

## Organizational Structure, Technological Change and Organizational Performance: A Case of Hadiya Zone Public Sectors, Ethiopia

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### ***Abstract***

*The main objective of this study is to assess the relationships between organizational structure, technological change and organizational performance. To achieve the main objective of this study the quantitative research approach was used. In additions, descriptive and inferential methods of data analysis were computed. The finding result indicates that organizational structure and technological changes had a significant influence on organizational performance.*

**Keywords:** Technological change, Organizational Structure, Human Resource Planning, Organizational Performance

## **1. INTRODUCTION**

It is obvious that globalization poses keen competition among firms which in turn affect their performances (Noon, Blyton & Morrell, 2013; Rayner et al., 2002). Its effect can be reflected in attaining a flexible, intellectually agile workforce; recruitment and attraction of quality staff in a tightening labor market; planning for a more diverse career patterns; addressing learning gaps; and developing future leaders (Boxall & Purcell, 2011; Lamond, 2005). Hence, organizations need to assess their environment regularly.. The organizations' environment is the set of forces surrounding an organization that have the potential to affect the way it operates and its access to scarce resources. That is why they need to properly understand it for effective management (Davis & Powell, 2012). These factors include: political, economic, social, technological, environmental and legislative, as well as industry forces (Rao, 2008). Hence, organizations are expected to cope up the pace in the external environment in order to overcome the keen competitions of the day as it helps to enhance their performances which is a measure of the change of the state of an organization, or the outcomes that results from management decisions and the execution of those decisions by members of the organization (Robert et al., 2006) .Here, it is worth saying that organizational performances can be measured either in financial or non-financial terms that can be determined by stakeholders strategic purpose (Friend man, 2010).

### **1.1 Statement of the Problem**

The external and internal environment in which an organization operates presents the institute with opportunities, threats and constraints. It consists of micro and macroeconomic factors which include political, economic, social, technological, environmental, structural and legal factors. Several studies, from developed countries and developing countries have established various factors that are key to undergo human resource planning (HRP). Werner, et al. (2012) identified some determinants of HRP which comprised technological and organizational factors. Bergh, et al. (2013) conducted a study on the HRP in Belgian production companies and established that employee preferences, overtime regulation and cyclically of personnel rosters were the major determinants. In developing countries HR planning process and integrating company business strategy are totally ignored and untouched practices. Yambesi (2009) confirmed that many African countries continue to face human resource management (HRM) problems, in general and fail to maintain an effective HRP in particular. Chakravarthy and Prasad (2015) investigated the Role of Information Technology in Human Resource Management and established that human resource information system has various benefits but the foremost are cost reduction and less time consumption. Subaie, (2016) conducted a study on the factors affecting workforce planning in Saudi Universities. The study found that clarity of objectives, organizational structure and technological change of human resources altogether influenced planning for the work force. The effect of organizational structure and technological change on the organizational performance of the public sectors especially in Ethiopia has received little attention in academic inquiry. Studies done on Ethiopia public sectors have not tackled the issue of the organizational structure and technological change besides their influence on the organizational performance. It is in this light that the study finds to fill the existing research gap by carrying out a study to establish the influence of organizational structure and technological change on organizational performance of public sectors, with special focus on Hadiya zone Public sectors.

### **Objectives of the Study**

The main objective of this study is to reveal out the relationship between organizational structure, technological change and organizational performance with a special emphasis to Hadiya zone selected public sectors.

### **1.3 Research Hypotheses**

H1: Organization structure has a positive relationship with organization performance of public sector.

H2: Technology change has a positive relationship with organization performance of public sector.

## **2. LITERATURE REVIEW**

This section deals with review of related literatures pertaining to organization performance; emphasizing on major variables.

