INTERNATIONAL JOURNAL OF SUSTAINABLE CONSTRUCTION ENGINEERING AND TECHNOLOGY
VOL. 12 NO. 5 (2021) 94-105



**IJSCET**

http://publisher.uthm.edu.my/ojs/index.php/ijscet

ISSN : 2180-3242 e-ISSN : 2600-7959

International Journal of Sustainable Construction Engineering and Technology

# Model of Human Resources Management (HRM) Practices Factors Affecting Small and Medium Enterprises (SMEs) Performance

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DOI: https://doi.org/10.30880/ijscet.2021.12.05.010
Received 06 June 2021; Accepted 31 December 2021; Available online 31 December 2021

**Abstract:** This paper presents a development of Structural Equation Model (SEM) that shows the relationship of human resource management (HRM) practices and the factors affecting the organizational performance of small and medium enterprises (SMEs) in UAE. The model comprises five independent constructs of HRM practices factors and one dependent construct of SME organizational performance. Constructs of Independent Variables (IV) contain 36 items/factors and the construct of the dependent variable (DV) contains ten items/factors. The data used to develop the model was gathered through a questionnaire survey amongst SMEs human resources personnel from several SMEs in UAE. A total of 226 questionnaire forms were collected and analysed with the response rate of 88.7%, which is considered a good representation of the sample size. The developed model was analysed and assessed with AMOS-SEM software at measurement and structural levels to ensure that both levels achieve the fitness criteria. After the structural model achieved the satisfactory level of goodness of fit. The model was evaluated using path analysis to determine the relationship between IV and DV. It was found that all the IVs are significant to DV. Hence, the model has demonstrated the multivariate relationship between the considered variables/factors related to the topic of this paper. The findings can assist the practitioners in SMEs organizations in planning and implementing.

**Keywords:** Human resources management, Small and Medium Enterprises (SMEs)

## 1. Introduction

Human is a basic asset for success of any business or organization. Hence, Human Resource Management (HRM) has emerged as an important research topic. The goal of the HRM programme is to increase employees' expertise and skills. Despite numerous studies have been conducted on the relationship between HRM and organisational performance, the in-between variables that influence the relationship continues to pose significant challenges. Some studies have attempted to investigate the potential paths by which HRM activity influences organisational efficiency such as Rubel et al. (2018) conducted observational research to investigate the mediating impact of various factors on the HRM success partnership as employee capacity, attitudes, and behaviour.

Literature reveals that there is a scarcity of the studies on the relationship between HRM practise and organisational performance, particularly in public sector administration (Paauwe, 2009; Paauwe and Boselie, 2005; Prowse and Prowse, 2010). HRM planning can influence organisational performance (Parboteeah, Seriki and Hoegl, 2013, Mijan et al., 2020). Human resource management is a strong predictor of organisational performance (Arulrajah, 2015; Chumphong et al., 2020). Though, the empirical studies have explained the role of HRM as a predictor of organisational performance, but

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less attention has been paid to the influence of HRM on organisational performance. Also, only few studies highlighted the relationship between HRM Practices and SME Performance in the UAE (Alosani et al., 2020; Mehrajunnisa et al., 2021; Agarwal et al. 2019). Hence, this study was conducted in the UAE SMEs sector to bridge the gap and advance the emerging pattern/relationship of HRM with organisational success ties. This study clarifies the role of HRM activities in organisational performance in UAE SMEs. The findings of this study identified HRM and its role in implementing a new approach to facilitate organisational progress and, eventually, contribute to changes in inefficiency.

## 2. Hypothetical Model

Human resource management (HRM) and organisational performance are both behavioural sciences. It has received a lot of attention because of the link between HRM activities and the success of large organizations. The creation of uncommon, impossible to replicate, special, and useful properties provides a foundation for organizations' competitive advantages; these four attributes have been claimed frequently due to human capital (Mehmood et al. 2017). According to Rubel et al. (2018), it is more likely that small and medium-sized enterprises (SMEs), which reduce labour prices, absenteeism, and output expenses, will retain and maintain competitive advantages over large enterprises. Rubel et al. (2018) mentioned that a highly engaged and trained workforce would help small businesses remain successful in today's volatile market. Modern organisations are in constant flux and frequently undergo major changes; human resource management and development are critical to unlocking the UAE's potential. There have been numerous studies on the impact of human resource practises on organizational performance. Several factors related to human resource practises have been highlighted in the literature as summarized in Table 1.

