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RESEARCH PAPER

The effect of organizational culture on employees' performance in research institutes - evidence from Ethiopian Institute of Agricultural Research

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ABSTRACT

Goal: This paper presents a case study, which examined the effect of organizational culture (clan culture, adhocracy culture, market culture, and hierarchy culture) on employees' performance in a developing country context taking the case of Ethiopian Institute of Agricultural Research (EIAR).

Design / Methodology / Approach: Using survey questionnaire and convenience sampling techniques, 302 complete questionnaires were returned after being filled by respondents (employees) and considered for descriptive and inferential analysis. Based on their willingness to participate in the study, four research centers within Ethiopian Institute of Agricultural Research (EIAR) were included in the study.

Results: This study found out that all organizational culture types (clan culture, adhocracy culture, market culture, and hierarchy culture) have statistically significant results and have positive relationship with employees' performance. And, of all, the regression analysis result showed that the clan culture is the most dominant culture type.

Limitations of the investigation: The findings of the study depended on a single case study, and this limitation could be taken as an avenue for future researchers to examine other research institutes in similar contexts.

Practical implications: The presented result sheds light regarding the effect of organizational culture on employees' performance in agricultural research institutes; the research's outcome provides a useful input for agricultural research institutes and policy makers in the study setting concerning the effect of organizational culture on employees' performance.

Originality/Value: this study adds to the current body of knowledge in the area of organizational culture and its effect on employees' performance. Besides, not much earlier studies have been done on the subject of the study in the context of agricultural institutes in the developing world.

Keywords: Organizational culture; Employees' performance; Agricultural research institute; Developing country; Ethiopia.

INTRODUCTION

There is a tantalizing premise that organizational culture could be a key to better employees' and organizational performance (Jiddah, 2016; Rohman et al., 2021; Said et al, 2022). As a result, studies on organizational culture are still popular among academicians and practitioners (Bayanova, et al, 2019; de Castro Seixas et al., 2020; Mahendra et al, 2022; Meng & Berger, 2019). According to Abdala et al., (2021), organizational culture is understood as a set of habits, beliefs and shared values by the people that compose an organization. Besides, every organization has its own unique culture, some appear stronger, and more deeply rooted culture than others (O'Riordan,

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2015).

Organizations with strong organizational cultures are more successful than organizations with weak cultures because of unity among employees as they hold common beliefs and values (Thokozani, 2017). Similarly, Warrick (2017) stated that organizational culture can significantly influence the performance and effectiveness of an organization as well as the morale and productivity of its employees.

In other words, as organizational culture could contribute to the performance of employees (Priyadharsan and Nithiya, 2020), it is regarded as crucial within an organization (Paais & Pattiruhu, 2020). This is because organizational culture is a base and an important building block of an organizational performance (Abbas & Yaqoob, 2009). As a result, studies that examine the link between organizational culture and employee performance are essential in order to know what goes in an organization, how to run them, and how to improve them (Schein, 1992). Accordingly, this study was conducted with the aim to examine the effect of organizational culture on employee's performance in research institutes of the developing world taking the case of Ethiopian Institute of Agricultural Research (EIAR). Not much is known about the effect of organizational culture on employees' performance in research institutes of the developing regions of the world.

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Problem Statement

Many organizations today put more effort only on the intrinsic and extrinsic reward system to enhance employee performance, and give less concern on the organizational culture (Thuku et al, 2015). However, organizational culture is an important construct that affects both individual and organizational outcomes (Yesil & Kaya, 2012). There were different studies conducted on the relationship between organizational culture types and employee performance in different organizations. However, their findings have mixed results and are contradictory. For example; a study by Vasantha and Durgadevil (2017) showed that clan culture and hierarchy culture have a positive effect on performance; but adhocracy culture has negative effect on performance. To the contrary, Naranjo-Valencia et al., (2016) argue that adhocracy culture has a positive effect and hierarchy culture has a negative effect on performance. They also found out that clan culture has positive effect on performance. In addition, Beyene (2018) also found out that organizational culture has a positive effect and a significant relation with the performance of employees. The researcher confirmed that all the four organizational culture types, namely clan, adhocracy, market, and hierarchy cultures had a significant effect on employee performance, with market culture being a dominant one.

