

Examining Human resources effects on productivity

Andrew Banda

Humanities and Social Sciences
Information and Communications University
Lusaka, Zambia
Andrewbanda840@gmail.com

Marvin M Kabubi

Department of Social Research
Information and Communication University
Research and Development Center
Marvinkabubi@ymail.com

Abstract— The purpose of this study was to analyze the effect of human resource management practices on productivity at Zambia Electricity Supply Corporation Limited. The study was guided by four specific objectives to: examine the influence of employee assessment on productivity, to examine the effect of workplace environment on productivity, to examine the effect of compensation and benefits on productivity and lastly, to examine the effect of training and development on productivity at ZESCO. To achieve the research objectives, the study adopted a quantitative correlational research design. Systematic and purposive (convenient) sampling of the respondents was carried out. A sample size of 344 respondents was obtained according to the Raosoft calculator with a population of 3200 employees at 95% confidence interval. Questionnaires were the main research instruments used to collect data from the respondents which formed primary sources of information. The filled-up questionnaires were returned by 344 respondents out of 500 which were administered. The response rate was therefore 68.8%. Books, journals, and the internet provided secondary sources of information.

Multiple hierarchical regression and correlation statistics were used to analyze the data collected through the statistical package for social sciences (SPSS25). There was a good extent of performance assessment, workplace environment, and training and development with a mean of 3.9094, 3.7058 and 3.9250, respectively. However, the compensation practice was lesser to some extent, with a mean of 3.0828.

The correlation and regression analysis result showed that all four independent variables have a positive effect on the productivity measured in terms of employee performance. From this analysis, performance assessment ($\beta=0.009$, P value= 0.000) and workplace environment ($\beta=0.107$, P value= 0.000), compensation ($\beta=0.057$, P value= 0.000) and Training practice ($\beta=0.949$, P value= 0.000) all had a positive effect except performance assessment which was not significant under regression analysis model 5. Based on the study results, it was suggested that firms need to implement the Human resource practices together as a whole and blend them.

Key Words - Human resource practices. productivity

1.1 Background of the study

Management of human resources has long been recognized as a crucial component of every firm including Zambia Electricity Supply Corporation Limited. This is so because people are what make Zambia Electricity Supply Corporation Limited or country valuable. Any company's level of prosperity therefore depends on the effectiveness and productivity of both its people and its businesses. Ali,

and Ahmad, (2009) asserts that a corporation or nation can develop a competitive advantage and accomplish its objectives by making effective use of its workforce. By utilizing company resources to produce the goods and services that consumers require, employees of firms create value.

Evidence-based research indicates that HRM techniques greatly increase employee productivity, (Abeysekera, 2017). By producing human resources that are distinctive and challenging to duplicate and, therefore, increase worker productivity, HR practices, according to Armstrong, (2018), substantially contribute to developing a competitive edge. There has been much discussion over the past three decades about how human resource management strategies affect an organization's performance, which has aided in the advancement of HR research, (Shabbir, 2014; Singh and Kass, 2016; Fey, et al., 2018; Nzuve, and Ng'endo, 2012; Aswathappa, 2017; Elarabi and Johari, 2014). One of the most pervasive areas of research continues to be explaining variances in organizational performance. There is evidence that economic development is favorably correlated with investments in human capital, and numerous studies have demonstrated a clear association between HR practices and an organization's performance and productivity, (Jackson, and Schuller, 2012).

The definition of human resource management by Harter, Schmidt and Hayes, (2012) is "a systematic and cohesive approach to the management of an organization's most valuable assets, the people working there who individually and collectively contribute to the attainment of its goals." Human resource management (HRM) is the "process of managing human abilities to fulfill organization's aim," according to Armstrong, (2018), whereas HR practices are the informal methods used to manage people. Human resource management (HRM) practices are organizational actions that ensure that the human resource pool is managed and used to achieve institutional goals, (Singh and Kass, 2016). Nzuve, and Ng'endo, (2012) discovered that HR procedures have

a significant direct impact on a company's profitability in a survey of 194 Singaporean businesses from various industries. Elarabi and Johari, (2014) contend that it's critical for businesses to implement Human Resources Management (HRM) strategies that make the most of their workforce. Organizational labor productivity is significantly impacted by HRM strategies, (Fey, et al., 2018). Even though many investigations have attempted to clarify employee productivity, few have conducted an empirical study on the relationship between HR practices and labor productivity. None have also examined human resources practices and effects on productivity. The few empirical studies that have been conducted have been done primarily on ZESCO. In order to determine the relationship between HR practices and labor productivity, this research is an empirical study.

Employee turnover, which drives up labor expenses and disrupts operations, is caused by dissatisfaction with HR procedures and working conditions, claim, (Shabbir, 2014). Only 60% of the 136 non-financial companies who began their initial public offerings on the American stock market in 1988 were still in business in 1993, according to a study of their five-year survival rates. The empirical analysis showed that both the importance a company placed on human resources and how it rewarded its employees were significantly related to the 3 Organizational performance and probability of survival, even when other variables like the company's size, industry, and even profits were statistically controlled, (Abeysekera, 2017). The fact that HR management practices offer a variety of critical sources that improve organizational performance results in enormous gains. However, some researchers, such as Harter, Schmidt and Hayes, (2012), come to the conclusion that not all human resources practices have the same impact on organizational outcomes. Theories of best practices or high commitment theories, according to Armstrong, (2018), indicate that specific HRM practices are universally linked to greater organizational performance, such as increased labor productivity, whether used alone or in combination. According to the "best practices" approach to strategic HRM, Fey, et al., (2018), some HR practices are superior to others, and all organizations should work to embrace them. In light of this, the purpose of this study will be to assess human resources practices and effects on productivity, with specific reference to ZESCO.