### **2.1 Organizational Structure**

Organization structure expresses managerial, administrative, and operational relationships within the entity (Golmohammadi, 2008). It also embodies authority, responsibility, and accountability. Organization structure companies activities for the purposes of administration and control and combines duties and responsibilities into jobs. According to Lai (2005) entity structure is the result of and a tool for implementing operational, financial, human resource, and strategic plans as it influences the entity's ability to communicate, coordinate its functions, and reply to environmental changes. The structure of an entity must concurrently facilitate planning, problem solving, policy-making, communications, operations, resource allocation and use, and performance assessment in order to meet the demands placed upon it. On the other hand, Bloor (2008) stated employees do not respond simply to financial incentives as other kinds of non-financial incentives such as trust, duty, reputation within peer groups and communities equally important. Every business enterprise has a unique structure that displays its modern-day image, reporting relationship and internal politics. Okumus (2003:876) defines “organizational structure” as “the shape; division of labor; job duties and responsibilities; the distribution of power, and decision-making procedures within the company”. Okumus (2003) cautions that issues for consideration should include: the effect of a new strategy on potential changes in duties; roles; decision making; and on reporting relationships. Leaders must consider whether the organizational structure facilitates the free flow of information; co-ordination, and the co-operation between management and other functional areas.

### **2.2 Technological Changes**

Technology has also improved HRP operations in terms of effectiveness and efficiency in public sectors (Xie & Huang, 2012). One of the many benefits ensuing from the use of technology is the decreased cost of processing (Shyni, 2005) and more effective planning. Communication technologies have enhanced the incorporation of HRP into the management of other aspects such as customer relationships. As developments in information technology have transformed the nature of the workforce, HR planners need to create integrated systems that allow an organization to have up to date information and the ability to analyses data in a sophisticated and

informative manner. According to Encher, Nielson and Vallone (2002) Human Resources is an important part that firms have not skipped, new technologies have a major impact on the practices and processes in this field. Access to HR services is now being provided through technology and online application thus shifting the practice of HRM (Richard, Johnson & Gueutak, 2011). Recent research indicates firms that fully adopt sophisticated HR technology tools outdo those that do not. Technology has impacted HR in the function of recruitment; by enabling the recruiter to be better organized (Selvan, 2015). Technology enables public relations actioners of human resource to successfully plan and coach new hires effectively. The ability to get company information and training programs from faraway locations removes the need for trainers to work directly with new hires on all training. According to Thamarai Selvan (2015) assessment of an employee performance can be done by use of computers. The development and application of new technology has been significant in shaping organizations and management practices. The advent of advanced technologies in production and transportation systems, communications, computers, energy, medicine have brought major changes, all of which affect HRP activities. Technological change will undoubtedly pose challenges for further adaptation particularly in areas concerning HRP (Ivan Cenrich, 2002).

### **2.3 Organizational Performance**

Performance has been the most important issue for profit and non-profit organization. Barney (2001) asserts that researchers have different beliefs and thoughts about organizational performance but it still remains a controversial issue. Performance means quality, condition or function. Non-profit organizations view their performance in terms of how they meet their missions and goals. Organizational performance is commonly conceptualized in simple terms as the actual output or results of an organization as measured against its intended outputs (or goals and objectives) (Short, Ketchen, Palmer & Hult, 2007). Therefore, organizational performance is a multi-dimensional construct that is influenced by a wide-assortment of factors that are both internal and external to the organization. Balunywa (2009) when he was urging about public institutions he stated that poor performance of these enterprises is due to their resistance to change and failure to develop the performance. Dodo (2001) the corner stone of our civil service performance programs the production and implementation by all organizations. It is felt that this is one of the best ways to establish a new performance best management culture in an organization. Dodo further stipulates that performance agreements can be used sometimes as an effective management tool in the organization.

## 2.4 Conceptual framework

Taking into consideration the literature review as discussed in the foregoing sections, the conceptual framework illustrated in Figure 1 is proposed.