The above arguments exhibit inconsistency of findings about the question of whether (which dimension/type of) organizational culture improves or worsens employees' performance. As a result it is still worthy to conduct further studies in different organizational settings and national contexts. Scholars state that there are lack of enough studies specific to the relationship between organizational culture types (namely, clan, adhocracy, market/competitive, and Hierarchy) and employee performance within the domain of public organization in developing countries such as

agricultural research institutes (Rus & Rusu, 2015; Paais & Pattiruhu, 2020; Yesil & Kaya, 2013). Therefore, this study aspires to shed light on the subject of the study by providing empirical evidence by investigating the effect of organizational culture on employee performance in agricultural research institute in a developing country context.

Research Hypotheses

In light of the main research issue of this study that focuses on examining the relationship between organizational culture type (s) and employee performance, this study tests the following hypotheses:

Hypothesis 1 (H1): Clan Culture has positive and significant effect on employee's performance.

Hypothesis 2 (H2): Hierarchy Culture has positive and significant effect on employee's performance.

Hypothesis 3 (H3): Adhocracy Culture has positive and significant effect on employee's performance.

Hypothesis4 (H4): Market culture has positive and significant effect on employee's performance.

REVIEW OF LITERATURE

Organizational culture

Organizational culture is a culture formed in accordance with organizational goals by sharing the things acquired by learning, and comprises all the values, activities, philosophy, and ideals of an organization (Nam & Kim, 2016). It is a social glue that bonds people together and makes them feel part of the organizational experience (Wambui, 2018). It plays a primary function in modeling the behavior and performance through the collective efforts of individual employees of the organization; and as such maintaining strong organizational culture is necessary for superior employee's performance and organizational performance (Joseph & Kibera, 2019).

Besides, Qianqian and Zhihua (2020) noted that organizational culture can build friendly, family work atmosphere and care about development of employees, which is attractive for some employees who seek for employment ability , personal value, and career development. More so, as organizational culture may have specific typologies including clan, adhocracy, market and hierarchy culture (Durgadevi and Vasantha, 2017).

The first one - Clan culture is a family like type of corporate environment that emphasizes consensus and commonality of goals and values (Chuang et al., 2014; Kim, 2014). This culture is the most collaborative and the least competitive of four main corporate culture models (Chennattuserry,2022; Xiong et al., 2021; Huang, 2022). The second type - adhocracy culture, with its external oriented and dynamic structure, refers to the culture of an organization that is entrepreneurial, flexible, innovative, and creative. It is also a culture based on the ability to adapt quickly to changing conditions (Keskin et al., 2005; Porcu et al., 2017). According to Arditi (2017), adhocracy culture encourages creativity, experimentation, innovation, and individual initiative. Moreover, an environment, which thrives on modeling new ideas, characterizes adhocracy culture; and adhocracy type of culture is anchored on eagerness for continuous change, acquisition of new knowledge and resources (Misigo, 2019). And, the third one - market culture occurs at the time of stability and control; and in this culture employees are success oriented, giving importance to personal interest rather than organizational goals and emphasizes on the concept of performance and efficiency (Gimenez-Espin et al, 2013; Yazici, 2009). The fourth type - a hierarchy culture focuses on internal maintenance and strives for stability and control through clear task setting and enforcement of strict rules, ie., it stresses a formalized and structured place led by a coordinator or organizer (Lund, 2003; Mohammed et al., 2020). This culture highlights organizational levels and rules, emphasize controllability and stability of organization, which is a kind of relatively rigorous and high controlled culture (Qianqian & Zhihua, 2020).

Cameron and Quinn's Competing Values Framework Model

Numerous types of organizational culture have been proposed for different studies in the area of organizational culture research. However, Cameron and Quinn's (1999; 2011) competing values framework model is at the forefront. This model is also one of the most influential and extensively used models in the area of organizational culture research. The parameters of this model include focus (internal versus external) and level of stability/control versus flexibility (Olynick & Li, 2020).This model classifies organizational culture in to four culture types namely: clan culture, adhocracy culture, market culture, and hierarchy culture. The following framework explains how these four organizational cultures compete with one another.

