CB -> WE, CD -> WE and RS -> WE) attached to this research objective were statistically accepted. The following hypothesis - TD -> WE was statistically rejected. The results agreed with the findings of many researchers. The findings were based on the relevant rule of thumbs including the T-value, p-value and  $\beta$ -value.

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