1.2 Statement of the problem

Any organization's ability to succeed depends on how productive and diligent each employee is. Utilizing resources effectively, especially human resources, has

been linked to productivity and profitability. Numerous authors have shown a connection between HRM practices and an organization's efficiency, (Fey, et al., 2018). In 2021, Peter Kapala, the minister of energy, claimed that ZESCO was having financial difficulties. And Mr. Kapala claimed that ZESCO has had a challenge when it comes to workforce productivity. These difficulties have resulted in a decrease in the organization's labor force productivity, (Times of Zambia, 2021). Considering this, the study attempted to assess human resources practices and effects on productivity, with specific reference to ZESCO.

1.3 General Objective

The main objective of this study was to determine the effect of human resource management practices on productivity at Zambia Electricity Supply Corporation Limited

- i. To examine the effect of performance assessment on promoting productivity
- ii. To examine the effect of workplace environment on productivity
- iii. To determine the effect of compensation and benefits on productivity
- iv. To determine the effect of employee training and development on productivity
 - i. What is the effect of employee training and development on productivity?

1.5 Theoretical and conceptual framework

Literature indicates that there is a relationship between Human resource practices and productivity. Performance assessment is a key human resource practice that is designed to evaluate employee performance and identify areas for improvement. In this context, human resource practices related to performance assessment are seen as a key factor in enhancing productivity. According to Armstrong and Baron (2005), "Performance management can help to improve productivity by aligning employee objectives with organizational goals, providing regular feedback and coaching, and identifying training and development needs.

The workplace environment is another important factor that can impact employee productivity. In this context, human resource practices related to workplace

environment are seen as a key driver of productivity. According to Hackman and Oldham (1976), "Job design can impact employee motivation and productivity by increasing task variety, autonomy, and feedback, and by designing jobs that are meaningful and challenging.

Compensation and benefits are key human resource practices that are designed to attract and retain employees, and to motivate them to perform at their best. In this context, human resource practices related to compensation and benefits are seen as a key factor in enhancing productivity. According to Milkovich and Newman (2017), "Compensation practices can help to improve productivity by aligning employee rewards with organizational goals, providing incentives for performance improvement, and ensuring that compensation is fair and equitable.

Employee training and development is a key human resource practice that is designed to enhance employee skills and knowledge, and to improve their performance. In this context, human resource practices related to employee training and development are seen as a key driver of productivity. According to Noe (2017), "Training and development practices can help to improve productivity by enhancing employee skills and knowledge, providing opportunities for career advancement, and increasing employee motivation and engagement.

Overall, these theoretical and conceptual frameworks provide a useful lens through which to understand the relationship between human resource practices and productivity. By examining the underlying principles and assumptions that guide this research, and by developing clear visual representations of the key concepts and relationships between them, researchers can gain important insights into how human resource practices can be used to enhance productivity in the workplace.

From the above theories, the below conceptual framework was developed.

CHAPTER 2: LITERATURE REVIEW

2.0 Overview

Chapter two discusses literature review which includes research on employee perceived performance in pharmaceutical sector, banking, and psychiatry. It also reviews literature on employee and organizational performance.

Performance assessment is a critical human resource practice that aims to evaluate employee performance and provide feedback for improvement. Performance assessment is a critical component of human resources management. It involves evaluating employee performance to identify strengths and weaknesses, and to provide feedback to employees on how they can improve their performance. Research has shown that effective performance assessment can lead to increased job satisfaction, motivation, and productivity. For instance, a study by DeNisi and Pritchard (2006) found that performance feedback improved employee motivation and performance, especially when the feedback was perceived as fair and accurate. Similarly, a study by Becker and Huselid (1998) found that organizations that adopted performance assessment practices had a 10% higher productivity rate than those that did not. And another study by Wang and Hsieh (2013) found that performance appraisal had a significant positive effect on employee job satisfaction and productivity. Therefore, organizations should implement effective performance assessment practices to improve employee productivity. Performance evaluation and performance assessment are often used interchangeably since both terms refer to a procedure through which an employer assesses an employee's performance and decides on rewards, despite the significant differences that human resource purists point out between the two terms. But strictly speaking, an assessment usually came before an evaluation. A person's job-related actions and results within a certain position are formally determined through performance review, (Jackson, and Schuller, 2012). While During a performance appraisal, a subordinate's work performance is evaluated and discussed with a supervisor in order to develop their skills. This structured and formal interaction typically takes the form of a regular interview, (Fey, et al., 2018).

properly, the procedure may have negative repercussions on the organization. The other issue is that if the organizational culture and system and the P.E. system do not align, it may not be effective, (Shabbir, 2014).

The workplace environment is another crucial factor that can impact employee productivity. A positive workplace environment can enhance employee motivation, job satisfaction, and productivity. Research has shown that workplace environment factors such as physical comfort, safety, and social support can positively affect employee productivity. For instance, a study by Firth et al. (2015) found that workplace social support had a significant positive

effect on employee productivity. Similarly, a study by Koustelios et al. (2018) found that a positive work environment was positively associated with employee productivity. Another research has shown that workplace environment factors such as lighting, temperature, and noise levels can have a significant impact on productivity. For example, a study by Hedge et al. (2004) found that improving lighting conditions led to a 10-15% increase in productivity. Therefore, organizations should strive to create a positive work environment to enhance employee productivity.

Compensation and Benefits is an essential human resource practice that refers to the financial and non-financial rewards that employees receive for their work. Research has shown that compensation and benefit practices that are perceived as fair can lead to increased motivation and productivity. For example, a study by Lawler et al. (2003) found that organizations that adopted fair compensation and practices had a 7% higher productivity rate than those that did not. And another research has shown that compensation and benefits practices can impact employee motivation, job satisfaction, and productivity. For instance, a study by Gerhart et al. (2015) found that employee compensation and benefits was positively related to employee productivity. Similarly, a study by Pfeffer (1998) found that pay-for-performance compensation and benefits systems had a positive impact on employee productivity. Therefore, organizations should implement effective compensation and benefits practices to enhance employee productivity.