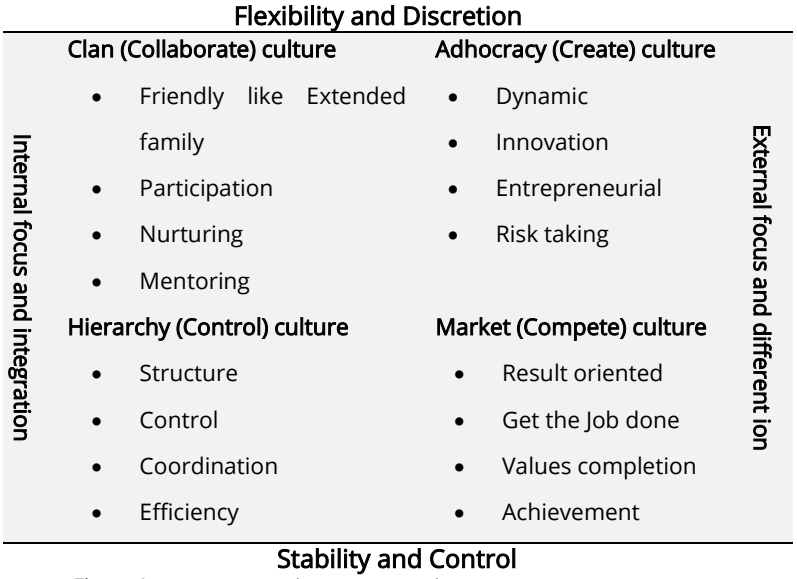

Figure 1 - Competing Values Framework (Cameron & Quinn, 1999).

Employee performance

Employee performance can be described as the ability of employees to reach goals using organizational resources efficiently and effectively (Augustrianto et al., 2018). Employee performance is not only measured on their ability to meet organizational goals and target but by how they are willing to subscribe to the organization's culture (Diana et al., 2021). It deals about the amount of output generated from job execution by an employee over a particular period of time in an organization (Dhammika, 2017). It plays an important role for organizational performance; as a result, the effective evaluation of performance is a necessary condition for organizational success (Kotter & Heskett, 1992). Through continuous evaluation, management could be able to collect data necessary for defining priorities, formulating the necessary policies, and then taking corrective actions to continuously upgrade the quality of work produced (Isychou et al, 2016).

Organizational Culture and Employee's Performance

The linkage between culture of organization and employee's job performance is crucial for the success of an organization (Shahzad et al., 2013). Karamipour et al (2015), found out that culture affects formulation of goals, strategies, organizational performance, motivation, job satisfaction, creativity, & innovation, entrepreneurship, the way of decision-making, the level of employee participation in affairs, and the level of satisfaction and commitment. Besides, Salihu et al (2016) confirmed that organizational culture does directly affect employees' job performance. Similarly, Klimas (2015), clarified that an organizational culture that promotes and facilitates collaboration is important for establishing long-term inter-organizational relationships and improve performance. However, when it comes to investigating the effect of the specific dimensions of culture, there are still conflicting results. For instance, Vasantha et al (2017) noted that clan culture and hierarchy cultures have a positive effect on performance. In contrast, adhocracy culture has negative effect on performance. On the other hand, Naranjo-Valencia et al, (2016) argue that adhocracy culture has a positive effect and hierarchy culture has a negative effect on performance; and clan culture has a positive effect on performance.

Clan Culture and Employee Performance

Teamwork, loyalty, personal commitment, extensive socialization, and social influences are features of clan culture (Njug & Agusioma, 2014). These scholars argued that clan culture encourages team spirit and synergies. Therefore, employees' value recognition and cohesion with colleagues, has a highest influence on performance. According to Vasantha et al (2017), clan culture has a positive effect on performance. In addition, Beyene (2018) found out that

clan culture has a positive effect and a significant relation with the performance of employees. Based on the evidence provided above, the following hypothesis is suggested:

Hypothesis 1 (H1): Clan Culture has positive and significant effect on employee's performance.

Hierarchy Culture and Employee Performance

According to Alas and Ubius (2015), the organizational culture, which is compatible with hierarchy culture is characterized by formalized and structured place at work, effective leaders acting as good coordinators and organizers, maintaining a smooth running organization, and the long-term concerns of the organization (predictability, stability, and efficiency). Vasantha et al (2017) found out that hierarchy culture has a positive effect on performance. Similarly, Beyene (2018) has also found out that hierarchy culture has a positive effect and a significant relation with the performance of employees. Therefore, the following hypothesis is derived:

Hypothesis 2 (H2): Hierarchy Culture has positive and significant effect on employee's performance.

