

# **THESIS OF (PhD) DISSERTATION**

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**THE MEDIATING ROLE OF DYNAMIC CAPABILITIES  
ON THE RELATIONSHIP BETWEEN HUMAN  
RESOURCE DEVELOPMENT AND ORGANIZATIONAL  
EFFECTIVENESS**

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## **1.RESEARCH BACKGROUND**

I have chosen this research theme due to the fundamental characteristics of the business environment in which organizations work in today's world are knowledge-based competition and rapidly changing markets. To survive in such an environment, the organizations must possess a capable human resource that enables them to keep facing these challenges and compete to achieve excellence. As result, the concept of human resource development (HRD) has emerged as a strategy to improve employee's competences in turn to enhance organizational effectiveness (Gberevbie,2012; Potnuru and Sahoo, 2016).

The higher educational organizations surely do not operate in a vacuum. They operate in national and international environments, they strive to integrate resources and coordinate strategies to meet challenges and shifts in the environments and take advantage of opportunities (Yuan et al. 2016).

The most valuable human resource in higher education organizations are lecturers and researchers who comprehend the strategic and operational objectives, who possesses human capabilities and knowledge. Without staff having a convenient qualification, educational and research experience and the right attitude, higher educational organizations cannot operate effectively.

I argue that human resources development is one of the most important tasks faced by contemporary organizations, under the conditions of scarcity and its indicators such as (talent development, training and development, organizational development and, career development) are increasing day by day. The recent studies (Chang, 2011; Blanco and Botella, 2017; Otoo and Mishra 2018) have emphasized the distinctive role of the human resource in the work of organizations, which requires serious attention if they want continuing success and excellence. Also, several researchers (Nilsson and Ellstrom 2012; Schuler and Jackson, 2014; Alagaraja et al. 2015) have confirmed that human resource development practices have a significant positive impact on organizational effectiveness. Moreover, this study argues

that in rapidly changing environments it is imperative that organizations to develop capabilities to meet and cope with the environmental turbulence what are so-called dynamic capabilities in order to achieve superior organizational effectiveness.

The dynamic capabilities (DC) has emerged as an attempt to untangle the complex problem of organizational performance in today's dynamic environment (Olovsson and Lundström, 2010). Dynamic capabilities are an organization's ability to integrate, build and reconfigure internal and external resource to address environmental changes (Teece et al.,1997).In term of the relationship between human resource development (HRD) and dynamic capabilities, many researchers (Wang et al. 2012; Wilhelm et al.,2015; and Helfat et al.,2007) have established that HRD plays a key role in supporting the creation and maintenance of dynamic capabilities in order to keep pace with the firm's environment.

Leih and Teece, (2016) argue that if higher education organizations want to maximize organizational effectiveness, they must continuously align their internal and external capabilities to the challenges and/or opportunities offered by the environments. These efforts require universities to improve employees' competencies through HRD practices that may contribute, in aggregate to cope with environmental changes.

Despite this progress, there is still a lack in the literature about an understanding of the mediating mechanisms of dynamic capabilities on the relationship between HRD practices and organizational effectiveness. Based on the knowledge of the author there were no studies investigated alternative relationships. Consequently, this study tries to address this gap by proposing an empirical model that demonstrates dynamic capabilities constructs i.e. sensing capabilities, learning capabilities and reconfirmation capabilities mediate the relationship between HRD constructs i.e. talent development,

training and development, organizational development, and career development and organizational effectiveness.

Overall, two important motivations fuel this study. First, theoretically, this study provides a research model for empirical literature in the field of human resource development, dynamic capabilities, and organizational effectiveness. Second, empirically this study provides practical implications for universities management. Also, it provides significant insight and demonstrates a good understanding of HRD practices, dynamic capabilities and organizational effectiveness in the selected Iraqi public universities context. The findings of this study have the potential to help decision-makers to develop their HRD practices and adopt dynamic capabilities mechanisms to improve organizational effectiveness.

## **2. RESEARCH QUESTIONS, OBJECTIVES AND HYPOTHESES**

### **2.1. Scope and focus of the study**

The scope of the thesis is within the fields of strategic management and human resources. More specifically three key focuses fuel this study. Firstly, the central focus is the universities' specific HRD practices – which contribute to organizational effectiveness. Secondly, the study also pays attention to the universities' integrating, building, and reconfiguring resources and strategies, which may develop solid dynamic capabilities that allow them to meet environments change. Thirdly, the study explores the integration between HRD practices and dynamic capabilities that is might improve the universities' effectiveness. The study took place in the top ten public universities of Iraq. Higher education plays a vital role and function in the advancement of competitiveness and efficiency of the nation's economy. The higher education sector is worthy of such a research effort due to the social and economic benefits it delivers to developing countries in general and Iraq in particular.

## **2.2. Problem statement**

The global competition and the rapid growth of the knowledge economy in a highly changeable environment has encouraged the organizations to develop a paradigm to understand how to sustain their competitiveness and achieve superior organizational effectiveness. The aforementioned literature have highlighted that HRD practices have a significant positive impact on organizational effectiveness. But, with the rapid shifts in business environments, HRD is often not the best strategy to enhance organizational effectiveness (Teece et al., 1997 and Aminu and Mahmood, 2015). Therefore, this study argues that in such a dynamic environment HRD practices have the potential to influence organizational effectiveness through the mechanism of dynamic capabilities. The explanation of the linkage between HRD, dynamic capabilities and organizational effectiveness HRD is still unexplored.

Moreover, the serious attention and efficient and effective use of human resource development at the level of Iraqi educational organizations is still below the required level, due to the current circumstances in the country, and the reflection on the entire educational process. Thus, the Iraqi educational organizations need to understand the role of HRD practices in achieving organizational effectiveness by means of dynamic capabilities. Due to the lack of empirical research in this issue, this study proposes a set of research questions as mentioned below.

## **2.3. Questions of the study**

The following research questions will be addressed in order to guide the acquisition of data required to satisfy the statement of the problem:

1. To what extent does human resource development influence dynamic capabilities?
2. To what extent does human resource development influence organizational effectiveness?

3. To what extent do dynamic capabilities influence organizational effectiveness?

4. To what extent do the dynamic capabilities mediate the relationship between human resource organizational effectiveness?

## **2.4. Objectives of the study**

The primary objective of this study is to examine the impact of human resource development on organizational effectiveness and explores the mediating role of dynamic capabilities on the relationship between human resource development and organizational effectiveness in selected Iraqi public universities context. More specifically the study sought:

1. To assess the theoretical significance of human resource development, dynamic capabilities and organizational effectiveness which are considered critical factors in the success of the organizations.

2. To find an empirical model, which can test the relationship between human resource development and organizational effectiveness.

3. To test the proposed model empirically and investigate the relationship between dynamic capabilities and organizational effectiveness.

4. To identify and empirically assess the effect of HRD on organizational effectiveness by means of mediating effect of dynamic capabilities.

## **2.5. Research hypotheses**

H1: The organizations with HRD system that appropriately strive their HRD practices to create and develop employee competence, their HRD practices i.e.( talent development, training and development, organizational development, and career development) will have a positive influence on organizational effectiveness constructs.

H2: HRD practices positively influence dynamic capabilities constructs.

H3: If the organizations have dynamic capabilities to address its organizational effectiveness so, the dynamic capabilities constructs (sensing capability, learning capability, and reconfiguring capability) have a significant positive impact on organizational effectiveness.

H4: Dynamic capabilities significantly mediate the relationship between HRD and organizational effectiveness.

