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Employees' Motivation and Organizational Performance: Evidence from Gondar City Public Service Organizations

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Abstract

Improving organizational performance is the central concern of both public and private organizations across the globe. However, organizational performance is affected by numerous factors among, which employees' motivation is one. Thus, the objective of this study was to examine the effects of employees' motivation on organizational performance of public sectors organizations in Gondar. Employing quantitative research approach; specifically, descriptive and explanatory research designs, a total of 290(male=182 & female=108) public sector employees involved in the study. Data were collected using structured questionnaire and analysis was undertaken using statistical software. Specifically, Frequency, Percentage, Mean, Standard Deviation, Pearson Correlation and Multiple Linear Regression were used to analyze the data. Results show that employees' involvement in decision making ($r=.97$, $p<0.01$), recognition ($r=.97$, $p<0.01$), work environment($r=.54$, $p<0.01$), pay and incentives($r=.62$, $p<0.01$) and career advancement($r=.73$, $p<0.01$) have significant positive relationships with employees' performance. Moreover, findings show that all explanatory variables significantly affect organizational performance in the study area. Specifically, 77% of the variation in organizational performance is explained by employees' involvement in decision making, recognition, work environment, pay and incentives and career advancement. Findings also indicate that employees' involvement in decision making has greater positive effect followed by pay/incentives and recognition. Finally, recommendations such as managers and leaders of the public sector organizations in the study area must create an atmosphere where employees feel satisfied and cooperative at work. And managers should ensure employees are involved in decision making processes and given a chance to air their views.

Keywords*: Decision Making, Recognition, Incentives, Career Advancement, Work Environment*

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1. INTRODUCTION

1.1. Background of the Study

The achievement of organizational goals to a greatest extent is depending on employees' motivation (Ladd &Sorensen, 2017). Motivation involves the processes that account for an individual's passion, direction and determination of effort in reaching the end goal. "*The role of motivation in the organizational context has been studied to understand what causes employees to try hard to do well, or more specifically what causes the arousal, direction, and persistence of voluntary actions that are goal directed*" (Mitchell & Linden, 2012). It is therefore imperative that managers understand what motivates employees and also how to motivate them effectively (Deci, 2013)

Conversely, poorly motivated labor force results lower productivity and performance, excessive staff turnover, increased expenses, repeated absenteeism and a negative effect on the morale of colleagues (Jobber & Lee, 2014). Moreover, lack of employees' motivation leads to declining of productivity, failure to overcome challenges, dispiritedness and poor customer services. It also leads to absenteeism, late-coming, uncommitted employees', declining levels of engagement and higher employee turnover (Rutachururwa, 2013). This is the fact many organizations failed to properly motivate their employees, which becomes the main driving force for their lower organizational performance and other related organizational crisis (Ali et.al., 2012)

In Ethiopia, studies also show that employees' motivation has significant contribution to organizational performance (Daniel, 2018; Michael, 2019). To examine some of these studies; Daniel (2018) conducted a study on the influence of motivation on employees' performance in the public sector. Findings show that the combination of determinant factors (financial motivation practices, participation in decision making, and other non-financial motivation practices) have a positive effect on employees' job performance Michael (2019) conducted a study on the effect of employees' motivation on organizational performance. Findings revealed that extrinsic factors were considered to have more significant effects on organizational performance than intrinsic factors. The result also indicated that employees' motivation has a significant effect on organizational performance. The above local studies revealed that employees' motivation is one the determinant factors for employees' as well as organizational performance.

When observing the condition in the study area, there are many public organizations hiring many employees. These public organizations provide various services to the public. So the motivation of their employees is very fundamental to satisfy the need of customers in particular and to enhance the performance of their organization in general. Therefore, empirically testing how employees are motivated and the effects of their motivation to the performance of their organization is very important. However, empirical data documenting the role of employees' motivation to organizational performance are non-existent as far as the researcher understands. So there is a significant gap in terms of the availability of such studies. And therefore, perusing a study in this respect is essential. So the particular focus of this study was public sector organizations found in Gondar city. More specifically, this study explored the effects of employees' motivation on the performance of those public organizations.

1.2. Objectives of the Study

The general objective of this study was to investigate employees'' motivation and its effect on organizational performance of public sector organizations in Gondar city. Specifically, the study sought to investigate the following specific issues:

- ✓ To examine the level of motivation among employees;
- ✓ To determine the relationship between motivational factors (participation in decision making, work environment, career advancement, salary/incentive and recognition) and organizational performance;
- ✓ To examine the effect of employees' participation in decision making on organizational performance
- ✓ To determine the effect employees' work environment on organizational performance;
- ✓ To investigate the effect employees' career advancement on organizational performance
- ✓ To explore the effect of salary and incentives on organizational performance
- ✓ To assess the effect of recognition on organizational performance

2. LITERATURE REVIEW

Employees need to play an important role in their organizations since they are regarded as a valuable resource in an organization (Sheedy, 2013). However, in order to contribute and achieve organizational goals, employees need to have optimal level of motivation. Motivation, according to Sambhav as cited in Bulkus& Green (2009), derived from the word "motivate", means a move, push or influence to proceed for fulfilling a want. Motivation is a power that strengths behavior, gives route to behavior, and initiates the tendency to continue (Farland et al, 2011). This explanation identifies that in order to attain targets; individuals must be satisfactorily energetic and be clear about their determinations. Motivation is also a procedure that begins through a physiological or psychological need that stimulates a performance set by an objective (Rajput ,Bakar& Ahmad, 2011) .

Motivation plays an important role in individual as well as organizational success (Rutachururwa,, 2013). Specifically, As Kalimullah (2010) suggested, in organizations a motivated employee has his/her goals aligned with those of the organizations and directs his/her efforts in that direction. In addition, these organizations are more successful, as their employees continuously look for ways to improve their work. So employees' motivation can be considered as valuable input for organizational performance (Ruge, 2012). In relation to this, organizational performance is defined as the extent to which an organization, by the use of certain resources, accomplishes its objectives without exhaustinyg its resources and without placing pointless pressure on its members and/ or society (Dobre, 2013).

As motivation is the most important factor for every organization, globally, both public and private organizations attempt to initiate employee motivation through different ways (Dobre, 2013). More importantly, organizations are using different mechanisms including rewards, social recognition and team based methods so as to provoking employees and improving organizational performance (Robbins &Decenzo, 2008). Scholars provide various approaches of motivation; they usually categorized as intrinsic and extrinsic motivation (Armstrong, &Micheal, 2006). Intrinsic motivation is the self-desire to seek out new things and new challenges, to analyze one's capacity, to observe and to gain knowledge (Mullins, 2005). On the other hand, extrinsic motivation is a motivation 'derived from outside the person or from those things that are external to the work or activity itself, positively influences behavior, performance, and productivity (Ryan &Deci, 2000). Though the nature and degree of their effect is not similar in organizational literature documents persistently provides evidence that both intrinsic and extrinsic motivations affect organizational performance (Helepota, 2005)

In Ethiopia the issue of employees' motivation and organizational performance has always been the concern of both private and public organizations. And various local studies also provide an empirical ground that employees' motivation and organizational performance are the same sides of a coin. For instance, a study conducted by Helen ((2007) revealed that both intrinsic and extrinsic motivational factors combined with favorable motivational situations had a significant effect on organizational performance. NebiyuYohannis (2016) also reported that there is a positive relationship between incentives and organizational performance.

In the study area, Gondar city, there are many private and government organizations deploying many employees with the objective of accomplishing different organizational goals. Specifically, in the city, there are many public sector organizations which provide different services to the public. Thus, the importance of employees' motivation to enhance the performance of those organizations is unquestionable. Equivalent to expecting employees' motivation to play important role to organizational performance of public organizations in the study area, it is also mandatory to objectively assess the role of employees' motivation to the performance of those organizations. Because, unlike other private organizations, public organizations are places where there are many people in need of public service. So, continually assessing employees' motivational level and taking corrective measure would have a paramount importance to both organizations in particular and to the public in general and with this argument, this study assessed the effects of employees' motivation on the performance of public sector organizations in Gondar city.

Empirical Literature:

Farhanabanana (2013) conducted a study on the impact of employee motivation on work performance. The study found that motivational factors play an important role in increasing employee job satisfaction. This will result in improving organizational performance

Manzoor (2012) conducted a study on the impact of employee motivation on organizational effectiveness. The study found that two central factors; empowerment and employee recognition for enhancing employee motivation which leads to organizational effectiveness

Matsie (2008) conducted a study on "the impact of motivation on employee performance at level one district hospitals".The study indicated that companies should survive and stay competitive if they have a motivated employee and they are more energetic to increase the productivity and performance of their organization.

Nizam etal., (2015), investigated on the impact of employee motivation on organizational performance in oil and gas sector of Pakistan. The study confirmed that examining work performance and appraising employs' performance and motivating them, employees get satisfied and thus their level of output

increases and enhances the work performance of their organization. Recognition plays an important part in enhancing employee motivation towards their work by recognizing employees they feel internally motivated with their job and committed towards organizational achievement.

Conceptual Framework of the Study:

In this study, participation in decision making, work environment, career advancement, salary/incentive and recognition were considered as the independent variables of the study. On the other hand, organizational performance was treated as the dependent variable of the study. The following figure shows the relationship between these variables.

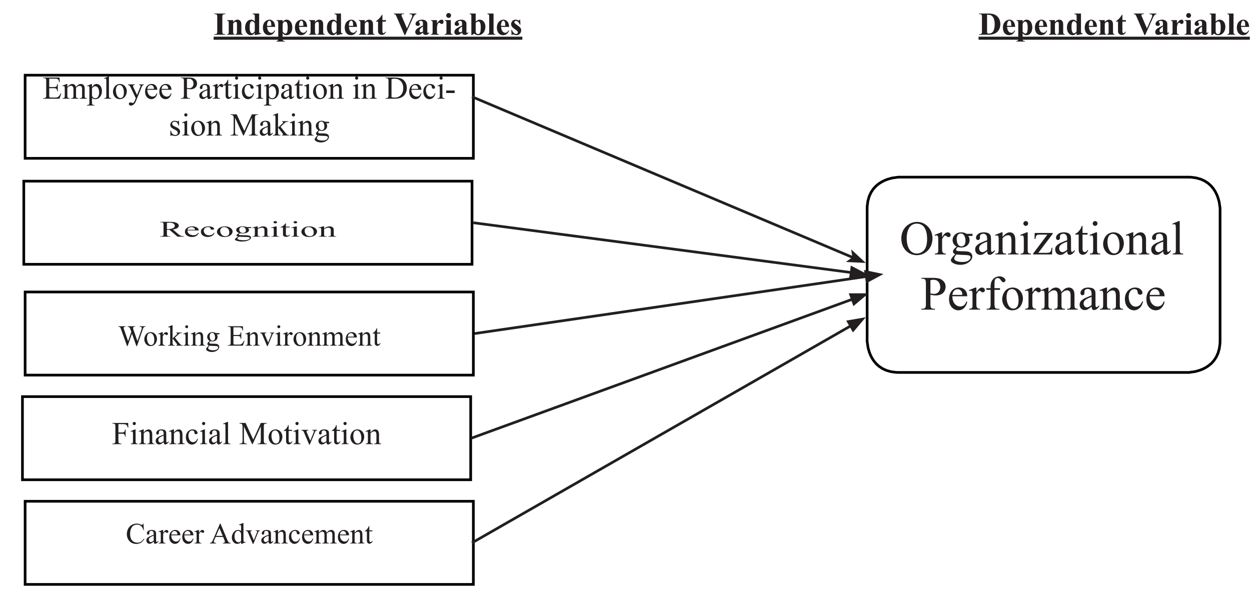

Fig. 1 Conceptual Framework of the Study, adopted from Daniel (2018)

Hypothesis:

The following hypothesis were developed and tested:

Ha_1: The level of motivation among employees of public sector organization is high

Ha_2: There is significant positive relationship between motivational factors (participation in decision making, work environment, career advancement, salary/incentive and recognition) and organizational performance

Ha_3: Employees' participation in decision making has significant positive effect on organizational performance

Ha_4: Employees' work environment has significant positive effect on organizational performance

Ha_5: Employees' career advancement has significant positive effect on organizational performance

Ha_6: Salary and incentives has significant positive effect on organizational performance

Ha_7: Recognition has significant positive effect on organizational performance

3. RESEARCH METHODOLOGY

Research Approach:

As explained earlier, the objective of this study was to investigate the effect of employees' motivation on organizational performance. Thus, quantitative research approach was more appropriate. In relation to this, Creswell (2009) explained that quantitative research is a means for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured typically on instruments, so that numbered data can be analyzed using statistical procedures

Research Design:

This study adopts descriptive and explanatory research designs to identify the effects of employees' motivation on organizational performance. The rationale behind choosing this design is the fact that it enables the researcher to assess the explanatory power of independent variables over organizational performance. Since the purpose of explanatory design is explaining and interpreting relationships between two or more aspects of a situation or phenomenon, it is used to explain and interpret the effects of variables of employee motivation on organizational performance in the current study area (Creswell, 2004).

Target Population:

The target population of this study was all employees of public service organizations found in the study area. According to data obtained from Gondar City Administration Civil Service and Human Resource Department (2020) a total of 1140(male=724 & female=416) public service employees were found in Gondar city. Thus, sample unit of analysis were taken from this target population and findings were generalized to this target population.

Sample Size Determination:

The study used sample sized determination formula developed by Yamane (1967). Accordingly, the sample size was determined as follows.

$$n = \frac{N}{1 + N(e)^2}$$

.Where,

- **N** = Population of study =1140
- **e**= 95 % level of significance or margin of tolerable error at 5%
- **n**= sample size required

Thus, =

$$n = \frac{1140}{1+1140(0.05)2} = \frac{1140}{1+1140(0.0025)} = \frac{1140}{3.85} = 296$$

Sampling Techniques:

The study used stratified random sampling technique specially, proportional sampling technique. Hence, the complete list of different sector offices with their male and female employees were obtained [each sector office was considered as stratum) and then comprehensively all sector offices were taken. And then using proportional sampling technique, the required number of samples was selected from each stratum. Stratifications were made by considering an employee number in each sector.

Response Rate:

Although the total sample consisted of 296 (Male=188 and Female=108), only 290 (male=182 & females=108) of those samples participated in the study. As it has been shown in the explanation of the target population, participants were both male and female government employees under the public service. Moreover, participants of this study were chosen only those government employees whose liability were to the Gondar City Administration and Participants were with permanent terms of employment.

Data Collection Instruments:

In this study structured questionnaire was used to collect the required data. The questionnaire has six major sections. The first section consists of items that ask about the demographic characteristics of respondents. Sex, age, educational level and work experience were treated as the demographic characteristics of respondents. Section two presents items that assess employees' participation in decision making (6 items). Section three consists of items measuring working environment (5 items). Section four provides items assessing career advancement (6 items). Section five consists of items that assess pay and incentives (6 items). Section six consists of items assessing recognition (4 items). Section seven presents items that assess organization performance. The questionnaire was prepared in Likert which ranges from 1=strongly disagree to 5=strongly agree.