Adhocracy Culture and Employee Performance

The adhocracy culture creates self-motivated, entrepreneurial, and innovative work settings, encouraging individual initiatives and provides autonomy for those individuals who are prepared to take risks (Isa et al, 2016). Adhocracy culture is characterized by an organization that is innovative - stimulate entrepreneurial mindset, imitative, creativity and a risk taking; and it is found to have a positive effect on performance (Naranjo-Valencia et al., 2016). In addition, adhocracy culture, among other factors, plays a significant role in organization performance and success as it affects job contentment and performance of employees (Misigo et al., 2019). Naranjo-Valencia et al., (2016) added that adhocracy culture has a positive effect and significant relation with performance. Based on these arguments, the following hypothesis is developed.

Hypothesis 3 (H3): Adhocracy Culture has positive and significant effect on employee's performance.

Market Culture and Employee Performance

According to Cameron and Quinn (2011), a market culture is regarded as a result oriented workplace with emphasis on winning and outpacing the competition. In this type of culture, the organization is focused on increasing its competitive position, and the major task of management is to drive the organization toward productivity (Joseph & Kibera, 2019). Several authors such as Ogbonna and Harris (2000) found out a positive effect of market culture on performance. These researchers argued that market culture emphasize outer surroundings and focuses on effectiveness, efficiency and competitiveness, which turn improve the performance outcomes. Accordingly, the following hypothesis is derived:

Hypothesis4 (H4): Market culture has positive and significant effect on employee's performance.

Conceptual framework of the study

There are different models and frameworks for organizational culture. In this study, the researchers utilized Cameron and Quinn's competing values framework/model (1999, 2011). The reason for adoption of this model as a conceptual framework is because it accounts for different types of organizational culture: clan, hierarchy, market and adhocracy culture (independent variables) in order to see their effect on employee performance (task performance, contextual performance, counter- productive behavior and adaptive performance), and the later one being the dependent variable. This conceptual model is shown in Figure 2.

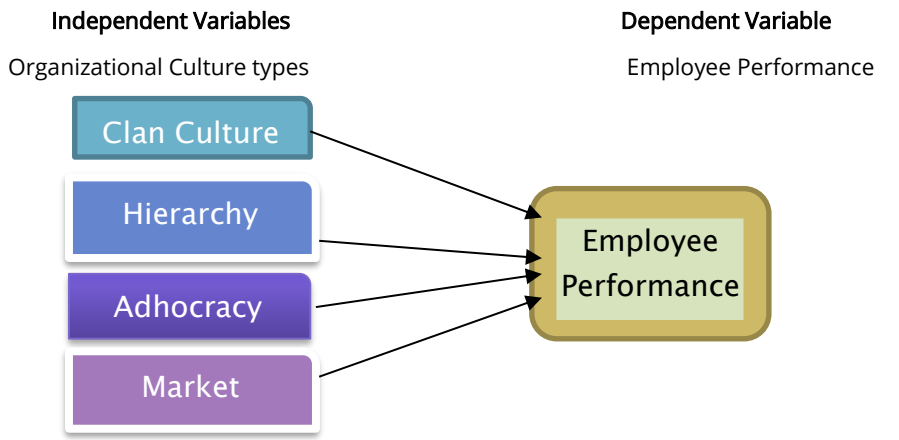

Figure 1 - Conceptual Framework (Adapted from Cameron and Quinn, 1999;2011).

RESEARCH METHODOLOGY

The study applied a quantitative research design. The target population were employees working in Ethiopian Institute of Agricultural Research's Head office (headquarters), Jimma Center , Holleta Center, and Debrezeit Center. The study used two sampling stages. The first one is to sample out the research centers within the institute; a purposive sampling technique were used to select the research centers among twenty research centers of Ethiopian Institute of Agricultural Research. Secondly, to select respondents (Researchers and administrative staffs) within the selected research centers, convenience sampling technique was adopted. A sample size of 327 was drawn from the overall target population (1850) but only 302 complete questionnaires were returned. The sample size was determined using Kothari's (2004) formula at confidence level 95% and confidence interval (margin of error) of 5%.

