



# Measuring the Impact of Human Resource Management Practices on Organizational Performance with the Mediating Role of Supply Chain Performance between Them in Saudi Industrial Large Organizations

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## Abstract

The main objective of this study is to measure the impact of human resource management practices on organizational performance of the Saudi industrial organizations, with analysing the mediating role of supply chain performance in the relationship between human resource management practices and organizational performance. Study population included all Saudi organizations registered in Commerce Industrial Chamber in the Eastern Province. Two hundred seventy-four (274) questionnaires were distributed. The number of correct questionnaires was 218, representing 79.6% of the total number of distributed questionnaires. The study results confirmed the existence of a significant positive impact of human resources management practices on the efficiency of supply chain performance and organizational performance. The results of this study revealed that the HR practices affect the efficiency and effectiveness of supply chain performance, and then the organizational performance. The results also confirmed that the supply chain performance plays the mediating role in that relationship. Therefore, it is essential that Saudi organizations try to exert endeavors to implement exclusive ranges of human resource management practices to assist them in achieving an excellent level of organizational performance.

**Key Words:** Organizational performance, supply chain performance, human resources management practices, and Saudi Industrial Large Organizations.

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## INTRODUCTION

The increasing attention toward HRM led to build a base of empirical researches that provided moral connotations in their studies of the impact of different HRM practices on corporate performance and organizational performance. However, researchers did not draw enough attention to understand the mechanisms by which HRM practices affect the organizations performance. In spite of the fact that this type of researches play a key role in emphasizing the importance of HR, but there are a few researches which have been conducted in this area. Through reviewing the literatures that have tested theoretical construction of HRM practices, we discover that the approach adopted by the researchers are the descriptive approach limited to the link between HRM practices and the organization performance or organizational performance. However, some researchers have concluded the results that confirm the existence of a significant relationship between the HRM practices and some significant variables that help to increase the organizational performance level and contribute in achieving an excellent level of organizational performance.

## LITERATURE

### Human Resource Management Practices

HRM is viewed as an integrated strategy and planned development process for the effective use of HR to achieve organizational goals. HRM involves the development of individual's capabilities and trends in a similar manner to achieve personal growth and the contribution to achieve organizational interests. Noe et al., (2006) defined HRM as it refers to the policies, practices, and systems that affect the behavior, attitudes, and performance of staff. However, the important thing is to determine the limits of HRM practices. Hornsby and Kur atko (2003) identified HRM practices in five key areas: Jobs analysis and description, recruitment and selection, training, performance appraisal and compensation. Huselid (1995) identified HRM practices as staff recruitment, selection procedures, compensation systems and performance management, and staff involvement and training. Jeffrey and Donald (2003) suggested that HRM practices include job analysis, recruitment, selection, compensation, benefits, incentives, performance evaluation, and training. Mondy et al. (2002) believed that HRM practices include five basic functions, involving recruitment, human resources development, compensation, benefits, safety and health, labor and personnel relationships. Many studies demonstrated that such practices could lead to the promotion of non-traditional features of HR to help the organization to obtain a competitive advantage and enhance its performance (Delaney and Huselid, 1996; Ahmad and Schroeder, 2002; Guest et al., 2003; Qureshi and Ramay, 2006).

The basic idea about the best HRM practices is that a certain set of these practices has the ability to provide a sort of performance improvement and organizational performance for all organizations (Marchinton and Wilkinson, 2003). Therefore, all organizations must define and implement the best HRM practices in their efforts to improve their performance. There are enough evidences that some types of HRM practices are associated with the performance. However, the effective HRM practices differ in each research. The practices referred to usually include the best practices, the most important of which are: High levels of teamwork, performance-related pay, decision-making decentralization, the overall procedures of staff selection and recruitment, intensive training, the staff participation and internal communication arrangements, interior career opportunities, and large-scale job description (Wiesner and McDonald, 2001; Guest et al., 2003; Michie and Sheehan, 2005).

### Supply Chain Performance

Most companies do not have a clear vision for developing efficient performance measures to measure the supply chain performance (Shepherd and Günter, 2006). Sukati et al., (2012) confirmed that the ratification of the supply chain performance should include three different

types of performance measurement, resources measurement, outputs and flexibility measurement. All these types have the same amount of importance in measuring the supply chain performance of industrial companies. Despite the enormous wealth of information available about the different methods to measure the supply chain performance, the researchers still refer to the need for studies to be continued in this field. That is due to the lack of a comprehensive measure of the supply chain for all positions. The existing measure is characterized by lack of clarity (Qrunfleh and Tarafdar, 2012).

There is no consensus among researchers on the best supply chain performance measures (Flynn et al., 2010; Ibrahim and Ogunyemi, 2012). Jeong and Hong (2007) measured the supply chain performance in terms of delivery reliability, responsiveness, flexibility, cost, and efficiency. Sezen (2008) used flexibility, outputs, resources performance in order to measure the supply chain performance. Lee et al., (2007) measured the supply chain performance through using the cost-containment measures and reliability. Ibrahim and Ogunyemi (2012) measured the supply chain performance through using supply chain flexibility and supply chain efficiency. The efficiency and effectiveness aspects have been widely used in the literature to measure the supply chain performance (Li et al., 2006; Lee et al., 2007; Ibrahim and Ogunyemi, 2012; Shatat, 2012).