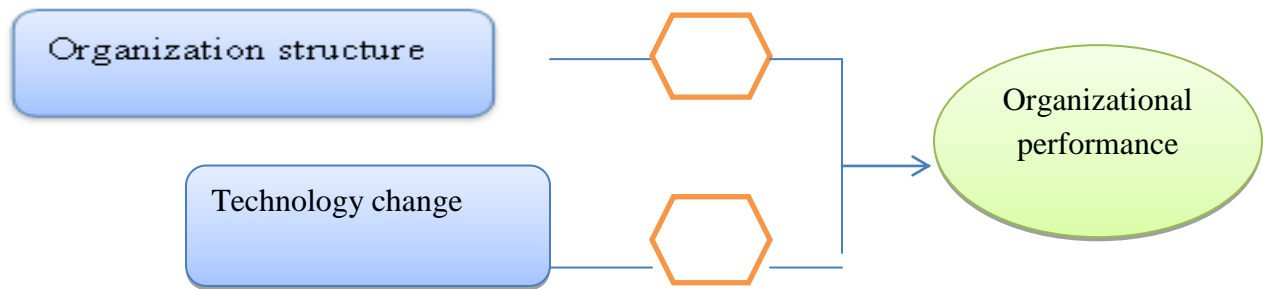


Figure 1 conceptual framework

## 3. RESEARCH METHODS

### 3.1 Research Design

This study employed both descriptive and correlational design. It was preferred due to its ability to combine quantitative and qualitative methods. The design enabled the researchers obtain information from a large population using a standardized instrument of data collection (Kothari 2004 & Mugenda, 2003). Also it was therefore suitable for this study.

### 3.2 Target population

The study population comprised of 250 employees from the ten selected public sectors working at different level of position.

### 3.3 Sample size & Sampling technique

There are 24 offices in the Hadiya Zone public sectors out of these bureaus 10 bureaus were selected by researchers. The researchers used both sampling techniques for selecting the sample respondents for this study. Accordingly, sample respondents were selected through stratified sampling whereas, sampled offices and interviewees were selected by convenience sampling technique. The sample size was determined by applying Yemane's (1967; 886) formula which is used to calculate sample size.

$$n = \frac{N}{1 + N(e)^2}, n = \frac{250}{1 + 250(0.05)^2} n = \frac{250}{1 + 250(0.0025)} n = \frac{250}{1.625} = 153$$

Where;

n=the sample size of the study

N=total number of employees found at Hadiya Zone Public sector

e2 = margin of error 5%=0.05

1= designates the probability of the event occurring

### **3.4 Data Collection Methods**

Primary data collection tools were deployed. Accordingly, questionnaire and interview were used to collect the intended data to meet the objectives of the study.

### **3.4 Data Analysis and presentation of Findings**

Descriptive statistics and inferential statistics were used to analyze quantitative data. Descriptive statistics that were computed include: mean and standard deviation whereas, Pearson correlation analysis was employed from inferential statistics, It is SPSS version 23 which was used to compute the quantitative data.

#### **Reliability Test Result**

The reliability test is vital instrument to measure the degree of consistency of an attribute which is supposed to be measured. As stated by Yen (2003), the less variation of the instruments produces in repeated measurements of an attribute the higher its reliability. The normal range of Cronbach's Alpha coefficient value ranges between 0 - 1 and the higher values reflects a higher degree of internal consistency. Different authors accept different values of this test in order to achieve internal reliability, but the most commonly accepted value is 0.70 as it should be equal to or higher than to reach internal reliability (Hair et al., 2003). The result of the Cronbach's alpha for this study's instrument was found to be in the acceptance range i.e. > 0.70. Thus, showing as indication of acceptability of the scale for further analysis since all the three dimensions (Technology change, Organization structure and dependent variable Organizational Performance) were found to be above 0.7.