Reliability Testing:

Data collection instruments were adopted from other sources. So before they were used to collect the final data to address research objectives, the researcher was conducting a pilot testing in order to check its reliability. Accordingly, all measurement scales were beyond the minimum cut off point (see Table 3.1)

Table 3.1 Reliability Statistics of Data Collection Instruments

No	Measures	Number of items	Cronbach's Alpha
1	Employees' involvement in decision making	6	0.694
2	Employees' work environment	5	0.769
3	Recognition	4	0.658
4	Pay and salary	6	0.805
5	Career development	6	0.702
6	Organizational performance	5	0.614

Source: SPSS (2020)

Data Analysis:

As the nature of the data was quantitative, data analysis were undertaken using quantitative methods. Specifically, the study used statistical software, SPSS version 20. In specific terms, the following tools were used. Descriptive statistics (Frequency, Mean and Standard Deviation) were used to summarize respondent's average score on variables of the study. Pearson correlation was used to examine whether there is statistically significant relationship between employees' motivation and organizational performance. Multiple linear regressions were computed to assess the effects of employees' motivation and organizational performance.

4. RESULT AND DISCUSSION

Demographic Characteristics of Respondents:

As indicated above, in this study, sex, age, educational status and work experience were considered as demographic characteristics of respondents. Thus, each character has been described by using frequency and percentage as indicated in the following table.

Table 4.1 Demographic Characteristics of Respondents

No	Characteristics	Frequency	Percent
1	Sex:		
	➢ Male	182	63
	➢ Female	108	37
	Total	290	100
2	Age		
	➢ 27-35	109	38
	➢ 36-45	96	33
	➢ 46-55	85	29
	Total	290	100
3	Educational Status		
	➢ College Diploma	113	39
	➢ First Degree	121	42
	➢ Second Degree	56	19
	Total	290	100
4	Work Experience		
	➢ 1-5 years	93	32
	➢ 6-10 years	128	44
	➢ >10years	69	24
	Total	290	100

Source: Own Survey (2020)

Table 4.1 portrays results regarding the demographic characteristics of respondents. According to the result, 63% of the respondents in the study were male whereas, 37% were female. With respect to the age of respondents, the majority of the respondents (38%) were in the age range of 27-35 years old, 33% of the respondents were found in the age range of 36-45 and 29% of the respondents were in the age range of 46-55 years old. As far as the educational status of respondents is concerned, 39% of the respondents were college diploma holders, 42% were degree holders and 19% of the respondents were second-degree holders. With regard to work experience of respondents, 32% of the respondents had a work experience of 1-5 years, the majority (44%) had a work experience of 6-10 years and 24% had a work experience of more than 10 years.

The Level of Employees' Motivation-

In this study, employees' motivation is conceptualized in the following factors; involvement in decision making, work environment, career development, recognition and pay/incentives. The following table provides the Mean and Standard Deviation scores of employees across the indicated variables.

Table 4.2 Mean & Standard Deviation Scores of Variables of Employees' Motivation

Motivational Variables	N	Mean	Std. Deviation
Involvement in decision making	290	23.24	6.56
Recognition	290	23.53	6.58
Work environment	290	24.70	1.53
Pay and incentives	290	23.62	1.57
Career advancement	290	23.70	2.18
	Grand Mean	23.75	3.68

Source: own survey, 2020

Table 4.2 presents the mean and standard deviation scores of respondents across variables of employees' motivation. Findings show that 23.24 (SD=6.56), 23.53 (SD=6.58), 24.70 (SD=1.53), 23.62 (SD=1.57) and 23.70(SD=2.18) were the Mean and Standard Deviation scores of respondents respectively. Moreover, the table shows that respondents' grand mean was 23.75 with the Standard Deviation of 3.68. As it can be seen from the table, respondents scored below the grand mean in all variables of employees' motivation except work environment. In other words, employees' motivation level is below the average, which in turn affects the performance of public sector organizations in the study area.

The Relationship between Employees' Motivational Factors and Organizational Performance-

This study investigates the relationship between selected employees' motivational factors and organizational performance. To this end, Pearson correlation was conducted and the following table presents the relationship between dependent and independent variables.

Table 4.3 Correlation Analysis

No	Variables		1	2	3	4	5	6
1	Decision making	Pearson Corre.	1					
2	Recognition	Pearson Corre.	.98**	1				
3	Work environment	Pearson Corre.	-.61**	-.55**	1			
4	Pay & incentive	Pearson Corre.	-.73**	-.68**	.70**	1		
5	Career advancement	Pearson Corre.	-.78**	-.72**	.80**	.73**	1	
6	Organizational Performance	Pearson Corre.	.97**	.97**	.54**	.62**	.73**	1

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

Source: Own survey, 2020

Table 4.3 indicated that there is a positive and significant relationship between the independent and dependent variables. Thus, organizational performance has statistically significant positive relationship with employees' involvement in decision making ($r=.97$, $p<0.01$), recognition ($r=.97$, $p<0.01$), work environment($r=.54$, $p<0.01$), pay and incentives($r=.62$, $p<0.01$) and career advancement($r=.73$, $p<0.01$) respectively.

The implication behind the above correlation coefficients is that as employees are allowed to involve in the process of organizational decision making, it is more likely for them to raise their motivational level and this in turn leads them to concentrate on their job and other organizational responsibilities and this again improves organizational performance. Thus, it can safely be assumed that employees' involvement in organizational decision making could have valuable effect on the performance of public sector organizations in the study area.

Similarly, as employees are given due consideration for their individual organizational contribution they will develop the feeling that their organization is attending them properly. This implies that properly recognizing employees would further trigger to involve in their organizational tasks and they strive to effectively accomplish those tasks.

Findings also show that employees need a safe and conducive work environment to effectively execute their tasks. This means as employees work under positive and conducive work environment their motivation tends to rise, which positively affects their organizational performance.

Findings also confirmed that pay and incentives are crucial motivational factors for employees to improve organizational performance. This implies that employees should have positive perception that their pay and incentives fit with their effort they exert to meet organizational goals. Last but not least is career advancement, findings show that as employees step upward in their career ladder they further become motivated and immerse themselves to accomplish their tasks which eventually positively affects organizational performance. Therefore, findings show that the selected variables of employees' motivation play significant contribution to enhance organizational performance in the context of public service organizations in the study area.

Previous studies also provided empirical evidence that employees' motivation contributes to organizational performance. For instance Waheed (2013) reported that if employees perceive that their

efforts are recognized by the organization they feel motivated and level of commitment will rise. Further, Farhanabanana (2013) found that motivational factors play an important role in increasing employee job satisfaction. This will result in improving organizational performance.

Wood & de Menezes (2011) also proved that when any type of participation program introduced in decision-making, employees feel that by being involved in this participation program, their motivation increases as well.

Regression Analysis:

As explained earlier, the five employees' motivational factors are considered to have effects on organizational performance. Thus, multiple linear regressions were conducted to assess the overall and individual effects of the aforementioned motivational variables. But, before running the regression analysis, diagnostics test should have been checked to detect if there was data problem. The following regression assumptions are tested.

Multicollinearity Test:

Multi-collinearity occurs when more than two predictor variables are inter-correlated (Kothari, 2004). This is an undesirable situation where the correlations among the independent variables are strong as it increases the standard errors of the coefficients. To test for multicollinearity, Variance Inflation Variable (VIF) or tolerance, a diagnostic method was used to detect how severe the problem of multicollinearity is in a multiple regression model. The VIF statistic of a predictor in a model indicates how much larger the error variance of the unique effect of a predictor (Baguley, 2012). Using the VIF method, a tolerance of less than 0.20 and a VIF of more than 5 indicates a presence of multicollinearity problem. From Table 4.4 there is no VIF with a value of 5 or greater than 5 and this shows that there is no multicollinearity problem.

Table 4.4 Multicollinearity Test

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.732	.890		3.071	.002		
	Decision making	.353	.028	.897	12.426	.000	.020	2.732
	Recognition	.079	.025	.201	3.174	.002	.026	2.068
	Work environment	.016	.031	.010	.529	.597	.305	3.274
	Pay and incentives	.341	.029	.209	11.708	.000	.324	3.091
	Career advancement	-.059	.027	-.049	-2.199	.029	.203	4.925

a. Dependent Variable: Organizational Performance
Source: own survey, 2020

Table 4.5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.885[a]	.771	.670	.44532

a. *Predictors: (Constant), Career, Recognition, Pay, Work environment, Decision*

b. Dependent Variable: organizational Performance

Table 4.5 shows the combined effects of the predictor variables to organizational performance. Accordingly, involvement in decision making, recognition, pay/incentives, career advancement, and work environment are found to have explained organizational performance by 77%; whereas, the other, 23% the variation in organizational performance is explained by other variables. As revealed on table 4.6 the five variables have high contribution to organizational performance because the observed R-square is high. In other words, the selected variables have explained about 77% of variation in organizational performance. This figure can be said pretty good because the organizational performance of a given public organization could be affected by numerous factors and from these factors the selected variables of employees' motivation in this study took the indicated percentage in explaining organizational performance. This indicates that these variables play crucial role in public sector organizations.

The Effects of Employees' Motivational Factors on Organizational Performance:

Table 4.6 shows that involvement in decision making (β = .897, t= .000, P<0.01), recognition (β = .201, t=3.174, p<.0.01), pay & incentives (β=.209, t=11.708, p<0.01) and career advancement (β=.049, t=2.199, p<0.05). However, the beta values indicate that involvement in decision making has a greater positive effect followed by pay/incentives and recognition whereas career advancement has relatively lower effects on organizational performance.

Table 4.6 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta			
1	(Constant)	2.732	.890		3.071	.002
	Involvement in Decision making	.353	.028	.897	12.426	.000
	Recognition	.079	.025	.201	3.174	.002
	Work environment	.016	.031	.010	.529	.597
	Pay and incentives	.341	.029	.209	11.708	.000
	Career advancement	-.059	.027	.049	-2.199	.029

a. Dependent Variable: Organizational Performance

Source: own survey, 2020

This study was supported by the reports of some previous local literature. For instance, Matsie (2008)

conducted a study on the impact of motivation on employee performance and the result portrayed that for any company to survive and stay competitive, organizations should motivate their employee's and in return they exert their effort into the organizational performance.

Daniel (2018) also reported that financial motivation practices, participation in decision making, and other non-financial motivation practices have a positive effect on employees' job performance among employees of public sector organizations in East Hararghe zone. In general, the findings of the presents study made it clear that the selected motivational factors can play significant role in enhancing the motivation of public sector employees which further leads better organizational performance Thus, in the study area, specially, the management of the public sector organizations should focus on these factors so as to enhance organizational performance. Helen ((2007) also revealed that both intrinsic and extrinsic motivational factors combined with favorable motivational situations had a significant effect on organizational performance.

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

Voluminous organizational literature documented that employees' motivation is one of the essential inputs that enhance organizational performance. In this study, it has also been confirmed that the selected variables of employees' motivation were demonstrated to have significant and positive effect on the organizational performance of public sector organization. Specifically, findings show that employees' involvement in decision making which implies that the participation of employees in setting goals and deciding on organizational issues could motivate them to exert maximum effort to carry out their organizational tasks ad this in turn leads better organizational performances.

Findings also documented that recognition, which implies that full appreciation for work done is often among the top motivators of employee performance. And thus, the management of the public sector organizations in the study area could ensure success to their organization through proper practice recognition in the course of managing employees. Findings also confirmed that pay and incentives can have significant and positive effects on organizational performances via enhancing employees' motivation. So employees should have a positive perception of fairness of pay and incentives.

Most importantly, employees should be motivated when they compare the amount and quality of work was with corollary pay and incentives offered to them. Findings also show that career advancement as the other motivating factor related with employees' motivation. In other words, as employees are ensured that their career path is properly managed there is no way that they cannot be motivated. So employees' career advancement should always be considered so as to earn better from employees in the study area. Last but not least, employees' work environment which refers to the availability of conducive work environment for employees in the study area. Because, as employees are provided with a suitable work environment their motivation could be enhanced and thus, organizational performances would be enhanced. In a nutshell, all these variables could result in substantial benefits for employees as well as to the performance of public sector organizations in the study area.

5.2. Recommendations

The following are recommended as per the findings of the study.

- Managers and leaders of public sector organization in the study area should ensure employees are adequately motivated so as to enhance organizational performance.
- Managers and leaders of the public sector organizations in the study area should create an atmosphere where employees feel satisfied and cooperative at work. And managers should ensure employees are involved in decision making processes and given a chance to air their views.
- Management and leaders of the public sector organizations should increase career development opportunities as well as clearly communicated their employees. Employees who offer the same level of inputs with respect to skills, efforts, qualifications, experience, should be entitled to equitable outcomes in terms of pay, incentives, and opportunity for advancement. Additional inputs and outstanding performance should entitle an employee to additional rewards.
- Finally, this study recommends that management should make a strategy that aids in ensuring that employees are adequately extrinsically motivated to remain intrinsically motivated on the job. This will, in turn, enhance or boost employee morale resulting in a competitive edge through higher commitment levels, employee engagement, lower turnover and improved performance and productivity levels.

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Effect of Organizational Culture on Social Loafing: Intention to Leave as a Mediator

By

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Abstract

The objective of this study is to investigate the effect of organizational culture on social loafing, taking intention to leave as a mediator with reference to Gondar poly technique collage. A quantitative research approach with the help of cross-sectional survey and explanatory research design is employed. A total of 170 employees were participated in the study and the data, after checking the necessary assumptions, were analyzed using descriptive and inferential statistics.The model adapted from (Hayes, 2013) is also used to see the mediating role of intention to leave between organizational culture and social loafing. The results showed that, organizational culture has moderate and negative effect on social loafing. And intention to leave has positive and significant effect on social loafing. Furthermore, intention to leave mediates the relationship between organizational culture and social loafing. To combat the prevalence of intention to leave and organizational culture problem, the institution should peruse intention to leave strategies, such as self-empowerment, balancing work and life, opportunities for advancement and promotion.

Keywords: Intention to Leave, Organizational Culture, Social Loafing.

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1. INTRODUCTION

1.1. Background of the Study

The chronicles of human existence are punctuated by people functioning together in teams and groups to accomplish, overcome, and discover. The attainment of common goals by individuals operating together has been fundamental to mankind's survival ever since our earliest ancestors first grouped together to satisfy their basic needs (Naicker, 2011). "Only when all contribute their firewood can they build up a strong fire" the sentiment expressed in this Chinese proverb underlines the importance of all members of a group contributing to a task (Jill, 2011). In the contemporary organizational setting, there seems to be added impetus and recognition of the value of this primitive principle in the accomplishment of work. Organizations rely more on teams and groups to accomplish an assortment of activities, from designing commodities to developing services (Naicker, 2011).

Organizational life without the participation and collective action is completely meaningless. One of the main concerns of organizations is to attract the participation of majority of staff to achieve their organizational goals (Abesi & Samani, 2017). However one of well-known shortcomings of group works is tendency of some partners to exert less effort when they perform in a group than when they perform alone (Smrt and Karau, 2011: 267 as cited in (Meydan & Okulu, 2014). According to (Harun, Semih, and Ebru, 2014), social loafing is defined as "the reduction of physical, perceptual, or cognitive effort in the presence of others". Social loafing or the 'reduction in individual effort when people work in groups' has been well documented in numerous studies (Jones & Peters, 2014).