2.4 Employee training and development

Employee training and development is another critical human resource practice that aims to enhance employee skills, knowledge, and abilities. Research has shown that employee training and development can positively impact employee productivity. For instance, a study by Noe et al. (2014) found that employee training and development had a significant positive effect on employee productivity. Similarly, a study by Chen et al. (2018) found that employee training and development had a positive impact on employee job satisfaction and productivity. Another research has shown that training and development programs can lead to increased employee skills and knowledge, which can lead to improved productivity. For example, a study by Baldwin and Ford (1988) found that organizations that invested in training and development programs had a 15% higher productivity rate than those that did not. Therefore, organizations should invest in effective employee training and development programs to enhance employee productivity.

This is a human resources (HR) activity focused on improving the performance of individuals and groups within a company, (Singh and Kass, 2016). In his study of the top 100 mid-sized enterprises in South Africa, Armstrong, (2018) examined the effect of training and development on employee performance and discovered a favorable correlation between the two. Additionally, the study discovered that firms with extensive training and development programs for staff members outperformed those with occasional or nonexistent programs in terms of overall organizational performance.

According to Harter, Schmidt and Hayes, (2012), training gives employees the abilities they need to carry out their job duties. When workers are not fully equipped to handle a dynamically changing work environment, productivity levels decline. Additionally, training and development make sure that workers are equipped to deal with any demands or difficulties they may face at work. Organizations that are successful link staff training and development to performance reviews, (Jackson, and Schuller, 2012). This will guarantee that each employee has the opportunity to improve their performance through training at each evaluation period. This is supported by, Aswathappa, (2017) research, which also emphasizes how the constantly evolving business environment in terms of technology, customer needs, and production processes does require employers to make sure that their staff members are adequately trained in aspects that will improve both their performance and the performance of the organization.

Professional development offers aided learning opportunities in professional sectors, such as certificates in law, marketing, accountancy, and educational bodies, among others, (Singh and Kass, 2016). A group of experts in a certain field typically designs and facilitates a training process for its members called professional development. The professional organization typically creates trainings where members must complete specific courses to be licensed to practice or must complete particular courses on a regular basis to receive points, which determines their operating experience, efficiency, and relevancy, (Abeysekera, 2017). To improve employee effectiveness, these professional organizations make sure that their training programs and courses are current with industry demands. In order to improve employee performance, organizations should make sure that their staff members are either certified by or registered with professional organizations. They should also have their performance reviewed on an

annual basis by professional organizations (Joseph and Dai, 2019).

Groups have the right to encourage their employees to join these organizations while also making it easier for them to participate by paying registration costs, yearly membership fees, licensing fees, and certification fees, among other fees, (Fey, et al., 2018). According to, Shabbir, (2014), there is a statistically significant connection between an employee's performance and their professional growth. A similar argument is made by, Nzuve, and Ng'endo, (2012) who claim that professional development is relevant and important since it offers tools for improving employee productivity as well as a way to guarantee ongoing, official evaluation of an employee's professionalism.

Based on the literature reviewed, it is evident that human resources practices have a significant impact on productivity. Effective human resource practices can positively impact employee productivity, leading to better organizational performance. Practices

Performance assessment, workplace environment, compensation, and employee training and development are all important factors that can affect productivity. Organizations that adopt effective human resources practices in these areas are likely to have higher productivity rates than those that do not.

To ensure the successful implementation and survival of the organization and its employees, HRM practices are a system that recruits, develops, inspires, and retains workers, (Shabbir, 2014). Employee performance and HR procedures are significantly correlated, claims, (Abeysekera, 2017). Formalized procedures, formal rules, and formal ideologies that guarantee the organization's existence and success are the major elements that considerably enriched the connection. According to Ali, and Ahmad, (2009), human resource strategies are a technique through which businesses can improve the capabilities of their staff and give employees incentives to contribute, making them a valuable asset to a company.

Even while the "battle for talent" is acknowledged to be critical to every firm in today's competitive global market, the value of human resource strategies nevertheless provokes strongly divergent opinions inside businesses, (Jackson, and Schuller, 2012). The infrastructure components of a strategic HRM process include HRM functions and practices, and organizations should strategically use their infrastructure to obtain an edge in the market today, (Harter, Schmidt and Hayes, 2012). Therefore, organizations have shifted their focus to developing

competitive advantage, which is based on the resource-based perspective by Armstrong, (2018), who explains that developing competitive advantage depends on a set of conditions that may be closely related to the HRM field because resources need to be valuable and uncommon to the organization.

HRM practices also refer to particular procedures, official rules, and ideologies that are intended to draw in, train, inspire, and hold onto workers who will assure the organization's survival and success, (Singh and Kass, 2016). Since HRM policies and practices differ from company to organization, Fey, et al., (2018) claim that they should be in line with the core business strategy in order to achieve corporate goals. These goals are numerous and different from one business to the next, but generally speaking they would include, among others, increasing market share, profitability, growth and expansion, organizational survival, satisfaction, and market leader. The following human resources practice types are examined:

While research has shown that human resource practices can positively impact employee productivity, there is a need for further research in this area. For instance, future research could explore the specific human resource practices that are most effective in enhancing employee productivity in different industries and organizational contexts. Despite the growing body of literature on the relationship between human resources practices and productivity, there is still a need for further research in this area, research could explore the impact of technological advancements on human resource. Additionally, another area that requires further research is the impact of human resources practices on different types of organizations, such as small and medium-sized enterprises (SMEs). Most of the existing research has focused on large organizations, and it is not clear how the findings can be applied to SMEs. Another area that requires further research is the impact of human resources practices on different types of employees, such as part-time and temporary employees. Most of the existing research has focused on full-time employees, and it is not clear how the findings can be applied to part-time and temporary employees. Further research in these areas could provide valuable insights into how human resources practices can be tailored to different types of organizations and employees to improve productivity.