**Table 1 - List of human resources practices factors**

| Human Resources Practices Factors | References |
|---|---|
| Training and development | Kadiresanet al. (2015); Drostet al. (2002); Tangthong et al.(2014); Horwitz. (1999); Larsen. (2017); Niazi. (2011). |
| Employee compensation | Gupta and Shaw (2014); Lamba and Choudhary. (2013); Tangthong et al, (2014); |
| Human resources planning | Al-Qudah et al. (2014); Liou and Lin. (2008); Al Shobaki et al. (2017); Garavan et al. (1998) |
| Work environment | Lewicka. (2010); Adriaenssens et al. (2006); Bibi et al.(2018); Knudsen et al. (2011) |
| Ethical climate | Arulrajah. (2015); Sittisom. (2020); Yamin.(2019); Kia et al.(2019) |

A hypothetical model is prepared with the help of above factors as shown in Figure 1.

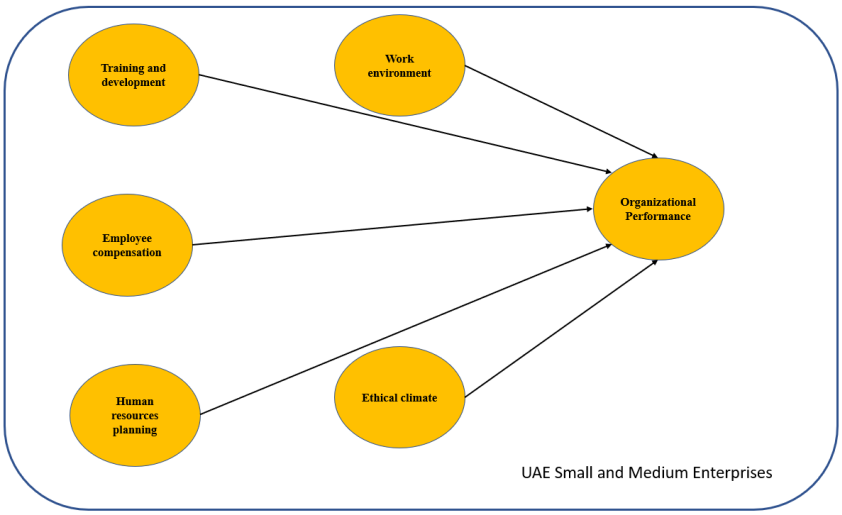


**Fig. 1 - Hypothetical model**

Figure 1 presents the relationship between HRM Practices constructs and SME Organizational Performance. Based on above figure, this study identified five groups/constructs of HRM practices that have a direct and significant impact on the performance of SME organisations. This relationship serves as the foundation for developing the structural equation model for this study.

## 3. Methodology

The purpose of this research was to create a structural equation model (SEM) that depicts the relationship between human resource management (HRM) practises and the organisational performance of small and medium-sized enterprises (SMEs) in the UAE. A total of 300 questionnaire sets were distributed to SMEs in the UAE via posting, email, in-person, and survey Google web services. However, 266 questionnaire sets were deemed valid for further examination. This indicates an 88.7 percent survey response rate, which is a good representation of the sample size. With the help of AMOS-SEM software, the data was used to investigate the relationships between multiple variables (independent variable and dependent variable) according to the study's designed hypothetical model

## 4. Measurement Models

This section describes the creation and evaluation of six individual measurement/construct models: training and development construct, employee compensation construct, human resources planning construct, work environment constructs, ethical climate construct, and organisational performance construct. Analysis of Moment Structures (AMOS)-SEM software is used to build and test the model. Confirmatory Factor Analysis (CFA) is used in the assessment to examine the construct's measures of fitness as well as to establish the validity of the construction Awang (2015). CFA is intended to confirm the effects of the constructs' items on the constructs chosen from the literature review. Table 2 shows the outline goodness-of-fit indices and level of acceptance used to evaluate construct fitness for measurement models and structural equation models.