First, researchers wanted to prove that the behavior did in fact exist and under what type of circumstances. And then find out what contextual and personality factors contributed to it (Simms & Nichols, 2014). More recently, researchers have grounded their study of social loafing in motivation theories, and have identified a wide variety of potential antecedents (Liden, Wayne, & Jaworski, 2004). Hence, according to (Nduka, 2016), social loafing is determined not just by group size but also by various other factors like task difficulty, group equity, team familiarity, culture and gender. Conditions such as increasing group size (which decreases individual visibility), the degree to which an individual views him or herself as unique compared to their group members, fatigue, and even in some instances, gender, all contributed to individuals partaking in social loafing. In addition, researchers found that being able to identify each individual's contribution to a project, increasing the difficulty of the task, and even self-evaluation, all led to decreased instances of loafing (Simms & Nichols, 2014).

The study which was conducted in turkey on the search and rescue team, perceived organizational culture and solidarity affects to social loafing behavior perception. At the same times, which are part of organizational culture, it has observed that socialization has significant negative effect on social loafing behavior (Cicekdagi, Akgemci, & Yilmaz, 2018). The study results on justice and exchange indicated that, there is significant relationships between interactional justice and LMX (leader–member exchanges), and between interactional justice and TMX (team–member exchanges), but not TMX, was negatively related to social loafing. Distributive justice was not significantly related to LMX (Murphy, Wayne, & Liden, 2003).

When (Tyagi, 2015) examined the role of motivational components as modeled by the expectancy-value theory and inequity perceptions in predicting social loafing behavior, they found that the instrumentality component of the expectancy-value model is the most influential predictor of the social loafing behavior. In collective settings, the social loafing behavior will be at the lowest when an instructor can demonstrate a clear linkage between outstanding performance and corresponding rewards (e.g., grades).. At the same time, effort expectancy also plays a significantly important role in reducing social loafing.

A study conducted by (Novliadi & Eliana, 2017) on two groups of psychology students. The one group is experimental group and the other one is control group. The experimental groups were given a brief achievement motivation training, while the control group did not receive any treatment. The effectiveness of the intervention saw decreasing score in social loafing tendency in the experimental group. According to (Güçer, 2014) there are significant relationships between social loafing and intention to leave. And also, the social loafing behavior perceived by employees affects the intention to leave. On the other dimension (Cicekdagi et al., 2018) proved that turnover intention partially mediated the effect of cognitive job insecurity on social loafing.

Gondar Poly Technique College, ever since the existing government embarked comprehensive TVET program with the aim of alleviating socioeconomic problems through providing vocational training, industry extension and technology transfer services. The college has been striving to bring better results. Due to the nature of the tasks, most of the activities require team work. According to the TVET strategy, before starting the practical training, trainers must prepare project and business plan in group. In addition to that, technology adoption, creation and transfer activities also demanded trainers to work in collaboration with others. Most of the time many of the trainers don't want to exert their maximum effort when they are assigned in group works. Because of that, no matter how hard the college has tried to meet its objective, still it is unable to achieve its pre-settled goals (Gondar Poly-technique College annual report, 2018). According to the annual report, among all active on the job trainers, majority of them are victims of social loafing (free riding) when they are engaging in group works. But surprisingly they have been claiming to have good efficiency with other benefits that the college offers. According to (Nduka, 2016), social loafing is determined by factors like organizational culture, motivation, promotion and intention to leave. Thus, this study intended to examine the effects of organizational culture and intention to leave on social loafing.

1.2. Problem Statement

According to (Cicekdagi et al., 2018) perceptions of people on organizational culture affects social loafing positively. On the other dimension socialization affected social loafing negatively.

And based on the findings of (Etemadi et al.. 2015) distributive justice (by taking justice as a dimension of organizational culture) affected social loafing according to the nature of the justice practice. If the resource distribution is fair (distributive justice), the likelihood of social loafing behavior is low. And if the resource distribution is unfair, the likelihood of social loafing behavior is high. The same is true for equity.

On the other study conducted by (Murphy et al., 2003), there are positive and significant relationships between interactional justice and LMX (Leader Member Exchange), and TMX (Team Member Exchange). LMX, but not TMX, was negatively related to social loafing. Distributive justice was not significantly related to LMX. Thus no support was found for LMX as a mediator of the relationship between distributive justice and social loafing. In similar fashion, different components of motivation (Expectancy, Instrumentality and Valence) affected social loafing. As (Tyagi, 2015) instrumentality component of the expectancy-value model is the most influential predictor of the social loafing behavior. Furthermore (Novliadi & Eliana, 2017) proved that providing achievement motivation training affect social loafing behavior positively and significantly.

The other research finding also proved that, there is a strong relationship between promotion and employee motivation (Butt, 2015). If there is a strong relationship between promotion and employees motivation, it is clear that by implication promotion have some kind of relationship with social loafing Regarding with intention to leave and social loafing, (Güçer, 2014) concluded that, there are significant relationships between social loafing and intention to leave. A research by (Mefoh and Nwanosike, 2012) in Nigerian secondary school context explored variables like individual and group difference in performance with the reward effect. Their experiment re-examined the prediction that performing in large group would lead to social loafing behavior. Their study also tested whether the promise of reward would attenuate social loafing effect on a simple experimental task. The study revealed that performance was significantly poorer in the group condition than in the alone condition and reward significantly attenuate social loafing effect in the group condition.

The study conducted by (Cicekdagi et al., 2018) also have tried to see the mediating effect of turnover intention in both the relationship between co-worker support with social loafing, and between affective job insecurity with social loafing. Furthermore, the mediating effect of turnover intention between co-worker support and affective job insecurity with social loafing is fully supported. But the mediating effect of turnover intention between cognitive job insecurity and social loafing is only partially supported. So that, in one hand, turnover intention proved to be a determinant factor of social loafing. On the other hand it also played mediating role between co- worker support, affective and cognitive job insecurity with social loafing.

Despite abundant studies on organizational culture, intention to leave and social loafing, still much remains unexplored about the possible mediation effect among each variables. Most of the research on these research variables (organizational culture, intention to leave, social loafing) have been paying attention on a direct effect of each variable or by identifying other predictor and criterion variable. Academic institutions, like other profit making organizations, need to have workers with the courage to discharge their responsibilities not to loaf in individual and group task, not to intend to leave. But a number of factors make these behaviors inevitable. The researchers try to unearth the relationship among each variable by providing empirical evidences thoroughly.

1.3. **Objective**

The main objective of this study is to investigate the effect of organizational culture on social loafing; intention to leave as a mediator. Specifically to;

- Investigate the effect of organizational culture on social loafing.
- Investigate the effect of intention to leave on social loafing.
- Investigate the mediating effect of intention to leave between organizational culture and social loafing.

2. LITERATURE REVIEW

Doing things in group is not a new phenomenon. It traced back in history when people started hunting animals and gathering fruits in group. As generation passed, and the people's way of life transformed from hunting and gathering to domestic animals and farming, the positive role of a group continued. During the industrial revolution, people's life fundamentally changed like it was never before. Still many tasks are performed in group instead of individually. But after, a French scientist whose name was Ringleman did an experiment on volunteer groups, (When a group of people collectively pulled on a rope, the output was less than when group members individually pulled on the rope (Simms & Nichols, 2014). The belief of a group always play positive role put under question. The results of (Rich, Owens, Johnson, & Mines, 2014) finding were not considered further until 1974 when Ingham, Levinger, Graves, and Peckham recreated the experiment (Simms & Nichols, 2014). That was the time the term "social loafing" coined for the discovery that participants working in groups exert less effort than participants working individually.

Social Loafing:

Formally, social loafing is defined as "the tendency to reduce one's effort when working collectively compared with coactively on the same task (Karau & Williams, 1993, p. 683) as cited in (Rothgerber & Day, 2011). As (Abesi & Samani, 2017) social loafing is the phenomenon of a person exerting less effort to achieve a goal when they work in an organizational group than when they work alone. And according to (Luo, 2015) social loafing is a behavior pattern wherein an individual working in a group setting fails to contribute his or her fair share to a group effort as perceived by group members. In line with this (Rich et al., 2014) also defined social loafing as a means that when people are in a group they are likely to exert less effort than they would if they were working alone.

Team structure is one cause which induces social loafing through their influence on cognitive disengagement mechanisms (Simms & Nichols, 2014). And when we see the level of social loafing during group development it is less likely to occur early in group's development compared to later stages (Rothgerber & Day, 2011). Employees' perception of coworkers and lack of individual evaluation could cause social loafing, if there is a perception that coworkers are engaging in social loafing, employees will reduce their commitment to the organization and tend to loaf more. If managers do not evaluate every employee's individual effort, more and more employees could loaf as a result (Meydan & Okulu, 2014). Commitment is also the other element that has been identified as a key factor in the management of organizational loafing. When a person is committed and responsible, he tries to carry out his duties with more energy and be more involved in the organizational collective activities (Abesi & Samani, 2017).

On the other hand, three main problem areas that create conditions for social loafing to thrive in groups of the organization have been distinguished by (Jolita Vveinhardt, 2004). And these problem areas were the individual employees' disposition to social loafing, the quality of managing people and the quality of relationships between the employees (social cohesion). According to (Schippers, 2015) complex tasks, team members with high conscientiousness and agreeableness may compensate for team members who tend to engage in social loafing. The other determinant of social loadings are;-PGW (Preference for Group Work) related negatively to self-reported and peer rated measures of social loafing behavior and that WI (Winning Orientation) moderated further the relationship in the self-reported social loafing.

In relation to face to face technology, social loafing, as a problem that hinders team productivity, is more prominent in technology-supported settings than face-to-face settings (Simms & Nichols, 2014). On the issue of organizational environment the following finding concluded that, management of organizational loafing is organizational environment and among the environmental aspects of the organization, internal factors (with dimensions of organizational culture, style of supervision, and the behavior of colleagues) was recognized as the most important aspect of the organization's environment. Job satisfaction is the most significant impact on organizational loafing management known. When employees are not satisfied with payment level, distribution of rights and benefits, how to behave and interact, how to manage and chief executives, physical conditions of work, the nature of the job, the imbalance between performance and payment, without a doubt, they will respond to the organization (Abesi & Samani, 2017). When employees have full support from coworkers has the following effect on turnover and social loafing. Turnover intention fully mediates the relationship between co-worker support and social loafing (Cicekdagi et al., 2018).

Finally, there are some findings which proved motivation is a key factor for social loafing. So that, environment supporting autonomy can foster intrinsic motivation (Cooper, 2006). On the other hand environments controlling employees such as by using extrinsic reward to increase identifiably, have the potential to undermine intrinsic motivation. The excessive use of extrinsic motivators can lead to negative organizational consequences, such as employees working only as much as what they are paid for (Deci, 1995) as cited in (Hall & Buzwell, 2012). From the motivational training perspective, there was the difference between a group of participants who received achievement motivation training with a group of participants who did not receive the training in social loafing tendency (SLT), which participants' decrease of SLT was due to the implemented achievement motivation training (Novliadi & Eliana, 2017).

Organizational Culture:

The term "organizational Culture" has been defined in different way. Some of these definitions and concepts are:- Organizational culture keeping together the members of organization and linking them to each other is of the most important elements of the organizational success. Organizational culture can positively or negatively affect the organizational success. For organizational culture to positively affect organizational success, it is necessary for it to have the features of organizational culture in both internal and external environment (Cicekdagi et al., 2018). Shein (1990: 112) cited in (Cicekdagi et

al., 2018) reported that a human society previously determined has a past with continuity and the same as each other will enable a culture to be shaped, in case that this is absent, a culture bringing together in continuously differentiating organizations will not be present. The work of (Cicekdagi et al., 2018) especially strove about the importance of symbol and said that symbolic structure determined the understanding of organization.

According to (Yosinta, 2016) organizational culture is considered through eight key themes: 1) Dominant characteristic of the organization, 2) Leadership style, 3) Management of employees, 4) Organizational cohesion (glue), 5) Organizational strategic emphasis, 6) Organizational success criteria, 7) Organizational reward in the form of promotion, and 8) Job satisfaction. And his finding proves that, a strong culture is generated by participative leadership style and management approach. The work of (Brien, 2008) characterize organizational culture as a set of shared assumptions that guide behaviors. It is also the pattern of such collective behaviors and assumptions that are taught to new organizational members as a way of perceiving and, even thinking and feeling. Thus organizational culture affects the way people and groups interact with each other, with clients, and with stakeholders. In addition, organizational culture may affect how much employees identify with an organization. All of organizations have cultures, which has different structure. Hence, of the cultures of these organizations, bringing together those having similar to each other, for the sake of revealing the major models, is a need that has a serious dimension (Cicekdagi et al., 2018). Organizational culture and leadership is the internal atmosphere and mood among employees at a company that is driven by management intentionally or unintentionally.

The culture of the organization is closely linked to organizational design. For instance, a culture that empowers employees to make decisions could prove extremely resistant to a centralized organizational design, hampering the manager's ability to enact such a design. However, a culture that supports the organizational structure (and vice versa) can be very powerful (Novliadi & Eliana, 2017). Culture dictates the freedom of participation in the managerial decision-making. A strong culture has a strong influence on organizational members and creates committed employees by instilling clear cultural values and beliefs. A weak culture can breed apathy, resentment, and unproductive workers (Cicekdagi et al., 2018).

In a broader sense, a good organizational culture always considered the employees as an integral part of the growth process of the organization. An organization fosters the employee commitment towards the organization. Employees align their goals and objectives with organizational goals and feel responsible for the overall wellbeing of the organization (Novliadi & Eliana, 2017). As their efforts are in turn appreciated by the management and suitably rewarded, and they have immense job satisfaction. In such organizational cultures, the employees are committed to achieving their goals and thus have a positive effect on the overall performance of the organization (Cicekdagi et al., 2018). Organizational culture enables internal integration & coordination between organization and its employees and it creates the environment of learning, competition, opportunities, positive attitude, mutual trust, better understanding, less conflict, increases the quality of work, sense of accomplishment and performance enhancement. What we deducted from this study is that organizational culture is very important in every organization and it enhances employee's performance resulting employee's commitment which helps the organization to prosper & flourish and influence the level of organizational goal in a positive way (Narayana, 2017). The conditions causing social loafing of the people emerge from the cultural values belonging to them they have. It can be said that the behaviors of the individuals in a group of community that is working are affected from the cultural foundation they have and from the cultural values the other community members have (Cicekdagi et al., 2018).

Hypothesis Ha_1: organizational culture has a positive effect on social loafing

Intention to Leave:

Intention to quit refers to employees' conscious decisions and will to leave their organizations (Çıra, 2010 cited in (Güçer, 2014). Bothma and Roodt (2012) identified intention to quit as a type of withdrawal behavior that is associated with under-identification with work. They further assert that intention to quit is the employee's conscious and deliberate willingness to quit the organization and it is regarded as the last in a sequence of withdrawal cognitions. This intention is determined by three things: their attitude toward the specific behavior, their subjective norms and their perceived behavioral control (Khalid, 2013). Job satisfaction, job stress, organizational culture, organizational commitment, salary, organizational justice, promotional opportunity, demographic variables, leadership styles, and organizational climate are common in any type of organizations that aggravate employee intention to leave. But there are other factors also to be considered like perceived organizational support, perceived supervisor support, job autonomy, Employees' benefits, and training and development (Abozed, Melaine, & Saci, 2013).

