

The mediating role of information exchange in the relationship between human capital and employees' performance

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Abstract

This study examines the effect of the medium variable on information exchange on the relationship between human capital and the performance of workers in regulatory bodies in the Republic of Yemen. The positive analytical description methodology has been used. Data were collected by analyzing questionnaire data. Independent variables are elements of human capital (experience and creativity) and the variable is the information exchange and the dependent variable is the performance of workers.

The survey includes supervisory levels of administrative staff in various departments of the central office and its central branches. Two different statistical tools were used from statistical software to analyze equations, the measurement model, the structural model for testing hypotheses and the use of statistical methods such as the methods of variation in data analysis.

The study tackled the impact of (information exchange) as an intermediate factor on the relationship between elements of human capital (experience, creativity) and performance of employees. The study shows that there is a positive statistical significance for (information exchange) of the relationship between human capital components (experience, creativity) and employee performance. The results showed a strong positive indicator of information exchange in the relationship between human capital and employee performance factors. The results of this study support and confirm the theories in this field that support the belief that the information exchange of human capital in organizations is the important tool to achieve the competitive advantage and economic advantage of existing organizations.

Key words: Human capital, experience, creativity, employee performance, information exchange

1. Introduction

The human capital continues to be a guiding force for the efforts carried out to capitalize on staff potentials for organizational excellence. This is especially the case for public organizations that are eager to attract the right people to achieve outstanding performance in a more competitive labor market. Human capital theory also suggests that not all workers possess information and skills of equal strategic importance to the organization. Consequently, organizations will seek to retain staff and develop their tasks (Battaglio, French & Goodman, 2017). The attention to and improvement of individuals working in the organization are effective means that the organization can use to renew its activity and vitality continuously and increase its ability to cope with changes at the external and internal environment levels, for it trusts the scientific, behavioral and practical abilities of its employees. The increasing size and type in the quality of local and international competition among organizations, as well as their race to offer the best goods and services to

achieve customer satisfaction, have increased the growing attention and emphasized the role that training and development, at the strategic level, play to make human capital of high experience, creativity and information. This will enable the human resources to be creative and provide the best and newest products and improve the staff's performance in the organization to achieve the competitive advantage for the organization (Ahmad, Bosua & Scheepers, 2014).

The effectiveness of individual and collective performance and the organization's overall performance depend on the ability of the individuals working therein to perform the tasks assigned to them effectively and efficiently and the desire to perform such. Training, in turn, increases these abilities and skills, Thus increasing the motivation, experience and creativity of workers. It contributes to providing the individual with the required information in the work to improve the performance. Training also represents a golden opportunity to progress and improve the skills. (Jundt, Shoss, & Huang, 2015). Many companies and organizations, today, claim that they pay attention to the human element and they are developing it in the proper

way. However, the viewer of the operations and procedures done by such organizations and the way they consider training, education, development and how well-trained human capital are dealt with would notice that they, the organizations, deal with human resources as costs rather than investment. This is the difference between the organizations which pay attention to the human element and others which consider it as a cost; therefore, it is of paramount importance for companies looking for competition to change the way they look at and deal with the human capital.

Information is the backbone of organizations and a useful and contemporary means of management to adapt to the requirements of the age. Information is the most important resource in creating wealth and achieving excellence and creativity in light of the intellectual data, such as globalization, privatization, information revolution, the expanding of different human societies (Devi, & Jain 2016)

In the mid-1990s, the concept of information management was beginning to be widely seen and perceived by organizations as information was the key to business power and there was a value generated from using it (Hannon, & Daneman, 2014). The contemporary perception of the traditional components of wealth (labor, raw materials and capital) has changed with the addition of a new element, i.e. information, which is the most important factor in production in light of the contemporary developments (economic, social and technological), which has led many administrative organizations to focus on information to achieve the competitive advantage and ensure growth and continuity (Mishra, et al 2015). The interest in information management has become evident with the increase of theoretical and applied studies about it; the allocation of refereed scientific journals; the holding of many conferences, seminars and training programs; and the establishment of specialized professional associations (Proust, & Bennett, 2015).

It is natural for information to continue to be relevant in our present era, after the communications, information and technology revolutions have paved the way, brought distances closer and facilitated the exchange of information and innovation. It is not surprising that in the wake of these revolutions, the volume and quantity of information are multiplied every few years, which used to take centuries to be doubled (Shi, Visschers, & Siegrist, 2015). The rise in the information economy has led to increased reliance on intellectual and information assets as a new source of competitive value for companies and organizations (de Pablos, & Edvinsson, 2014).

