



## Influence of Human Resource Management on Organizational Efficiency and Effectiveness within ADNOC in UAE

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**ABSTRACT:** A significant approach to achieve organizational effectiveness and efficiency is through human resources management (HRM). The current study purpose is to evaluate the effect of HRM on ADNOC's efficiency and effectiveness in the UAE. Questionnaire survey data was implemented to assess the proposed model. A total of 215 responses were returned and were valid for analysis out of 650 distributed. This study employed Structural Equation Modelling-Variance Based (SEM-VB) via SMART PLS 3.0 that was implemented for determining the importance of associations and interactions between the tested factors. The proposed model evidenced by the goodness of fit of the model to the data, HRD has explained 57% and 54% of the variance in organizational efficiency and effectiveness, respectively. The study outcomes might give further insights into HRM and effectiveness and efficiency of public sector organizations. Theoretical and practical implications are also provided.

**Keywords:** Human resource management; organizational efficiency; organizational effectiveness; UAE.

### I. INTRODUCTION

A significant approach to achieve organizational effectiveness and efficiency is through human resources management (HRM). Management of firms used to largely ignore human resource management strategy until recently, when its role as a major driver of successful effectiveness and efficiency achievement was evidenced. Since then, HRM reputation has grown in manifold in light of its strategic aspects, specifically in its role in enhancing organizational effectiveness and efficiency [2,6,34].

Lately, increased attentiveness has been marked in the field of human resources systems enhance the effectiveness and efficiency of organizations. In the most contemporary organizations, adopting technology not only uses ICT in order to fill up some forms but it also uses it as a tool to carry out the process of identification, accumulation, analysis, measurement, preparation, interpretation and communication of the information used by the management for planning purpose [1,3,4,5]. It is used in evaluating and controlling within an organization and to assure appropriate use and accountability for their resources [1,3]. In this regard, it was contended that in today's dynamic and competitive market place, success hinges on the benefits related with economies of scale, technology, patents, capital access, innovation, speed and adaptability. He also contended that the above latter competitive advantage sources stem from the human resources of the firm.

In this regard, studies dedicated to human resource practices, were as mentioned, limited to western and developed countries. Because of this, it is difficult to form generalizations of HRM practices found in Western context to the underdeveloped or developing nations. More importantly, the overall HRM practices concept has been criticized because of the diversity in culture, norms or customers among countries. It is clear that the UAE is trying to become a leading technology centre based on the innovation strategy of the 4th Industrial Revolution [6, 7]. The global indicators assist in

obtaining an in0-depth knowledge on UAE's position based on the international standards [8-11]. Hence, human resources practices vary from one country to the next. Such variations observed in case of human resource practices can be attributed to the cultural aspect of the country, which has a major effect on internal HRM practices of the organization, with different cultures leading to different behavioural patterns and norms.

Moreover, since there is significant impact of oil and gas industry in the current global economy that urges industry specialists to promote effective and implement strategic planning. In the present study, the researcher aims to highlight and examine the HRM in Abu Dhabi National Oil Company (ADNOC) in the United Arab Emirates (UAE) and the top important issues of work efficiency and effectiveness among ADNOC employees. This calls for the need to focus on the HRM and their effects on the employees' work performance in term of efficiency and effectiveness.

### II. LITERATURE REVIEW

#### A. Organizational Efficiency and Effectiveness

Defining productivity as the relationship between output and input efficiency is connected to the resource use, particularly the input of productivity quota. In contrast, effectiveness is output-centred and it connects to customer satisfaction and productivity output quota. Research and practice generally indicate that to achieve competitive and sustainable state resources, productivity has to be increased or for efficiency and effectiveness. In fact, high efficiency and effectiveness has been evidenced to result in greater productivity and thus, competitiveness. The current automation trends include cyber-physical systems, Internet of things, cloud computing and cognitive computing [12]. This was also evidenced, who stated that even the most effective and smooth running business will die of poor efficiency but even an efficient business can end up the same way if they are only efficient in doing the wrong things and lack

effectiveness.

Several articles and books have included the concept in their discussions, with managers across the board attempting to achieve organizational goals through maximized efficiency and effectiveness. Governments, organizations, and individuals should pay the greatest attention to the planning and implementation of information technology in all its aspects of business, especially in the age of digitalization. In the age of digitalization, which has been commonly referred to as Industry 4.0 or fourth industrial revolution [13, 14]. Despite the numerous factors that drive productivity, employee performance is considered to be the top influencing factor in this regard.

### B. Human Resource Management (HRM)

HRM is defined as a planned human resource deployment that aims at achieving the organizational goals. Furthermore, human resource management practices bring about improved effectiveness and performance of the organization through its role in attraction, identification and retention of skilled, able and knowledgeable employees, and driving their behaviour in such a way that will reinforce the organization's mission and objectives. In other words, effective HRM practices are largely dependent on their engendering of the suitable attitudes and behaviour from employees and the practices implementation.