### **3. RESEARCH MATERIALS AND METHODS**

#### **3.1. Research design**

This research used a quantitative methodology. A quantitative methodology is suitable to use in hypotheses testing of relationship between independent and dependent variables (Sekaran and Bougie, 2013). The purpose of this quantitative method is to verify the research hypotheses. According to Harvard University (2014), a quantitative research approach is appropriate when specific hypotheses are tested, concepts are defined as distinct variables, procedures are standard, and analysis occurs using statistics, tables, and charts. This study meets these criteria. This study uses a primary data to address the purpose and objectives of the study. This study adopted the survey method to collect the primary data. (Creswell, 2003) states that in general, researchers and scholars adopt a quantitative research often employ survey method because it is considered an economical and efficient method to gather quantitative data concerned to a given population for the purpose of generalizing the result. Furthermore, HRD researchers such as (Hua, 2013; Tsang-Kai, 2010 and Potnuru and Sahoo, 2016) mostly use a quantitative methodology often rely on data collected through surveys. Within the quantitative methodology data analysis usually occurs to test hypotheses using statistical methods. Many previous studies in the human resources development areas have used quantitative methodologies. Quantitative research commonly employs survey method as it is considered the most

appropriate for collecting data (Creswell, 2003). This study adopts a web-based survey for collecting data from the sample of the study. Online questionnaire was developed by Google-Forms tool. According to (Grohmann and Kauffeld (2013) questionnaire is often used while adapting survey method. The online questionnaires were distributed through e-mail designed to collect the primary data from the public universities of Iraq including a number of deans, heads of departments, faculty members and principals of the execution units which seems to provide a corresponding sample for conducting data collecting and analyzing. According to the research questions and hypotheses, this study used the Statistical Package for the Social Sciences (SPSS) software version 23 and the Analysis of Moment Structures (AMOS) software version 24 to test the reliability and validity analyses, and descriptive statistical analyses. In addition, this research used Partial least squares structural equation modeling (PLS-SEM) in order to test research hypotheses. SEM is commonly used in the social sciences because of its ability to explain the relationships between unobserved constructs (latent variables) from observable variables (Henson and Roberts, 2006). SEM is comparable to common quantitative methods, such as correlation, multiple regression, and analysis of variance to estimate and test the relationships among constructs.

### **3.2. Population and sampling procedure**

Sekaran (2003) defines population as the object for study which consists of events, individuals, groups of people, institutions, to which we want to generalize the findings. The study took place in top ten Iraqi public universities (University of Babylon, University of Baghdad, Diyala University, University of Mosul, University of Basrah, Kufa University, Mustansiriyah University University of Anbar, and Kerbala University) the population consisted of deans, heads of departments, faculty members and principals of the execution units of the selected Iraqi public universities which seems to provide a corresponding sample for conducting data collecting and analyzing.



However, including the whole population in the study is often not practically reasonable and uneconomical since it consists of a huge number of employees; therefore, a sample was selected from the total population to present as representatives.

Sampling is the process of selecting a subset of the total population to include in the study to address the research objectives (Krause et al.,2011). There are two sampling methods: probability and non-probability sampling techniques. The study employed non-probability sampling based on purposive sampling method, which is appropriate for the scope and nature of the study. A purposive sample is one in which participant selection is based on meeting certain criteria of interest to ensure the most relevant information is obtained based on the population (Cooper and Schindler, 2011). According to (Sekaran and Bougie,2013) this sampling technique involves choosing participants that are well equipped with relevant information pertinent to the study focus. In this regard, the sample frame for this study included deans, heads of departments, faculty members and principals of the execution units of the selected Iraqi public universities were targeted to provide a corresponding sample for conducting data collecting and analyzing.

### **3.3. Instrumentation development**

This study adopts a web-based survey for collecting data from the sample of the study. Online questionnaire was developed by Google-Forms tool. According to (Grohmann and Kauffeld (2013) questionnaire is often used while adapting survey method. The questionnaire was developed based on an extensive review of the literature related to topic of the study. The questionnaire comprises of three sections (see appendix). Section one collects participant & institutional background information of the respondents such name of the university, age, gender, position held, educational attainment, work experience, and organization size. Section two includes questions are designed to measure the variables of the study by using a comparative seven-

point Likert-type scale ranging from 1-7, in which, 1 = strongly disagree, 7 = strongly agree. Moreover, 20 items are designed to measure HRD constructs which are talent development, training and development, organizational development, and career development and 15 items designed to measure dynamic capabilities constructs which are learning capability, sensing capability, integrating capability and lastly, 12 items designed to measure measures the organizational effectiveness constructs which are goal approach, system resource approach, and competing values approach. In the third section of the questionnaire includes 10 concluding questions designed to measure descriptively the implementation of HRD in the selected Iraqi public universities.

The web-based questionnaires were distributed through E-mail designed to collect the relevant data from the selected public universities of Iraq totaling 10 universities including a number of deans, heads of departments, faculty members and principals of the execution units which seems to provide a corresponding sample for conducting data collecting and analyzing. Table (1) shows detailed information regarding the variables, sources, and number of the items as follows:

Table 1. the study variables in regard to the sections of the questionnaire, sources, and number of items

sections	Name of the variable	Source	Number of items
section one	participant & institutional background information	Researcher developed	9
Section two	Human resource development constructs: Talent development, training and development, organizational development and career development.	(Mahfoozi et al.,2018),( Asfaw et al.2015),( Sabarina,2015),(Parvaneh,2016),( Zadeha and Ghahremanib,2016),( Xueling,2017),( Weng and McElroy,2012)	20

	Dynamic capabilities constructs: Sensing capabilities Learning capabilities Reconfiguration capabilities	(Teece et al. ,1997) ,( Eisenhardt and Martin ,2000),( Nieves and Haller,2014)	15
	Organizational effectiveness constructs: Goal approach System resource approach Competing Values Approach	(Gold et al., 2001), (Rahman et al., 2013),(Banat,2002),(El Khair,2016)	12
Section three	Human resource development – concluding questions	Partly adapted from (Stephen,2016) and, (Singleton,2014), Some questions are developed by the researcher	10
Total			66

### 3.4. Data collection procedure

The survey was created by Google-Forms tool, which is commonly used by researchers for collecting data. Online structured questionnaire was developed for data collection. The online questionnaire is increasingly used as a main tool of data collection because it provides advantages to researchers such as speed response, lower respondent error, covers a wide range of potential respondents and low cost (Carcary et al., 2012). The questionnaire was sent via e-mail to the initial mailing list of the potential respondents. The online survey was done during 25th November 2018 to 20th of January 2019. All data submitted by respondents were anonymous which means the respondents didn't mention their name or other identifying information. However, respondents were asked to provide their email address if they want to receive a copy of a summary of the study's results.

After respondents completed the survey online, all answers were recorded and stored by Google-forms. The data was accessible by the researcher only. When the deadline was over and the survey was closed, the collected data was

exported from Google-forms into a Microsoft Excel and then into SPSS for data analyzing.

### **3.5. Data analysis procedure**

Data analysis was conducted to address the research questions, objectives and hypotheses. Data analysis was done by using Statistical Package for Social Science (SPSS) version 23 and the Analysis of Moment Structures (AMOS) software version 24. Before conducting data analysis, the data preparation was done on the completed questionnaires by editing, coding, entering and cleaning the data.

Descriptive statistics such as the frequency and percentage, mean, standard deviation, were used to provided data summarization of demographic characteristics of respondents. Also, the Pearson correlation coefficient was used to describe the correlations among the variables. To purify the instrument items confirmatory factor analysis (CFA) was carried out to assess the validity and reliability of the instrument by using convergent and discriminant validity. Also, Cronbach's Alpha was used to examine the reliability of the scale items. The overall model fit was assessed using seven goodness-of-fit indices, namely the chi-square/degree of freedom ( $\chi^2/df$ ) ratio, the comparative fit index (CFI), the Tucker-Lewis index (TLI), the Normed Fit Index (NFI), the goodness of fit index (GFI), the root means square error of approximation (RMSEA) and the expected cross-validation index (ECVI). In addition, Partial least squares structural equation modeling (PLS-SEM) was used to test empirically the proposed hypotheses. SEM is commonly used in the social sciences because of its ability to explain the relationships between unobserved constructs (latent variables) from observable variables (Robert, 2007). SEM is comparable to common quantitative methods, such as correlation, multiple regression, and analysis of variance to estimate and test the relationships among constructs.