CHAPTER 3: RESEARCH METHODOLOG

The section also explains the research design, population, and sampling design in the study. As well as providing research information on data collection technique and the reasons why one particular technique was used as opposed to another method. The research procedures are detailed as well as the data analysis method including potential criticisms.

Research Design

Research design is a blue print for any research process because it depicts how the study is conducted technically and elaborates how the researcher carries out sample selection, research procedures and data analysis among other specific tasks (Cooper & Schindler, 2014). According to Saunders (2009), descriptive design is used to document a study phenomenon in its real situation, without the interference of the researcher. Descriptive research design was used where the problem is well defined without looking at the relationships between the variables. With descriptive research design, the researcher aims to determine the aspects of the problem which are crucial for a thorough analysis (Backlund and Suikki, 2005). Moreover, the researcher has an opportunity to have a clear view of the problem from other related sources and narrows the research around these important items, thus, leading to precise or almost detailed facts when carrying out the study.

Quantitative and qualitative methodologies have their advantages and disadvantages. It is understood that quantitative methodology has the advantage of validity of hypothesis may oversimplify the reality. Qualitative methodology in contrast, allows for an in-depth understanding of reality while being disadvantaged by limited generalization (Simmons, 1985). The combination of these approaches will consequently balance the limitations of each methodology (Simmons, 1985; Denzin, 1989 cited in Shen, 2009). Leedy, (1993) argued that several studies can be improved significantly if mixed method research is employed. Creswell and Clark, (2007) were of the view that bias is reduced when the mixed methods are applied. This research used a combination of both the quantitative and qualitative approaches to empirical research to collect comprehensive information with regards to the research objectives. The purpose of these strategies is that both approaches have their relative strengths and weaknesses and thus in conducting the research, the weaknesses of one was

The target population is defined as the entire set of units for which the survey data are to be used to make inferences. Thus, the target population defines those units for which the findings of the survey are meant to generalize (Lavrakas, 2007). In this study the target population was ZESCO employees which was 3200. The study population is defined as the total members of a defined class of people, objects, or elements.

Sample Design

This study made use of systematic and purposive sampling to collect data from the respondents. Systematic sampling technique was used in identifying and interviewing the employees of ZESCO. This systematic sample was involved in selecting a starting point and then selecting every k individual where $k = \text{population size/sample size}$. This technique was used to sample employees of ZESCO. This technique was necessary as there was a list obtained from ZESCO Lusaka headquarters. The techniques was efficient for sampling from large databases obtained from ZESCO. The selection of HRM was done using purposive sampling to ensure every respondent has an equal chance of being included in the study sample. A purposive sampling method was used to collect data from the HRM. The justification for the use of purposive sampling, in this case, was based on the fact that HRM are key informants in as far as human resources practices and effects on productivity are concerned. This was done in order to provide each population element an equal probability of being included in the sample.

Sample size

A sample is a small proportion of the target population selected using some systematic procedures for study (Cooper & Schindler (2014). According to Lind (2008), a sample is a subgroup of the population. The use of a sample enable a researcher save a lot of time and money, and get more detailed information (Bluman, 2009). A sample reflects the population as a whole i.e. it a true representative of the population. Out of the whole population, a sample was selected to be a true representative of the population.

The sample size in a research were the number of observations or replicates to include in a statistical sample. The sample size is important in achieving the objective of making an inference about a population from a given sample . A sample size of 344 respondents was obtained according to the Raosoft

calculator with a population of 3200 employees at 95% confidence interval

The purpose of data collection procedures was to provide the framework for a uniform, accurate record system. According to Polit and Hungler (1999), data is defined as information obtained during study. Data was collected through primary sources. Primary data was collected using questionnaires... This research study used a questionnaire as instrument; the questionnaire was based on (close ended questions). Structured questionnaire is a questionnaire in which the questions asked are precisely decided in advance. The questionnaire was in line with the research objectives and was delivered to ZESCO employees in Lusaka. The questionnaire was self-administered. This involves administering the questionnaires to the respondents when they report for work at the ZESCO Office, then requested them to filled out the questionnaires using google forms.

The multivariate technique was used to analyse the data because there are more two variables in the study, and one is dependent on the others (Chabala, 2020). Specifically, the quantitative correlation design under the multivariate techniques was used. Performance is dependent on the human resource practices. The regression and correlation analysis were performed using SPSS to analyse and produce desired results.

The data which was collected through the questionnaire was systematically organised in the manner that enabled analysis. The data was coded, summarized, presented, and analysed using the Statistical Package for Social Sciences (SPSS) version 25. The results were presented using tables, bar charts, and graphs using frequencies, percentages as well as inferential statistics.

The primary data that was gathered for the study was analysed using the quantitative methods. This was because the study's descriptive statistics need thus making it to heavily be concentrated on the quantitative methods of data analysis. The inferential statistics needed for the study requested the employment of the quantitative methods, that is, in the testing of the hypothesis of the study (Naresh and David, 2016).

Correlation was used to establish the strength and direction of the relationship between variables and regression was used to measure the effect of the independent variable on the dependent variable. Correlation was used to give a numeral value for the relationship that exists between the dependent variable and the independent variables. It explains the

variations in the dependent variable resulted by the independent variables. The disadvantage is that it does not explain how much change is in the dependent variable as the result of a change in the independent variables (Naresh and David, 2016).

Triangulation

Triangulating the effects of Human Resource practices on productivity can help us understand how these factors interconnect and mutually influence each other. Let's examine the impact of performance assessments, workplace environment, compensation and benefits, and training and development on productivity:

Performance Assessments: Performance assessments provide a structured process for evaluating employee performance, setting goals, and providing feedback. By conducting regular assessments, HR can identify high performers who can serve as role models and motivate others. It also helps identify areas for improvement and provide targeted training or development opportunities. Effective performance assessments contribute to productivity by aligning individual goals with organizational objectives, improving employee skills and competencies, and recognizing and rewarding high performance.