Despite the similarities between performance and productivity in that they are both the effective and efficient use of resources for the achievement of outcomes, public sector performance has a more general extensive meaning than productivity and it is directed and assessed using several effectiveness, efficiency and equitable standards. Moreover, HRM practices contributing to the competitive advantage of the firm is interrelated to the efficiency and efficiency concept as HRM strategy for optimum performance of the firm.

Therefore, firms should adopt HRM practices that leverage employees' skills and talent and this trend has garnered interest as to the effect of HRM on organizational performance, with several studies reporting positive high-performance work practices and different performance measures relationships. Additionally, there is some empirical evidence as to the firm's need to align its HRM practices to its business strategy for superior results.

In today's businesses, HR departments are expected to work towards enhancing the efficiency and efficiency of organizations and majority of organizations are convinced that successful strategic management process and performance are based on the level of involvement of the HRM function. These findings lead to proposal of the below two hypotheses:

H1: Human resource management has a positive impact on organizational efficiency.

H2: Human resource management has a positive impact on organizational effectiveness.

## III. RESEARCH METHODOLOGY

### A. Proposed Conceptual Framework

The present study aims at investigating the link between HRM and the organizational efficiency and effectiveness, based on Resource-Based View Theory (Fig. 1).

### B. Instrument Development and Collection of Data

The study involved survey questionnaire which were

used for three months from August 2018 to October 2018 for data collection.

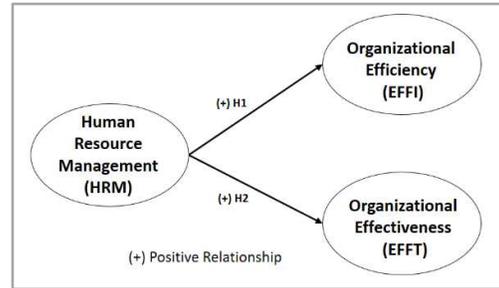


Fig. 1. The proposed conceptual framework

This study distributed 650 questionnaire copies and expected a high response rate as the cooperation of ADNOC HR department was solicited, and the final collected data samples numbered 215 from all the sections and branches in ADNOC. A random sample was obtained from the ADNOC sections based on Creswell (2003) [15]. The unit of analysis is the ADNOC section, represented by their heads sections. The questionnaire collected data are analysed with the help of analytical methods, and in the present study, data analysis was conducted with the help of Statistical Package of Social Sciences (SPSS), version 22.0 and Smart PLS3.0. The data analysis methods adopted based on their research questions and the characteristics of the variables as recommended by Byrne [16]. Variables were measured using a Likert Scale which recommended in the previous studies [17-19].

## IV. STUDY RESULTS

PLS -SEM-VB was employed to assess the research model by utilising the software SmartPLS 3.0 [20]. A two-phase analytical technique [21, 22] consisting of (i) measurement model analysis (reliability and validity) and (ii) structural model analysis (examining the conceptualised relationships) was employed after performing the descriptive assessment. This two-phase analytical technique consisting of a structural and a measurement model assessment is better than a single phase assessment [22, 23]. While the model of measurement explains each parameter's measurement, the structural model describes the correlation between the parameters in this model [22].

### A. Descriptive analysis

Table 1 exhibits mean and SD values for every variable. The opinion of the respondents were recorded with respect to HRM, organizational efficiency, and organizational effectiveness based on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). HRM score the highest with mean 3.714 out of 5.0, with a standard deviation of 0.730.

### B. Measurement Model Assessment

Construct reliability as well as validity (comprising discriminant and convergent validity) were used to examine the measurement model. The particular alpha coefficients of Cronbach were tested to determine the reliability of every core parameter in the measurement model (construct reliability). The quantities of all the unique alpha coefficients of Cronbach in this research ranged from 0.820 to 0.924, which went beyond the proposed value of 0.7 [24]. Moreover, for inspecting

construct reliability, all the CR (composite reliability) values ranged from 0.881 to 0.937, which went beyond 0.7 [25-27]. Thus, Table 1 presents construct reliability values. Analysis of indicator reliability was conducted by utilising factor loadings. When the related indicators are very similar, this is reflected in the construct and signified by the construct's high loadings. As per Hair et al. (2010) [28], the exceeding of values beyond 0.70 suggests substantial factor loadings. Table 1 shows all research items having factor loading value more than that of the

suggested value. AVE (average variance extracted) was employed in order to analyse convergent validity, which represents the degree to which a measure is correlated positively with the same construct's other measures. All the AVE values ranged from 0.623 and 0.663, which went beyond the proposed value of 0.50 [28]. Thus, all constructs have complied with the convergent validity acceptably (Table 1).