**Table 2 - Criteria of Goodness-of-fit index**

| Name of indices | Goodness-of-fit indices | Acceptance level |
|---|---|---|
| Normed Fit Index / Tucker Lewis index | NFI/TLI | NFI ≥ 0.95 |
| Root Mean Square Error of Approximation | RMSEA | RMSEA < 0.08 |
| (Adjusted)Goodness of Fit | AGFI/GFI | AGFI > 0.90/GFI > 0.95 |
| Comparative Fit Index | CFI | CFI > 0.90 |
| Chi-Square/degree of freedom | Chisq/df | Chisq/df < 3.0 |

Source: Adapted from Awang (2012) and Dash & Paul (2021)

In this study, re-specified models were tested before being used for further analysis. These indices were also used as a guide during the model re-specification process to detect specification errors

### 4.1 Individual Model Assessment

The initial measurement models, fitness indices, modification indices, and final measurement models were presented sequentially for each latent construct

#### 4.1.1 Training and Development Construct

The Training and development measurement model is a graphical representation of the relationship between response items and their underlying Training and development construct, and the analysis is performed using CFA. The questionnaire contains nine questions about the construct (internal environment). The measurement model was developed with AMOS application. The reliability construct's factor loading, squared multiple correlations ($R^2$), and fitness indexes were investigated as shown in Figure 2.

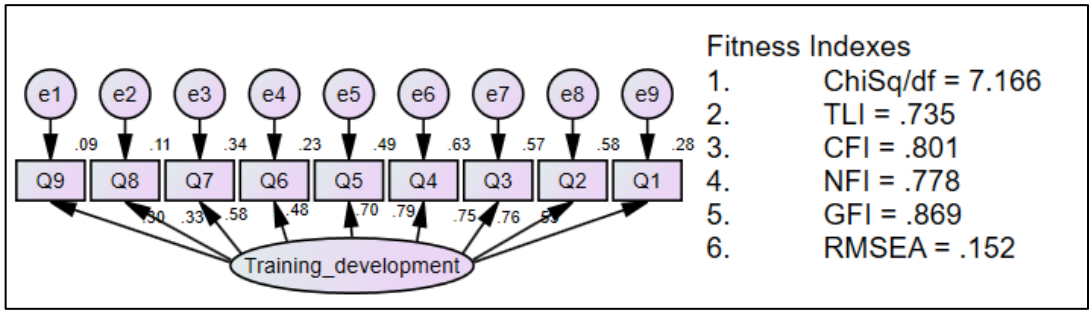

**Fig. 2 - Initial measurement model for Training and development**

Figure 2 shows that some measurement items have low factor loading, causing the model to fail to fit as indicated by the fitness indexes. As a result, items with low factor loading are candidates for deletion. Because of their low factor loading, Q1, Q6, Q8, and Q9 are deleted. As a result, the final training and development measurement items are depicted in Figure 3.

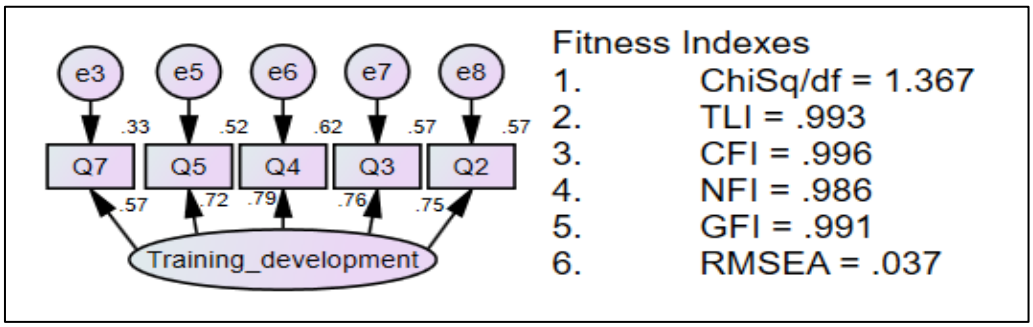


**Fig. 3 - Final measurement model for Training and development**

Figure 3 shows that the factor loading for all items is greater than 0.5 and the Chisq/df is less than 3.0. As a result, the model meets all the fitness requirements.

### 4.1.2 Employee Compensation Construct

The Employee compensation measurement model is graphically represented in the relationship between response items and their underlying Employee compensation construct. Confirmatory Factor Analysis (CFA) was performed, and the results are shown in Figure 4.