### **Organizational Performance**

The researchers have not provided any standard definition of organizational performance (OP) (Ou et al., 2010). Some researchers measured the organizational performance of manufacturing enterprises using accounting data such as return on investment (Tan et al., 2002). Some authors, on the other hand, used marketing performance indicators such as product quality and development of new products (Lin et al., 2005). As a result, Li et al., (2006) used in their research the financial performance and financial indicators to measure organizational performance. Kristal et al., 2010, presented evidences in their study that organizational performance can be determined through financial statements. With regard to financial targets, Yang and Su (2009) published eighteen accounting variables to measure the performance of manufacturing companies. Some of these variables included: The rate of return on investment, market share, inventory turnover rate, return on assets, etc. Al-bahussain and El-garaihy, (2013) conducted a study indicating where they measured the impact of HRM practices on organizational performance using seven measurement factors.

## **CONCEPTUAL FRAMEWORK**

### **Human Resource Management Practices**

From the above discussion, the study suggests six key practices for HRM, which are likely to be positively associated with SC performance and organizational performance. The proposed practices are:

#### ***Training and Development***

'Training and development' is a formal training given to employees. It is designed to develop either technical skills or basic skills, such as work teams, and leadership (Delery and Doty, 1996). Harel and Tzafrir (1999) confirm that training affects performance in two ways: I. Training improves the skills and capabilities. II. Training increases staff satisfaction about their jobs and the workplace.

#### ***Teamwork***

Teamwork, or the so-called working team, refers to a group of employees created in order to perform tasks, certain activities, or to solve certain problems. The idea of teamwork indicates

that the people exchange knowledge, skill, judgment, and ideas among themselves to get the best results (Sang, 2005). According to Pfeffer (1998), teamwork provides many advantages including: (a) Teamwork relies on work based on peers, rather than the hierarchy, which leads to achieve more effectiveness. (b) Teamwork facilitates the flow of ideas and innovative solutions from team members. (c) Teamwork helps to save administrative costs.

### ***Compensation/Incentives***

Compensation or incentive depends on the performance, and the process of providing performance-based incentive compensation, which is considered one of the basic means used by organizations to promote and motivate staff (Delaney and Huselid, 1996). According to Gomez-Mejia et al., (2004) there are three types of compensation plans: The first one is the fixed compensation, the second is the incentive payments, and the third is the indirect compensation.

### ***Human Resources Planning***

'Human resources planning' includes expectations of staff needs, the budget required for the staff selection, the number of people participating in the selection, and interviews (Chang and Chen, 2002). Organizations usually need to predict the size of necessary employment requirements to meet future demand. According to Sang (2005), it is necessary to consider the following matters; a) what is the availability rate of manpower in the future? b) Are there enough potential young workers in the labor market, in the next two years or the next five years? c) What is the education level of these potential workers? And d) Do we need to help investment firms in the educational system to help raise the education level of prospective workers or not?

### ***Performance Evaluation***

The purpose of performance evaluation is to improve developing objectives, improve the feedback processes in order to directly, and correctly enable staff to improve their performance. According to Sang (2005), performance evaluation helps senior management to understand the existing workforce capabilities in the organization. Gomez-Mejia et al., (2004) suggested that the performance evaluation system could be used for administrative purposes related to employee work conditions, including the promotion, termination of employment, and bonuses.

### ***Job Security***

Job security means job safety by installing workforce and work continuity policies (Pawan, 2000). Job security is very important to determine the productivity of labor. The high degrees of job security provided to employees lead to more commitment the organization gets from the staff.

### ***The Relationship of HRM Practices, SC Performance, and Organizational Performance***

A number of studies have shown link between HRMP and the organizations performance. For example, Ahmad and Schroeder's (2003) tried to generalize seven effective HRMP proposed by Pfeffer (1998) in the field of industry. The seven HRM practices include; job security, selective employment, decentralization, work groups, compensation/incentives based on performance, intensive training, and information sharing. While operational performance included cost elements, quality, delivery, flexibility, and organizational commitment. The results offered by both researchers presented comprehensive support for the relationship between the seven HRM practices and performance. Chang and Chen (2002) conducted a comprehensive study to assess the relationship between HRM practices and performance in Taiwanese technology companies. Both researchers indicated that HRM practices such as training, development,

teamwork, benefits, human resources planning, and performance evaluation have a significant impact on employees' productivity.

Kuo (2004) conducted a study about the relationship between HRM practices, staff commitment, and performance in health care institutions in Taiwan. The study relied on a group of eleven HRM practices, including selective recruitment, interior job opportunities, human resources planning, training, job security, job descriptions, and work groups, incentive compensation, performance evaluation, staff participation, and staff communications. The researcher concluded that every practice of HRM practices has different degree of impact on the operational performance.