Two research instruments were used in this study: (1) Organizational Culture Assessment Instrument (OCAI) developed by Cameron and Quinn for measuring four types of organizational culture namely: Clan culture, Adhocracy culture, Hierarchy culture, and Market culture. (2) The employee performance questionnaire from (Heuristic framework of individual work performance) dimensions (Koopmans, 2013) for measuring the effect of organizational culture on employees' performance at Ethiopian institute of agricultural research.

Table 1 - Proportionate Sampling Determination.

No.	Research center	Location	Sample size	
			Sampling Frame	Proportion of sample
1	EIAR, Head quarters	Addis Ababa	330	[(330/1850) x 327]= 58
2	Holleta Agricultural Research center	Holleta	557	[(557/1850) x 327]= 99
3	Jimma Agricultural Research center	Jimma	521	[(521/1850) x 327]= 92
4	Debrezeit Agricultural Research center	Bishofitu	442	[(442/1850) x 327]= 78
			1850	327

Source: EIAR, Human resource and development directorate (2021).

The data has been analyzed by using SPSS 20.0 software and the reliability of the instrument was tested using Cornbanch's alpha. Besides, multiple regression assumption tests were carried out and the data found to be fit for multiple regressions.

Reliability Testing

The reliability of the instrument used in this research was tested using Cronbach's alpha for the different variables separately as Cronbach's alpha is most commonly used to check the internal consistency of a questionnaire based on Likert scale type. A Cronbach's alpha higher than 0.7 indicates internal consistency on the instrument (Pallant, 2010). Besides, prior to actual data collection, pilot test was conducted by the researchers to enhance the validity of the instrument.

Table 2 - Reliability test result.

	Cranach's Alpha	Cronbach's Alpha Based on standardized Items	No of Items	Comment
Clan Culture	.731	.742	5	Reliable
Adhocracy Culture	.718	.708	5	Reliable
Market Culture	.735	.738	5	Reliable
Hierarchy Culture	.757	.763	6	Reliable
Employee Performance	.827	.843	22	Reliable

Source: Own Survey, SPSS output.

Model Specification

The model specification to test the hypotheses is given as follows:
Employees' Performance (EMP)= $\alpha+\beta 1$Clan+ $\beta 2$Adhocr + $\beta 3$Mark + $\beta 4$Hie +εi

Where	EMP	Employee performance
	Clan	Clan culture
	Adhocr	Adhocracy culture
	Mark	Market culture
	β	Coefficient of slope of regression model
	α=	Constant
	ε_i =	Error term

STUDY RESULTS AND DISCUSSIONS

Demographics of Respondents

A total of 327 questionnaires were distributed. However, due to incomplete responses, only data from 302 participants were analyzed. Accordingly, the demographic data (Table 3) shows

that male respondents represent 64.6% of the sample; the majority of respondents fall in the age groups below 40 which constitute (69.2%) of the sample; considerably large number of employees were married (63.9%). Majority of respondents' service years is less than 10 years (63.6%). Lastly, the majority of respondents educational level was first degree and above (83.8%).

Table 3 - Demographics of Respondents.

Variables	Category	Frequency	Percent
Gender	Female	107	35.4
	Male	195	64.6
	Total	302	100.0
Age	20-30	108	35.8
	31-40	101	33.4
	41-50	61	20.2
	above 50 years	32	10.6
	Total	302	100.0
Marital status	Single	101	33.4
	Married	193	63.9
	Divorced	6	2.0
	Widow	2	.7
	Total	302	100.0
Education level	Diploma	49	16.2
	First degree	141	46.7
	MA/MSC	97	32.1
	PhD	15	5.0
	Total	302	100.0
Service years	Below 5 years	87	28.8
	6-10 years	105	34.8
	11-15 years	36	11.9
	above 15 years	74	24.5
	Total	302	100.0
Employment Category	Supporting staff	111	36.8
	Researcher	136	45.0
	Process director	5	1.7
	center process coordinator	24	7.9
	Technical Assistant	26	8.6
	Total	302	100.0

Source: Survey data.

Descriptive Statistics for Variables

This section presents the descriptive statistics (Mean and Standard deviation) of dependent and explanatory variables used in this study. The dependent variable used in this study was employee performance while the explanatory variables are clan culture, adhocracy culture,

market culture, and hierarchy culture.

Table 4 - Summary of descriptive Statistics for Independent variables.