Workplace Environment: The workplace environment encompasses the physical, social, and cultural aspects of the organization. A positive and supportive environment promotes employee engagement, satisfaction, and well-being, which in turn enhances productivity. HR plays a vital role in shaping the workplace environment by fostering open communication, teamwork, and collaboration. By promoting work-life balance, recognizing achievements, and ensuring a safe and inclusive atmosphere, HR contributes to higher levels of employee motivation, creativity, and productivity.

Compensation and Benefits: Compensation and benefits are crucial factors that influence employee motivation and job satisfaction. HR manages the design and implementation of fair and competitive compensation structures, including salaries, incentives, and bonuses. Additionally, comprehensive benefits packages encompassing healthcare, retirement plans, and other perks contribute to employee well-being. When employees feel fairly compensated and receive attractive benefits, it enhances their job satisfaction, loyalty, and productivity.

Training and Development: HR is responsible for identifying skill gaps and implementing training and development programs to enhance employee capabilities. By providing opportunities for learning and growth, HR ensures that employees have the

knowledge and skills required to perform their roles effectively. This, in turn, increases their confidence, job satisfaction, and productivity. Training and development initiatives can include workshops, seminars, online courses, mentoring programs, and leadership development, all aimed at improving employee performance and productivity.

By triangulating these factors, we can see their interconnected nature. For example, performance assessments help identify skill gaps, which can be addressed through training and development initiatives. A positive workplace environment encourages open feedback during performance assessments and supports employee growth and development. Fair compensation and benefits, in turn, contribute to employee satisfaction and motivation, while also attracting and retaining top talent. When all these elements are integrated effectively by HR, they create a synergistic effect that enhances productivity within the organization.

In summary, performance assessments, workplace environment, compensation and benefits, and training and development are key factors in HR's arsenal to drive productivity. By understanding their interdependencies and implementing strategies that optimize each factor, HR can create an environment where employees are engaged, motivated, and equipped with the skills necessary to contribute to the organization's success.

CHAPTER 4: PRESENTATION OF RESEARCH FINDINGS AND DISCUSSION OF RESULTS

4.0 Overview

In this chapter, findings are presented. The research findings are presented using frequency tables, pie

charts, percentage scores and bar charts. In addition to that, the chapter explains the inferential analysis, descriptive statistics, and study findings interpretation. Inferential statistical analysis was used to test the hypotheses, the independent variable being the human resource practices and the dependent variable being performance. Hence, inferential statistics makes it possible for us to test the hypotheses for all the four independent variables one by one.

4.1 Presentation of results on background characteristics of respondents

4.1.1 Age, Gender and Marital status of the respondents

A total of 165 (48%) males and 179(52%) females responded to the survey. From the analysis, it was revealed that 5 respondents were below the age of 25 years and this accounted for 1.5% of the total data collected. It also revealed that 34 respondents were aged between 26 and 30 years giving 9.9% of the total respondents. Respondents between the age of 31 and 35 years old were 79 giving a total portion of 23% of the total respondents. Further, 61 respondents were aged between 36 and 39 years and this accounted for 17.7% of the total respondents. Finally, 165 respondents were aged above 40years old accounting for 48% of the total respondents and this was the highest.

With regards to marital status, 70 were married representing 20.3% proportion, 250 were single, representing 72.7% proportion, 16 were widowed and this accounted for 4.7% and lastly, 8 were divorced accounting for 2.3% of the total respondents. These results are illustrated in the table below.

TABLE 4.1 Age, Gender and Marital status Frequency Table

Variable	Frequency (n)	Percent (%)
Gender		
Male	165	48
Female	179	52
Total	344	100
Age		
25 and Below	5	1.5
26-30 Years	34	9.9
31-35 years	79	23
36-39 Years	61	17.7
Above 40 years	165	48
Total	344	100
Marital Status		
Married	70	20.3
Single	250	72.7
Widowed	16	4.7
Divorced	8	2.3
Total	344	100

Source: Author 2023

4.1.2 Education level and employment position of respondents

Overall proportions in terms of level of education were 49.4%-degree level, 19.8% diploma level, 24.4% masters and PhD level, 6.4% certificate. When it comes to employment positions, 7.3% were senior management, 20.3% middle management, 39% supervisory and 33.4% shopfloor position level. Results are shown in the frequency table 2 below.

Table 4.2 Education level and employment position of respondents

Variable	Frequency (n)	Percent (%)
Position in the Organisation		
Senior Management	25	7.3
Middle Management	70	20.3
Supervisor	134	39
Shopfloor	115	33.4
Total	344	100
Highest Qualification		
Certificate	22	6.4
Diploma	68	19.8
Degree	170	49.4
Masters PhD	84	24.4
Total	344	100

Source: Author 2023 Table 4.2 Education level and employment position of respondents

Source: Author 2023

4.1.3 Number of years spent in the organization and department of respondents

From the pie chart below, the highest number of respondents were from the Human resource department with about 27% of the total

respondents. 7% were from the marketing department, 23% from Administration, 20% Operations, 21% Finance and lastly 2% were from Engineering.