Sang (2005) conducted a study in an attempt to figure out the implications of HRM practices on business performance (operational performance and organization performance in general) in Cambodia and Taiwan. Sang (2005) selected nine practices of HRM, which are: (Human resource planning, recruitment, incentives, evaluation, training, teamwork, and staff participation, individual differences, job security), so as to explore the relationships with the perception of the company's performance (financial and non-financial performance). At the same time, the researcher also tested the nine HRM practices to monitor their effects on four performance criteria: Product quality, product cost, products delivery, and production flexibility. The study results indicated that human resource planning, recruitment; incentives, evaluation, training, teamwork, and staff participation have a positive impact on employee productivity, and organization performance in general.

There are a few papers that provided attempts to evaluate the relationship between HRM and SC management performance. These researches concluded that the development of supply chain management comes from the integration of manufacturing process and marketing process. These researches also confirmed that the performance measures of supply chain management dealt with various problems such as resources and efficiency, costs reduction, and customer service. This has demonstrated that the use of internal human resources development to strengthen the supply chain management practices still needs to be taught properly. These researches confirmed that these efforts would help organizations to improve supply chain performance management.

Based on the review of previous studies and what has been presented above, the proposed model for this study, Figure (1), indicates that HRM variables have been used as an external variable (independent), while the organizational performance variable has been used as a final variable (final dependent variable). The variable of supply chain performance has been used as internal variable of HRM practices, while it is considered in the same time as the external variable of organizational performance (mediator).

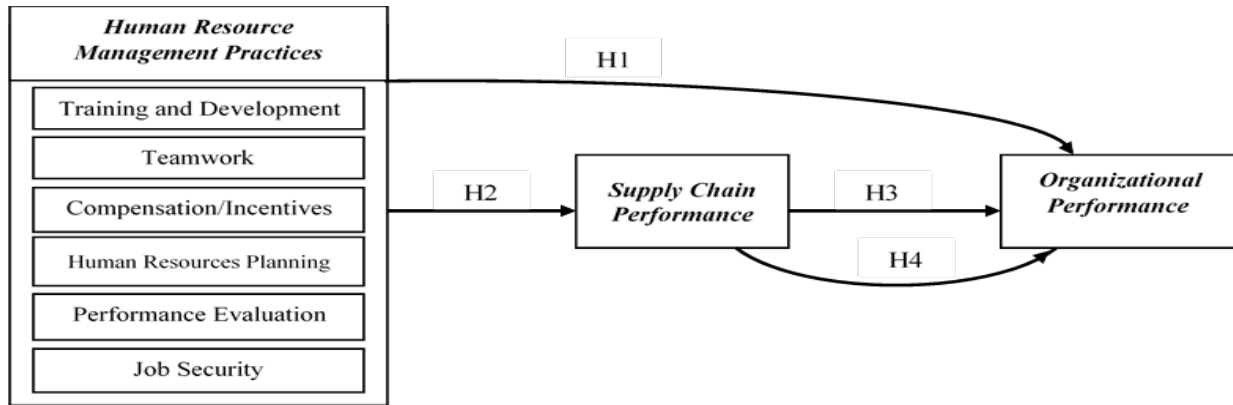
Based on the previous presentation and what was supposed to be drawn in the conceptual model of the study (Fig. 1): The following hypotheses could be concluded:

H1: HRM practices positively affect the organizational performance.

H2: HRM practices positively affect the supply chain performance.

H3: Supply chain performance has a positive impact on the organizational performance.

H4: Supply chain performance plays the mediating role between HRM practices and the organizational performance. This is the primary hypothesis, which includes the following sub-hypotheses:



**Figure (1) Proposed Study Model**

H4 (a): Supply chain performance plays mediating role between the practice of training, development, and organizational performance.

H4 (b): Supply chain performance plays mediating role between the practice of teamwork and organizational performance.

H4 (c): Supply chain performance plays mediating role between the practice of the compensation/incentives and organizational performance.

H4 (d): Supply chain performance plays mediating role between the practice of human resources planning and organizational performance.

H4 (e): Supply chain performance plays mediating role between the practice of performance evaluation and organizational performance.

H4 (f): Supply chain performance plays mediating role between the practice of job security and organizational performance.

### METHODOLOGY

It is essential to explore the impact of HRM practices on the organizational performance level, and examine the role of supply chain performance, as a mediator variable in the relationship between HR practices and organizational performance. This could help in proposing an integrated model to explore and analyze those relationships in Saudi Industrial Organizations, through the creation of a conceptual framework that contributes to study and embody those relationships. Thus, the current study seeks, through experiment and analysis, to provide a model to explore the impact of HRM practices on the organizational performance level, and examines the role of supply chain performance as a mediator variable between them. It then proposes a model to help to explore and analyze the relationship between them in the major industrial organizations in Saudi Arabia. Therefore, the current study tries to answer the following questions: Do HRM practices positively affect the level of supply chain performance? Do HRM practices positively affect the level of organizational performance? And, can supply chain performance play the mediating role in the relationship between HRM practices and organizational performance?