Organizational Culture Types	N	Mean	Standard deviation
Clan Culture	302	3.7874	.59542
Adhocracy Culture	302	3.6146	.56361
Market Culture	302	3.3397	.74598
Hierarchy Culture	302	3.4647	.61289
Average		**3.7874**	**.59542**

Source: Survey data.

Table 4 shows that from among the four organizational culture types, the overall mean score value of clan culture was relatively higher (3.78). This implies that majority of the respondents agreed with the measures of clan culture items. It showed that Ethiopian Institute of Agricultural Research implements more of clan culture. The finding also revealed that next to clan culture, the mean score of adhocracy was relatively higher (3.61). It means that adhocracy culture was practiced in the institute next to clan culture. Besides, the study indicated that market culture scores a mean of 3.33 and hierarchy culture a mean value of 3.46. This indicates that majority of the respondents have less agreement with respect to the degree of prevalence of market culture and hierarchy culture in the institute. Based on the result, clan culture is found to be the dominant culture type in Ethiopian Institute of Agricultural Research followed by adhocracy, market, and hierarchy culture types respectively.

Table 5 - Summary of Descriptive Statistics for dependent variables.

Employee performance dimensions	N	Mean	Standard deviation
Task performance	302	3.7874	.59542
Contextual performance	302	4.0998	.69507
Counterproductive behavior	302	2.3682	.91980
Adaptive performance	302	4.2046	.45689
Average		3.615	.6667

Source: Survey data.

Table 5 shows that contextual and adaptive performances have a high mean value. This implies that the majority of the respondents have agreed with the statements of contextual and adaptive performance measures. However, counterproductive behavior has lower mean score. This indicates that the majority of the respondents disagree with the statements of counterproductive scale measures. The overall mean and standard deviation of employee performance was 3.615 and 0.667 respectively. This indicates that there is a high level of employee performance.

Correlations and Regression Result

In order to examine the relationship between the employee performance and organizational culture types, the Pearson's product moment correlation test was done.

Table 6 - Correlation between organizational culture and employee performance.

Correlations						
		Clan Culture	Adhocracy Culture	Market Culture	Hierarchy Culture	Employee performance
Clan culture	Pearson Correlation	1				
	Sig. (2-tailed)					
Adhocracy Culture	Pearson Correlation	.453**	1			
	Sig. (2-tailed)	.000				
Market Culture	Pearson Correlation	.354**	.421**	1		
	Sig. (2-tailed)	.000	.000			
Hierarchy Culture	Pearson Correlation	.202**	.151**	.295**	1	
	Sig. (2-tailed)	.000	.008	.000		
Employee performance	Pearson Correlation	.580**	.511**	.667**	.355**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	302	302	302	302	

**. Correlation is significant at the 0.01 level (Sig. 2-tailed).
Source: Survey data, SPSS output.

Regarding the relationship between the independent variables and dependent variable, Table 6 clearly shows that the all variables are significantly correlated with each other (sig. level P<0.01). The Pearson correlation coefficients showed that clan culture (r = 0.58), adhocracy culture (r = 0.51), market culture (r = 0.66), and Hierarchy culture(r = 0.35) have positive correlation with employees' performance within a range of 0.35 to 0.66. According to the guideline (Weak: below 0.4; Moderate 0.4-0.59; Strong 0.6-0.79; and Very strong: above 0.8) provided by Evans (1996) to interpret the correlation's coefficient, this finding shows that clan culture and adhocracy culture have a moderate relationship, market culture has a strong relationship, and hierarchy culture has a weak relationship with employee performance.

Regression Analysis

Regression is useful to understand the predictive power of the independent variables on the dependent variable once a casual relation has been confirmed; and it also deals with the relationship between the dependent variable and one or more independent variables (O'Brien & Scott, 2012). Accordingly, Table 7 shows the regression results.

Table 7 - Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.103[a]	.011	.006	.40926
2	.828[b]	.686	.676	.23227

a. Predictors: (Constant), Service years, Education level, Gender, Marital status, Age
b. Predictors: (Constant), Service years, Education level, Gender, Marital status, Age, Adhocracy culture, Clan culture, Hierarchy culture, Market culture

Source: Own Survey, SPSS output.