**Table 1: Measurement model assessment.**

Constructs	Item	Loading (> 0.7)	M	SD	$\alpha$ (> 0.7)	CR (> 0.7)	AVE (> 0.5)
Human Resource Management (HRM)	HRM1	0.808	3.714	0.730	0.924	0.937	0.623
	HRM2	0.782					
	HRM3	0.791					
	HRM4	0.810					
	HRM5	0.794					
	HRM6	0.802					
	HRM7	0.766					
	HRM8	0.764					
	HRM9	0.789					
Organizational Efficiency (EFI)	EFI1	0.807	3.648	0.734	0.820	0.881	0.650
	EFI2	0.817					
	EFI3	0.769					
	EFI4	0.830					
Organizational Effectiveness (EFT)	EFT1	0.824	3.657	0.739	0.831	0.887	0.663
	EFT2	0.851					
	EFT3	0.776					
	EFT4	0.805					

Note: M=Mean; SD=Standard Deviation,  $\alpha$ = Cronbach's alpha; CR = Composite Reliability, AVE = Average Variance Extracted.

The degree to which the articles distinguish among concepts or measure different constructs is demonstrated by discriminant validity. Fornell-Larcker method was used for discriminant validity analysis. Table 2 exhibits these values by following the Fornell-Larcker condition. The AVEs' square root on the diagonals (displayed in bold) is bigger than the correlations among

constructs, suggesting a strong association between the concepts and their respective markers in comparison to the other concepts in the model [29-31]. According to previous study, good discriminant validity was observed. Also, the exogenous constructs showed a correlation of < 0.85 [32].

**Table 2: Fornell-Larcker criterion.**

	<i>EFI</i>	<i>EFT</i>	<i>HRM</i>
<i>EFI</i>	<b>0.806</b>		
<i>EFT</i>	0.691	<b>0.814</b>	
<i>HRM</i>	0.753	0.738	<b>0.790</b>

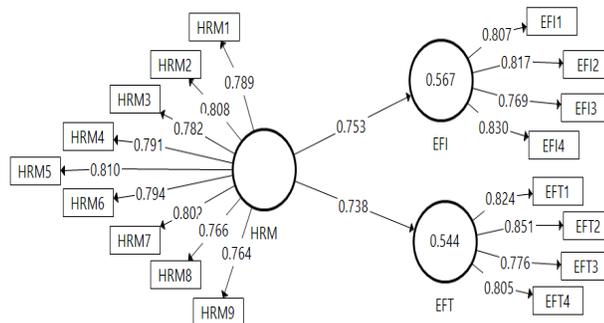
Note: Diagonals represent the square root of the average variance extracted while the other entries represent the correlations.

**Key:** HRM: human resource management, EFI: organizational efficiency, EFT: organizational effectiveness

**C. Structural Model Assessment**

The structural model can be tested by computing beta ( $\beta$ ),  $R^2$ , and the corresponding t-values via a bootstrapping procedure with a resample of 5,000 [22]. Figure 2 and Table 3 depict the structural model assessment, showing the results of the hypothesis tests. Human resource management positively influence organizational efficiency and organizational effectiveness. Hence, H1 and H2 are accepted with ( $\beta =$

0.753,  $t = 17.860$ ,  $p < 0.001$ ) and ( $\beta = 0.738$ ,  $t = 15.345$ ,  $p < 0.001$ ) respectively. Fifty-seven percent of the variance in organizational efficiency is explained by human resource management, and fifty-four percent of the variance in organizational effectiveness is explained by human resource management. The values of  $R^2$  have an acceptable level of explanatory power, indicating a substantial model [30,31, 33].



Key:PM: project management, EFI: organizational efficiency, EFT: organizational effectiveness.

Fig. 2. PLS algorithm results.

Table 3: Structural path analysis result.

Hypothesis	Relationship	Std Beta	Std Error	t-value	p-value	Decision	R <sup>2</sup>
H1	HRM→EFI	0.753	0.042	17.860	0.000	Supported	0.57
H2	HRM→EFT	0.738	0.048	15.345	0.000	Supported	0.54

Key: HRM: human resource management, EFI: organizational efficiency, EFT: organizational effectiveness

## V. DISCUSSION

This current research primarily aimed at examining the link between HRM and the organizational efficiency and effectiveness within ADNOC in the UAE. The inconsistent findings indicate unresolved issues that need further in-depth investigation.

The objective was to analyse the impact HRM on the organizational efficiency, thus, H1 was formulated and examined. The results indicated that HRM has a significant and positive impact on organizational efficiency. Thus H1 is supported with ( $\beta = 0.753$ ,  $t = 17.860$ ,  $p < 0.001$ ).