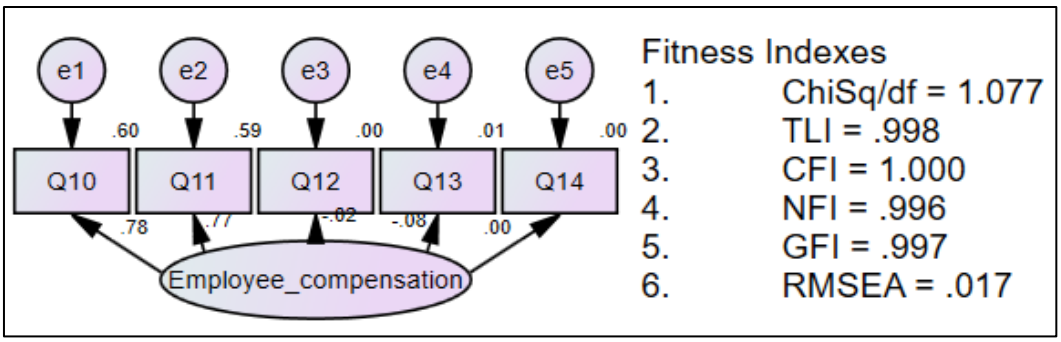


**Fig. 4 - Initial measurement model for employee compensation**

Figure 4 shows that the factor loading for all items is greater than 0.5 and the Chisq/df is less than 3.0. As a result, the model meets all the fitness requirements.

### 4.1.3 Human Resources Construct

The Confirmatory Factor Analysis (CFA) result for the human resource planning measurement model was shown in Figure 5 to determine whether the level of acceptance for each index in the human resources construct was met.

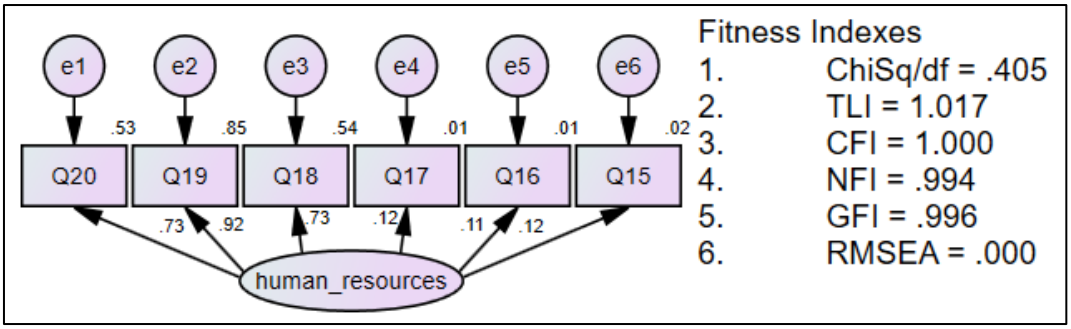


**Fig. 5 - Measurement model for human resources**

Figure 5 depicts that in the measurement model human resources, all the factor loadings appear to be good, as none are less than 0.5. The measurement model for the human resources construct met all of the acceptable cut-off values recommended by the goodness-of-fitness indexes.

### 4.1.4 Work Environment Construct

Figure 6 presented the results of the CFA for the Work environment measurement model.

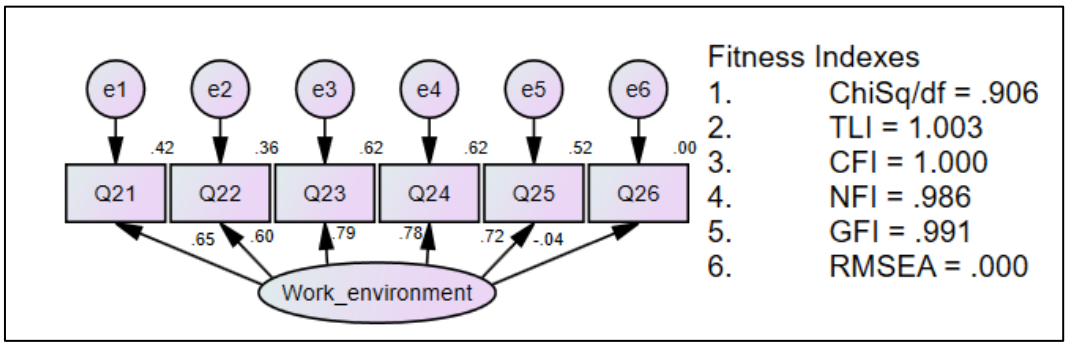


**Fig. 6 - Measurement model for work environment**

The factor loading for each item, squared multiple correlations ($R^2$) and fitness indexes were observed from Figure 6. The outcome revealed that all items had appropriate factor loading. Thus, all the items in construct work environment have met the level of acceptance.

### 4.1.5 Ethical Climate Construct

Figure 7 presented the CFA results for the Ethical climate measurement model.