In another finding, Poor treatment by managers, dissatisfaction with job security and career prospects, and a perception that pay was not sufficient and fair were the main reasons for employees' low QWL (Quality Working Life). Employees who experienced lower QWL had more intention to leave their organization, if they find another job opportunity (Abozed et al., 2013).

A conducive work environment that provides resources and information to support staff commitment to quality work may not be effective if not aligned to staff care services to reduce intention to quit if the staff plans to leave or consider other job offers. Majority of the respondents were graduates who know what is expected at work but also have intention to quit the organization due to poor pay, lack of recognition programs and no career paths. Commitment is also the other determinant that has been identified as a key factor in the management of organizational loafing. When a person is committed and responsible, he tries to carry out his duties with more energy and be more involved in the organizational collective activities (Abesi & Samani, 2017).

According to (Güçer, 2014) there are significant relationship between social loafing and intention to leave in hotels. And also, the social loafing behavior perceived by employees affected the intention to leave. According to the research, if hotel employees have perceived social loafing, they intent to leave their work. On the other study (Akgunduz & Eryilmaz, 2018) proved that the mediating effect of turnover intention in both the relationship between co-worker support and social loafing and between affective job insecurity and social loafing is fully supported, the mediating effect of turnover intention in the relationship between cognitive job insecurity and social loafing is only partially supported.

Hypothesis Ha_2: intention to leave has a significant effect on social loafing

HypothesisHa$_3$: the relationship between organizational culture and social loafing is mediated by intention to leave

Conceptual Framework-

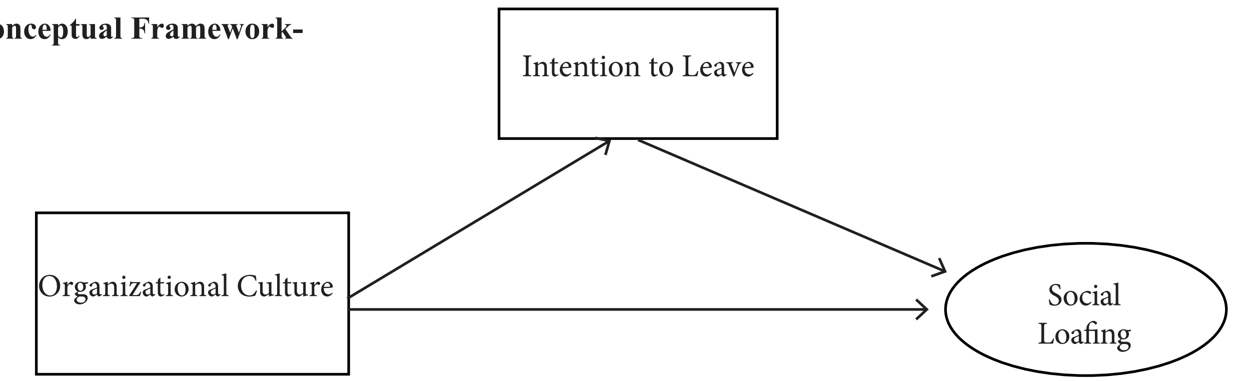

Figure 1 Conceptual framework: showing the predictor, mediator and criterion variable.

3. METHODS

The Study Design:

According to (Marczyk, DeMatteo, and Festinger, 2005) survey studies ask large numbers of people questions about their behavior, attitude, and opinion. The principal advantage of survey studies is that they provide information on large groups of people, with very little effort, and in a cost effective manner. There are only three main methods that have been used in past research on social loafing: descriptive-surveys method, case study, and experimental (Piezon, 2008). The study pursued a quantitative research approach with and through descriptive, explanatory and survey design. A survey design provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population Kotari (2004). Descriptive research includes surveys and fact-finding enquiries of different kinds. From sample results, the researcher generalizes or makes claims about the population (Creswell, 2003).

Sampling and Data Source:

The target Population for the study is all the employees of the college. Information revealed form the human resource unit of the college indicates that currently there are 200 employees in different departments with different responsibilities. Out of 200 all target population working at the college, 170 of them were included in the study. The rest 30 employees are out of the job to attained further education in regular program in different colleges and universities of the country. Therefore, researchers employed census sampling method to determine the sample size of the study. Therefore, all the employees who are on the job are taken as participants of the study. Primary sources of data were employed to fully address the research objective. The primary data were collected using a survey questionnaire. The respondents were from different job categories namely trainers and administrative staff at the institution.

Measurement and Variables:

To achieve the proposed objectives the study adopted measurements that are valid, reliable and used by prior researches. Measurement techniques and strategies are therefore an essential component of research methodology. According to (Marczyk, et al., 2005) measurement is a process through which researchers describe, explain, and predict the phenomena and constructs of our daily existence. Both the independent, dependent and mediating variable of the study measured by standardized instruments. Five point likert scales ranging from 1 strongly disagree to 5 strongly agree used to measure the research variables (independent, mediating and dependent).

- ***Social Loafing:*** Social loafing is operationalized as the perception that one or more other group members are contributing less than they could to the group in their work activity. Social Loafing is measured with the help of scale developed by (Dornburg, Stevens, Forsythe, & Davidson, 2007). Sample social loafing items (on a five point Likert scale; 1 strongly disagree to 5 strongly agree); "My effort on a group work is less than the effort I would exert if I work alone" and "My contribution in a group work is under what is expected from me".
- ***Organizational Culture:*** Organizational culture is operationalized as a system of shared values and beliefs that produce norms of behavior and establish an organizational way of life. Based on this, Organizational culture is measured with the help of scale developed by (Maull et al. 2001) cited in (Cicekdagi et al., 2018b). Sample organizational culture items (on a five point Likert scale; 1 strongly disagree to 5 strongly agree); "In our institution we regularly celebrate our achievements" and "The institution's decisions are always made in meetings".
- ***Intention to Leave:*** Intention to leave was operationalized as the likelihood of an employee to leave the current job he/she are doing. Intention to leave was measured with the help of scale developed by (Luo, 2015). Sample intention to leave item (on a five point Likert scale; 1 strongly disagree to 5 strongly agree); "I would leave the collage if I have other alternative".

Procedure:

After checking the consent of participants data were collected at the case organization during work hours. To complete the surveys researchers were scheduled one week period. All respondents' survey administrations were conducted by the researchers. Participants were informed that the study was designed to examine the effect of organizational culture and intention to leave on social loafing behavior. Participants responded to questionnaires that included measures of organizational culture, intention to leave and social loafing.

Method of Data Analysis:

Data collected through questionnaire is analyzed and interpreted quantitatively, further organized and treated with different statistical techniques. Descriptive statistics, such as frequency count, percentages was calculated to the demographic characteristics of respondents. The data was entered into SPSS version

20 in order to draw simple tabulations to describe the demographic characteristics of the respondents. Pearson correlation used in order to explain the relationship between the variables, dependent (social loafing) and the independent (Organizational culture and intention to leave). Pearson correlation allow how well variables are related, their strength and direction of the linear relationship. In addition, multiple linear regression analysis is conducted to examine the level of effect of organizational culture and intention to leave on social loafing. Similarly the mediating role of intention to leave between organizational culture and social loafing is checked through regression model by using the model adapted from (Hayes, 2013).

4. RESULTS AND DISCUSSION

The total number of questionnaires disseminated to respondents is 170. Out of which 164 or 96.48% are returned and valid for analysis. The remaining 7 or 4.2% were not returned. This section of the analysis demonstrates the mediation analysis among variables. In general, a given variable may be said to function as a mediator to the extent that it accounts for the relation between the predictor and the criterion (Baron & Kenny, 1986). Taking in to account this definition a relationship between the predictor and outcome variable is established with the inclusion of external (mediator) variable that would enhance the relationship. The section is devoted to see whether intention to leave mediates the relationship between organizational culture (predictor variable) and social loafing (criterion variable).

A necessary component of mediation is a statistically and practically significant indirect effect (Preacher & Hayes, 2004). The type that occurs when one variable (M) mediates the effect of X on Y we term this model simple mediation. The simple relationship between *X* and *Y* is often referred to as the *total effect* of *X* on *Y.* we denote the total effect c to distinguish it from *c'*, the *direct effect* of *X* on *Y* after controlling for *M.* (Preacher & Hayes, 2004).

The formal heuristic analysis often used to detect simple mediation effects is straightforward and follows directly from the definition of a mediator provided by Baron and Kenny (1986). A variable functions as a mediator when it meets the following conditions:-

(1) X significantly predicts Y (i.e. $c \neq 0$) or when path a and b are controlled, a previously significant relation between the independent and dependent variables is no longer significant, with the strongest demonstration of mediation occurring when path *c* is zero,
(2) X significantly predicts M (i.e. $a \neq 0$) or variations in levels of the independent variable significantly account for variations in the presumed mediator (*i.e., path a*), and
(3) M significantly predicts Y controlling for X (i.e., $b \neq 0$), or variations in the mediator significantly account for variations in the dependent variable (i.e., *path b*).

Two further assumptions must be met in order to claim that mediation has occurred, according to Baron and Kenny (1986); namely, should be no measurement error in M, and Y should not cause M. These two assumptions have been met for this data. And mediation analyses are most often guided by the procedures outlined by Baron and Kenny (1986). Nothing is special for this data and it is build up on this model. The following figure shows the simple mediation i.e., intention to leave (mediating variable), organizational culture (predictor variable) and social loafing (outcome variable).

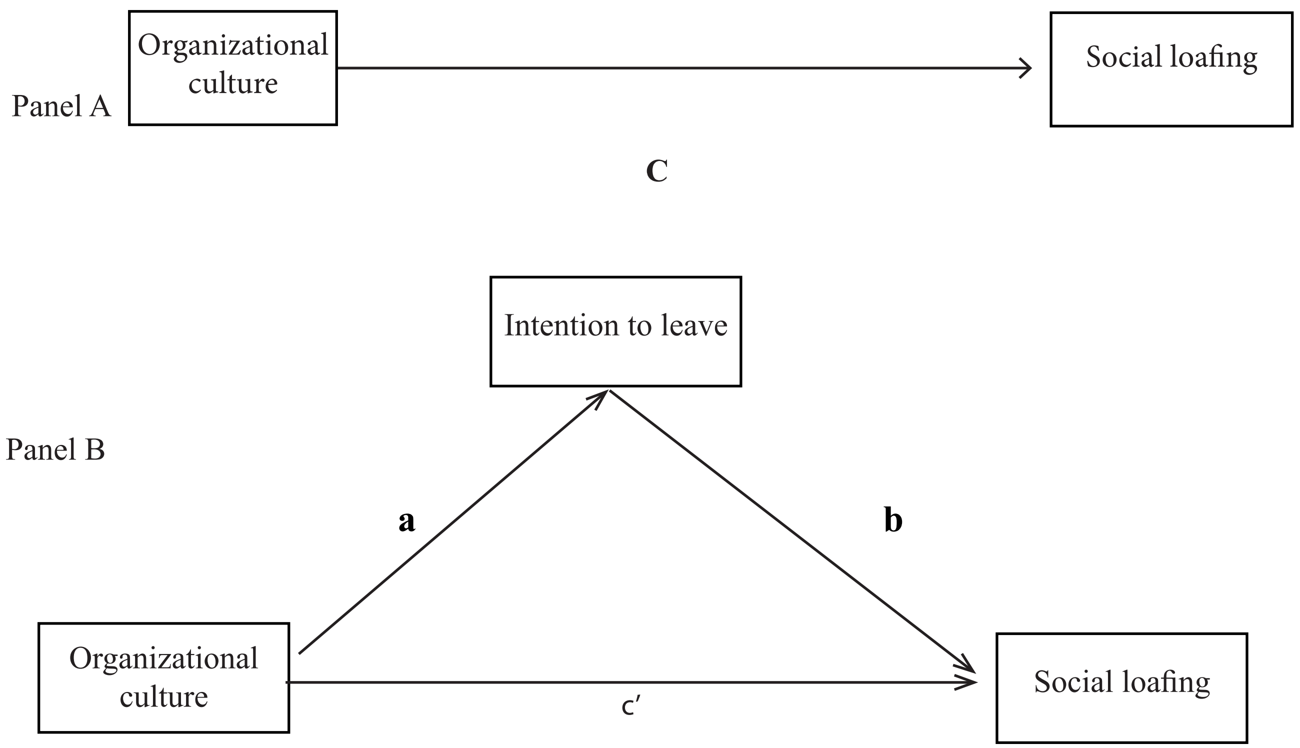

Figure 2: Panel A: Illustration of total effect, organizational culture affects social loafing.

Panel B: Illustration of a mediating design organizational culture affects social loafing indirectly through intention to leave.

This model adapted from (Baron & Kenny, 1986; Preacher & Hayes, 2004) assumes a three-variable system such that there are two causal paths feeding in to the outcome variable: the total impact of organizational culture on social loafing (path c) the direct impact of the independent variable organizational culture on social loafing (*path c′*) and the impact of the mediator intention to leave on social loafing (*path b*). There is also a path from the independent variable organizational culture to the mediator intention to leave (*path a*). The statistical result below demonstrates whether the above proposed mediation model is significant or not. The analysis was done using (Hayes, 2013) process macro plug in tool it is easy to run the mediation analysis. A macro is a program that will run when a shortcut command is given to execute it. Rather than running the entire program for each analysis.

For mediation to happen the following preconditions should be fulfilled.

1. X variable (organizational culture) predicts Y variable (social loafing) – path c
2. X variable (organizational culture) predicts M (intention to leave) – path a
3. X (organizational culture) and M (intention to leave) together predicting Y (social loafing)
    a. M variable (intention to leave) predicts Y (social loafing) – path b
    b. X variable no longer predicts Y or is lessened predicting y – path c′

The process macro plug in regression output is provided below to see whether the above preconditions of mediation are fulfilled or not. Each requirement for mediation analysis is discussed separately.

Run MATRIX procedure:

Model: 4

Y: Social Loafing

X: Organizational culture

M: Intention to leave

Sample size=164

1. **X Variable predicts Y – path c**

The total effect model in the table below shows that the total effect of the predictor variable (organizational culture) on the outcome variable (social loafing). This total effect is mean *path c*, the total effect of the predictor on the criterion variable. Before checking the mediator variable has an indirect effect between the predictor and criterion variable, first the total effect has to be checked. If there is no total effect between the independent and dependent variable, no further step is necessary for mediation. The same is true for this data set before checking intention to leave is playing a mediating role between organizational culture and social loafing, initially organizational culture should be able to predict social loafing. The regression output illustrates that the total model effect is statistically significant with the following *F, b* and R^2 values.

a. F (1, 162) = 50.87, $P < .001$, $R^2 = .24$
b. b =-.12, t(162) = *-7.13*, $P < .001$

Table 1: Total Effect of Organizational Culture on Social Loafing

************************** TOTAL EFFECT MODEL ****************************

OUTCOME VARIABLE: Social Loafing

Model Summary

R	R-sq	MSE	F	df1	df2	p
.49	.24	.73	50.87	1.00	162.00	.00

Model

	coeff	se	t	p	LLCI	ULCI
Constant	21.46	.81	26.61	.00	19.86	23.05
ORGCU	-.12	.02	-7.13	.00	-.15	-.08

****

As the model summary statistic shows above, R (.49) is the correlation between organizational culture and social loafing; there is a moderate relation between the two variables. The R^2value is .24 this amount explains that 24% organizational culture can explain the variation in social loafing. From the above statistical result we can conclude that organizational culture can predict social loafing. The total effect or path C is achieved in the above statistical result. This statistical result is helpful to reject the first hypothesis i.e., organizational culture has a positive effect on social loafing. Therefore, the first situation or precondition in the mediation analysis is fulfilled. Hence, within this situation the other requirements for mediation analysis are discussed below.