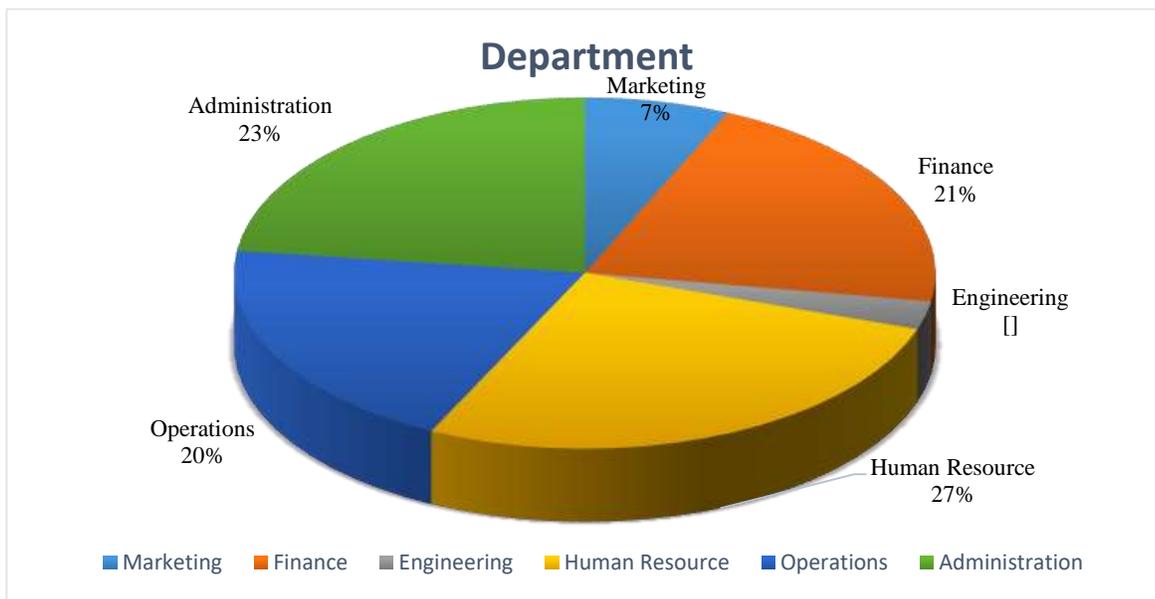


Fig 4.1 Source: Author 2023

The figure 4.2 below shows a bar chart with the number of years worked in the organization. 39.5% worked above 10

years, 29.4% worked 6 to 10 years, 20.1 % have worked 2 to 5 years and only 11% worked less than 1 year.

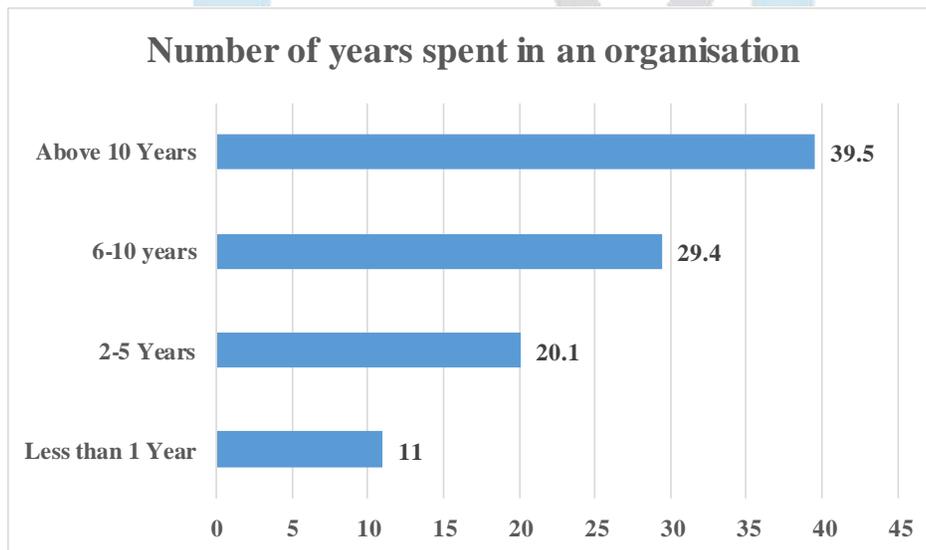


Fig 4.2 Source: Author 2023

measured by a 1- 5 Likert scale with 5- strongly agree, 2- agree, 3-neutral, 2 - disagree and 1- strongly disagree.

A. 4.2 Presentation of results on the effect of performance assessment on productivity

Descriptive statistics were used to understand data description. The data set was described by mean values and variables were Table 4.3- Descriptive statistics

Descriptive Statistics							
Variable	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Std.Error
Performance Assessment	344	1.00	5.00	3.9094	0.76091	-1.155	0.131
Workplace Environment	344	1.00	5.00	3.7058	0.73795	-0.816	0.131
Compensation and Benefits	344	1.00	4.50	3.0828	0.78875	-0.378	0.131
Training and development	344	1.00	5.00	3.9250	0.59469	-1.377	0.131
Employee Performance	344	1.00	5.00	3.8870	0.56435	-0.926	0.131

Source: Author 2023.

From the table above, it is clearly shown that many respondents agreed with items represented under performance assessment and it is supported by mean=3.9094 and standard deviation 0.76091.

The relationship between constructs of this study was determined by Pearson correlation. Correlation values above 0.70 show a very strong positive correlation, those between 0.5 and 0.70 indicates strong correlation, 0.3 to 0.5 shows moderate correlation and lastly those between 0.1 and 0.3 indicate relatively weak

correlation. Pallant (2010) eluded that any correlation above 0.80 may cause worry as it indicates the presence of multicollinearity. Below is the table of Pearson correlation for this study.

Table 4.4 Pearson correlation Table

#.Variable	N(sample size)	1	2	3	4	5	6
1.Employee Performance	344	–					
2. Age	344	.119*	–				
3. What is your gender	344	0.067	.138*	–			
4. Performance Assessment	344	.511**	0.026	0.005	–		
5. Workplace Environment	344	.556**	-.151**	-0.026	.552**	–	
6. Compensation and Benefits	344	.402**	-0.016	.149**	.331**	.591**	–
7. Training and development	344	.894**	0.056	0.102	.589**	.677**	.442**

* Correlation is significant at the 0.05 level (2-tailed).
 ** Correlation is significant at the 0.01 level (2-tailed).