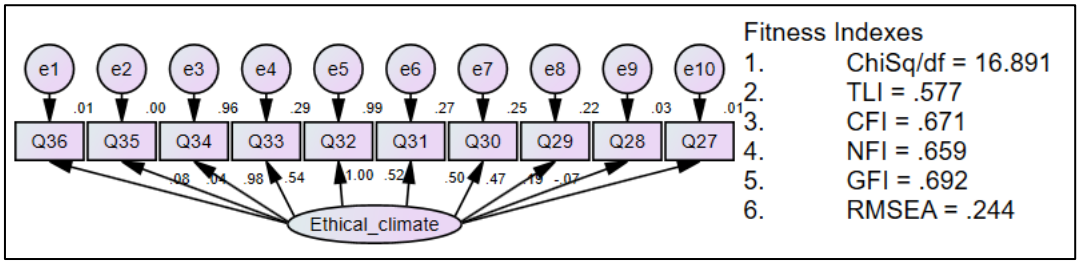


**Fig. 7 - Measurement model for ethical climate**

Figure 7 demonstrates that some measurement items have low factor loading, causing the model to fail to fit as determined by the fitness indexes. As a result, items with low factor loading are candidates for deletion. Because of their low factor loading, Q27, Q28, Q29, Q35, and Q36 are deleted. Figure 8 depicts the final training and development measurement items.

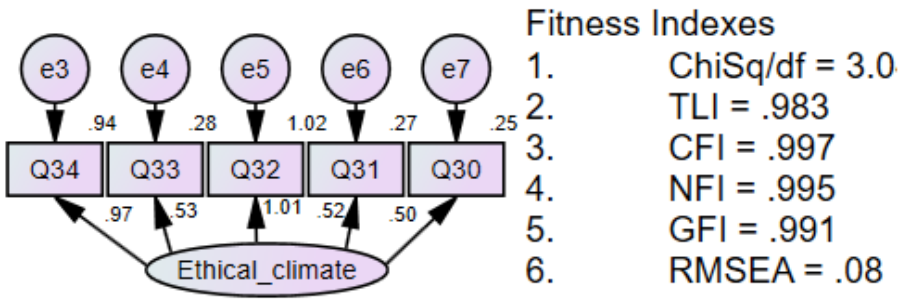


**Fig. 8 - Final measurement model for ethical climate**

Figure 8 reveals that all items in construct Ethical climate have met the level of acceptance.

### 4.1.6 Organization Performance Construct

The factor loading for each item squared multiple correlations ($R^2$), as well as fitness indexes were calculated for the Organization Performance measurement model as presented in Figure 9.

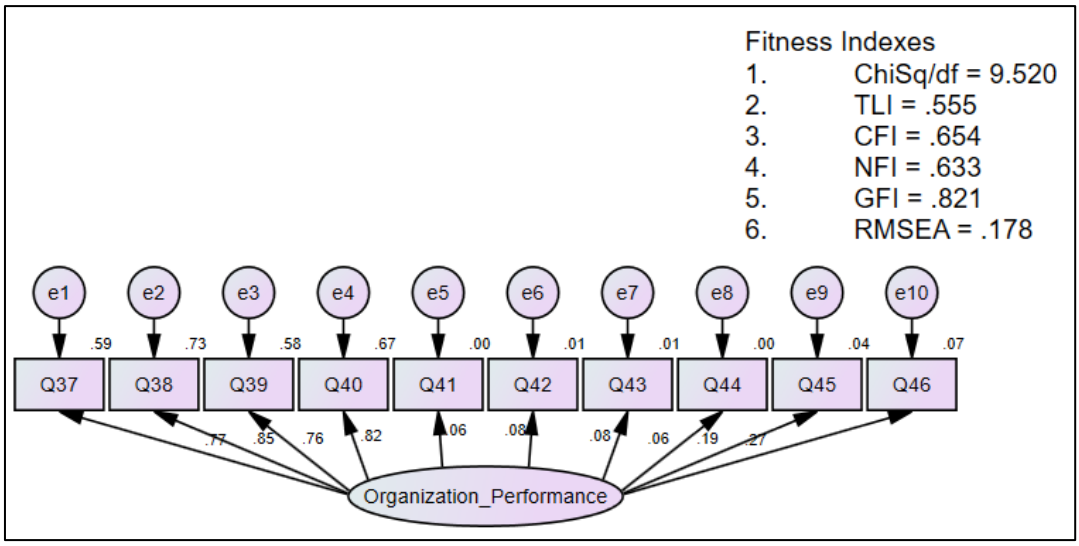


**Fig. 9 - Measurement model for organization performance**

Figure 9 demonstrated that the fitness indices were not met, and it was discovered that Q41-Q46 have low factor loading, which will be removed in the next final measurement model, as shown in Figure 10.