2. **X variable predicts M – path *a***

This is the second requirement for mediation to happen. In this data set X (independent variable) is organizational culture and M (mediating variable) is intention to leave. For mediation to happen the predictor variable (organizational culture) should predict the mediating variable (intention to leave). The statistical table below displays whether organizational culture predicts intention to leave or not.

Table 2: Effect of Organizational Culture on Intention to Leave

****

OUTCOME VARIABLE: Intention to Leave

Model Summary

R	R-sq	MSE	F	df1	df2	p
.8064	.6503	.7103	301.2723	1.0000	162.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
Constant	.3439	.7972	.4314	.6668	-1.2304	1.9182
ORGCU	.2809	.0162	17.3572	.0000	.2489	.3128

****

As indicated from the above table, the model that states organizational culture does predict intention to leave (i.e., path a) of the mediation analysis is significant with the following F and b values.

a. F (1, 162) = 301.27, $P < .01$, $R^2= .65$

b. $b =.28$, $t(162) = 17.36$, $P < .01$

Although the P-value of intention to leave of the above regression output is greater than the standard (p>0.01), the overall model is statistically significant. It is sure that with this statistical result the second precondition for this mediation analysis i.e., the independent variable (organizational culture) should

predict the mediating variable (intention to leave) is fulfilled.

3. **X and M together predicting Y**

Another situation that should be fulfilled in mediation analysis is that the independent (organizational culture) and mediating variables (intention to leave) together should predict the dependent variable (social loafing). By doing so, within this situation there are two preconditions that should be met. The first one is the mediating variable should predict the outcome variable (path b), second the independent variable no longer predicts the dependent variable or lessened predicting (i.e., path c'). Accordingly, organizational culture and intention to leave together should be able to predict social loafing. Now let's as see each precondition separately. The model summary describing this precondition is statistically significant F (2, 161) = 40.24, $P < .01$, $R^2= .33$ (see table 3). Hence, this statistical result does ensure both paths (b and c') are fulfilling the requirement of mediation.

a. **M variable predicts Y – path *b***

For mediation to exist the mediating variable should predict the outcome variable. To this end intention to leave mediates the relationship between organizational culture and social loafing, as a precondition intention to leave (the mediating variable) it could predict social loafing. If the mediating variable is not predicting the outcome variable, the game of mediating stops here. When look at the regression output of this relationship in the table provided below, it has the following statistical result.

i. $b= .36$, $t(161) = 4.77$, $P = .00$

This statistical result explains that intention to leave (mediating variable) did predict social loafing (outcome variable) when X is controlled. Path b (M predict Y) is achieved in this data set according to the above statistical result, look the table provided below. Hence, the realization of this precondition leads the way to see the other requirements for mediation analysis, and it is discussed below.

b. **X variable no longer predicts Y or is lessened predicting Y – path c′**

It is important precondition that should be demonstrated to ensure existence of mediation. The predictor variable strongly predicts the outcome variable or predicting in a highest value when the mediating variable is controlled. In this case, organizational culture should predict social loafing when intention to leave is controlled (i.e., path c′). The regression output below explains the coefficient value that c′ is statistically predicts the outcome variable.

i. $b = -.22$, $t(161) = -8.34$, $P < .001$

The statistical result above explains the fulfilment of the last precondition, the predicting values of organizational culture on social loafing is different from zero when intention to leave is controlled. Therefore, intention to leave mediates the relationship between organizational culture and social loafing. In this model mediation did occur. Therefore the null hypothesis which says the relationship between organizational culture and social loafing is mediated by intention to leave is failed to reject.

Table 3: Intention to Leave and Organizational Culture on Social Loafing

****

OUTCOME VARIABLE: Social Loafing

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5773	.3333	.6405	40.2373	2.0000	161.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
Constant	21.3341	.7575	28.1655	.0000	19.8383	22.8299
ORGCU	-.2167	.0260	-8.3402	.0000	-.2680	-.1654
INTLEAV	.3560	.0746	4.7719	.0000	.2087	.5033

****

5. CONCLUSION AND RECOMMENDATION

3.1. Conclusion

The study was set out to find out the effect of organizational culture on social loafing by taking intention to leave as a mediator. The statistical result revealed that, organizational culture has a moderate negative effect on social loafing $p<.05$ level ($b=-.584$, $t(159)=-61.434$, $p=.00$). The meaning of this finding is that, suitable organizational culture can add value in minimizing loafers among employees of the college. on the contrary, according to (Cicekdagi et al., 2018) perceptions of peoples on organizational culture affects social loafing positively. And based on the findings of (Etemadi et al., 2015) distributive justice (considering as a dimension of organizational culture) affected social loafing according to the nature of the justice practice. Organizational culture practices like celebration of individual as well as group achievements, participation in important decisional areas, regular revision of policies and guidelines, free flow of opinions and ideas about organizational stakes, evaluation of strategic plan, and enhanced collaboration and interdependence among individuals and units can really minimize the impact of individual's intent to loaf.

Intention to leave has its own effect on individual's intent to loaf behavior. The statistical result is in support of this evidence $b=.36$, $t(161)=4.77$, $P=.00$. And this finding is similar with the work of (Güçer, 2014), there is significant relationships between intention to leave and social loafing. When workers really reflect a poor sense of belongingness for their organization they highly indulge in social

loafing behavior. Even when individuals have other alternatives in their career, they intend to participate in loafing behavior. Losing a sense of obligation is another intention to leave factor used to aggravate social loafing behavior. Moreover, the statistical evidence confirmed that intention to leave behavior really mediate the relationship between organizational culture and social loafing behavior.

3.2. Recommendation

As per the results and conclusion made above the following recommendations are forwarded that really used to combat the problem of organizational culture, intention to leave and social loafing behavior. The institution must give much due attention to deal with the employees' intention to leave. Since it is the most significant factor of social loafing, in order to discourage social loafing behaviour, the collage needs to pursue remedies which discourage the employee's intention to leave, like self-empowerment, balancing work and life, pursuing opportunities for advancement and promotion. Increasing workers sense of belongingness is another strategy used to overcome the problem of intention to leave. Make the working environment conducive, improving promotion criteria, make the work interesting and participation are tools used to increase workers sense of belongingness.

With regard to organizational culture, even though its effect is negative and moderate and not as significant as intention to leave, without a doubt it requires strategists' attention. The following things should be there in the institution. Employees should receive opportunities to participate in decision making practices; they must have a right to choose their own method to do their task (only positive interference is appreciated). Leaders need to enhance collaboration, interdependence and smooth operation of activities among individuals as well as across different cross functional units and organizational levels. In addition to its direct significant effect, intention to leave fully mediates the relationship between organizational cultures and social loafing. Meaning, if any measure is taken on organizational culture, it will have indirect effect on social loafing. Which means when there is good organizational culture in the institution, the chance employees intend to leave is low. And if the employees' intention to leave is low the likelihood of engaging in social loafing will become low as well. Therefore the management should know that when they work on organizational culture, at the same time they are working on employees' intention to leave. And the cumulative effect will be seen on social loafing.

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The Impact of Small-Scale Irrigation on Household's Food Security: The Case of Machakel District, Ethiopia.

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Abstract

The study focused on the impact of small-scale irrigation on farm household food security with specific reference to Machakel District. A multi- stage random sampling technique was employed to select sample households and the data was collected from primary and secondary sources.The study used PSM model to analyze impacts of small-scale irrigation on food security, while Logit model was used to identify factors affecting household participation decision in small-scale irrigation. Using PSM (kernel matching with band width of 0.25) it was found that participation in small scale irrigation increased daily caloric intake and household consumption expenditure by 649.09kcal and 1706.28birr, respectively, over non-participant households. The sensitivity analysis result shows that the impact estimates on significant outcome variables were insensitive to unobserved selection bias. Thus, strengthening crop-livestock production, construction of irrigation schemes, arranging training and close follow up for elder farmers, provision of market information and infrastructure and promoting off/non-farm income generating activities should be a policy priority and concern areas to enhance farm households' participation decision in small-scale irrigation in turn to improve food security.

Keywords: ATT, Food Security, Logit, PSM, Small Scale Irrigation

1. INTRODUCTION

Agriculture is the vital sector for the attainment of food security, employment creation and economic growth within the world (AGRA, 2013). Agriculture is also additionally the basis for economic growth, especially for most of African nations, where it generates about 25% of the gross domestic product

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(GDP) in sub Saharan Africa (Schaffnit-Chatterjee, 2014).

Ethiopia is also one of the sub-Saharan nations for which, agriculture is the driving force as well as the overall economic development of the nation relies on the sector. In 2011, for example, the sector contributed 40% to Ethiopia's GDP, 80% to employment, 28% to government tax revenue, 85% to export earnings and it is additionally accountable for 70% of the supply of raw materials to non-agricultural sector (Lakew, 2004, CSA, 2012). However, the sector does not enable to fulfill the food requirements of the people, because of low farm production and productivity, repetitive dry spell, climate change and use of backward technology (MoFED, 2012). In Ethiopia, most settlement areas are degraded, per-capita land availability is fragmented, productivity of land are diminished, and agricultural production is essentially rain fed, which is influenced by erratic and often insufficient rainfall (Seleshi and Merrey, 2014). As a result, there is low farm production, widespread poverty, poor health, etc.; remain to be frequent problems in Ethiopia (Pendon, 2007). All these circumstances expose the nation to amplify the problem of food insecurity.

Thus, Ethiopia is among the major food aid recipient nations within the world (Todaro and Smith, 2011). By using the threshold of 2,200 kilocalories (Kcal) per adult equivalent per day, 40 percent of Ethiopian households for whom their larger part dwell in rural parts of the country were food insecure (Abduselam, 2017).The reliance of most of the farmers on rain-fed farming has made the country's rural economy amazingly fragile and powerless to the impacts of climate and climatic inconstancy leading to partial or total crop failure, which in turn brought about food shortages and Starvation (MoWE, 2012).It was claimed that, Ethiopia could not guarantee food security for its population with rain fed agriculture alone (MoWR, 2010). Therefore, there is a need for different distinctive mediation instruments; irrigation being one of the alternatives, which could help in adapting techniques to cope up with drought and food insecurity challenges. Irrigation development has a decisive significance in raising production and productivity to achieve food self-sufficiency and to realize food security at national level in general and household level in particular. The irrigated agriculture can also play a crucial role to supply the desired raw materials for domestic economy and increase export earnings (Awlachew et al., 2010). Hence, by considering the significance of irrigation sub-sector in the overall country's advancement, the government of Ethiopia gives high priority to irrigation development, particularly small-scale irrigation to exploit the untapped resource (MoA, 2011).

To alleviate the deep rooted food insecurity problem in particular and poverty in general, the government of Ethiopia has introduced and begun implementation of diverse national strategic plan, such as agricultural development led industrialization (ADLI) (1991), structural adjustment program (1994-1999), sustainable development and poverty reduction program (2000-2005), plans for accelerated and sustained development to end poverty (2005-2010) and growth and transformation plan (2011-2015); all are given a due attention for irrigation infrastructure (Nugusse,2013). Irrigation has the potential to stabilize agricultural production, mitigate the negative impact of variable and/or inadequate rainfall and helps to offset some of the negative effects of rapid population growth (CSA, 2007). However, the existing irrigation development in Ethiopia as compared to the potential that the country has is far from satisfactory and the sector is not contributing its share accordingly (MoA, 2011). Whereas the country's irrigation potential is about 3.7 million hectares (WSDP, 2002), the total irrigated area is 190,000 ha in 2004, that is only 5.13 percent of the potential (FAO, 2005). Despite the challenges, some of the implemented small-scale irrigation schemes are contributing well for the country's food security and poverty reduction strategies as compared to rain fed agriculture.

Having this, there are various empirical studies that have been conducted to investigate the impact of small-scale irrigation on household's food security status. For example, Abonesh et al. (2011) and Kinfe et al. (2012) studied the impact of small-scale irrigation on household's food security status using Heckman two stage procedure and concluded that small scale irrigation has positive and significant effect on households' food security status. But the question may arise in the model they have used, because Heckman two stage procedure though very good for alleviating selection bias; it is not that much as better as propensity score matching model for impact analysis. Thus, this study is intended to use propensity score matching to isolate the appropriate impacts of irrigation upon irrigation user households.

Furthermore, Getaneh (2011), Tedros (2014) and Tizta (2017) conducted descriptive studies on the issue, in that they did not isolate the possible impacts of irrigation to food security status of irrigators than non- irrigators. Above all, Machakel District has high potential of water resource, but its utilization is perceived to be very low especially by small holder farmers (MDAO, 2018). As to my knowledge, empirical study regarding on the impacts of small-scale irrigation on household's food security status were not conducted in the area, which necessitates such an analysis and come up with the point of solution so that the policy actions and extension activities can be undertaken. Therefore, this study would aim to fill such knowledge gaps on the impact of small-scale irrigation on food security of participant household's and its comparison with the counter parts of control group.

2. METHODOLOGY

Description of the Study Area-

Machakel District is found in east Gojjam zone of Amhara region, which consists of 24 kebeles and covered total area of 746.43km^2. Geographically, the District is located at 10^0 19‘‘ 75’’ to 10^0 41‘‘ 00’’ N latitude and 37^0 46‘‘ 16’’ to 37^0 45‘‘ 42’’ east Longitude. The capital of the district is Amanuel town, which is located 328 km South West of Addis Ababa, 30 km West of Debre Markos Town; the capital city of the zone, 235 km east of Bahir Dar City; the capital of Amhara regional state (MDAO, 2018). Agriculture is the major economic activity; mixed farming system being a common practice in all Agro-climatic zones. Accordingly, crop production and livestock raring are the main sources of livelihood for households. Crops like, maize, teff, wheat, barley, legumes and vegetables like, red onion and tomato are commonly produced in the District. According to the data, which obtained from the district's agricultural development bureau, the total land area under different uses was estimated at 79, 558 hectares, of which the land suitable for agricultural use is 39,349 hectares.

Data Type and Source:

For this study, both primary and secondary data sources were utilized to collect both qualitative and quantitative data type. Due to the nature of household studies, the main data sources used were primary data. Accordingly, a well-designed questionnaire was deployed to collect pertinent information from sample respondents. Indeed, to enrich the primary data, secondary data was additionally collected from the published and unpublished documents of the district's administration office and agricultural Bureau of the district.