This study seeks to achieve a number of important goals, such as: determine HRM practices in the major Saudi organizations to explore their role in improving supply chain performance in those organizations; determine HRM practices in the major Saudi organizations to explore their role in improving organizational performance; and trying to propose a model that helps to explore and analyze the relationship between HRM practices and organizational performance, and the role of SC performance variable as a mediator between them. This could benefit those who are in charge of Saudi Arabia organizations to formulate the basic strategies for their organizations and to support their competitive position, on the one hand. They can also determine whether it was necessary to focus on the development of HRM practices in

those organizations to improve SC performance level, and improve organizational performance, on the other hand.

### **Study Population and Sample**

In order to verify the developed hypotheses, study population has involved all Saudi industrial organizations registered in the Eastern Province Chamber of Commerce on 01/03/2015. The total number of organizations is 448 (the list of the organizations' names is obtained from the Associate Members Department of Commerce Industrial Chamber, Eastern Province). The study sample was selected from the large industrial organizations. Large organizations are meant to be in our study (those organizations that have 200 workers or more), therefore the study sample consisted of 274 organizations. So, the number of distributed questionnaires is 274. The number of correct questionnaires is 218, representing 79.6% of the total number of distributed questionnaires. The survey approach was used to collect information from respondents of this study. SPSS 21, AMOS 21 programs have been used to conduct statistical analyzes.

### **Survey Design**

The survey list consists of three parts, including the following:

HR practices: The variable of HRM practices was measured, using six dimensions, developed by (Qureshi and Ramay, 2006). The six dimensions included training and development (ten elements), teamwork (five elements), compensation/incentives (eight elements), human resources planning (four elements), performance evaluation (five elements), and job security (four elements). That is, the measure included six sub-variables, involving 36 elements for measuring HRM practices.

Supply chain performance, and organizational performance: The variable of supply chain performance and organizational performance were measured, using one dimension for each variable. The dimension of supply chain performance consisted of twelve elements, developed by Shatat (2012). The dimension of organizational performance also consisted of seven elements, obtained from (Al-bahussin and El-garaihy, 2013).

Participants responded to each item of the dimensions of HRM practices, supply chain management practices, and supply chain performance, using the five-point Likert scale [1 = (Strongly Disagree), 2 = (Disagree), 3 = (Neither), 4 = (Agree), 5 = (Strongly Agree)]. The dimension of organizational performance has been answered, using five-point Likert scale [1 = (Significantly Reduce), 2 = (Reduce), 3 = (As before), 4 = (Increase), 5 = (Significantly Increase)]. In summary, the questionnaire consisted of eight sub-dimensions, including 55 elements distributing on the three key variables above mentioned.

## **STUDY PROCEDURES**

### **Primary Test**

All data have been obtained from the survey through questionnaires. The researcher has conducted a pilot test in May 2015. It is useful to conduct a pilot questionnaire, involving at least 10 respondents, in order to emphasize the questionnaire clarity, and the lack of any wrong conclusion adopted by the respondents. Malhotra (1999) confirmed that sample size of pre-test should be small, and include among 15 -30 respondents of experimental test. Accordingly, the sample has been selected from 25 respondents from Saudi major industrial organizations under study. The arithmetic mean and standard deviation were calculated to evaluate each study variable (see table 1).

**Table (1) Arithmetic mean and standard deviation of measure elements (sample size = 25)**

<b>Human Resource Management Practices</b>		
	<b>Mean</b>	<b>Deviation</b>
<b>(1) Job Security:</b>		
1. Workers can expect to stay in position as long as they wish.	5.62	0.81
2. It is difficult to terminate the worker's service in this organization.	5.67	1.06
3. Job security is guaranteed for almost all employees in this organization.	5.51	1.03
4. If the organization has faced economic problems, the workers are the last people to get rid of.	5.24	1.05
<b>(2) Human Resources Planning:</b>		
1. The organization has clear and specific procedures and policies for human resources planning processes.	5.25	1.21
2. The organization spends a large sum of money (as a percentage of the organization's profit) for human resources planning.	5.08	1.08
3. The scope of human resources planning process in the organization depends on many different methods of human resources planning.	5.13	0.93
4. The process of human resources planning in the organization takes long time.	5.21	1.03
<b>(3) Teamwork (working Groups):</b>		
1. When we work together as a team, we always try to make sure that we are all within the team to learn from each other.	5.69	0.91
2. When we work together as a team, I try to find out what other people know, so I will be able to complete my task.	5.15	0.82
3. When we work together as a team, there is an urgent need for the ideas of each individual in the team in order to achieve success.	5.25	0.87
4. When we work together as a team, work is divided so that each individual does part of the work and the others should share in it.	5.02	0.79
5. When we work together as a team, we all can not complete the project until everyone in the team is involved in this work.	5.14	1.04
<b>(4) Incentives and Rewards:</b>		
1. Workers are associated with incentives system based on those with multi-skills and extensive knowledge.	5.16	0.97
2. Workers are given clear motivational objectives by which the performance can be assessed and measured.	5.35	1.06
3. Workers are associated with incentives system that gives the opportunity to earn rewards for achievements.	5.51	0.99
4. Workers are associated with rewards system based on team performance or group performance.	5.25	0.98
5. Workers are given the right to discuss the performance and rewards systems with management.	5.34	0.84
6. Workers are associated with rewards system based on the entire organization's performance.	5.24	0.86
7. There are training opportunities associated with the development of performance.	5.09	0.83
8. Workers are associated with rewards system, connecting part of the salary to performance.	4.84	0.79
<b>(5) Training and Development:</b>		
1. An introductory course is available to workers to help in understanding the organization, its philosophy, and objectives.	5.18	1.19
2. There are equal opportunities for permanent employees of the organization to get training.	5.23	1.12
3. There are opportunities for employees to discuss their own needs of training plan with their managers.	5.18	1.27
4. There are opportunities for employees to work on a plan for career development with their managers.	5.23	1.16
5. There is a personal trainer for the employees, with whom they can regularly talk one by one.	5.33	1.09
6. There are opportunities for the organization workers to attend training courses to improve or learn new skills.	4.78	1.21
7. There are opportunities for the employees to attend training courses on multi-skilled.	5.37	1.08
8. There are opportunities for the employees to attend courses related to extensive topics such as communication skills.	5.03	1.02
9. There are opportunities for the employees to learn about jobs with others on various issues such as customer service and quality management.	4.68	1.18