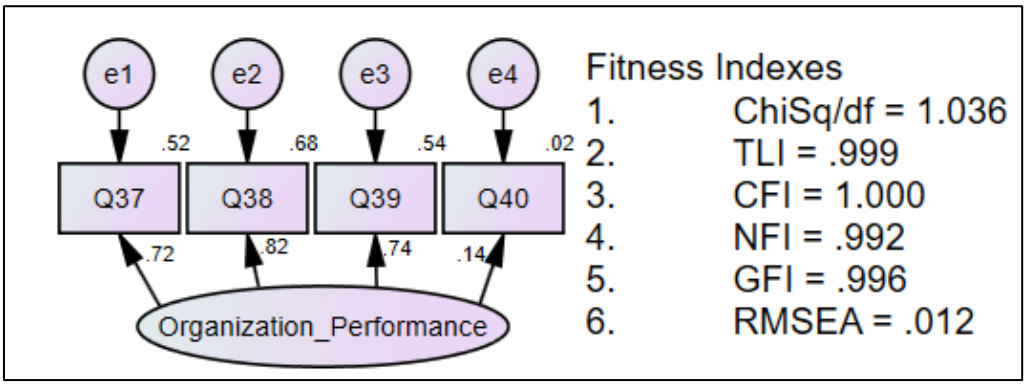


**Fig. 10 - Final measurement model for organization performance**

From figure 10, all the items in the construct Organization Performance constructs met the level of acceptance.

## 4.2 Assessment of the Entire Constructs

In this study, the construct validity was investigated by examining both the convergent and discriminant validity for the structural model's fitness. According to Pallant (2011), construct validity is investigated by looking at its relationships with other constructs; both related (convergent validity) and unrelated (discriminant validity). According to Hair et al. (2010), Average Variance Extracted (AVE) should be greater than 0.5 to indicate adequate convergent validity, and AVE estimates for two factors should be greater than 0.5 to provide evidence for discriminant validity (Hair et al., 2010). Memon & Rahman highlighted that Fornell and Larcker (1981) describes discriminant validity as satisfied if the AVE is greater than the square of the correlation coefficient between the constructs. This criterion has been adopted by several researchers such as Almansoori et al. (2021), Khahro et al. (2021) and Aibinu & Al-Lawati (2010). Furthermore, internal reliability (Cronbach's alpha), construct validity (CR), and average variance extracted are used to assess reliability (AVE).

### 4.2.1 Convergent Validity Analysis

Convergent validity is the measure to confirm that the factors representing a construct in the model truly belong to that construct. For a satisfactory convergent validity, the factor loading scores of items of measurement model should be correlated and significant i.e., the factor loading scores are greater than 0.5. In this study, the convergent validity is assessed using factor loading for all items in the final measurement model evaluated with the Bentler-Bonett coefficient (NFI) values (Hair et al., 2011) as presented in Table 3.

**Table 3 - Convergent reliability results**

| Constructs | Residual items number | Factors loading | | NFI Index |
|---|---|---|---|---|
| | | Lowest | Highest | |
| Training and development | 5 | 0.741 | 0.863 | 0.981 |
| Employee compensation | 5 | 0.741 | 0.834 | 0.977 |
| Human resources | 6 | 0.741 | 0.815 | 0.961 |
| Work environment | 6 | 0.852 | 0.980 | 0.999 |
| Ethical climate | 5 | 0.654 | 0.743 | 0.901 |
| Organization Performance | 4 | 0.721 | 0.823 | 0.917 |

From table 3, it is seen that loading value and NFI values of the final measurement models were both greater than 0.5 and 0.9 respectively which confirm that the convergent validity for all constructs in this study met the acceptable requirement. Internal reliability of the items was assessed with Cronbach Alpha value as presented in table 4.

**Table 4 - Internal reliability results**

| Constructs | Number of Items | | Cronbach's Alpha |
|---|---|---|---|
| | Initial | Residual | |
| Training and development | 9 | 5 | 0.864 |
| Employee compensation | 5 | 5 | 0.746 |
| Human resources | 6 | 6 | 0.835 |
| Work environment | 6 | 6 | 0.810 |
| Ethical climate | 10 | 5 | 0.885 |
| Organization Performance | 10 | 4 | 0.803 |

Table 4 shows that all the constructs have Alpha value above 0.7 which is recommended value as adopted by (Almarashda et al. 2021, Khahro et al. 2021) which confirms the internal reliability of all the constructs.