Information is a strategic organizational resource that can be a source of sustainable competitive advantage. The view of companies and information-based organizations suggests that information is a sustainable basis for

competitive advantage because it is rare and unreplaceable (Sharma, et al, 2016).

It is important to ask whether organizations are able to retain and transfer the expertise, skills and information of the human element within the organization, which represents the company's wealth to other employees to gain a competitive advantage in the market, where such information and skills will be more useful when shared (Chugh, 2013).

2. PROBLEM STATEMENT

Researchers have turned their attention to human capital as the main pillar in the production process. The ultimate aim of the administrative process is to improve the performance of the employees, which is the course of improving the general productivity of the institution (Shields, et al 2015). All branches of modern social sciences are concerned today with the concept of human capital because individuals, institutions and countries today believe that human capital is one of the most important factors in security and success. This concept has become one of the basic concepts in the aspects of modern economic analysis (Perepelkin, Perpelkina, & Morozva, 2016).

According to many researchers, the most important elements that make up human capital are the abilities and skills possessed by the human element and the experience gained through the practical application of information in organizations and institutions and the state of creativity that is reached by human capital. From this vision, the researcher embarked on the concept of human capital (Kohan, 2014), (Qian & Huang, 2017), (Kanten, Kanten, & Gurlek, 2015), (Al-Dujaili, 2012). Many organizations today recognize the importance of information which is among the important things to be maintained and developed and is considered to be important asset in the organization. Therefore, it seeks to provide all available means to prepare, utilize and maintain it. What confirms the need for information management processes is that the organization is exposed to a loss in its capital when one of its highly qualified employees or leaders leaves it without registering its experience and transferring it to its successor (Hislop, 2013). Information is one of the important factors for business people to earn and maintain a competitive advantage (Wang, Arnett, & Hou, 2016). Many modern organizations in all fields face a wave of changes and rapid changes that are sweeping them. The most important of these is the information revolution. As a result of these changes, organizations have to pay attention to information, which is the most important strategic source in the control and success of organizations or even their failure (Shi, Visschers, & Siegrist, 2015).

This paper has complemented previous studies and bridged the gap in previous studies that did not address the extent to which the participation of information as a mediator variable influences the relationship between human capital and employee performance, which enables us to learn how to increase the performance of employees in organizations.

3. Research Questions

- Does the increase in human capital experiences affect staff performance?
- Does the increase in human capital creativity affect staff performance?
- Does the mediator variable (information exchange) effect on the relationship between human capital and staff performance?

4. Research Objectives

- Verify the impact of increased human capital experiences on staff performance.
- Verify the impact of increased human capital creativity on staff performance.
- 5) Verify the effect of the mediator variable (information exchange) on the relationship between human capital and staff performance.

5. Basic Research Method

The nature of the problem and the objectives represent the given data for the selection of the appropriate method to accomplish this study. Through adequate data on the subject, the descriptive method shall be used. Using the questionnaire, The descriptive method is a research feature which makes use of the quantitative or qualitative to describe humanitarian, social, administrative or a set of interrelated phenomena through the use of data collection methods, such as interviews, observations, questionnaires and others as to investigate the phenomenon under study and make it easier to identify the problem realistically (Oppenheim, 1997).

6. Conceptual Model

A research structural models was developed in this study. The research structural model is intended to test 5 hypotheses related to direct effects between Experience (EXP), Creativity (CR), Information exchange (IEX) and Performance of staff (PERS). The study also examined the mediation effects of Information exchange (IEX) on the relationships of the other constructs. Figure 6.1 illustrates the hypothesized direct and mediation effects in the research structural model.

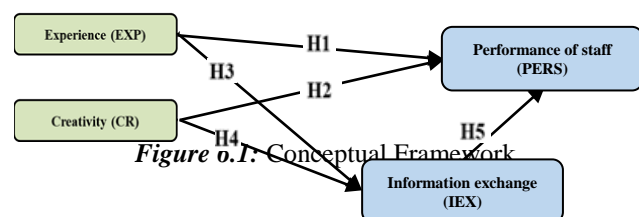


Figure 6.1: Conceptual Framework

7. The Hypothesis

- H1- There is a positive relationship between increasing experience of human capital and employees' performance.
- H2- There is a positive relationship between increasing creativity of human capital and employees' performance.
- H3- There is a positive relationship between increasing experience of human capital and information exchange.
- H4- There is a positive relationship between increasing creativity of human capital and information exchange.
- H5- There is a positive relationship between the mediator variable of information exchange and employees' performance.