### **3.6. Validity and reliability measurement**

Validity is the extent to which an instrument measures what it is intended to measure and performs as it is designed to perform (Biddix, 2014). Reliability refers the extent to which an instrument measures a phenomenon provides stable and consist result (Carmines and Zeller, 1979). In this study and before testing the hypotheses reliability and validity of measurement scales were assessed by using confirmatory factor analysis (CFA). (Hair et al., 2016) suggests that to assess the reliability through PLS-SEM method, it is basic to examine the outer loadings of all constructs. He defined that the items with loadings in between .40 to .70 can be maintained. Also, this study used Cronbach's alpha coefficient to evaluate internal consistency of the scales. (Hair et al., 2010) stated that Cronbach's alpha coefficient for the constructs above 0.70 it is considered acceptable which indicates that all the items are internally consistent.

In order to measure the validity, this study used construct validity which refers to the extent to which a measurement scales can be transformed an idea, concept, or behavior that is a construct into a functioning and operating reality (Taherdoost,2016). In order to assess the construct validity, there are two methods which are suggested by (Fornell and Larcker,1981). The first method is convergent validity which refers to the extent to which a constructs are expected to be related are, in fact, related. (Fornell and Larcker,1981) proposed that to provided evidence for the convergent validity the item loadings should exceeded threshold value which is 0.50 with the significant t values and all the constructs have acceptable average variance extracted (AVE) and composite reliability (CR) values which are above 0.50 and 0.70 respectively.

The second method is discriminant validity which refers the extent to which latent variable discriminates from other latent variables (Duarte and Raposo, 2010). Two methods were used to assess discriminant validity. First, by using ( Fornell and Larcker (1981) method which states that the square root of AVE of each variable should be greater than its correlations with any other construct.

Second, if AVE for a latent construct is larger than the maximum shared variance with other latent constructs (Hair et al., 2010).

## **4. RESULTS**

### **4.1. The impact human resource development on organizational effectiveness**

The main purpose of this study is to investigate the relationships between the practices of human resource development and organizational effectiveness in the top ten Iraqi public universities context. This study adopted the survey method to collect primary data. The survey was created by the google-forms tool, which is commonly used by researchers for collecting data. The web-based questionnaires were distributed through E-mail designed to collect the primary data from the employees of the selected Iraqi public universities including a number of deans, heads of departments, faculty members and administrative staff which seems to provide a corresponding sample for conducting data collecting and analyzing. An online questionnaire was distributed to around 342 employees, out of which 215 completed questionnaires were obtained. For analyzing the data, confirmatory factor analysis (CFA), structural equation modeling (SEM) were used. This study finds that HRD practices such as talent development, training and development, organizational development and career development have a positive and significant impact on organizational effectiveness. This study has confirmed the significance of HRD practices and how they are positively related to organizational effectiveness. The results of this study have the potential to help the decision-makers of universities to develop effective HRD practices which will enable them to improve employees' competencies in enhancing organizational effectiveness. Also, this study recommends universities' managers to use effective HRD practices which are aimed at

building excellent employees' competencies and increase the integration between human resource development and organizational effectiveness.

#### 4.1.1. Descriptive statistics

Table 2 presents a descriptive analysis of the data and the correlations matrix among variables. The means, standard deviations, and correlation matrix are presented. The mean score for HRD practices (TD, T&D, OD, CD) and organizational effectiveness constructs (GA, SRA, CVA) is located between (3.29-3.80) and standard deviation (1.48-1.62) that indicates a good implementation of HRD practices in enhancement organizational effectiveness of in the public universities of Iraq. Also, the results show that each of the constructs is positively and significantly correlated to each other.

Table 2. Descriptive and correlation results

	Mean	S. D	TD	T&D	OD	CD	GA	SRA	CVA
TD	3.29	1.59	1.000						
T&D	3.49	1.56	.778**	1.000					
OD	3.46	1.60	.777**	.823**	1.000				
CD	3.35	1.59	.755**	.795**	.832**	1.000			
GA	3.80	1.62	.733**	.839**	.859**	.788**	1.000		
SRA	3.44	1.48	.701**	.793**	.767**	.715**	.853**	1.000	
CVA	3.80	1.53	.629**	.694**	.703**	.695**	.771**	.743**	1.000

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

TD=Talent Development, T&D=Training & Development, OD=Organizational Development, CD=Career Development, GA=Goal Approach, SRA=System Resource Approach, CVA=Competing Values Approach

#### 4.1.2. Reliability and Validity

In this study and before testing the hypotheses reliability and validity of measurement scales were assessed by using confirmatory factor analysis (CFA) to estimate the convergent validity, discriminant validity and goodness of fit statistics. The reliability of the scales was evaluated using Cronbach's alpha coefficient. As it is seen in table 6, Cronbach's alpha coefficient for all constructs ranges between 0.874 and 0.953 and it is considered acceptable which indicates that all the items are internally consistent (Hair et al., 2010).

In order to determine the convergent validity, there are three important indicators of convergent validity are factor loadings (standardized estimates), Average Variance Extracted (AVE) and Composite Reliability (CR). Hair et al. (2006) suggest that the items with loadings in between .50 to .70 can be maintained. This study investigates that the item loadings all exceeded the threshold value and statistically significant ( $p < 0.05$ ). (see table 3). Composite reliability (CR) for all constructs ranges between 0.872 and 0.955 which are above 0.50 that indicates that all the constructs have a good level of composite reliability (CR) as recommended by (Hair et al., 2012). The average variance extracted (AVE) value for all the constructs are in the range between .618 to .808 which are above the threshold value .50 which is suggested by (Hair et al., 2010).

Table 3. Constructs evaluation

Constructs	Measurement Items	Factor Loading	CR	AVE	P.Value
Talent Development	TD5	0.852	0.947	0.780	.000
	TD4	0.884			.000
	TD3	0.896			.000
	TD2	0.898			.000
	TD1	0.852			.000
Training & Development	T_D5	0.807	0.932	0.732	.000
	T_D4	0.902			.000
	T_D3	0.886			.000
	T_D2	0.855			.000
	T_D1	0.827			.000
Organizational Development	OD5	0.9	0.948	0.785	.000
	OD4	0.9			.000
	OD3	0.904			.000
	OD2	0.875			.000
	OD1	0.85			.000
Career Development	CD5	0.854	0.955	0.808	.000
	CD4	0.952			.000
	CD3	0.904			.000
	CD2	0.922			.000



	CD1	0.861			.000
Goal Approach	GA4	0.901	0.932	0.789	.000
	GA3	0.837			.000
	GA2	0.904			.000
	GA1	0.91			.000
System Resource Approach	SRA4	0.883	0.872	0.618	.000
	SRA3	0.733			.000
	SRA2	0.722			.000
	SRA1	0.797			.000
Competing Values Approach	CVA4	0.904	0.936	0.771	.000
	CVA3	0.94			.000
	CVA2	0.824			.000
	CVA1	0.841			.000

CR =Composite Reliability and Average, AVE=Variance Extracted

Fornell and Larcker (1981) method was used to assess discriminant validity. He suggested that to support for discriminant validity if the square root of the AVE for a latent construct is greater than the correlation values among all the latent variables. Table (4) shows that the square root of the AVE values of all the constructs are greater than the inter-construct correlations which supports the discriminant validity of the constructs. Also, the goodness-of-fit statistics of the measurement model indicated a good fit to the data (CMIN/df=1.903, GFI=.0.913, TLI=.909, CFI=.901, RMSEA=.084). Thus, the measurement model reflects good construct validity and desirable psychometric properties.