### 4.2.2 Discriminant Validity

Discriminant validity is a technique for determining how distinct one construct is from others in a model. According to Hair et al. (2014), discriminant validity assesses a construct's uniqueness in comparison to other constructs. Discriminant validity is achieved when the squared inter-construct correlations for a specific construct exceed the corresponding inter-construct correlation estimates for other constructs (Hair et al., 2010). According to the rule of judgement for establishing discriminant validity, the sum of the square correlations of the Average Variance Extracted (AVE) indicators of a particular construct should be greater than the correlation of the construct with any other construct in the model as used by Memon and Rahman (2014). The indicated AVE thresholds are (0.50) and higher, respectively. Table 5 displays the AVE of each construct diagonally, while the off-diagonal values are the correlation coefficients

between the constructs. All AVEs are greater than (0.50), and each AVE value is greater than any correlation with other constructs, implying that discriminant validity has been achieved.

**Table 5 - Discriminant validity**

| | Training and development | Employee compensation | Human resources | Work environment | Ethical climate |
|---|---|---|---|---|---|
| Training and development | .501 | | | | |
| Employee compensation | .039 | .500 | | | |
| Human resources planning | .146 | .482 | .515 | | |
| Work environment | .046 | .046 | .005 | .501 | |
| Ethical climate | .026 | -.092 | -.043 | -.016 | .512 |

### 4.2.3 Multicollinearity Assessment

Multicollinearity occurs when the independent variables in a regression analysis have a high correlation, influencing the overall interpretation of the results. It lessens the power of the coefficients and weakens the statistical measure of relying on p-values to identify significant independent variables. As a result, we would not investigate the independent variables' individual explanations for the dependent variable. Multicollinearity can be tested using two methods: a correlation matrix/correlation plot and the Variation Inflation Factor (VIF) (Michael Patrick Allen, 1997).

In this study, a correlation matrix of the constructs was used to determine the presence of multicollinearity in the measurement model. It used Pearson's correlation between two variables to calculate a correlation coefficient ranging from -1 to +1. If the value is zero, the two variables are independent and have no relationship. If the measure is very close to one of these values, this indicates a linear relationship and is highly correlated. This means that a significant change in one variable is associated with a significant change in another. Table 6 displays Pearson's correlation coefficients between the constructs.

**Table 6 - Correlation matrix of research constructs**

| | Training and development | Employee compensation | Human resources planning | Work environment | Ethical climate | Organisational performance |
|---|---|---|---|---|---|---|
| Training and development | | | | | | |
| Employee | .039 | | | | | |
| Human resources planning | .146 | .482 | | | | |
| Work environment | .046 | .046 | .005 | | | |
| Ethical climate | .026 | -.092 | -.043 | -.016 | | |
| Organisational performance | .044 | -.004 | -.171 | .226 | .522 | |

As shown in Table 6, the highest correlation i.e., 0.522 exists between organisational performance and ethical climate, while the lowest correlation i.e., 0.004 exists between organisational performance and employee compensation. This indicates that there is no unnecessary multicollinearity between constructs, which could jeopardise the validity of the result. As a result, all of the constructs were included in the development and evaluation of the structural model

## 5. Structural Equation Modelling

Following the establishment and validation of the measurement constructs, the entire constructs were combined into a single structural equation model using Analysis of Moment Structure (AMOS) graphics. The structural model was then evaluated to determine the causal relationship between the exogenous and endogenous constructs in order to meet the

model validity criteria. As shown in Figure 11, each construct is linked with an arrow pointing in the direction of the hypotheses while results of the fitness indexes are presented in table 7.