Table 1 Reliability Analysis of the Variables

<b>Dimensions</b>	<b>No. of Items</b>	<b>Cronbach's Alpha Coefficient</b>
Organization structure	5	0.805
Technology change	5	0.824
Organizational Performance	5	0.826
<b>Total</b>	<b>30</b>	<b>0.818</b>

**Source:** Own Survey, 2021

As it can be seen from the Table, for each field value of Cronbach's Alpha is in the range between 0.805 - 0.826. This vary is considered as high; the end result ensures the reliability of every subject of the questionnaire. Cronbach's Alpha equals 0.818 for the entire questionnaire which indicates very good reliability. So, based on the test, the results are reliable

## **4. RESULTS AND DISCUSSIONS**

In this section various statistical data analysis tools such as mean, standard deviation and Pearson correlation Coefficient (r) was used to determine the relationship between each independent variable with the dependent variable.

Table 2 Correlation Result

	Statements	Correlation	Mean	St. dev.	1	2	3
1	Organizational structure	Pearson Correlation	4.35	.572	1		
2	Technology change	Pearson Correlation	4.32	.58	.976* *	1	
3	Organization performance	Pearson Correlation	4.33	0.58	.969* *	.944**	1
	** significant @0.01						

Source: Own Survey, 2021

#### 4.1 Organization structure

This section seeks to establish the extent to which organization structure influence human resource planning in public organizations. The findings presented in table 2 indicated that the organizational structure affected HRP had a mean of (4.35) and stranded deviation (0.572) to a large extent. The findings agree with Okumus (2003) cautions that issues for consideration must include: the impact of a new strategy on potential changes in duties; roles; decision making; and on reporting relationships. Leaders must consider whether the organizational structure facilitates the free flow of information; co-ordination, and the co-operation between management and other functional areas. Simplistically, structure informs “who does what”, and “levels of accountability”. This without a doubt indicates that organizational structure is a necessary thing when looking at how strategic planning can be implemented in organizations. Without proper structures then strategic planning might not see the light in some organization because structures play a major roles in delivering the expected results. In additions, the above result shows that there is strong and significant relationships between organizational structure and organizational performance ( $r = .969, p < 0.01$ ). That means, the more organizations up dated their structure, the more organizational performance enhanced. Therefore, the null hypothesis ( $H_0$ ) is rejected. The findings agree with Lai (2005) entity structure is the result of and a tool for implementing operational, financial, human resource, and strategic plans as it influences the entity's ability to communicate, coordinate its functions, and respond to environmental changes.

#### 4.2 Technological changes

This section seeks to establish the extent to which technological changes influence human resource planning in public sectors. The finding which is shown in the above table 2 reveals that the technological changes had an effect on organizational performance with a mean of (4.32) and stranded deviation (0.58) to a large extent. The findings agree with Xie & Huang (2012) technology has also improved HRP operations in terms of effectiveness and efficiency in public sectors. The findings also appear to support Hitt et al. (2005) that emphasizes technology makes life smooth and easy. This concept also applies to service delivery. An organization with good and updated technology system usually has an upper hand over technologically weak organizations not only in competition but also in the performance. With good technology an organization is able to easily enhance its performance. From the above result, it is possible to infer that technology change ( $r = 0.976, p < 0.01$ ) is positively and significantly correlated with

organization performance. Therefore, the null hypothesis ( $H_0$ ) is rejected. That means, the more organizations update their technology, the more they enhance their performances. The findings also appear to support Thamarai Selvan (2015) who reveals that making use of technological advancement would enhance organizational performances. The development and application of new technology could able to shape organizations and management practices.

## **5. CONCLUSION AND RECOMMENDATION**

As per the finding of the study, it is possible to conclude that organizational performance can be enhanced whenever organizations pay attentions to their structure and technological advancement. This does not mean that they are an end by themselves rather they are means to end as there are different factors that could affect organizational performances.

Generally speaking, it is advisable for organizations to exert their efforts on maintaining an updated organizational structure and technological advancement to enhance their performances while keeping other factors constant.

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