Table 4. Discriminant validity of the constructs

	TD	T_D	OD	CD	GA	SRA	CVA
TD	<b>0.883</b>						
T_D	0.823	<b>0.858</b>					
OD	0.816	0.857	<b>0.886</b>				
CD	0.785	0.827	0.866	<b>0.899</b>			
GA	0.798	0.836	0.821	0.850	<b>0.880</b>		
SRA	0.788	0.848	0.871	0.808	0.857	<b>0.795</b>	
CVA	0.0685	0.744	0.754	0.737	0.841	0.745	<b>0.886</b>

Notes: Bold values in diagonal represent the squared root estimate of AVE.TD=Talent Development, T&D=Training & Development, OD=Organizational Development, CD=Career Development, GA=Goal Approach, SRA=System Resource Approach, CVA=Competing Values Approach.

### 4.1.3. Test of hypotheses

The proposed model indicates that HRD constructs i.e. (talent development, training and development, organizational development and career development) have an influence on organizational effectiveness within the investigated Iraqi universities. Structured equation modeling (SEM) was used to test this hypothesized model. The results (Table 5 and figure 1) show that all the four hypothesized relationships between HRD practices and organizational effectiveness are significant and thus all the hypotheses are supported. Moreover, the positive significant relationships include, (1) talent development and organizational effectiveness ( $\beta=0.13$ ,  $p<0.044$ ) supporting H1; (2) training and development and organizational effectiveness ( $\beta=0.57$ ,  $p<0.000$ ) confirmed H2; (3) organizational development and organizational effectiveness ( $\beta=0.63$ ;  $p<0.000$ ) that supports H3; (4) career development and organizational effectiveness ( $\beta=0.20$ ,  $p<0.000$ ) confirming H4.

Table 5. Result of hypothesis analysis

NO.	Hypotheses	Beta Coefficient	P.Value	Result
H1	Talent development→ Organizational effectiveness	0.13	0.044	Supported
H2	Training & development→ Organizational effectiveness	0.57	0.000	Supported
H3	Organizational development→ Organizational effectiveness	0.63	0.000	Supported
H4	Career development→ Organizational effectiveness	0.20	0.003	Supported

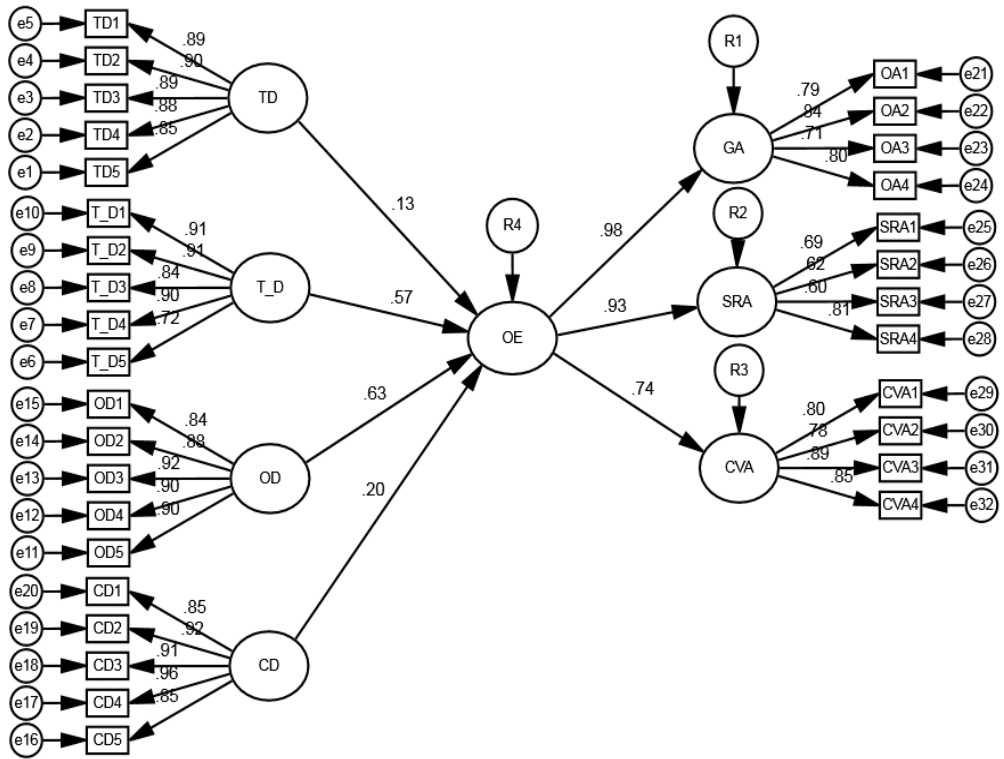


Figure 1. The SEM model analysis of HRD and OE

#### 4.2. The impact of dynamic capabilities on organizational effectiveness

This study aims to investigate the impact of dynamic capabilities constructs i.e. sensing capability, learning capability, and reconfiguration capability on organizational effectiveness in the selected Iraqi public universities context. This study adopted the survey method to collect primary data. An online questionnaire was distributed to around 342 employees, out of which 215 completed questionnaires were obtained. The reliability and validity of the dimensions are assessed through confirmatory factor analysis (CFA) and the hypotheses are tested by using structural equation modeling SEM. The analytical results indicate that sensing capability does not have a positive impact on organizational effectiveness while learning capability and reconfiguration capability have a positive impact on organizational effectiveness. Thus, this study provides a better understanding of the effects of

dynamic capabilities. The results of this study have the potential to help the decision-makers of universities to develop learning capability and reconfiguration capability, in turn, universities will be able to achieve superior organizational effectiveness.

#### 4.2.1. Descriptive statistics

Table 6 shows a descriptive analysis (mean and standard deviation) of the data and the correlations matrix among variables. The means score for dynamic capabilities constructs (SC, LC, RC) and organizational effectiveness constructs (GA, SRA, CVA) are located between (3.38-3.80) and standard deviation (1.48-1.62) that indicates a good implementation of dynamic capabilities in enhancement organizational effectiveness in the selected public universities of Iraq. Also, the results show that each of the constructs is positively and significantly correlated to each other.

Table 6. Descriptive and correlation results

	Mean	S. D	SC	LC	RC	GA	SRA	CVA
SC	3.38	1.53	1.000					
LC	3.41	1.54	.891**	1.000				
RC	3.53	1.56	.854**	.867**	1.000			
GA	3.80	1.62	.806**	.843**	.844**	1.000		
SRA	3.44	1.48	.778**	.840**	.818**	.854**	1.000	
CVA	3.80	1.53	.671**	.711**	.719**	.758**	.733**	1.000

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

SC=Sensing Capability, LC=learning Capability= Reconfiguring Capability, GA=Goal Approach, SRA=System Resource Approach, CVA=Competing Values Approach

#### 4.2.2. Reliability and Validity

In this study and before testing the hypotheses reliability and validity of measurement scales were assessed by using confirmatory factor analysis (CFA), employing the statistics program AMOS 24 to estimate the face validity, convergent validity, discriminant validity and goodness of fit statistics. Face validity was established by adopting the scales from the existing literature and adapting them to the current study. The reliability of the scales was evaluated using Cronbach's alpha coefficient. As it is seen in table 11,

Cronbach’s alpha coefficient for all constructs ranges between 0.874 and 0.953 and it is considered acceptable which indicates that all the items are internally consistent (Hair et al., 2010). In order to determine the convergent validity, there are three important indicators of convergent validity are factor loadings (standardized estimates), Average Variance Extracted (AVE) and Composite Reliability (CR). (Hair et al., 2006) suggests that the items with loadings in between .50 to .70 can be maintained. This study investigates that the item loadings all exceeded the threshold value and statistically significant ( $p < 0.05$ ) (see table 7). Composite reliability (CR) for all constructs ranges between 0.872 and 0.955 which are above 0.50 that indicates that all the constructs have a good level of composite reliability (CR) as recommended by (Hair et al., 2012). The average variance extracted (AVE) value for all the constructs are in the range between .618 to .808 which are above the threshold value .50 which is suggested by (Hair et al., 2010).