Table 7 (Model summary 1) shows that the R is equal to 0.103, which reveals the presence of weak correlation between the demographic factors and the dependent variable. In addition, the result revealed that R Square is 0.011, which indicates that demographic characteristics explain only 1.1% of the variations on employee performance (the dependent variable) with unexplained factors of 98.9%. Besides, speaking of the effect of the independent variables on the dependent variable, the result in model summary 2 holds R = 0.828 and the value of R2 = 0.686. This indicates the model's predictive ability to be 68.6% for the variations on employee performance with unexplained factors of 31.4%.

Table 8 - ANOVA of the Variables.

ANOVA[a]						
Model		Sum of Squares	Df*	Mean Square	F **	Sig.***
1	Regression	.533	5	.107	.637	.672[b]
	Residual	49.577	296	.167		
	Total	50.111	301			
2	Regression	34.358	9	3.818	70.764	.000[c]
	Residual	15.753	292	.054		
	Total	50.111	301			
a. Dependent Variable: Employee performance						
b. Predictors: (Constant), Service years, Education level, Gender, Marital status, Age						
c. Predictors: (Constant), Service years, Education level, Gender, Marital status, Age, Adhocracy culture , Clan culture, Hierarchy culture, Market culture						
*Df (Degrees of freedom): the maximum number of logically independent values, which are values that have the freedom to vary, in the data sample.						
**F(F Value): helps address the issue of whether the variance between the means of two populations are significantly different						
Sig.***: Statistical Significance/P-values.						

Table 8 shows the analysis of variance (ANOVA) of the variables. The analysis of variance shows the statistical significance of the model. Accordingly, the ANOVA table contains an F ratio, F (9, 292) = 70.764, P = 0.000), which is statistically significant at p<.05 (the model is significant). This shows that organizational culture types: adhocracy culture, clan culture, market culture, and hierarchy culture have statistically significant effect on employees' performance. However, as shown on Table 8 (model 1) the demographic variables such as service years, education level, gender, marital status, and age have insignificant effect on employees' performance.

Table 9 - Regression Coefficients analysis.

Coefficients [a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t**	Sig.
		B*	Std. Error	Beta		
1	(Constant)	3.460	.122		28.362	.000
	Gender	.038	.050	.045	.757	.450
	Age	.000	.036	.000	-.004	.996
	Marital status	.064	.048	.085	1.331	.184
	Education level	.015	.031	.028	.479	.632
	Service years	-.003	.030	-.007	-.083	.934
2	(Constant)	.811	.140		5.787	.000
	Gender	-.009	.029	-.011	-.311	.756
	Age	.010	.020	.024	.491	.624
	Marital status	.039	.027	.051	1.421	.157
	Education level	-.008	.017	-.015	-.440	.660
	Service years	-.025	.017	-.068	-1.421	.156
	Clan culture	.290	.025	.423	11.757	.000
	Adhocracy culture	.235	.026	.324	8.868	.000
	Market culture	.189	.022	.346	8.676	.000
	Hierarchy culture	.079	.023	.118	3.394	.001

a. Dependent Variable: Employee performance

*B (unstandardized beta): this value represents the slope of the line between the predictor variable and the dependent variable.

**t (the t-test): how many standard-error units the coefficient is away from zero/ how many times larger the coefficient is from that error

Based on the regression coefficients shown in Table 9, the values for the regression weights (regression equation) are as follows:

Employee Performance (EMP) = 0.811 + 0.290 Clan + 0.235Adhocr + 0.189 Mark + 0.079 Hie +εi

Table 9 shows the value of regression coefficient and the constant, which is the expected value of the dependent variable when the values of independent variables equal to zero. Results indicated that all of the independent variables have statistically significant positive relationship with the dependent variable. All the results are statistically significant at p-value less than 0.05. Similarly, the study revealed that clan culture, adhocracy culture, market culture, and hierarchy culture are significant and predict employee performance with beta value of 0.290, 0.235, 0.189, and 0.079 respectively.

Besides, the variable with the largest beta coefficient make the strongest contribution in explaining the dependent variable (employee performance). Therefore, the study found that clan culture is the most contributing organizational culture type in the prediction of employee performance with beta value 0.290. The other three organizational culture types, in their

descending order of standardized coefficients are adhocracy culture (B=.235), market culture (B=.189) and hierarchy culture (B=.079).The t-values in the coefficients indicate the variables statistical significance. A t- value of two or higher indicates statistical significance. Therefore, all the independent variables t-value in the above table are greater than two and it indicates statistically significance.