10. There are opportunities for the employees to attend courses not relevant to their work, but to achieve personal goals.	5.18	1.12
<b>(6) Performance Evaluation:</b>		
1. Wages that are paid to our employees closely linked to individual or collective performance.	4.88	1.55
2. A great deal of effort is spent to measure the performance of our employees.	4.92	1.50
3. Our reward practices are based on seniority (the number of service years).	4.64	1.70
4. There is a great deal of participation by the employees in developing goals and evaluating the organizational situation.	4.53	1.67
5. On conducting a debate about performance, we put a great deal of emphasis on finding ways to personal development.	5.18	1.52
<b>Supply Chain Performance</b>		
1. The quality of supply chain products was improved within the supply chain of the company	5.21	1.28
2. On-time delivery was improved within the supply chain of the company	5.23	1.21
3. The inventory costs were reduced within the supply chain of the company	5.23	1.36
4. The company's customers feel satisfied with its products and services	5.32	1.25
5. The operational costs were reduced within the supply chain of the company	5.33	1.18
6. The information flow is done quickly in parallel with the value chain	4.78	1.30
7. The respond ability to customers was improved within the supply chain of the company	5.37	1.18
8. Accurate information for decision-making is usually provided	5.34	1.11
9. We constantly renew our merits to meet the changing needs of customers	4.68	1.27
10. We integrate production planning and scheduling between suppliers, manufacturers, marketing, and distributors	5.31	1.21
11. We take some quick action based on all the information collected continuously along the supply chain of the company	5.42	1.28
12. We link the information systems so that each member in the supply chain recognizes the others' requirements	5.11	0.97
<b>Organizational Performance</b>		
1. Market share	5.25	0.95
2. Return on investment	5.43	1.05
3. Market share growth	5.62	0.99
4. Sales growth	5.34	0.94
5. Growth of return on investment	5.43	0.87
6. Profit margin on sales	5.33	0.82
7. General competitive situation	5.18	0.87

**Seven-point Likert Scale is used**

**Data Analysis Methods**

Cronbach's alpha coefficient was calculated to examine the credibility. The reliability and arithmetic mean of the dimensions of HRM practices, supply chain performance and organizational performance were calculated. As Nunnally & Bernstein (1994) confirmed, when Cronbach's alpha coefficient equals 0.60 or less, the results of internal consistency is not satisfactory or inadequate. To be acceptable, reliability coefficient must be higher than 0.70. The higher reliability coefficient is; the more credibility and reliability are achieved due to the value of the correlation coefficient between the variables. Moreover, regression analysis was used to prove the theories of the study. The relationship between the independent variables and dependent variables was examined through four (4) steps according to the proposal of Baron and Kenny (1986).

**Demographic Characteristics:**

Table (2) demonstrates Demographic Characteristics of Respondents. The table indicates that about 61% of the respondents are Saudis, while the rest, 39%, are of other nationalities. The majority of 72% of the respondents was under 45 years, and the rest was more than 45 years.

The table also indicates that about 76% of respondents have a college degree, and 21.5 % have masters or doctoral degree, the rest are under the first university degree.

**Table (2) Demographic characteristics (sample size = 218)**

Variables	Numbers	Ratio	Variables	Numbers	Ratio
Nationality			Age		
<i>Saudis</i>	133	61	<i>Under 25 years</i>	2	0.92
<i>Non-Saudis</i>	85	39	<i>From 26 to 35 years</i>	49	22.6
Scientific Qualification			<i>From 36 to 45 years</i>	106	48.7
<i>High school</i>	5	2.3	<i>From 46 to 55 years</i>	42	19.26
<i>Bachelor</i>	166	76.2	<i>From 56 to 65 years</i>	19	8.8
<i>Master or Ph.D.</i>	47	21.5	Total	218	

The empirical test of the items used to evaluate the variables, it is indicated that the the items mean was mostly over 0.5 with a standard deviation above 0.7 (refer to table (1)).