Source: Author 2023

The control “variables used in this study were age and gender and age was significant whereas gender was insignificant. The results in table above indicate that correlation between the performance assessment variable and the employee performance variable was significant (p<0.01). r was 0.511 showing a strong correlation. Multiple hierarchical regression analysis was used to predict performance after controlling age and gender using HR variables and Productivity variable. To test for multicollinearity, the variance inflation factor (VIF) was computed. From the table, all VIF values for control variables and independent variable are less than 5. Hence multicollinearity is not an issue (Pallant 2011).

combined contribution of adjusted coefficient of determination (R-squared) of 1.1% and correlation coefficient (R) of 0.129, which shows a very small effect size. Individually, age is significant while gender not significant, implying that age has an effect on the productivity.

In model 2, performance assessment variable was introduced in addition to the control variables. This showed a significant combined large effect (adjusted R-squared=26.8% from 1.1%) and R of 0.524 indicating a moderate positive relationship. On individual basis, only the age and performance assessment variables contribute significantly to performance.

From table 4.5 below, In model 1, we have the base model which only includes control variables of age and gender. These make a Table 4.5- Regression analysis

Variable	Model 1		Model 2		Model 3		Model 4		Model 5		VIF
	Beta	(SE1)	Beta	(SE2)	Beta	(SE3)	Beta	(SE4)	Beta	(SE5)	
Control Variables											
Gender	0.052	0.061	0.051	0.053	0.054	0.061	0.041	0.049	-0.049	0.028	1.079
Age	0.112*	0.027	0.099*	0.024	0.171**	0.087	0.166**	0.022	0.057*	0.013	1.095
Independent Variable											
Performance assessment			0.508**	0.034	0.264**	0.196	0.265**	0.038	0.009	0.023	1.650
Workplace Environment					0.438**	0.335	0.388**	0.046	0.107**	0.030	2.698
Compensation benefits							0.081	0.038	0.057*	0.022	1.612
Training and development									0.949**	0.034	2.224
F	2.907*		42.872***		57.045***		46.28***		240.907***		
F change	2.907		120.76		72.514		2.326		721.07		
R	0.129		0.524		0.634		0.637		0.901		
R square	0.017		0.274		0.402		0.406		0.811		
R square adjusted	0.011		0.268		0.395		0.398		0.808		
R square change	0.017		0.258		0.128		0.004		0.405		

***sig at 0.0001, **sig at 0.001, *sig at 0.05

Source: Author 2023

B. 4.3 Presentation of results on the effect of workplace environment on productivity

From table 4.3 of descriptive statistics, the study indicated that the respondents fairly agreed with components under the variable workplace environment as the results showed a mean of 3.7058 and Standard Deviation of 0.73795.

From the regression analysis table 4.5, in model 3, workplace environment was introduced in addition to control variables and performance assessment variable. This resulted into a combined significant large effect of adjusted R-squared 39.5% from 26.8% and correlation coefficient R of 0.634 showing a moderate positive relationship. On individual basis, only performance assessment and workplace environment were significant

In the Pearson correlation table 4.4, the results indicated that correlation between the workplace environment and the employee performance variable was significant (p<0.01). r was 0.511 showing a strong correlation.

C. 4.4 Presentation of results on the effect of compensation and benefits on productivity

From table 4.3 of descriptive statistics, the study indicated that the respondents somewhat agreed with components under the variable compensation and benefits not to a large extent as the

results showed a mean of 3.0828 and standard deviation of 0.78875. The mean was below 3.5 and almost neutral.

In the Pearson correlation table 4.4, the results indicated that correlation between the compensation and benefits variable and the employee performance variable was significant ($p < 0.01$). r was 0.402 showing a moderate correlation.

From the regression analysis table 4.5, In model 4, Compensation and benefits variable was introduced to the variables in model 3. A significant combined effect is observed as adjusted R-squared increases to 39.8% from 39.5% and correlation coefficient R of 0.637 showing a moderate positive relationship. When viewed individually, all variables are all significant, except compensation and gender.

D. 4.5 Presentation of results on the effect of Training and development on productivity

From table 4.3 of descriptive statistics, the study indicated that the respondents agreed with components under the variable training and development to a large extent as the results showed a mean of 3.9250 and standard deviation of 0.59469. The mean was above 3.5 and almost a 4.

In the Pearson correlation table 4.4, the results indicated that correlation between the training and development variable and the employee performance variable was significant ($p < 0.01$). r was 0.894 showing a very strong correlation.

From the regression analysis table 4.5, Training and development variable was introduced in model 5 in addition to control variables and the other three independent variables. A very significant

Table 4.6- Hypotheses testing summary

#	Hypothesis	Statistic	Test	Result
H 1	Performance assessment has an effect on productivity	$R = .511^{**}$	Correlation	Supported
H 2	Workplace environment has an effect on productivity	$B = .0107^{**}$	Regression	Supported
H 3	Promoting compensation has an effect on productivity	$B = .0057^{**}$	Regression	Supported
H 4	Employee training and development programs have an effect on productivity	$B = .0949^{***}$	Regression	Supported

*sig at 0.05 ** sig at 0.001 ***sig at 0.000

Source: Author 2023

CHAPTER 5

CONCLUSION AND RECOMMENDTIONS

5.0 Overview

This chapter highlights the recommendations, gives a conclusion, and summarises the research study on the effects of the human resource practices on the productivity of ZESCO Ltd

5.1 Conclusion

The purpose of this study was to determine the effect of human resource practices on the productivity of ZESCO. The study was guided by four research

combined effect of 80.8% from 39.8% and correlation coefficient R of 0.901 which indicates a very strong positive relationship. On individual basis, all the independent variables are significant except performance assessment

E. 4.6 Discussion of research findings

The findings in this study suggest that performance assessment, workplace environment, compensation and benefits and training and development each significantly affects productivity at ZESCO. Based on the comprehensive multiple regression model 5, the largest predictor of performance is Training and development but by the time all variables are put in together, performance assessment becomes insignificant. This means that for every unit change in performance assessment, there is 0.009 unit change in performance, for every unit change in workplace environment, there is 0.107 unit change in performance, one unit change in compensation results in 0.057 unit change in performance as well as 0.949 units change when training and development practice increases by one unit. However, the correlation results indicate that inter correlations among the among the human resource practices range between $R = 0.129$ to $R = 0.901$, representing a large size effect. The implication is that the Human resource practices should be managed, developed, and implemented as a whole and not in isolation from each other. The findings in model 5 at 0.05 significance level have supported the conceptual model and all the hypothesized relationships except for performance assessment. This means that when Human resource practices are implemented together, there is an effect on the performance of the employees. Table below summarizes the hypotheses testing.

questions which includes: what is the effect of performance assessment on the productivity of ZESCO? what is the effect of the workplace environment on the productivity of ZESCO? what is the effect of compensation and benefits practice on the productivity of ZESCO? And lastly, what is the effect of training and development practice on the productivity of ZESCO?