Further, as shown in Table 9, while demographic variables such as service years, education level, gender, marital status, and age have insignificant effect on employee performance; all organizational culture types such as clan culture, adhocracy culture, market culture, and hierarchy culture have positive and significant relationship with employee performance in Ethiopian Institute of Agricultural Research. In addition, Clan culture, adhocracy culture, and market culture was statistically significant at p-value of 0.000, and hierarchy culture has significant level at p= 0.001, which are less than 0.05. Hence, alternative hypotheses related to clan culture, adhocracy culture, market culture, and hierarchy culture have not been rejected (See Table 10).

Table 10 - Hypotheses Testing and Result.

S.N	Hypotheses	Result	Reason
1	H1: Clan Culture has positive and significant effect on employee's performance	H1:Not Rejected	Sig = 0.000, P < 0.05
2	H2: Hierarchy Culture has positive and significant effect on employee's performance	H2:Not Rejected	Sig = 0.001, P < 0.05
3	H3: Adhocracy Culture has positive and significant effect on employee's performance	H3:Not Rejected	Sig = 0.000, P < 0.05
4	H4: Market Culture has positive and significant effect on employee's performance	H4:Not Rejected	Sig = 0.000, P < 0.05

DISCUSSIONS AND CONCLUSIONS

Results and Discussion

The result of this study revealed that all of the organizational culture types - clan culture, adhocracy culture, market culture, and hierarchy culture have positive relationship with employee performance. Clan culture, adhocracy culture, and market culture have been statistically significant at p-value of 0.000, which is significant at P < 0.01 level. And, hierarchy culture has statistically significant (at 95%) confidence level at p value of 0.001, which is statistically significant at P < 0.05 level. The overall result showed that all organizational culture types do have effect on employees' performance.

Besides, this study found out that the clan culture is the most dominant organizational culture type in the study setting; followed by adhocracy culture, hierarchy culture, and market culture. More specifically, study results showed that there is significant relationship between clan culture and employee's performance. These findings are in line with earlier findings of other scholars such as Beyene (2018), Vasantha et al, (2017), Naranjo-Valencia et al., (2016), and Klimas (2015). The result also showed that there is significant relationship between hierarchy culture and employees' performance. This finding is consistent with Vasantha et al., (2017) and Beyene (2018). In addition, this study found out that there is significant relationship between adhocracy culture and employee's performance, which is similar with earlier findings that asserted that adhocracy culture has a positive effect on performance (Naranjo-Valencia et al., 2016). More so, it is discovered that there exists significant relationship between market culture and employees' performance, such is also consistent with the findings of Ogbanna and Harris (2000) and Beyene (2018).

More so, as per the descriptive analysis, result of overall employees' performance in Ethiopian Institute of Agricultural Research holds a mean value of 3.615 and a standard deviation of 0.667. Therefore, according to the perception of employees; the employee performance level in Ethiopian Institute of Agricultural Research was high. Moreover, the correlation analysis indicated that all organizational culture types (clan culture, adhocracy culture, market culture, and hierarchy culture) have a positive correlation with employees' performance within the range of 0.355 to 0.667 (weak to strong correlation). All correlation results are significant at the $P < 0.01$ level. Additionally, the pearson coefficient correlation of overall organizational culture and employee performance indicated that organizational culture has a positive strong correlation ($r = 0.79$) with employee performance, which is significant at the $P < 0.01$ level. Further, the clan culture and adhocracy culture have the greatest effect on overall employee performance with the regression coefficient value of 0.290 & 0.235 respectively. This implies that both variables (clan culture and adhocracy culture) result in a 29% and 23.5% increase in employees' performance.

CONCLUSIONS

In general, this study concludes that the examined organizational culture types namely; clan culture, adhocracy culture, market culture, and hierarchy culture have positive relationship with employees' performance, and found to be statistically significant. And, the study also found out that clan culture is a most dominant organizational culture type in the study context, followed by adhocracy culture, hierarchy culture, and market culture. In other words, the result of the multiple regression analysis showed that all organizational culture types (clan, adhocracy, market, and hierarchy culture) influence employees' performance; and the clan culture and adhocracy culture have the greatest effect on overall employees' performance.

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