Sampling Technique and Sample Size Determination-

A multi- stage random sampling technique was employed to select sample households. To begin with, Machakel district is selected purposively because of the extensive practice of irrigation. In the second stage of sampling procedure, three kebeles were selected randomly from those kebeles which have small scale irrigation access. Then, the households are stratified in to irrigation users and non-users. The stratification of households in to irrigation users and non-users is made, because this study is an impact analysis which tries to show the distinction in food security status among irrigation user and non-user households because of their participation in small-scale irrigation. Therefore, to compare their status, it is vital to stratify households in to users and non-users. According to the districts' agricultural bureau in 2018, there are 2596 households in the target kebeles of Machakel district. The sample size determined by Yemane (1968) sample size determination formula which is given as; .Assuming 95% confidence level, 347 households are determined as sample size of the study. To determine respective samples for each stratum of the three Kebeles, sampling proportion to population was used. Finally, representative sample for each stratum were selected through systematic random sampling technique.

Model Specification-

The objective of this study was to explore the impact of small-scale irrigation on farm household's food security. In this manner, irrespective of its limitations, propensity score matching (PSM) method was used. Estimating the propensity score involve decisions about what model to be used for the estimation. Regarding the decision of choosing the type of model to be used, for the binary treatment case, where we estimate the probability of participation versus non-participation, both logit and probit models often yield similar results. However, from mathematical point of view; logit model is an extremely flexible and easily used function; and it lends itself to a meaningful interpretation (Caliendo and Kopeinig, 2005). To capture this advantage, logit model was used for estimating the propensity score in this study. In estimating the logit model, the dependent variable is irrigation participation, which takes value 1 for irrigation users and 0 otherwise. According to matching theory (Rosenbaum and Robin, 1983; Bryson et al., 2002; Jalan and Ravallion, 2003), the propensity score generated through the logit model should include predictor variables that influence the selection procedure or participation in the program and the outcome of interest. To minimize the problem of unobservable characteristics in evaluation of the impact of small-scale irrigation, we included as many explanatory variables as possible in this study.

The effect of household's participation in small scale irrigation on a given outcome (Y) is specified as:

$$T_i = Y_i(D_i = 1) - Y_i(D_i = 0) \quad \ldots\ldots (1)$$

Where, is the treatment effect, is the outcome on household, is whether householdhas get treatment or not (i.e., whether a household participated in small scale irrigation or not).Nonetheless, since cannot be observed for the same household simultaneously, estimating individual treatment effect is impossible and one must shift to estimating the average treatment effect on the Treated (T_{ATT}), which is specified as;

$$T_{ATT} = E(T/D = 1) = E(Y_i^T/D = 1) - E(Y_i^C/D = 0) \quad \ldots\ldots (2)$$

Where,outcome variable for thehousehold in the treatment group, Outcome variable for thehousehold in control group and D{0, 1}= treatment indicator [D=1 for treated group and D=0 for control group]

Basically, there are two strong assumptions to solve the selection problem. These are: Conditional independence assumption and common support condition.

Conditional independence assumption (CIA): it states that given a set of observable covariates (X) that are not affected by treatment; potential outcomes Y are independent of treatment assignment D. Meaning outcomes of the irrigators and non- irrigators are independent of the treatment status. This assumption implies that the selection is solely based on observable characteristics, and variables that influence treatment assignment (Caliendo and Kopeinig, 2005). CIA is specified as:

Where, ⊥ indicates independence, X-is a set of observable Characteristicsand

Common Support Condition (CSC): This assumption rules out perfect predictability of D given X. That is: $0 < P(D = 1| X) < 1$. It entails the existence of enough overlap in the characteristics of the treated and untreated units to find adequate matches (common support).

Table 1: Definition of Hypothesized Variables & Measurement

Variable Definition	Type	Hypothesis	Measurement
Sex of household head	Dummy	+	1 if male and 0 otherwise
Age of household head	Continuous	±	year
Marital status	Dummy	+	1 if married and 0 otherwise
Family size	Continuous	+	man equivalent
Education level of household head	Dummy	+	1 if literate & 0 otherwise
Distance to the nearest market	Continuous	±	km
Distance to irrigation water source	Continuous	_	km
Access to credit	Dummy	+	1 if they have credit access and 0 otherwise
Frequency of extension contact	Continuous	+	Number of contacts per year
Cultivated land size	Continuous	+	Hectare
Off/non-farm income	Dummy	+	1 if household had non-farm income and 0 otherwise
Total livestock holding	Continuous	+	TLU
Outcome Variable:			
Household consumption expenditure	Continuous		Birr Per adult equivalent
Daily calorie intake per adult equivalent	Continuous		Kcal

Source; Own definition, 2019

3. RESULT AND DISCUSSION

3.1. Descriptive Statistics-

According to descriptive analysis, some variations were observed between irrigator and non-irrigators of household's in terms of their demographic characteristics, socio-economic and institutional factors (Table2 and 3). The average age of the sample household heads in the study area was between 44.08 and 47.88 with standard deviation of 7.07 and 7.08 for irrigation user and non-users, respectively. The average family and farm size of irrigators were more than non-irrigators. Extension contact of irrigator and non-irrigator households was 2.438 per year with standard deviation of 0.986 and 1.163 per year with standard deviation 0.969, respectively. This shows that the treated group had one more contact than the control group. Frequent visit of agricultural extension agent's increases awareness among farmers about new farm activities through demonstrations and discussions. Irrigators are also nearest to local market and irrigation water source than non-irrigators. Livestock holding was another important household's characteristics. Average livestock owned by the total sampled households was 5.312 TLU. Proportionally, irrigators owned almost two more livestock units than non-irrigators.

Table 2: Descriptive Statistics for Continuous Variables

Variable	Irrigation non- user HH		Irrigation user HH		Combined		t-value
	Mean	SD	Mean	SD	Mean	SD	
Age	47.88	7.08	44.37	7.07	46.4	7.27	4.51***
Family size	4.004	0.865	4.800	0.887	4.322	0.95	-8.311***
Land size	1.662	0.538	2.116	0.560	1.844	0.590	-7.581***
Extcon	1.163	0.969	2.438	0.986	1.674	1.158	-11.927***
TTLU	4.733	1.275	6.179	1.310	5.312	1.470	-10.23***
DIRRW	1.810	0.863	0.904	0.508	1.447	0.864	11.139***
DISMKT	12.088	7.077	10.637	5.912	11.507	6.664	2.01*

*Note: *** Significant at 1% and * Significant at 10% of significant levels*

Source: own estimation result, 2019.

According to the Chi-square result 97.12% of Male headed and 72.6% of Female headed household's adopt small scale irrigation. It shows Male headed households have higher likelihood to adopt irrigation. About 76.98% of irrigators and 16.35% of non- irrigators have attended formal education. It revealed that adopters have better educational background than non- adopters. Moreover, those who have credit access and non-farm income are more likely to practice irrigation.

Table 3: Descriptive statistics for Dummy Variables

Variables	type	Participant	%	non- participant	%	Total	%	χ2-test
Sex hh	Male	135	97.12	151	72.6	288	83	39.8
	Female	4	2.98	57	27.4	59	17	(0.000***)
	Total	139	100	208	100	347	100	
Mrst	Married	128	92.08	115	55.3	244	70.3	53.7
	Not married	11	7.12	93	47.7	103	29.7	(0.000***)
	Total	139	100	208	100	347		
Edu	Literate	107	76.98	34	16.35	141	40.63	75.66
	illiterate	32	23.02	174	83.65	206	59.37	(0.000***)
	Total	139	100	208	100	347	100	
Credit	Yes	86	61.87	56	26.92	142	40.92	
	No	53	38.13	152	73.08	205	59.08	42.09
	Total	139	100	208	100	347	100	(0.000***)
Nonfarm	Yes	109	78.42	64	30.77	173	49.86	126.97
	No	30	21.58	144	69.23	174	51.14	(0.000***)
	Total	139	100	208	100	347	100	

*Source: own estimation result, 2019. Note: *** Significant at 1% level*

3.2. Econometric Result

Determinants of Participation in Small Scale Irrigation-

The estimated binary logit regression model (Table 4) indicated that Eight of the twelve explanatory variables, age of household head, marital status of the household head, cultivated land size, ownership of tropical livestock units (TTLU), distance from water sources, frequency of extension contact, education level of the household head and participation in off-farm income are statistically significant and provides economically sensual insights.

The effect of age of household head-on small-scale irrigation was negative. This is due to the reason that, older farmers do not have long term plan and become risk averse so that they are reluctant to adopt new technology. This finding was in line with the previous hypothesis and in agreement with the work of Wang et al. (2015). Land size was significantly and positively affecting irrigation participation at 5% probability level. As the land size of a household increases by one hectare, the probability of participating in irrigation technology would increase by 12.5 percent, ceteris paribus.

Households, who live one kilo-meter away from irrigation water sources has a lower tendency of participation in irrigation than the household who lives closer to water sources by 23.5 percent,

holding other variables constant. This finding is not surprising, because in developing world, where mechanization is at its infant stage and every activity is handled manually, an increase in distance of farm land from irrigation water source highly hinders irrigation activity. The same result was found by Alemu (2017) and Kinfe et al. (2012).

Frequency of Extension contact was significant (at 1% level of significance) and positive marginal effect coefficient. It provides farmers greater access to information on technology, via communications and more opportunities to participate in demonstration tests. This result is consistent with the finding of Abonesh*et al.* (2011).

Amount of livestock holding is also another determinant factor for the household to be irrigation users or not. The variable has statistically significant (at 5% level of significance) and positive marginal effect coefficient. The magnitude and sign of the marginal effect shows that, a one unit increase in the number of tropical livestock units (in TTLU) of a household increases irrigation participation of the household by 7.2 percent, keeping other variables constant. This result is consistent with the finding of Abonesh*et al*. (2011).

Non-farm income positively affects participation in irrigation, which support the previous hypothesis at 1% level of significance. Marginal effect revels that, having non-farm income increases participation in irrigation by 25.65, ceteris paribus. The result of this study is in line with the study of (Hundush, 2014); found that households who participate in non-farm activity are more likely to participate and adopt irrigation systems because of the money that they earn from non-farm activity leads the household to engage in adoption of irrigation systems.

Table 4: Logistic estimation results for the likelihood of households' irrigation participation

Variable	Coef.	Std. Err.	dy/dx	Std. Err.	P>|z|
Sex*	1.618	1.147	.197	.089	0.126
Age	-.07	.032	-.012	.005	0.043**
Mrst*	1.621	.675	.226	.08	0.001***
Familysize	.144	.276	.024	.046	0.443
Edu*	1.125	.43	.2	.085	0.013**
Landsize	.748	.372	.125	.063	0.041**
Ttlu	.43	.173	.0723	.031	0.019**
Nonfar~n*	1.524	.44	.256	.076	0.001***
Dirrw	-1.398	.353	-.235	.062	0.000***
Extcon	.718	.223	.12	.039	0.002***
Dismkt	-.062	.036	-.01	.006	0.009
Credit*	.518	.441	.089	.079	0.273

	Number of obs	= 347
	LR chi2 (12)	= 303.19
Logistic regression	Prob > chi2	= 0.0000
Log likelihood = -82.023048	Pseudo R2	= 0.6489

Note: ***, ** and* Statistically Significant at 1%, 5% and10%, respectively

(*) dy/dx is for discrete change of dummy variable from 0 to 1

Source; Own estimation result, 2019

Propensity Score Estimation-

The study used propensity score matching technique in order to build matching pairs between participant and non- participant household's based on propensity score in the absence of base line data. The logistic regression was used to estimate propensity score for treatment (participant) and control (non-participant) households.

Checking the Overlap or Common Support Region-

The common support region was determined by taking the maximum of the minimums and minimum of the maximums for the two groups propensity score. Based on this technique the common support region for the propensity score of the sample households was (.0059199, .9626413). In other words, households whose estimated propensity scores are less than .0059199 and larger than .9626413 are discarded from the analysis. Because of this restriction, 104 households (57 irrigation non-user and 47 irrigation user) were discarded from the analysis.

Table 5: Summary of common support region for estimated propensity score

Observation	Mean	SD	Min	Max
Treated	0.8211828	0.2392549	0.0059199	0.9987078
Control	0.119498	0.2157557	0.000014	0.9626413
Total HH	0.4005764	0.4113947	0.000014	0.9987078

Source: own estimation result, 2019

Most of the time, the distribution of the control households was found in the left and the center of the propensity score of the kernel density distribution, due to this most of the discarded household's in the control group found in the left hand -side of the kernel distribution.

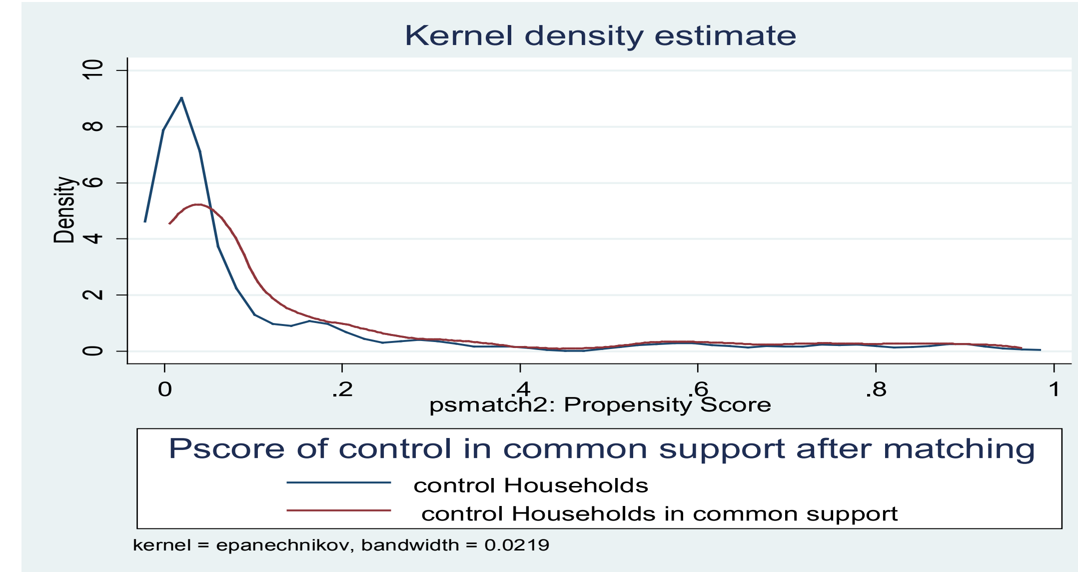

Figure 1: kernel density of the control groups in common support after matching

In similar fashion, the maximum number of distribution for the participants or the treated households were found in the right-hand side and the minimum number of distribution were found on the left-hand side of the kernel density estimate. Due to this reason most observations which discard from the analysis were found in the right-hand side of the distribution. This is clearly shown by the kernel density estimate plot below.