Table 7. Constructs evaluation

Constructs	Measurement Items	Factor Loading	CR	AVE	P.Value
Sensing Capability	SC1	0.769	0.767	0.709	.000
	SC2	Deleted			.000
	SC3	0.769			.000
	SC4	0.915			.000
	SC5	0.876			.000
Learning Capability	LC1	0.875	0.899	0.827	.000
	LC2	0.871			.000
	LC3	0.919			.000
	LC4	0.961			.000
	LC5	0.918			.000
Reconfiguration Capability	RC1	0.818	0.837	0.762	.000
	RC2	0.783			.000
	RC3	0.938			.000
	RC4	0.951			.000
	RC5	0.863			.000
Goal Approach	GA4	0.901			.000
	GA3	0.837			.000

	GA2	0.904	0.932	0.789	.000
	GA1	0.91			.000
System Resource Approach	SRA4	0.883	0.872	0.632	.000
	SRA3	0.733			.000
	SRA2	0.722			.000
	SRA1	0.797			.000
Competing Values Approach	CVA4	0.904	0.936	0.772	.000
	CVA3	0.94			.000
	CVA2	0.824			.000
	CVA1	0.841			.000

CR =Composite Reliability and Average, AVE=Variance Extracted

Discriminant validity was assessed by using two methods: First, (Fornell and Larcker, 1981) method. He suggested that to support for discriminant validity if the square root of the AVE for a latent construct is greater than the correlation values among all the latent variables. Table (8) shows that the square root of the AVE values of all the constructs is greater than the inter-construct correlations which supports the discriminant validity of the constructs. Second, if AVE for a latent construct is larger than the maximum shared variance with other latent constructs (Hair et al., 2010). Finally, the goodness-of-fit measures were used to assess the fitness of a measurement model. The results, indicate a good model fit to the data (CMIN/df= 1.077, GFI=0.973, TLI= 0.998, CFI=0.999, RMSEA=0.027). Thus, the measurement model indicates a good construct validity and desirable psychometric properties.

Table 8. Discriminant validity of the constructs

	AVE	MSV	SC	LC	RC	GA	SRA	CVA
SC	0.709	0.697	<b>0.842</b>					
LC	0.827	0.807	0.723	<b>0.909</b>				
RC	0.762	0.714	0.801	0.621	<b>0.872</b>			
GA	0.789	0.701	0.721	0.653	0.812	<b>0.880</b>		
SRA	0.632	0.501	0.765	0.541	0.700	0.695	<b>0.795</b>	
CVA	0.772	0.727	0.321	0.652	0.756	0.691	0.609	<b>0.886</b>

Notes: Bold values in diagonal represent the squared root estimate of AVE  
 AVE= Average Variance Extracted, MSV= Maximum shared variance, SC=Sensing Capability,  
 LC=learning Capability= Reconfiguring Capability, GA=Goal Approach, SRA=System Resource  
 Approach, CVA=Competing Values Approach

### 4.2.3. Test of hypotheses

The proposed model demonstrates that dynamic capabilities constructs i.e. (sensing capability, learning capability, and reconfiguration capability) have a significant influence on organizational effectiveness. Structured equation modeling (SEM) was used to test this hypothesized model. (Table 9 and figure 2 ) show the results that (H1) is not supported, that means sensing capability has an insignificant influence on the organizational effectiveness ( $\beta=-0.10$ ,  $p<0.0854$ ). The hypotheses (H2 and H3) are supported. Moreover, the positive significant influence includes, (1) learning capability and organizational effectiveness ( $\beta=0.685$ ,  $p<0.001$ ) supporting H2; (2) reconfiguration capability and organizational effectiveness ( $\beta=0.616$ ,  $p<0.001$ ) confirmed H3.

Table 9. Result of hypothesis analysis

NO.	Hypotheses	Beta Coefficient	P.Value	Result
H1	Sensing capability → Organizational effectiveness	-0.10	0.854	Not Supported
H2	Learning capability → Organizational effectiveness	0.685	0.001	Supported
H3	Reconfiguration capability → Organizational effectiveness	0.616	0.001	Supported

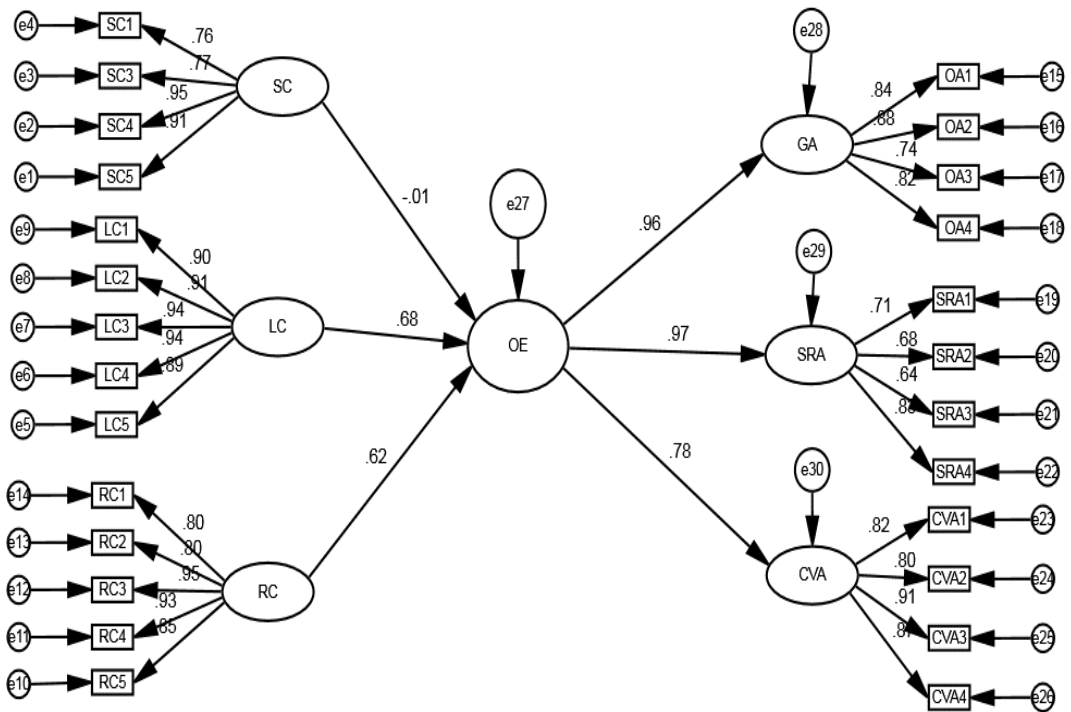


Figure 2. The SEM model analysis of DC and OE

### 4.3. Mediating role of dynamic capabilities on the relationship between human resource development and organizational effectiveness

The main purpose of this study is to examine the mediating role of dynamic capabilities on the relationship between human resources development and organizational effectiveness in the Iraqi public universities context.

Data were collected through an online questionnaire survey from 215 executive and non-executive employees working in the selected public universities in Iraq. Structural equation modeling (SEM) was employed to test the proposed research model.

The analyzed data supported all the hypothesized relationships of the study. This study finds that HRD practices have a significant influence on organizational effectiveness and dynamic capabilities. Further, dynamic capabilities significantly influence on organizational effectiveness. Also, the study empirically supports the mediating effect of dynamic capabilities on the relationship between HRD practices and organizational effectiveness.