8. Data Processing Methods and the Statistical Analysis

Hofmeyer (2007) mention that Data screening is necessary in ensuring that data are correctly entered, free from missing values, outliers and to confirm that the distribution of variables are normal. Appendix A depicts all the exogenous and endogenous variables together with their relative estimation errors in this study.

9. Hypotheses Testing – Correlation

Quaddus as mention in his statistics books reference that An “examination of goodness-of-fit indices indicates that the structural model adequately fitted the data: $\chi^2 = 430.842$, $df = 419$, $p\text{-value} = 0.334$, $GFI = 0.903$, $AGFI = 0.885$, $CFI = 0.997$, $TLI = 0.997$, $IFI = 0.997$, $RMSEA = 0.011$ and $\chi^2/df = 1.028$. The value of R^2 for Performance of staff (PERS) was 0.26 and 0.40 respectively. This indicates, for example, the error variance of Performance of staff (PERS) is approximately 60 percent of the variance of Performance of staff (PERS) itself. In other word, 40 percent of variations in Performance of staff (PERS) are explained by (Human capital factors). Overall findings showed that the score of R^2 value satisfy the requirement for the 0.10 cut off value (Quaddus and Hofmeyer 2007).The coefficient parameters estimates are then examined to test the hypothesized direct effects of the variables. The path coefficients and the results of examining hypothesized direct effects are displayed in” Table 9-1.

Table 9.1: Hypothesis testing summary – Relationship between Factors (IV), (DV) and MD

Path	Unstandardized Estimate	Standardized Estimate	critical ratio (c.r.)	P-value	Hypothesis Result	
	Estimate	S.E.	Beta			
EXP → PERS	0.189	0.073	0.17*	2.577	0.01	H1) Supported



CR → PERS	0.185	0.076	0.171*	2.434	0.015	H2) Supported
EXP → IEX	0.149	0.072	0.149*	2.079	0.038	H3) Supported
CR → IEX	0.139	0.075	0.144	1.871	0.061	H4) Rejected
IEX → PERS	0.288	0.077	0.258** *	3.731	0.000	H5) Supported

10. RESEARCH QUESTION FINDINGS

H1- Increasing the Experiences of Human Capital Significantly Affects Employees' Performance

The researcher suggested, in the research model, the following hypothesis: There is a positive relationship between increasing the experiences of human capital and employees' performance (H1). The result of the estimation obtained by this factor) H1: EXP → PERS; = β = 0.17, CR-value = 2.577, p = 0.01(of the above hypothesis is positive and statistically significant, meaning that there is a positive effect of the increasing experiences on the employee's performance and based on this assumption the hypothesis was approved and accepted. The results indicate that there is a way to reach a significant positive impact in employees' performance, which means the importance of this factor. This result is consistent with the results of previous research (de Waal and Oudshoorn, 2015), (Desai, Lockett & Paton, 2016) as mentioned before. Such studies indicate that there is a significant positive relationship between increasing the experiences of workers in the organization and their performance improvement, i.e. the more experienced the staff, the better the performance. The results indicate the possibility of reaching a significant positive impact on the employees' performance, which means the importance of this factor and thus confirming the results of the previous studies. The results indicate a significant and positive impact of increasing the experiences of human capital on employees' performance.

H2- Increasing the Creativity of Human Capital Significantly Affects Employees' Performance

The researcher suggested, in the research model, the following hypothesis: There is a positive relationship between increasing the creativity of human capital and employees' performance (H2). The result of the estimation obtained by this factor) H2: CR → PERS; = β = 1.171, CR-value = 2.434, p = 0.015(of the above hypothesis is positive and statistically significant, meaning that there is a positive effect of increasing the creativity on the employee's performance, and based on this assumption the hypothesis was approved and accepted. The results indicate that there is a way to reach a significant positive impact in employees' performance, which means the importance of this factor.

This result is consistent with the results of previous research (de Waal and Oudshoorn, 2015), (Prajogo, et. Al, 2016) as mentioned before. Such studies indicate that there is a significant positive relationship between increasing the creativity of workers in the organization and their performance improvement, i.e. the more creative the staff, the better the performance. The results indicate the possibility of reaching a significant positive impact on the employees' performance, which means the importance of this factor and thus confirming the results of the previous studies. The results indicate a significant and positive impact of increasing the creativity of human capital on employees' performance.