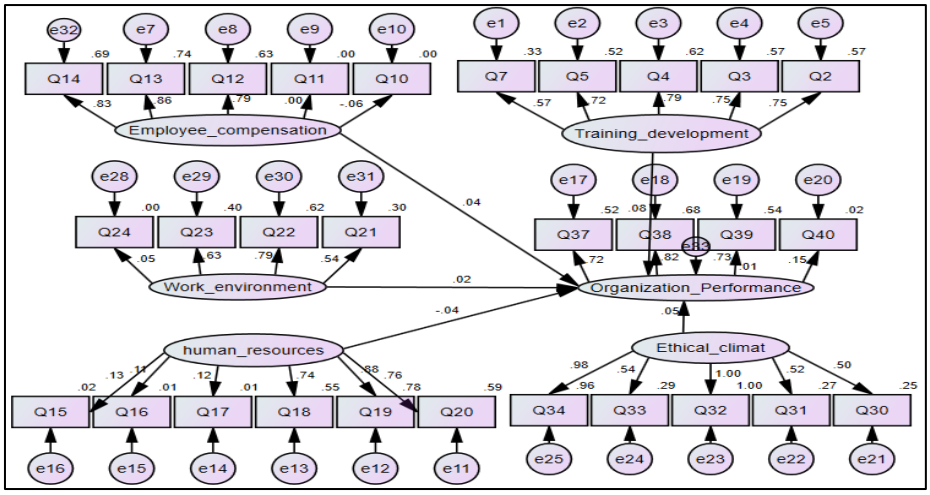


**Fig. 11 - Goodness-of-fitness for structural model**

From figure 11, observed factor loadings for the entire constructs were greater than 0.5 while certain parameters of the goodness-of-fit did not achieve satisfactory level and the model was applied with modification level and re-evaluated. The results of the fitness index of modified model were presented in table 7.

**Table 7 - The fitness indexes of the structural model**

| Index | Level of Acceptance | Index Value | Attaining the required level |
|---|---|---|---|
| **Chisq/df** | Chisq/df ≤3 | 2.436 | achieved |
| **TLI** | TLI ≥ 0.9 means satisfactory | 0.956 | achieved |
| **CFI** | CFI ≥ 0.9 means satisfactory fit. | 0.969 | achieved |
| **NFI** | NFI ≥ 0.80 suggests a good fit | 0.998 | achieved |
| **GFI** | GFI ≥ 0.80 suggests a good fit. | 0.801 | achieved |
| **RMSEA** | RMSEA ≤ 0.08 mediocre fit. | 0.073 | achieved |
| **Model is accepted** | | | |

From table 7, the developed model has achieved the required met the goodness-of-fitness indexes' acceptance. The standard regression weights indicated the beta coefficient estimate, which measures the impacts of the main constructs; exogenous variables on the intervening variable and endogenous variables on the intervening variable (organizational performance of SMEs in UAE). The Analysis Moment of Structures (AMOS) model used in this study for structural equation modelling normally produced two types of text outputs: standardised regression weights and unstandardized regression weights for the path analysis. However, the standardised regression weight is used to explain the relationship between all constructs in the theoretical research framework and then for testing hypotheses in the research because it is better and easier to interpret (Awang et al. 2015). Table 8 shows hypothesised outcome of each path in the structural measurement model.

**Table 8 - Result of the hypotheses testing on the structural model**

| Hypothesis | Hypothesis statement | P-value | Result |
|---|---|---|---|
| **$H_1$** | Human resource has substantial effect on organization performance | *** | Supported |
| **$H_2$** | Training and development has substantial effect on organization performance | *** | Supported |
| **$H_3$** | Employee compensation has substantial effect on organization performance | *** | Supported |
| **$H_4$** | Work environment has substantial effect on organization performance | *** | Supported |
| **$H_5$** | Ethical climate has substantial effect on organization performance | *** | Supported |

Key: *** represents P-value is less than 0.001

Table 8 shows that each of the five hypotheses has a significant relationship. This means that human resource management practises in the UAE have a direct and indirect impact on the organisational performance of SMEs. As a

result, the proposed model can be used as a strategy improvement mechanism to improve human resource management practises on the organisational performance of SMEs in the UAE.

## 6. Conclusion

The development of the Structural Equation Model (SEM) showing the relationship of human resource management (HRM) practises and factors affecting the organisational performance of small & medium enterprises (SMEs) in the UAE was presented in this paper. The developed model consists of five independent constructs of HRM practise factors and one dependent construct of SME organisational performance. The model based developed based on 46 measurable indicators where 36 items/factors were represented by five independent variables (IV) and ten items/factors in the dependent variable (DV). Model was run with AMOS software and evaluated at both the measurement and structural levels to ensure that both met the fitness criteria. The results of the AMOS assessment criteria revealed that the developed model is accepted for explaining the relationship between the human resource management and the factors affecting the organizational performance. These findings and the developed mode will help practitioners in SMEs organisations in proper planning and implementation of human resource management to achieve the desired organizational performance.

## Acknowledgement

The authors would like to thank the Institute of Technology Management and Entrepreneurship, Universiti Teknikal Malaysia Melaka, for supporting this research works.

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