In the literature, there is still a lack of how HRD practices impact on organizational effectiveness through the mechanisms of dynamic capabilities. Therefore, this research contributes to the literature by pointing out the mediating role of dynamic capabilities on the relationship between HRD and organizational effectiveness. Based on the existing literature and empirical results, the study provides the theoretical and practical implications which are further discussed in detail.

#### 4.3.1. Descriptive statistics

Table 10 shows a descriptive analysis (mean and standard deviation) of the data and the correlations matrix among variables. The means score for all the constructs is located between (3.29-3.80) and standard deviation (1.48-1.62) that indicates a good implementation of HRD practices and dynamic capabilities in enhancement organizational effectiveness in the selected public universities of Iraq. Also, the results show that each of the constructs is positively and significantly correlated with each other.

Table 10. Descriptive and correlation results

	Me an	S. D	T D	T& D	OD	CD	SC	LC	RC	GA	SR A	CV A	HR D	DC s	OE
TD	3.2 9	1.59	1.0												
T& D	3.4 9	1.56	.77 **	1.0											
OD	3.4 6	1.60	.77 **	.82 **	1.0										
CD	3.3 5	1.59	.75 **	.79 **	.83 **	1.0									
SC	3.3 8	1.53	.79 **	.79 **	.84 **	.80 **	1.0								
LC	3.4 1	1.54	.80 **	.81 **	.86 **	.84 **	.88 **	1.0							
RC	3.5 3	1.56	.77 **	.81 **	.84 **	.79 **	.84 **	.86 **	1.0						
GA	3.8 0	1.62	.73 **	.83 **	.85 **	.78 **	.80 **	.84 **	.84 **	1.0					
SRA	3.4 4	1.48	.70 **	.79 **	.76 **	.71 **	.77 **	.85 **	.82 **	.85 **	1.0				
CV A	3.8 0	1.53	.62 **	.69 **	.70 **	.69 **	.67 **	.72 **	.73 **	.77 **	.74 **	1.0			

HR D	3.39	1.58	.90**	.92**	.93**	.92**	.87**	.90**	.87**	.87**	.80**	.74**	1.0		
DCs	3.44	1.54	.82**	.84**	.88**	.85**	.95**	.96**	.94**	.87**	.85**	.74**	.92**	1.0	
OE	3.68	1.54	.73**	.83**	.83**	.79**	.80**	.87**	.86**	.94**	.93**	.90**	.87**	.88**	1.0

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

HRD=Human Resource Development, DCs=Dynamic Capabilities, OE=Organizational Effectiveness, TD=Talent Development, T&D=Training & Development, OD=Organizational Development, CD=Career Development SC=Sensing Capability, LC=learning Capability= Reconfiguring Capability, GA=Goal Approach, SRA=System Resource Approach, CVA=Competing Values Approach. Measurement Items used for calculation of the listed variables are explained in Appendix 1.

#### 4.3.2. Measurement model

To assess the validity of the measurement model and to test the fitting of the data with the proposed model confirmatory factor analysis (CFA) was used to assess the fitness of a measurement model. This study used some indexes like CMIN/df, GFI, TLI, CFI, and RMSEA to investigate the goodness of fit of the model. Table 11 presents the results of the index of confirmatory factor analysis. The results indicate that the goodness-of-fit indicators of all three models are satisfied with the suggested threshold value by (Jacob et al., 2003) thus, indicated good model fitness.

Table 11. Index of confirmatory factor analysis

	HRD model	DC model	OE model
CMIN/df	1.895	1.547	1.828
GFI	0.874	0.883	0.900
TLI	0.931	0.970	0.955
CFI	0.944	0.978	0.973
RMSEA	0.0721	0.073	0.070

#### 4.3.3. Reliability and validity

In this study and before testing the hypotheses reliability and validity of measurement scales were assessed by using confirmatory factor analysis (CFA), and AMOS 24 was used to estimate convergent validity and discriminant validity. The reliability of the scales was evaluated using Cronbach's alpha coefficient as it is seen in table 16, Cronbach's alpha

coefficient for all constructs ranges between 0.874 and 0.962 and it is considered acceptable which indicates that all the items are internally consistent (Hair et al., 2010). In order to determine the convergent validity, there are three important indicators of convergent validity which are factor loadings (standardized estimates), Average Variance Extracted (AVE) and Composite Reliability (CR). Hair et al., (2006) suggests that the items with loadings in between .50 to .70 can be maintained. This study investigates that the item loadings all exceeded the threshold value and statistically significant ( $p < 0.05$ ) (see table 12). Composite reliability (CR) for all constructs ranges between 0.767 and 0.955 which are above 0.50 that indicates that all the constructs have a good level of composite reliability (CR) as recommended by (Hair et al., 2012). The average variance extracted (AVE) value for all the constructs are in the range between .632 to .827 which are above the threshold value .50 which is suggested by (Hair et al., 2010).

Table 12. Constructs evaluation

Constructs	Measurement Items	Factor Loading	CR	AVE	P.Value
Talent Development	TD5	0.852	0.947	0.780	.000
	TD4	0.884			.000
	TD3	0.896			.000
	TD2	0.898			.000
	TD1	0.852			.000
Training & Development	T_D5	0.807	0.932	0.732	.000
	T_D4	0.902			.000
	T_D3	0.886			.000
	T_D2	0.855			.000
	T_D1	0.827			.000
Organizational Development	OD5	0.900	0.948	0.785	.000
	OD4	0.900			.000
	OD3	0.904			.000
	OD2	0.875			.000
	OD1	0.850			.000
Career Development	CD5	0.854	0.955	0.808	.000
	CD4	0.952			.000
	CD3	0.904			.000
	CD2	0.922			.000
	CD1	0.861			.000

Sensing Capability	SC1	0.769	0.767	0.709	.000
	SC2	Deleted			.000
	SC3	0.769			.000
	SC4	0.915			.000
	SC5	0.876			.000
Learning Capability	LC1	0.875	0.899	0.827	.000
	LC2	0.871			.000
	LC3	0.919			.000
	LC4	0.961			.000
	LC5	0.918			.000
Reconfiguration Capability	RC1	0.818	0.837	0.762	.000
	RC2	0.783			.000
	RC3	0.938			.000
	RC4	0.951			.000
	RC5	0.863			.000
Goal Approach	GA4	0.901	0.932	0.789	.000
	GA3	0.837			.000
	GA2	0.904			.000
	GA1	0.910			.000
System Resource Approach	SRA4	0.883	0.872	0.632	.000
	SRA3	0.733			.000
	SRA2	0.722			.000
	SRA1	0.797			.000
Competing Values Approach	CVA4	0.904	0.936	0.772	.000
	CVA3	0.940			.000
	CVA2	0.824			.000
	CVA1	0.841			.000

CR =Composite Reliability and Average, AVE=Variance Extracted

Discriminant validity was assessed by using two methods: First, (Fornell and Larcker, 1981) method. He suggested that to support for discriminant validity if the square root of the AVE for a latent construct is greater than the correlation values among all the latent variables. Table (13) shows that the square root of the AVE values of all the constructs is greater than the inter-construct correlations which supports the discriminant validity of the constructs. Second, (Hair et al., 2010) he suggests if AVE for a latent construct is larger than the maximum shared variance with other latent constructs that indicates discriminant validity can be maintained. Thus, the measurement model indicates a good construct validity and desirable psychometric properties.