### Descriptive Statistics and Credibility Analysis

To assess the internal consistency of reliability standards, Alpha coefficients were calculated (Table 3). Alpha values of the dimensions of HRM practices are as follows: Training and development ( $\alpha = 0.82$ ), working groups ( $\alpha = 0.86$ ), compensation ( $\alpha = 0.89$ ), human resources planning ( $\alpha = 0.87$ ), performance evaluation ( $\alpha = 0.91$ ). The job security is ( $\alpha = 0.93$ ), and the coefficient of the total practices of HRM is very high, ( $\alpha = 0.90$ ). The results also illustrate acceptable values of the variable of supply chain performance ( $\alpha = 0.89$ ). Alpha of organizational performance is very high ( $\alpha = 0.85$ ). Briefly, the values of alpha coefficient of human resources practices, supply chain performance, and organizational performance were above 0.70. Based on those results, and what was confirmed by Nunnally and Bernstein (1994), it is concluded that the elements and scales used in the study have high reliability. The average values of the variables of our study are also as follows: Training and development (5.63), working groups (5.52), compensation (5.44), human resources planning (5.37), performance evaluation (5.33), the job security (5.21). The Results also demonstrate an acceptable average of the variable of of supply chain performance (5.47). The organizational performance was very high (5.49). The standard deviation was above 0.70 of all scales used in the study, which is considered a positive indicator.

**Table (3) Results of descriptive statistics and reliability (sample size = 218)**

Variables	No. of Items	<i>m</i>	<i>SD</i>	Cronbach's Alpha Coefficient
Training and Development	3	5.63	0.77	0.82
Teamwork (work groups)	4	5.52	0.81	0.86
Remuneration/incentives	5	5.44	0.90	0.89
HR Planning	8	5.37	0.91	0.87
Performance Evaluation	10	5.33	0.86	0.91
Job Security	5	5.21	0.78	0.93
HR Practices	35			0.90
Supply Chain Performance	12	5.47	1.12	0.89
Organizational Performance	7	5.49	1.47	0.85

### Seven-point Likert Scale is used

### Hypotheses Testing

Regression analysis was used with the procedures referred to by Baron and Kenny (1986). It includes four separate procedures of analysis. This can be displayed as follows:

#### 1st, 2nd, and 3rd Hypotheses Test

Regression analysis results supported the validity of the first, second, and third hypotheses. It can be referred to tables (4, 5, and 6) to illustrate this, as follows: The results of (table 4) confirmed validity of first hypothesis that HRM practices positively affect organizational

performance, where the results were as follows ( $\beta = 0.51, P = 0.00$ ). The results of table 5 also confirms the validity of the second hypothesis that HRM practices positively affect the supply chain performance, where the results were as follows ( $\beta = 0.58, P = 0.00$ ). Finally, the results of (table 6) confirmed the validity of the third hypothesis that the supply chain performance positively affect the organizational performance, where the results were as follows ( $\beta = 0.73, P = 0.00$ ). Accordingly, the hypotheses from the first to the third were accepted.

**Table (4) 1st Step - Regression analysis between HR practices with organizational performance**

Variables	B	$\beta$	t-value	p-value	R	R <sup>2</sup>	F-value	E-value
Fixed	4.28		2.15	0.04	0.67	0.45	47.1	0.00
Training and Development	0.21	<u>0.14</u>	1.93	<u>0.04</u>				
Teamwork (work groups)	0.54	<u>0.38</u>	3.68	<u>0.00</u>				
Remuneration/incentives	0.28	<u>0.24</u>	2.49	<u>0.02</u>				
HR Planning	0.02	0.02	0.20	0.86				
Performance Evaluation	0.06	0.06	0.61	0.56				
Job Security	0.30	<u>0.16</u>	2.01	<u>0.03</u>				
Fixed	5.78		12.92	0.00	0.45	0.20	77.51	0.00
Organizational Performance	3.30	0.51	8.46	0.00				

**Significance = 0.05**

**Table (5) 2nd Step - Regression analysis between HR practices with supply chain performance**

Variables	B	$\beta$	t-value	p-value	R	R <sup>2</sup>	F-value	E-value
Fixed	1.57		0.74	2.04	0.77	0.61	79.54	0.00
Training and Development	0.25	<u>0.13</u>	3.35	<u>0.04</u>				
Teamwork (work groups)	0.44	<u>0.25</u>	0.77	<u>0.00</u>				
Remuneration/incentives	0.67	<u>0.39</u>	0.74	<u>0.04</u>				
HR Planning	0.10	0.08	4.30	0.06				
Performance Evaluation	0.18	<u>0.21</u>	3.35	<u>0.01</u>				
Job Security	0.56	<u>0.16</u>	0.77	<u>0.03</u>				
Fixed	21.51		12.93	0.00	0.56	0.32	121.67	0.00
Supply Chain Performance	4.72	<u>0.58</u>	11.01	0.00				