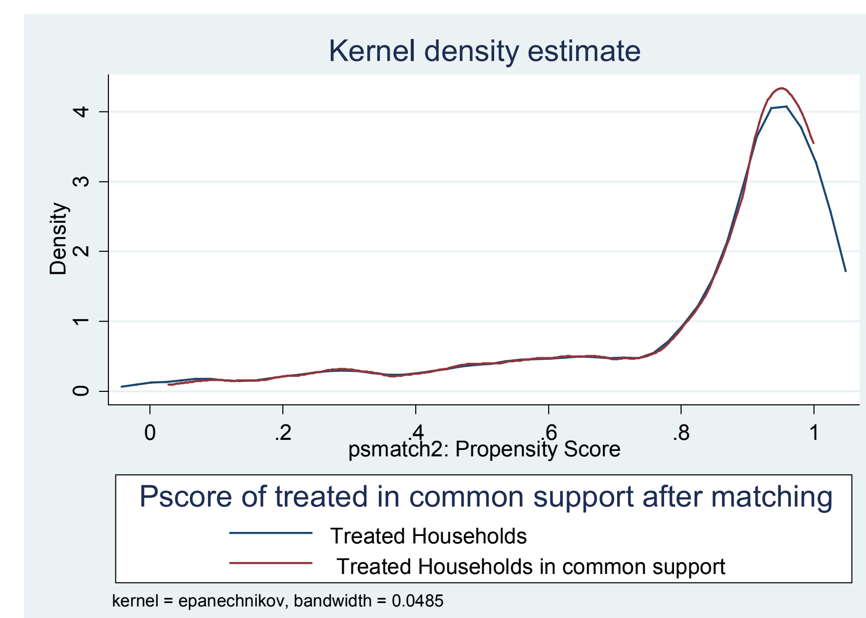

Figure 2: kernel density of the treated household's in common support after matching

Choice of Matching Algorithm

Alternative matching estimators used in matching the treatment and control households in the common support region. The final choice of a matching estimator guided by different criteria such as equal mean test (balancing test), Low pseudo-R^2 and greater number of matched sample size are some of the criteria to select matching algorithm (Dehejia and Wahba, 2002).When we investigate the results, kernel matching with band width (0.25) is the best estimator for the data at hand based on the above criteria. As a result, this study used to estimate the average treatment effect on the treated (ATT) of outcome variable or objective of this study based on the results obtained from the kernel matching (0.25).

Table 6: Performance of Different Matching Estimator

	Performance Criteria		
Matching estimator	Balancing test	pseudo R^2	Matched Sample Size
Kernel matching (KM)			
Band width=0.01	11	0.103	143
Band width=0.1	11	0.079	243
Band width=0.25	12	0.055	243
Radius matching (RM)			
Caliper=0.01	11	0.076	143
Caliper=0.1	10	0.081	243
Caliper=0.25	9	0.081	243
Nearest neighbor matching (NNM)			
(NN1)	9	0.081	243
(NN2)	10	0.094	243
(NN3)	10	0.107	243
(NN4)	10	0.092	243
(NN5)	11	0.083	243

Source: own estimation result, 2019

Estimation of Average Treatment Effect on the Treated (ATT)

The estimation result presented in Table 7 provides a supportive evidence of statistically significant effect of irrigation on outcome variables (calorie intake and consumption expenditure per adult equivalent). Average treatment effect on the treated (ATT) indicates that the households' calorie intake and annual

consumption expenditure per adult equivalent improved because of irrigation intervention. It has shown that, on average, the participant households have more total calorie intake and consumption expenditure per adult equivalent by 647.09kcal and 1706.28birr respectively which were significant at 1% probability level.

Table 7: ATT of Outcome Variables

Variable	Treated	Control	Difference	S.E[a]	t-value
Kcal/ad.eq/day	2939.74	2292.65	647.09	221.48	6.22***
conexp/ad.eq/year	6642.47	4936.19	1706.28	226.1	6.08***

*The bootstrapped SE obtained after 100 replications, ***Significant at 1% probability level*

Source: own estimation result, 2019

Sensitivity Analysis-

After estimating the treatment effect, sensitivity analysis, Rosenbaum bound estimation was conducted between the gamma values of 1 and 2, to test whether the treatment effect on the treated is sensitive to the hidden bias(unobservable) or not. Thus, the sensitivity analysis in table 7 conclude that, impact estimates (ATT) are insensitive to unobserved selection bias and are a pure impact of small-scale irrigation interventions.

Table 7: Result of sensitivity analysis using Rosenbaum bounding approach

Outcome Variable	e^y=1	e^y=1.25	e^y=1.5	e^y=1.75	e^y=2
Kcal/ad.eq./day	p<0.00	P<0.00	P<0.00	P<0.00	p<0.00
Consexp/ad.eq./year	P<0.00	p<0.00	P<0.00	P<0.00	P<0.00

Source: own estimation result, 2019

4. Conclusion and Recommendations

1.1. Conclusion

The study used binary logit model to analyze the determinants of participation in small-scale irrigation and it also used propensity score matching to determine the impact of small-scale irrigation on household food security in Machakel District. The result of logit model shows that, participation in small scale irrigation was significantly influenced by eight explanatory variables. These variables were age of the household head, marital status of the household head, livestock holding in TLU, education level of the household head, cultivated land size, distance from water sources, off/non-farm income and extension contact. In the PSM result, 92 irrigation user households were matched with 151 non-user households after discarding 104 households whose values were out of the common support region by using kernel matching estimator with 0.25 band widths. The resulted matching has been checked with different matching quality tests, like reduction in standard bias, chi-square test and after matching pseudo R^2.This study found evidence that irrigation user households have more total daily calorie intake per adult equivalent and annual consumption expenditure per adult equivalent of 647.09kcal and 1706.28 birr than those who are non-user households respectively.

1.2. Recommendation

This result calls for a closer integration of policies and more strategic investment targeted for promoting small scale irrigation schemes in the study area and scale up to all areas of the country, specially to those areas where rain fall is erratic to achieve the intended goal of household food security. Finally, with the increasing incidence of global warming and prospects of advancing desertification that tend to limit global water availability, further studies are important on sustainability of irrigation development as a way to improve food security.

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Economic Valuation of Local Environmental Amenities: A Case Study of Bahir Dar City, Amhara Regional State, Ethiopia

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Abstract

Environmental amenities exhibit public good characteristics, and they cannot capture by actual market price. Hence, environmental amenities need to establish economic value for their pleasure. The objective of the study was to estimate the economic value of local environmental amenity in Bahir Dar city. Hence, to achieve its objective the study employed choice experiment valuation method by identifying four environmental amenities attributes (Lake Tana, urban park, palm tree and street cleanliness). The study used probability multi stage random sampling technique. The analysis was based on primary data surveyed from households in Bahir Dar city; and surveyed 260 households. The study presented nine choice set for each respondents; each choice set has three alternatives including the status quo option. The study employed mixed logit model. The result showed that all improved attribute levels have positive sign and statistically significant. As expected and consistency with economic theory the monetary cost has negative sign and significant. The mixed logit model showed that there is preference heterogeneity in some attribute levels. To identify source of heterogeneity the study employed mixed logit model with interaction. Based on MWTP estimation palm tree was the most preferable amenity attribute followed by Lake Tana and street cleanliness was least preferable. The welfare change from best alternative hypothetical policy scenario is ETB 90527.33733. Based on the finding, the study recommends that the city administration and the concerned body expected to implement the hypothetical policy scenario so as to improve environmental amenity.

Keywords: Choice Experiment, Economic Valuation, Environmental Amenity, Mixed Logi

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1. INTRODUCTION

Environmental amenities, like beautiful vistas and famous natural landmarks, are highly valued by many people, but it is difficult to determine what would constitute an optimal supply of them (Lanz & Provins, 2013). Environmental amenities in large part are collective goods, since it is impossible or impractical to exclude individuals from them (Eagle, 2004). High quality environment can bring joy and a healthy life style to people, and their design and location constitute a key component of urban planning in the quest for healthy communities and sustainable cities (Jim & Chen, 2006). Within cities and across cities, non-market amenities are an important determinant of where people choose to live and work (Kahn, 2014).

Environmental amenities provide a major attraction for tourists and are an important element in the development of a tourist industry. However, much of these environmental amenities are under threat through neglect, decay, removal or destruction as well as through the less visible and tangible impacts of changing socio-economic values (Mossu, 2015). Bahir Dar city as one of the urban area has some challenges that are hindering the existing quality from being a place for tourism to the maximum extent that the city full potential can be reflected and especially the direction of the development (Samson Debele, 2010)"mendeley":{"formattedCitation":"(Debele, 2010.

Many environmental amenities exhibit public good characteristics and generate significant externalities. Thus, the understanding of economic value of environmental amenity service has always been hindered by lack of tangible economic values for environmental pleasures (Lern, 2012). Since environmental amenities are non-market benefits, the consumer is both the producer and consumer. Thus, measures of non-market benefits are concerned with estimates of consumer demand and consumer surplus (Lipton et al., 1995). Environmental amenities cannot be directly priced due to their non-consumptive nature. The provision of non-market environmental amenities can be identified via proxy market approach to exploiting relationships between consumption of a market good and the amenities of interest (Lanz & Provins, 2013).

To settle any competing preferences, environmental amenities need to establish economic value from society's point of view (Dikgang & Muchapondwa, 2017). Bahir Dar city where this study was conducted is one of the leading tourist destination in Ethiopia, with the variety of attractions in the nearby Lake Tana and attractive environment (Nigussie Haregeweyn et al., 2012). Environmental amenities bring benefits to people and improve their quality of life both with the city border and the surrounding areas. A growing urban population increases the demand for ecosystem service in cities and extensive areas around them (Samson Debele, 2010)"mendeley":{"formattedCitation":"(Debele, 2010. Bahir Dar city is known for its wide avenues lined with palm trees and varieties comfortable environmental amenities including green areas (urban parks) (Kassahun Gashu and Tegegne Gebre-Egziabher, 2019).

Having this, some studies were conducted with hedonic pricing method to measure the amenity value of environmental quality through implicitly price of houses and other related properties. For instance, Carriazo (2008) value of air quality, Khorshiddoust (2013) correlation between environmental quality and preference of buying a house, Hoshino and Kuriyama (2010) measuring urban park amenities, Hiebert and Allen (2019) environmental amenities across space and Engström and Gren (2017) value of green space. But it is difficult to provide an objective measure of environmental amenity change or in other words subject to measurement problem.

Further, some studies were conducted with the appropriate choice experiment method to estimate the value of environmental amenities. For instance, Jim and Chen (2006) recreational amenities of urban green space, Bennett et al. (2008) environmental quality of rivers, Arabamiry et al. (2013) economic valuation of Marine park, Lanz and Provins (2013) preferences for the spatial provition of local environmental improvements, Dikgang and Muchapondwa (2017) valuation of environmental amenities and Chen and Chen (2019) preference of local residents and tourists regarding green island. However, they focus on environmental specific goods like river, lake, park and the like. Besides this, the types and characterstics of environmental goods which generates environmental amenity service for reisdents are different which needs valuation for environment specfic goods in this area that generate amenity for local resients.

Therefore, the aim of this study was to estimate the economic value of local environmental amenities in Bahir Dar city by taking each environment specific good as an attribute based on household's preference with appropriate choice experiment method.

2. MATERIALS AND METHODS

Description of Study Area

Bahir Dar city is one of the major tourist destinations of the country with a variety of attractions in the nearby Lake Tana (Ethiopia's largest lake and famous for churches and monasteries on the lake's 37 islands), Blue Nile river and enjoys tropical type of climate with an average elevation of the city is estimated 1801 m above sea level (Kassahun Tassie, 2018). Specifically, the city is one of the leading tourist destinations in Ethiopia, with a variety of attractions in the nearby Lake Tana and other attractive environmental characteristics. Environmental amenities bring benefits to the residents and improve their quality of life through well-being improvement enjoys from the environment. Therefore, it is a need to establish economic value of environmental amenities from household's point of view to settle any competing preference.

Sampling Design and Data

The study used primary data gathered from sample households using a structured questionnaire by applying face to face interview to reduce non response rate and incompleteness of data. A list of households was generated from Kebelle administrations to form the sampling frame. The objective of this study was to determine the economic value of local environmental amenities in Bahir Dar city. For such a quantitative research, probability sampling technique is appropriate as compared to non-probability sampling technique because of it gives for every sample household equal chance of being interviewed.

The study area has been divided in to 17 administrative Kebelles. So, for the purpose of this study all Kebelles categorize into three main groups: Core, Middle and Outer depending on geographical location and its respective characteristics for primary data collection from sample units. Thus it employs a multi-stage sampling technique: the first stage is stratification of the study area second stage is selection of city Kebelle administrations and third stage is selection of households from each sample Kebelles) to make

sample representative and more homogenous characteristics of study population.

The sample size determination for discrete choice model when considering the main effect or fraction factorial design the rule of thumb as proposed by Johnson and Orme (2003) cited in Bekker-grob et al.(2015)"type":"article-journal"},"uris":["http://www.mendeley.com/documents/?uuid=3a71f29e-71c5-4c67-805d-84dd7269da45"]}],"mendeley":{"formattedCitation":"(Bekker-grob, Donkers, Jonker, & Stolk, 2015 suggests that the sample size required for the main effect depends on the number of choice set per respondents, the number of alternatives for each alternative, the number of blocks and the number of largest level from any attribute which the researcher identified.

The equation is given by:

$n \geq$, where 'n' is sample size and 'b' number of blocks.

Accordingly, for this study as identified the numbers of levels are three for all non-monetary attributes and the monetary attribute has seven levels including the constant base (status quo) the level of each attribute including monetary cost is determined by focus group discussion. The number of choice tasks for each respondent were 9 with two blocks and a total of 18 choice tasks, because it is difficult each respondent can answered all 18 choice set without block and results vague response from the respondents. Finally, the numbers of possible alternatives for each respondent regarding environmental amenity improvement options (utility improvement) were three including the constant base and two other future improvement alternatives. Therefore, the minimum required sample size for this study becomes:

$n = = 260$

Characterizing the Decision Problem

The first step in designing a choice experiment is to define the decision problem under consideration. The key decision problem that addressed by this study is lack of information about economic values of environmental amenity improvement in Bahir Dar city regarding household's preferences. In order to measure the welfare effect of an alternative environmental characteristics (attributes) improvement option (level), a constant base option (status quo) needs to be included in the model. This allows the resulting welfare estimates is expressed as the additional costs and benefits of alternative amenity improvement options.

Attribute Definition and Level Selection

The second major design stage in the construction of the choice model involves defining the attributes and levels which describes the alternative environmental amenity improvement options. A combination of primary data collection and secondary research methods are utilized to select attributes which are consistent with the decision problem. Some documents and face to face interview from administration of city green development office staffs relating to specifically the study area environmental amenity characteristics are analyses to gain an understanding of current environmental issues and compile an initial list of potential attributes. This list is presented to the focus group discussion with previous amenity services experiences in Bahir Dar city. Participants were then asked to which attributes played an important role in determining household's choice and were given an opportunity to add additional attributes. A refined list of attributes was provided to city green development staffs for comment and final approval.

For this study a decision is restrict the number of attributes into five including the monetary attribute. Throughout this process the researcher take care to avoid the exclusion of salient attributes which could potentially introduce problems surrounding omitted variable bias. The final lists of attributes included for this study are: Lake Tana, palm trees, urban parks, street cleanliness and annual monetary cost for environmental quality as payment vehicle. With attributes defined, the levels which describe the potential future environmental amenity improvement options are developed.