This study adopted a quantitative correlational design. The study population comprised 3200 ZESCO employees. To obtain a sample of minimum 344, about 500 surveys were sent out to employees randomly and the 344 responses were obtained. A structured questionnaire was used in this study as the data collection instrument. Descriptive and inferential statistics were used in this study to analyse data to investigate the relationship between the

dependent variable and the independent variables. The descriptive statistical analysis used in this study included mean and standard deviations while the inferential statistical analysis used included Pearson Correlation test and Regression test. The study revealed that the model of performance assessment, workplace environment, compensation and benefits, and training and development structure have a combined effect on employee performance, thereby affecting the productivity of ZESCO. Further, the study revealed that the model had an adjusted R squared of 0.808 which shows that about 80.8% of the employee performance can be explained by human resource practices. The remaining 19.2% can be explained by variables that are not in this study.

5.2.1 Recommendations on performance assessment

ZESCO should continue to practice performance assessment, make it a fair process and always give feedback on the rating to its employees. They should ensure that the performance assessment methods are understood, and a clear action plan must be in place to close gaps.

5.2.2 Recommendations on workplace environment

ZESCO should ensure that the workplace environment is conducive, noise free and appealing for employees. In addition to a good physical environment, a good work culture with open lines of clear communication, team cooperation, unity and trust is highly recommended.

5.2.3 Recommendations on Compensation and benefits

ZESCO should ensure the remuneration process is fair and equivalent to the employee work output, wages paid on time and employees must be paid fairly for extra work

5.2.3 Recommendations on Training and development

ZESCO should have a training plan drafted from a training needs analysis which will help develop employees to deliver better. High content quality of materials is also highly recommended.

5.3 Areas of further study

Other areas of further study in relation to this research are: An investigation on the effect of human resource management practices on project cost in in the energy sector. A study of the relationship between performance appraisal and retention of employees by ZESCO as a job security measure. Apart from that, a similar study can be adopted with more variables on human resource practices and in a qualitative approach.

APPENDICES

References

- Abeyssekera R. (2017). The Impact of Human Resource Management Practices on Marketing Executives Turnover of Leasing Companies in Sri Lanka, *Contemporary Management Research*, 3(3), 58-75.
- Ali, R., & Ahmad, M. S. (2009). "The impact of reward and recognition programs on employee's motivation and satisfaction: an empirical study." *International Review of Business Research Papers*, 5 (4), 270-279.
- Armstrong, M. (2001). *A handbook of personnel Management Practice*. London, UK: Kogan Page.
- Aswathappa, K. (2017). *Human Resource Personnel Management*. New Delhi: Tata McGraw-Hill.
- Bratton, J., & Gold, J (2017). "Human Resource Management": Theory and Practice, 4th Edition, Houndmills: Macmillan.
- Chen, Y. (2009). Self-determination in Human Behavior. *Journal of Applied Psychology* 74 (2), 580-590.
- Cohen, L and Manion, L (2000). *Research Methods in Education*. Routledge: New York.
- Elarabi, H.M. and Johari, F. (2014). The impact of human resources management on healthcare quality. *Asian Journal of Management Sciences & Education*, 3(1).
- Fey, C.F., Bjorkman, I., & Pavlovskaya, A (2018). The effect of human resource management practices on firm performance in Russia", *International Journal of human Resource Management*, (11)1.
- Harter, C., Schmidt, C. & Hayes, D. (2012). Performance Appraisal systems, Productivity, and Motivation. *Public Personnel Management* 31(2), 141- 159.
- Jackson, S. & Schuller, R. (2012). *Managing Human Resources through Strategic Partnership* (8th ed.). Toronto, Canada: Thompson.
- Joseph K. & Dai. C (2019). HRM Practices and Organisational Performance: An Empirical Analysis, *International Journal of Business and Management*, 4(8).
- Kothari, C., Garg, G. (2014). *Research Methodology and Techniques*. India.

Kothari, C.R (2018). "Research Methodology": Methods and Technique New Age International Ltd.
Nyakundi, S. (2016). The Challenge Facing the Practices Of Human Resource Management In Organizations In Kenya: A Case Study Of Aktion Afrika Hilke. Kenyatta University.

Nzuve, S. and Ng'endo, M. (2012). An Assessment of Employees' Perception of Performance Appraisal: A Case Study of The Department of Immigration – Nairobi; University of Nairobi.

Shabbir, M. (2014). The impact of human resource practices on employee perceived Performance in pharmaceutical sector of Pakistan. African Journal of Business Management, 6(2), 4-5.

Singh, R. and Kass, B. (2016). The impact of human resource management practices on organizational performance. A study on Debre Brehan University. International Journal Of Recent Advances In Organizational Behavior And Decision Science, 1(1)

Ulrich, D. (2017). Human Resource Champions. The Next Agenda for Adding Value and Delivering Results. Havard Business Review Press, Boston.

Wang, X., Liao, J., Xia, D. & Chang, T. (2010). The impact of organizational justice on work performance. International Journal of Manpower, 31(6): 660-677.

Yonder, D. Heneman, J., Turnbull, G. & Stone, C. (2019). Handbook Of Personnel