**\* Significance = 0.05**

**Table (6) 3rd Step - Regression Analysis of Supply Chain performance with Organizational Performance**

Variables	B	$\beta$	t-value	p-value	R	R <sup>2</sup>	F-value	E-value
Fixed	7.48		5.72	0.00	0.74	0.54	291.26	0.00
Organizational Performance	0.60	0.73	17.08	0.00				

**Significance = 0.05**

**Table (7) The Fourth Step - The Impact of Mediating of Supply Chain performance on the Relationship between HRM Practices and Organizational Performance**

Variables	B	$\beta$	t-value	p-value	R	R <sup>2</sup>	F-value	E-value
Fixed	3.71		2.02	0.04	0.75	0.57	57.80	0.00
Training and Development	0.15	<u>0.14</u>	1.13	<u>0.04</u>				
Teamwork (work groups)	0.29	<u>0.29</u>	1.96	<u>0.05</u>				
Remuneration/incentives	0.22	<u>0.21</u>	1.94	<u>0.05</u>				
HR Planning	0.40	0.14	1.12	0.03				
Performance Evaluation	0.19	0.12	-1.40	0.15				
Job Security	0.43	<u>0.42</u>	7.80	<u>0.03</u>				
Supply Chain Performance	0.04	0.05	0.31	0.74				
Fixed	7.01		4.83	0.00	0.73	0.53	149.1	0.00
HR Practices	<u>0.70</u>	0.12	2.00	0.05				
Supply Chain Performance	0.54	0.68	13.11	0.00				

**\* Significance = 0.05**

The results indicate that HRM practices are precedent to achieve the organizational performance. Moreover, HRM practices positively affect supply chain performance. The supply chain performance at the same time has a significant impact on organizational performance. Therefore, Saudi Industrial Organizations should possess a deep awareness of the capabilities of human resources practices and the need to adopt distinct practices, contributing significantly to achieve outstanding performance of the supply chain, which would contribute to raise the level of organizational performance.

#### ***Fourth Hypothesis Testing (Mediator Role Test of Supply Chain Performance)***

The results confirm that the variable of supply chain performance has the ability to play partial mediation role of the relationship between HRM practices and organizational performance. Table (4) indicates that Training and Development ( $\beta = 0.14$ ,  $P = 0.04$ ), Teamwork (Working Group) ( $\beta = 0.38$ ,  $P = 0.00$ ), Compensation/Incentives ( $\beta = 0.24$ ,  $P = 0.02$ ), Job security ( $\beta = 0.16$ ,  $P = 0.03$ ). These results indicate that these four practices are the HR practices, which have the most impact on organizational performance. The results of table (5) demonstrate that Training and Development ( $\beta = 0.13$ ,  $P = 0.04$ ), Teamwork (Working Group) ( $\beta = 0.25$ ,  $P = 0.00$ ), Compensation/Incentives ( $\beta = 0.39$ ,  $P = 0.04$ ), Job security ( $\beta = 0.21$ ,  $P = 0.01$ ), and performance evaluation ( $\beta = 0.16$ ,  $P = 0.03$ ). These results indicate that these five practices are the human resources practices, which have the most impact on the supply chain performance. The results of table (7) indicate that the variable of the supply chain performance completely mediates the relationship between training and development ( $\beta = 0.14$ ,  $P = 0.0$ ), Teamwork (Working Group) ( $\beta = 0.29$ ,  $P = 0.05$ ), Compensation/Incentives ( $\beta = 0.21$ ,  $P = 0.05$ ), Job security ( $\beta = 0.42$ ,  $P = 0.03$ ) on the one hand, and between organizational performance on the other hand. Therefore, the hypotheses 4(a), 4(b), 4(c), and 4(f) were strengthened and approved, so that these hypotheses are accepted. On the contrary, the variable of supply chain performance did not succeed in playing the mediating role in the relationship between both of human resources planning and performance evaluation on the one hand and the organizational performance on the other hand. Accordingly, the hypotheses 4(d) and 4(e) are rejected. As table (4) indicates, HRM practices positively affect the organizational performance ( $\beta = 0.51$ ,  $p = 0.00$ ). Table (6) also indicates that the variable of supply chain performance directly and positively affects organizational performance ( $\beta = 0.73$ ,  $p = 0.00$ ). As noted before, the variable of supply chain performance is an essential and important variable to achieve an excellent level of organizational performance, particularly in the industrial sector. The supply chain performance was measured as a mediator variable as in table (7) indicating that the variable of supply chain performance mediates the relationship between HRM practices and organizational performance ( $\beta = 0.12$ ,  $p = 0.05$ ). In addition, the  $R^2$  value raised from 0.20 in table (4) to 0.53 in (table 7).  $\beta$  value decreased from 0.51 in (table 4) to 0.12 in (table 7). Therefore, hypothesis 4 was partially strengthened and accepted, but not completely.