Table 13. Discriminant validity of the constructs

	AVE	MSV	TD	T_D	OD	CD	SC	LC	RC	GA	SRA	CVA
TD	0.780	0.682	<b>0.883</b>									
T_D	0.732	0.706	0.823	<b>0.855</b>								
OD	0.785	0.749	0.816	0.817	<b>0.886</b>							
CD	0.808	0.664	0.785	0.827	0.866	<b>0.898</b>						
SC	0.709	0.697	0.532	0.721	0.781	0.421	<b>0.842</b>					
LC	0.827	0.807	0.621	0.608	0.801	0.305	0.723	<b>0.909</b>				
RC	0.762	0.714	0.712	0.512	0.601	0.541	0.801	0.621	<b>0.872</b>			
GA	0.789	0.701	0.798	0.836	0.821	0.850	0.721	0.653	0.812	<b>0.888</b>		
SRA	0.632	0.501	0.788	0.648	0.771	0.708	0.765	0.541	0.700	0.695	<b>0.795</b>	
CVA	0.772	0.727	0.068	0.744	0.754	0.737	0.321	0.652	0.756	0.691	0.609	<b>0.886</b>

Notes: Bold values in diagonal represent the squared root estimate of AVE

AVE= Average Variance Extracted, MSV= Maximum shared variance

#### 4.3.4. Common method bias checks

Due to this research is employed a cross-sectional with a self-report questionnaire, common method variance (CMV) may affect systematic measurement accuracy (Podsakoff and Organ, 1986). Harman's single-factor test was used to address this issue by using exploratory factor analysis (EFA). The results show that the total variance for a single factor is less than 50% which means that common method bias does not confound the interpretations of the results.

#### 4.3.5. The structural model: test of hypotheses

##### 4.3.5.1. The direct effects

Structured equation modeling (SEM) was used to test the hypothesized model. The results of the proposed structural model show the good fit (CMIN/df= 1.418, GFI=0.925, TLI= 0.986, CFI=0.990, RMSEA=0.064). In order to verify the following hypotheses, H1, H2, H3 direct effects were assessed. The results, presented in (Figure 3 and Table 14) indicate that the three hypotheses are supported. In particular, HRD practices have a significant impact on organizational effectiveness ( $\beta=0.390$ ,  $p<0.001$ ) supporting H1. Similarly, the results revealed that HRD practices have a significant impact on the dynamic capabilities ( $\beta=0.982$ ,  $p<0.001$ ), therefore the hypothesis H2 is supported. Also, the results confirmed that dynamic capabilities significantly influence

organizational effectiveness ( $\beta=0.568$ ,  $p<0.001$ ) which is supporting the hypothesis H3.

Table 14. Results of direct effects

NO.	Hypotheses path	Beta Coefficient	P. Value	Result
H1	HRD→OE	0.390	0.001	Supported
H2	HRD → DC	0.982	0.001	Supported
H3	DC→ OE	0.568	0.001	Supported

#### 4.3.5.2. The mediating effects

In order to test hypothesis H4 indirect effect was assessed. The results showed in table 15 indicate that dynamic capabilities are significantly mediate the relationship between HRD practices and organizational effectiveness ( $\beta=0.558$ ,  $p<0.001$ ). Also, the bootstrapping was used in order to calculate the 95% confidence interval of the indirect. The results show there is no zero between lower and upper limits which is provided evidence that hypothesis H4 is supported.

Table 15. Results of mediating effect

NO.	Hypotheses path	Beta Coefficient	P. Value	95%LL	95%UL	Result
H4	HRD→ DC→ OE	0.558	0.001	0.073	0.533	Supported

Hypothesis is supported, when there is no zero between lower and upper limits, LL: Lower limit, UL: Upper limit

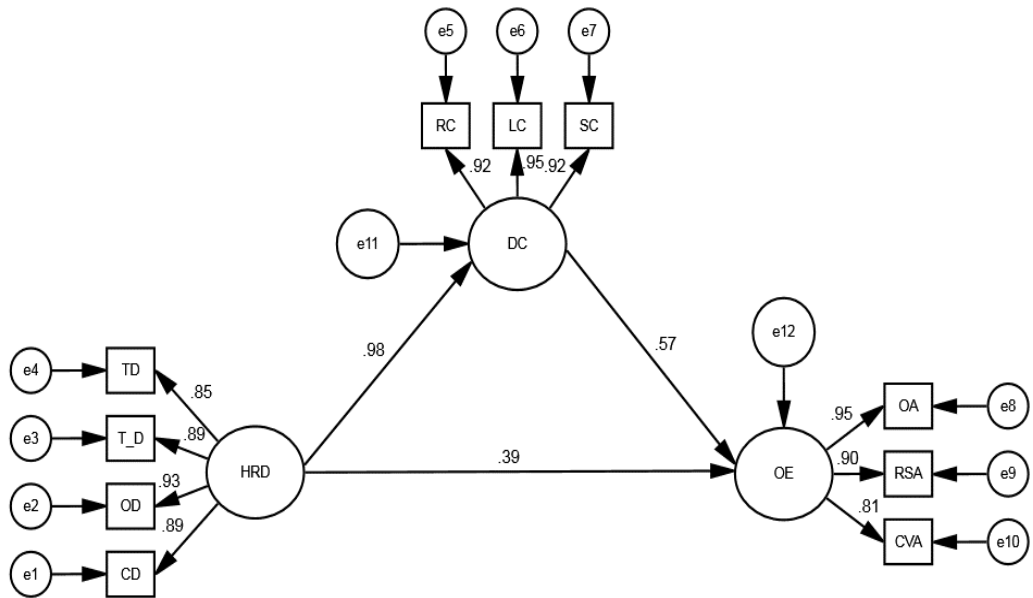


Figure 3. The SEM model analysis of HRD, DC and OE

## 5. DISCUSSION AND CONCLUSION

The study sought to increase the understanding the impact of human resource development on organizational effectiveness and explores the mediating role of dynamic capabilities on the relationship between human resource development and organizational effectiveness in the Iraqi public universities context. This dissertation reveals important empirical results that make a significant contribution to address the research questions and hypotheses. To do so, this dissertation conducted three empirical studies. The first study is presented in chapter four which investigates the impact of human resource development practices i.e. talent development, training and development, organizational development, and career development. The results confirmed that all HRD practices have a significant positive impact on organizational effectiveness and thus all the hypotheses are supported. The findings of this study are in line with the suggestions of (Otoo and Mishra,2018; Potnuru and Sahoo,2016; Alagaraja et al.,2015; Nilsson and Ellstrom,2012). This study

concludes that all the HRD practices are significant predictors of organizational effectiveness of the Iraqi public universities.

Chapter five presents the second empirical study which highlights the impact of dynamic capabilities on organizational effectiveness. The empirical results of this study show several key findings: First, analytical results show that sensing capability has no significant impact on organizational effectiveness. The reason underlying this may be that sensing capability impacts indirectly on organizational effectiveness. Second, the analytical results confirm that learning capability significantly affects the organizational effectiveness, which is in line with the suggestions of (Wilhelm et al.,2015) and (Helfat et al,2007). Third, the results show that reconfiguration capability significantly and positively impacts the organizational effectiveness, which is in line with the opinion of (Teece et al.,1997) and (Eisenhardt and Martin, 2000). In conclusion, the Iraqi public universities can achieve superior organizational effectiveness by using learning capability and reconfiguring capability. Lastly, in chapter six I investigate the mediating role of dynamic capabilities on the relationship between human resource development and organizational effectiveness. This study provides evidence that dynamic capabilities are significantly mediate the relationship between HRD practices and organizational effectiveness which is in line with the opinions (Zollo and Winter 2002; Aminu and Mahmood, 2015). In conclusion, this study argues that the relationship between HRD practices and organizational effectiveness is not direct in changing business environments but through the mediating role of dynamic capabilities. Consequently, in such shifts and turbulences in business environments, organizations need to develop not only human resource but also dynamic capabilities for sensing environmental conditions, learning response patterns and reconfiguring operating routines, in turn, organizations will be able to achieve superior organizational effectiveness.