H3- The Experiences Significantly Affect Information exchange

The researcher suggested, in the research model, the following hypothesis: There is a statistically positive relationship between experiences and information exchange (H3). The result of the estimation obtained by this factor) H3: EXP → IEX ; = β = 0.149, CR-value = 2.079, p = 0.038(of the above hypothesis is positive and statistically significant, meaning that there is a positive effect of increasing experiences on information exchange, and based on this assumption, the hypothesis was approved and accepted. The results indicate that there is a possibility to reach a significant positive impact on information exchange through increasing experiences of the employees, which means the importance of this factor.

This result is consistent with the results of previous research (Devi, & Jain, 2016), (Ishola & McCalla, 2016), (Joe, Yoong & Patel, 2013) as mentioned before. Such studies indicate that there is a significant positive relationship between increasing skills of human capital in the organization and information exchange, i.e. by increasing the experiences of the human capital, the process of information exchange will be wider and better. Therefore, this study confirmed these results that there is a positive impact of the experiences on information exchange.

H4- The Creativity Significantly Affects Information exchange

The researcher suggested, in the research model, the following hypothesis: There is a statistically positive relationship between creativity and information exchange (H4). The result of the estimation obtained by this factor) H4: CR → IEX ; = β = 0.144, CR-value = 1.871, p = 0.061(of the above hypothesis is negative, meaning that there is no positive effect of increasing creativity on information exchange, and based on this assumption, the hypothesis was disapproved and rejected. The results indicate that creativity does not significantly affect information exchange in the organization.

This hypothesis has been driven from the studies of (De Luca, & Atuahene- Gima, 2013), (Devi, & Jain, 2016), (Mura, et. Al, 2016) as mentioned before. Such studies indicate that there is a positive relationship between creativity of human capital in the organization and information exchange, i.e. by increasing the creativity of the human capital the process of information exchange will be wider and better. This study disagreed with these results. The interpretation of this result which is not consistent with previous studies is the lack of an incubator environment for creativity within the organization and therefore the creativity in this case misleads the individual and is not shared with others. The main reason could be that there is poor motivation of creative people to share their creativity and their information with others better.

H5- The Impact of Information exchange on Employees' Performance

The researcher suggested, in the research model, the following hypothesis: There is a statistically positive relationship between information exchange and employees' performance (H5). The result of the estimation obtained by this factor) H5 NS \rightarrow PERS; = $\beta = 0.258$, CR-value = 3.731, $p = 0.000$ (of the above hypothesis is positive, meaning that there is positive effect of information exchange on employees' performance, and based on this assumption, the hypothesis was approved and accepted. The results indicate the possibility to reach a significant positive impact in employees' performance through increasing information exchange, which means the importance of this factor.

This result is consistent with the results of previous research (Henttonen, et Al, 2016), (Kianto, et. Al, 2016) as mentioned before. Such studies indicate that there is a significant positive relationship between information exchange and employees' performance. Organizations that seek to manage, disseminate and share information among employees are much better performing than other organizations. Therefore, this study confirmed these results that there is a positive impact of information exchange on employees' performance.

12. SUGGESTED FUTURE RESEARCH

In light of the limitations of research and the options to be carried out in the research process, future suggestions have been identified. The following are some of the fruitful research areas that researchers can explore, The need for similar studies to demonstrate the impact of human capital factors in government regulatory bodies in other countries, The need for similar studies to demonstrate the impact of human capital factors in other sectors, The need for similar studies related to the development of regulatory capital and the relative capital (customer), The need to study the role of the work environment as a mediator variable between human capital and employees' performance improvement.

13. CONCLUSION OF THE RESEARCH

The most important asset in the organization is not something you can put your hands on. It is not equipment, not data or technology. The most valuable part of organizations is people, i.e. human capital. Any plans to move forward and improve this element must start from there. But, today's business leaders often run in a race to keep pace with the demands of day-to-day business, meaning that human capital, the company's most important resource, needs to take a next step in growth, innovation and improvement. In our previous study, the importance of the human factor and its impact on performance is demonstrated and how human capital factors affects this relationship. This research has developed and tested a structural model aimed at clarifying the relationship between human capital and employees' performance and the role of human capital factors in this relationship. The study was based on a series of previous research and studies. This model was tested according to data collected from 248 participants using advanced statistical software such as SPSS version 18.0 and AMOS version 20. The current study examined the impact of "information exchange" and (experience and creativity) on employees' performance. It proposed a conceptual model that integrates information exchange towards staff performance in organizations

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