### **DISCUSSION AND CONCLUSION**

This study provides a comprehensive evaluation and review of HRM practices, and supply chain performance that enhances product quality competitiveness ability, and thus increasing profitability as a primary objective in the economic field. The analysis of collected data emphasized the validity of the first, second, and third study hypotheses. The fourth hypothesis was accepted in part after the rejection of sub-hypotheses (d, e). The results indicate that there are statistically significant relationships between HRM practices, supply chain performance, and organizational performance. This study also provides proof of the hypothesis that human resource practices affect the supply chain performance, leading to a high indicator of organizational performance. The results directly indicate that there is a positive relationship between HR practices and organizational performance. It significantly seems that the impact of HRM practices on organizational performance is controlled by the effective performance of

supply chain management. As proof of the existence of an effect of mediation, HRM practices play a positive role in enhancing organizational performance through the effective performance of the supply chain.

The analysis based on the collected experimental data demonstrates that HRM practices can not only establish an effective level of supply chain performance, but can also strengthen the ultimate goal of the organization. This can achieve a high level of organizational performance, which in turn affects the competitive advantage of organizations. Thus, HRM practices are very important in their direct impact on the functions of other organization departments. Therefore, it can be concluded that HRM can significantly contribute in achieving a high level of supply chain performance, which in turn can help to achieve an excellent level of organizational performance.

This study aimed to indicate the effects of HRM practices on the efficiency and effectiveness of supply chain performance and organizational performance through a sample consisted of two hundred and seventy-four large industrial organizations in Saudi Arabia. Based on the study, it can be concluded:

- i. The results of the HRM practices impact on the efficiency and effectiveness of supply chain performance and organizational performance are in line with previous research. Our study confirms that the HR practices implemented by Saudi Industrial Organizations are good indicators of the efficiency and effectiveness of the supply chain performance and organizational performance. Thus, the Saudi Industrial Organizations need to implement those practices to enhance organizational performance.
- ii. This study contributes to verify the impact of HRM practices on the efficiency of supply chain performance and organizational performance. The results of this study reveals that HR practices such as, training and development, teamwork (working groups), compensation/incentives, and finally job security, are the most important practices that affect the efficiency and effectiveness of the supply chain performance and organizational performance. Therefore, the Saudi Industrial Organizations have to adopt and implement those practices, while working to develop the existing practices to enhance their supply chain performance, and enhance their organizational performance.
- iii. The results indicate that the impact of HRM practices on the efficiency and effectiveness of the supply chain performance and organizational performance is an important and positive matter in light of the high levels of intensive competition. The current study provides contradictory and varied results regarding the impact of HRM practices, this study is an extension of the literature in the areas of HRM and supply chain management. It refers to the importance of such practices as a good indicator of the efficiency and effectiveness of chain performance and organizational performance in highly competitive environments.
- iv. The most important result of this study is that the association between variables (HRM practices, and organizational performance) is not only because of their direct relationship, but because of many other factors that play a mediating role between them. Supply chain performance is one of those variables that are highlighted and approved in this study.

### **MANAGERIAL IMPLICATIONS AND FUTURE RESEARCHES**

The formulation of human resources practices has a very strong impact on organizational performance. Therefore, the success of efficient implementation of human resources practices

will help to increase the level of workforce performance and behavior, which is reflected on the supply chain performance, and organizational performance. On the other hand, human resources practices can help to increase the chain performance level. Organizations should have profits by recognizing that the effective performance of supply chain is a result of the employees and other stakeholders' performance, which lead to a distinct level of organizational performance. Therefore, HRM practices can be employed to drive supply chain management to generate strong functional relationships and create a distinct level of organizational performance.

It is expected that the results of this study will be very practical and useful for both academics and practitioners. The reason is not only it will expand the extent of the study at the academic level, but also it may help active managers to understand the importance and the role of human resources in increasing the efficiency of supply chain performance. This in turn will help managers to achieve an excellent level of organizational performance, which is a vital goal of each organization. This study has brought in light several effects that may be beneficial for supervisors, and senior officials working in Saudi industrial sector, through which they can achieve an excellent level of organizational performance by investing in HRM practices and effective supply chain performance.

Because of the easy transportation of technology and systems, it has become very difficult to compete in the markets. If an organization wishes to have an effect in the market, it has to bring some systems that cannot be easily imitated by competitors. In this case, the role of human resources rises, as any system in which the focus is on individuals that cannot be easily moved or imitated. Thus, this study emphasizes the need for managers and practitioners to focus on the area that can be exploited to increase the size of the operating results of human resources. With increasing interdependence among jobs, it becomes necessary for organizations to bring some human resources practices that help the organization members in dealing with such a correlation among jobs. It is also expected from the results of this study to help managers to identify the different human resources practices that need to focus on improving the supply chain performance, thereby achieving an excellent level of organizational performance, which is one of the most important vital objectives of each organization.

Despite the effective contributions, this study leaves some range for further improvement. Therefore, there are number of things that could be considered and implemented for future studies such as: First, Sample selection of the target community should be equally distributed rather than the focus on certain specific area or a particular field. It should be focused on using a larger sample to increase the dissemination of results. Second, there are another set of variables that can be considered as mediator variables in order to increase our understanding of the relationship between HRM practices and organizational performance. For example, a research can be conducted to verify the relationship between HRM practices and organizational performance by the following different variables: employee's performance, motivating employees, employee's loyalty, and SCM practices.

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