## **5.1. Theoretical implications**

Regarding to the theoretical contribution, this dissertation tries to address the gap and under-explored issues in the literature in several ways. First, the dissertation contributes to the emerging knowledge on the linkage between human resource development and organizational effectiveness through providing an empirical model which shows that HRD practices significantly impact on organizational effectiveness. Second, this dissertation attempts to understand and empirically test the relationship between dynamic capabilities and organizational effectiveness. Third, the study empirically supports the mediating effect of dynamic capabilities on the relationship between HRD practices and organizational effectiveness. Despite of that HRD, dynamic capabilities and organizational effectiveness have attracted considerable attention in the literature but, only very limited studies have highlighted the mediating role of HRD capabilities in the relationships between HRD and organizational effectiveness. Therefore, the empirical findings of this study have potential significance to fill the gap in the literature. Fourth, this dissertation sought to understand and empirically measure three critical managerial and organizational processes. This study determined the HRD practices in four measured dimensions i.e. talent development, training and development, organizational development and career development. Dynamic capabilities were measured in three dimensions: sensing capability, learning capability, and reconfiguration capability which are explicit constructs. Organizational effectiveness was measured in three approaches i.e. goal approach, system resource approach, competing values approach. Thus, it shows that these variables are not obscure abstractions that cannot be measured and managed, but specific processes which can be further, theoretically and empirically, explored and, in turn, to understand the nature their nature.

## **5.2. Managerial implications**

Besides the theoretical implications, this dissertation provides key practical implications for universities management. First, this study has confirmed the significance of HRD practices and how they are positively related to organizational effectiveness. The results of this study have potential to help the decision-makers of universities to develop effective HRD practices which will enable them to improve employees' competencies in order to enhance organizational effectiveness. Second, this dissertation sought to help decision-makers of universities on how to build and develop dynamic capabilities such as acquire new knowledge and integrate it into the existing structures through learning capability and how to create new capabilities, rebuild resources and organizational structures to address the environmental turbulence through reconfiguration capability, in turn, universities will be able to achieve superior organizational effectiveness. Third, the present study provides significant insight and demonstrates a good understanding of integration HRD practices, dynamic capabilities, and organizational effectiveness. In rapidly changing environments, HRD is often not enough to support organizational effectiveness. The universities management should develop not only HRD practices but, also adopt dynamic capabilities mechanisms to improve organizational effectiveness.

## **5.3. Limitations and future research**

Despite of the theoretical and managerial contributions, this study has some limitations that need to be addressed in future research as follows:

1. This study focuses on the top ten Iraqi public universities context, which may not be exclusively generalizable to other sectors. Therefore; future research may investigate this phenomenon in other businesses and economic context
2. This study adopts a cross-sectional research method for data collection, which does not allow the researcher to examine the causality of the

relationships between the variables in greater depth. Thus, future research should aim to use longitudinal data which could explain the highlighted relationships more insights.

3. This study focuses on four dimensions of HRD, three dimensions of dynamic capabilities and three dimensions of organizational effectiveness. therefore, future research may include other potential dimensions.

4. The results of this study are limited to the instruments used. The research instrument may not have been properly prepared to reflect all the variables of the study.

5. The questionnaire was translated into Arabic since English is the language of the study. The translated version may not have been entirely precise to the original English version.

6. The respondents may not have had sufficient knowledge or information to respond accurately to the survey instrument.

7. The perceptions of respondents may have been influenced by the respondents 'positions within their organizations as well as personal goals, employment experience, educational background, and ethnicity.

## **6. THE NEW SCIENTIFIC RESULTS**

The empirical analysis of structured equation modeling (SEM) has shown several new scientific findings as follows:

1.The empirical results show that HRD practices such as talent development, training and development, organizational development and career development have a significant potential to configure in such a way that employees can perform effectively and meet job requirements through improving employees' competencies, in turn, enhance universities' effectiveness.

2.The empirical results demonstrate that comprehensive implementation of HRD practices enhances the building of dynamic capabilities within universities to address the rapidly changing in the environments.

3.The analytical results confirm that developing the dynamic capabilities of universities in a changing environment is that throughout improving learning capabilities and the reconfiguring activities that help universities to maintain their leadership in innovation-based competitive environments.

4.The empirical results validate that developing the dynamic capabilities of universities play a vital role in the integration between HRD and organizational effectiveness in a dynamic environment.

## **7. PUBLICATIONS IN THE FIELD OF THE THESIS**

### **Paper in scientific journals**

Kareem, M. A.and Mijbas, H.A (2019). Mediating Role of Dynamic Capabilities on the Relationship between Human Resource Development and Organizational Effectiveness. *Organizacija Journal*, Volume 53, Issue 3. DOI: 10.2478/orga-2019-0012.

Kareem, M. A., and Hussein, I.J, (2019). The Impact of Human Resource Development on Employee Performance and Organizational Effectiveness: An Empirical Study. *Management Dynamics in the Knowledge Economy Journal*, Vol.7, No.3. DOI 10.25019/MDKE/7.3.02

Kareem, M. A., and Alameer, A.A. (2019). The Impact of Dynamic Capabilities on Organizational Effectiveness.*Management & Marketing. Challenges for the Knowledge Society*. Vol. 14, No. 4, Winter, pp. 402-418 DOI: 10.2478/mmcks-2019-0028.

Kareem, M. A. (2019). The Impact of Human Resource Development on Organizational Effectiveness: An Empirical Study. *Journal of Management Dynamics in the Knowledge Economy*, 7(1), 29-50, ISSN 2392-8042, DOI 10.25019/MDKE/7.1.02.

Kareem, M. A., and Mezei, C.(2018). The Role of Human Resource Development on Organizational Effectiveness Considering the

Mediating Role of Internal Marketing, *Köztes Európa : társadalomtudományi folyóirat : a Virtuális Intézet Közép-Európa Kutatására közleményei, évfolyam 1. szám, No. 23, ISSN 2064-437X*

Kareem, M. A. (2017). The Relationship Between Human Resource Management Strategies and Competitive Advantage, *International Journal of Business and General Management (IJBGM)*; Vol. 6, Issue 5, P.77-86, ISSN(E): 2319-2275.

### **Books**

Kareem, M. A. (2018). The Impact of Human Capital on Organizational Innovativeness, LAP Lambert Academic Publishing, Beau Bassin, Mauritius, ISBN 978-3-659-85852-9.

### **Full paper in conference proceedings**

Kareem, M. A., and Mezei, C. (2017). The Role of Human Capital Development in Achieving Sustainable Economic Development of Developing countries case study Iraq, 6th. International Conference of Economic Science, Kaposvár University, Kaposvár, Hungary, ISBN 978-615-5599-42-2.

Kareem, M. A., and Mezei, C. (2017). The Role of Human Resources Development Strategy in Achieving Corporate Social Responsibility: At SMEs Level, 21st European Scientific Conference of Doctoral Students, Mendel University in Brno, Czech Republic, ISBN 978-80-7509-555.

### **Abstract in Conference proceedings**

Kareem, M. A. (2019). The Impact of Dynamic Capabilities on Organizational Effectiveness. The 2nd Conference of Sustainable Solutions for Growth (SSG), Wrocław, Poland, ISBN

Kareem, M. A. (2018). Human Capital Development and Regional Development, 3rd International Young Researcher Scientific Conference “Sustainable Regional Development -Challenges of Space and Society in the 21st Century”, Szent István University, Gödöllő, Hungary, ISBN 978-963-269-730-7.

Kareem, M. A., and Mezei, C. (2018). The Impact of Human Resource Development on Employee Performance and Organizational Effectiveness: An Empirical Study, Management International Conference (MIC), Bled, Slovenia, ISBN 978-961-7023-90-9.

### **Poster in conference**

Kareem, M. A. (2019). The Impact of Human Resource Development on Organizational Effectiveness, VIII International Scientific Conference: Contemporary Economic “Social-Economic Problems in Globalization Era – Theory and Practice”, Toruń, Poland.