The study results are consistent with previous literatures that also showed similar results stating major impact of HRM on efficiency of an organization. Which means that the more employees' suggestions are evaluated, work in teams with members from a variety of departments, employees' training is provided in quality principles, employees are encouraged to take initiatives when dealing with customers' complaints; the more good use of my knowledge and skills to become more efficient, reducing cost in managing the organization.

The second objective is examining the effect of HRM on organizational effectiveness. Accordingly H2 was formulated and tested in the structural model assessment. Results testing this Hypothesis indicated that there is a positive direct impact on the organization effectiveness with ( $\beta = 0.738$ ,  $t = 15.345$ ,  $p < 0.001$ ), thus, H2 is supported. Results comes in line with former studies. This means that the more employees' suggestions are evaluated, work in teams with members from a variety of departments, employees' training is provided in quality principles, employees are encouraged to take initiatives when dealing with customers' complaints; the more improved high quality of work, improved productivity, better occurrence of goal attainment.

## VI. IMPLICATIONS, LIMITATIONS AND FUTURE DIRECTIONS

This study extended literature on the study variables by focusing on the UAE public service sector. The positive importance of the public service sector in the economic

development plans of countries failed to drive studies to focus on HRM in this sector, and as such, there is lack of studies. The focus on the UAE public service organizations is an attempt to contribute to empirical insights regarding the topic in literature. Moreover, the study findings highlighted that managers need to take the necessary activities to develop EE culture in the organizations through its HRM practices. Moreover, the results also confirmed that because HRM originated as Western practices, the strategies may not be embraced fully by culture-driven countries like the UAE and this may prevent their success implementation.

Despite the innumerable contributions of this study and information and knowledge from its findings, the results should be interpreted with caution in terms of the limitations that the study has. One of the limitation concerns the quantitative research method adopted, where the respondents were requested to translate their perceptions on the basis of the survey questionnaire statements into Likert scale numbers. The answers may have been swayed by biased perceptions of the phenomenon. It is thus suggested that future studies adopt a mixed research design, where qualitative and quantitative data gathering techniques are combined to complement strengths and to minimize each of the techniques weaknesses.

On the other hand, suggestion for future work is suggested which is related to the gathering of data from the public service sector managers, considering that they are the top authoritative personnel that hold the answers and descriptions into the innovative strategies implementation and their effects on the performance of the organizations. Future studies, in this regard, can incorporate more constructs to the model by gathering factors from other stakeholders, like customers and employees.

## VII. CONCLUSION

The study results further confirmed the effects of HRM and on the organizational efficiency and effectiveness of UAE public sector firms. Although such strategies originated from Western countries, it can be used by the Middle Eastern countries to enhance and maintain

organizational performance among the public service sector, particularly in the UAE. The study findings showed the important role that HRM has on the above mentioned relationships on the organizational efficiency and effectiveness. They also confirmed that in the UAE, HRM supports successful implementation of innovative strategies. It is suggested that managers, owners and policy-makers begin changing the culture of

organizations by providing suitable education, training and incentive initiatives to employees to change their behaviours and mind set towards competitive performance in the marketplace. Results would give insights for ADNOC and public sector in the UAE to improve the organizational efficiency and effectiveness focusing in HRM practices.

**Appendix**  
*Variable instruments*

<i>Variable</i>	<i>Measure</i>	<i>Source</i>
Human Resource Management (HRM)	HRM1: In our department, suggestions of employees are evaluated. HRM2: In our department, we usually perform teamwork, with various department members. HRM3: In our department, we utilize the teamwork ability as a criterion for selecting the employees. HRM4: In our department, employees' training is provided in quality principles. HRM5: In our department, resources are there for training of the employees. HRM6: In our department, the top management is often involved in quality training. HRM7: In our department, employees are encouraged to take initiatives when dealing with customers' complaints. HRM8: In our department, the problem-solving ability is considered as a criterion for selection of the employees. HRM9: In our department, employees are given the resources necessary to deal with customers' complaints.	
Organizational Efficiency (EF1)	EF11: My organization has effectively used my knowledge as well as skills aiming at higher organizational efficiency. EF12: My organization is aiming at cost reduction in order to manage as well as perform the tasks. EF13: My organization conducts business relations with external customers. EF14: It is rare to make big mistakes in my organization while work performance.	
Organizational Effectiveness (EFT)	EFT1: Since last two years, my work productivity has increased. EFT2: The work quality of my coworkers is high. EFT3: The performance of my work unit provides a worthwhile return of tax to the public. EFT4: Goal attainment is quiet high in my organization.	

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