Experimental Design

The aim of a choice experiment method is to estimate the weights that respondents place on each of the attributes which define the alternatives. A respondent acting rationally is expected to evaluate the alternatives in a choice task and choose the alternative which gives the greatest relative utility. This study is used experimental design procedures in choice model to formulate various attribute profiles and choice set presented to the respondents. Even if full factorial design has a capable of being able to estimate both main and interaction effect (all possible attribute-level combinations), the combination of attributes with each levels result large number of unique treatment combinations. Due to this it is not simply practical for respondents to simultaneously evaluate such large number of alternatives. Due to the difficulty of full factorial design this study is used fractional factorial design which is a sample of the previous one by assume implicitly all attribute interaction is negligible.

According to Greiner et al. (2014) experimental design stage considers at least three basic issues. Firstly, the number of alternatives, attributes, and attributes levels which are identified above. Secondly, response mechanism, a response in discrete choice experiment can take different formats including 'pick-one' and 'best-worse'. This study is used pick-one response format which is better mimics in real life decision making and captures only the first preferences. Finally, the number of choice tasks answered by each respondent also considered during experimental design. The total choice sets which are designed by algorithmic design with R software were 18 with two blocks, which was optimal and its respective d-error was 17.6% which is acceptable and best. To be attribute levels balanced the total number of choice set should be a common multiple of different levels of attributes and each level from its respective attribute had equal chance of occurrence. Accordingly, those attributes which have 3 levels had a chance of 6 times occurred each level in a choice set (), similarly the monetary attribute with 6 levels excluding the constant base, each level had equal chance of occurrence 3 times in a choice set ().

Econometric Models

The theoretical foundation of choice modeling rests up on random utility theory. The central idea behind random utility theory is that consumers derive satisfaction not from the goods themselves but from the characteristics (attributes) they provide. Accordingly, the individual depends on the choices that an individual made from a given choice set which includes the possible environmental amenity improvement options (Metkel Aregay and Wassie Berhanu, 2019).

This study follows the standard random utility model (RUM), where an individual i chooses an alternative j over k in choice task t if the utility of j is greater than the utility of k. Individuals are asked to choose between alternative goods, which are described in terms of their attributes. Consider the two alternatives case. The underlying utility function of individual 'i' is of the form:

$$Uij = U(Xj)$$

$$Uik = U(Xk)$$

Where: Xj and Xk are vectors of attributes including price attribute which are describing alternatives j and k. Individual i will choose alternative j over alternative k, if and only if Uij> Uik.

The utility of respondent i associated with alternative j is:

$$Uij = Vij + \varepsilon ij,\ i= 1, 2\ldots\ldots\ldots N,\ j= 1, 2\ldots\ldots\ldots J,$$

The utility of respondent i associated with alternative k is:

$$Uik = Vik + \varepsilon ik,\ i= 1, 2\ldots\ldots\ldots N,\ k= 1, 2\ldots\ldots\ldots K,$$

Where Vijand Vik are the deterministic components of the utility functions, and εijand εikare the stochastic components which arise because of the researcher only imperfectly observe how individuals process the information. The probability of observing individual i choosing alternative j over k is: Pr(Uij> Uik) = Pr (εik< εij+ Vij - Vik), j≠k or pr(j/C) = pr (Vij + εij > Vik + εik), where C is the complete set of alternatives (in this case alternative j and alternative k). This is the cumulative distribution of εik conditional on εij, Vij and Vik. In order to make this equation empirically acceptable, assumptions must be made regarding the structure of the error terms. As usual, the researcher assumes that the random error is independently and identically distributed (IID) according to a Gumbel distribution, which implies that: Pr(j/C) = , *where* η is a scale parameter which is inversely proportional to the standard deviation of the error distribution. This parameter cannot be separately identified and is therefore typically assumed to be one. In other words same parameter for all individuals for all attributes since the model is conditional logit model. This means homogeneous taste and preference. This assumption implies a constant error variance and also implies that as η→∞ the model becomes deterministic.

In order to derive an explicit expression for this probability, it is necessary to make an assumption regarding the distribution of the error terms. A typical assumption is that they are independently and identically distributed with an extreme value distribution. This distribution for the error term implies that the probability of any particular alternative being chosen as the most preferred can be expressed in terms of the logistic distribution, which results in a specification known as the conditional logit model (Hanley et al., 2006).

Now the equation becomes Pr(j/C) = .

Now impose structure on Vij and assume it is a leaner function of attribute levels.

VijCL=, where the B's measure the marginal utility for improvements undertaken, 'a' is attribute, Xaj levels of improvement specified in alternative j, α coefficient of monetary cost, and Pj is the price attribute. The utility specific to the status quo is capture by an alternative specific constant (ASC). In this case marginal utility coefficients have estimated via maximum likelihood. The log-likelihood function is given by:

lL = , where θ is the vector of parameters estimated from the data, yij is an indicator variable which is equal to one if individual i choose alternative j, zero otherwise. This structure is known as the conditional logit choice model (Lanz & Provins, 2013). The conditional logit model is convenient for its tractability, but it imposes heavy structure on observed choices. Specifically, the IIA property of the error term across alternatives, homoskedasticity assumption among individuals, and the assumption that all respondents make their choices based the same utility function imply restrictive substitution patterns among alternatives, known as the 'irrelevance of independent alternatives' property.

Independence of irrelevant alternatives captures all source of correlation over alternatives in the representative utility. However, the researcher was unable to capture all sources of correlations among alternatives, so that unobserved part of utility has correlated as result IIA not hold. Hence more general model than standard logit model is needed because IIA failed. A more flexible alternative is the 'mixed logit'(MXL) model, which exploits the panel data structure to accommodate preference heterogeneity at the individual level (Hanley et al., 2006).

Mixed logit model can consider the random preference variations among individual and it allows correlation of unobserved portion of utility over time. Under mixed logit model coefficients of attributes are random to account taste of respondents. The odds of probabilities of two alternatives could not affected by adding or removal of other alternative.

Pr(Uij> Uik) = $\phi(\theta/\bar{\upsilon}, \Sigma)d\theta$, where $\phi(.)$ is the multivariate normal density and $\bar{\upsilon}$ is the mean of θ.

Therefore the utility of alternative "j" of individual "i" is given by: Uij = ASC0+βiALi where, ASC0 represent alternative specific constant which account the mean effect of unobserved factors in the error term for each alternative, "βi" represents parameters of attribute levels "ALi" represents attribute levels.

Estimation of Marginal WTP and Welfare Change

The marginal WTP is given by the ratio of the parameter of attribute levels to the ratio of price parameter multiplied by the negative sign. This measure the marginal WTP of improved environmental amenity attributes give other attributes constant. WTP = - () where, represents parameter of attribute level and represents parameter of monetary cost. Beyond marginal WTP for each attribute levels, the study also estimated total economic value in terms of total willingness to pay. According to Lanz and Provins (2013) the cost of environmental amenity improvement is estimated through willingness to pay for improved environmental amenity alternatives. The WTP is estimated by scaling the utility function with the marginal utility of income. The estimation was based on simulation maximum likelihood, and assumes that individual WTP is normally distributed.

Choice experiment able to estimate the welfare effect of changes in attributes. The study estimated welfare change or consumer surplus in two proposed hypothetical scenarios. The study estimated the welfare change through comparison the utility of the two policy scenarios with the utility of the status quo.

Welfare change = (Where, is indirect utility from the status quo alternative, is indirect utility from improved alternatives. is estimated parameter of the monetary cost.

3. RESULTS AND DISCUSSION

Respondents' Characteristics

The survey contains 65% and 35% in terms of gender males and females respectively from the sample population. Regarding with marital status of the sample population 60.77% was married and the remaining 39.23% single. The distribution of respondents' age is skewed towards younger 80.77% of respondents being younger 40 years of age. In case of educational level, respondents had a high level of educational attainment with 58.46% having some form of tertiary qualification and above. The remaining 21.92% and 19.62% were primary education attainment including illiterate and secondary educational attainment respectively. In terms of households annual income 23.85% of respondents recorded annual household income less than Birr 36,000 and only 11.92% of respondents recorded household annual income greater than Birr 120,000. The remaining 64.23% of respondents recorded annual income of between these gaps (Birr 36,000-Birr 120,000). Finally from the given alternative presented the respondents select 89% and 11% of improved alternative and status quo alternatives respectively.

Econometric Model

The IIA assumption does not hold then conditional logit model would yield biased estimates. The study employed Hausman and McFadden test under the null hypothesis no violation to test the IIA assumption and the assumption is violated. This test is indicated as Table 1. Hence, conditional logit model is not appropriate model. Due to the violation of IIA property, the study considered alternative models namely mixed logit model and mixed logit model with interaction to identify the source of heterogeneity.

Drop alternative	Chi-sq	Degree of freedom	Decision
Alternative 1	80.1	10	Reject IIA
Alternative 3	59.4	10	Reject IIA

Table 1 Independent Irrelevant Assumption test

Despite the violation of IIA assumption the conditional logit model further assumes homogeneity across individual preference. Since preferences are heterogeneous the study considered and takes in to account for this heterogeneity in order to obtain unbiased estimates of individual preferences. Mixed logit model relaxes the property of IIA and allows the parameters of observed variables to vary randomly across individual rather than being fixed (Cheng & Yang, 2015).

Variables	Coefficient	Std. Err.	Z	P>z	[95% Conf. Interval]	
Mean	ASC0	46.54312	.	.	.	..
	Price	-.0094913	.0044653	-2.13	0.034	-.0182431 -.0007394
	tana2	.8077139	.1403525	5.75	0.000	.5326281 1.0828
	tana3	1.266744	.1942437	6.52	0.000	.8860332 1.647455
	palm2	2.293247	.2467449	9.29	0.000	1.809635 2.776858
	palm3	2.576425	.2326646	11.07	0.000	2.120411 3.032439
	park2	.9790602	.1148302	8.53	0.000	.7539971 1.204123
	park3	.7171971	.1449938	4.95	0.000	.4330144 1.00138
	scl2	.4067104	.1449726	2.81	0.005	.1225694 .6908514
	scl3	.38779	.1686538	2.30	0.021	.0572347 .7183453
SD	tana2	.3949197	.3022471	1.31	0.191	-.1974737 .9873131
	tana3	1.560518	.2433866	6.41	0.000	1.083489 2.037547
	palm2	.9871458	.1974337	5.00	0.000	.6001828 1.374109
	palm3	-.3038715	.2155115	-1.41	0.159	-.7262664 .1185234
	park2	.5134793	.1691038	3.04	0.002	.182042 .8449165
	park3	.1677824	.2266922	0.74	0.459	-.276526 .6120909
	scl2	.8766893	.167019	5.25	0.000	.549338 1.204041
	scl3	-.9164167	.1432041	-6.40	0.000	-1.197092 -.6357418

Table 2 Estimated Result of Mixed Logit Model

AIC = 2437.253	Number of obs	=	7020
LR chi2(7) = 106.23			
Log likelihood = -1201.6265	Prob > chi2	=	0.0000

The result of mixed logit model from Table 2 shows that all improved levels of environmental amenity attributes of Bahir Dar city are positive as expected and statistically significant at 1 percent level of significance except one level of street cleanliness which positive and statistically significant at 5 percent

level of significance. The positive sign and significance of all non-monetary attribute levels indicates that households preferred improved environmental amenity relative to the current situation or status quo. One important environmental amenity attributes is urban park which is positive and statistically significant. This indicates that as the quality and quantity of urban park improved the utility of residents generated from the environment increased and they preferred the improved level of urban parks relative to the current situation which is in line with the previous finding conducted by Engström and Gren (2017). Contrary, the finding conducted by Hoshino and Kuriyama (2010) indicated that the existence of urban park reduced the utility of residents and hence, less likely preferred by the residents. This is because of large parks often present external diseconomies like congestion and noise for residents around the parks. Interestingly, the study conducted by Jim and Chen (2006) confirmed with this study indicated that cities characterized with insufficient urban parks discouraging the recreation use of residents results increasing the quantity of urban parks more preferred than the current situation or status quo in this study. Urban trees like palm tree are powerful symbol for city beautifulness and provide benefit through amenity service and hence improve the welfare of the residents who live in the city this indicated by positive sign or positive marginal utility from both improved level of palm tree attribute which is consistency with the previous finding Giergiczny and Kronenberg (2014). Similarly, the study conducted by Sander et al. (2010) confirmed that local tree cover like palm trees are more preferred and valued by the residents in the city. The other environmental amenity attribute which identified by this study is street cleanliness as mentioned above it positively signed and statistically significant this indicates that the improvement of local environmental amenity in terms of improved street cleanliness is preferred and valid from households point of view this result is confirmed with Lanz and Provins (2013). The monetary cost coefficient of mixed logit model is negative as expected and statistically significant at 5 percent level of significance. This implies that households' demand to improved amenity decrease as the cost of improvement increase. The alternative specific constant of mixed logit model is positive but it is statistically insignificant.

The overall fit of the basic mixed logit model was best fit and better than the conditional logit model based on pseudo R2. This can be calculated as: Pseudo R2 = , where LRur is the log likelihood of unrestricted model when the parameters vector is at convergent and LRr is the log likelihood of restricted model when all parameters set to zero. R2 == 0.532. This indicates that the model is best fit by conventional standard and estimation of mixed model improves model fitness than the conditional logit model. Likewise, the joint test indicates that the amenity attribute levels of improvement jointly influence the decision of respondents. Overall the mixed logit model allows parameters variation across alternatives. Preference variation over alternatives from mixed logit model is indicated by the standard deviation of attribute levels. The significance of standard deviation of this model indicates the structural advantage of mixed logit model over conditional logit model. The mixed logit model estimation result also reveals significance and large derived standard deviation for five attribute levels i.e. tana3, palm2, park2, scl2 and scl3 this indicates that the data supports choice specific unobserved heterogeneity for these attribute levels. The result shows that the standard deviation of tana3, palm2, park2, scl2 and scl3 attribute levels statistically significant at 1 percent level of significance. This indicates preference heterogeneity of respondents in terms these attribute levels.

Mixed Logit Model with Interaction

Mixed logit model does not show source of heterogeneity. Hence it needs mixed logit model with interaction. To estimate the mixed logit model with interaction the study included interaction of individual specific socioeconomic characteristics with attribute levels in the utility function. The interacted variables are obtained by interacting random parameters with other socioeconomic variables decomposes any heterogeneity which observed with the random parameter from the basic mixed logit model indicated by their statistically significance standard deviation and hence showing source of heterogeneity in the mixed logit model with interaction. This study conducted various interactions of different environmental amenity attribute levels which have individual heterogeneity in the basic model with different socioeconomic characteristics of the respondents observed from the survey. The socioeconomic factors which affect the preference of households for improved level of environmental amenity attribute were age, annual income, level of education in terms of year of schooling, gender of respondents being male or female, occupation being government employee or not and family size of respondents have influence the preference of households.

Estimation of WTP

To estimate the willingness to of environmental amenity attributes the study assumes that the monetary cost is as fixed. This means all respondents have the same preference for cost which is quite unreasonable and also the distribution of preference for cost attribute is normally distributed. The marginal willingness to pay was estimated by computation of the marginal rate of substitution between environmental amenity attributes and the marginal utility of income represented by the monetary cost coefficient.

The study estimated marginal willingness to pay for improved level environmental amenity attributes from mixed logit model. The marginal willingness to pay for all improved attribute levels estimated was positive. This is an indication that the average respondents would experience an improvement in welfare with an increase in the level of environmental amenity attributes and hence would choose an intervention that maximizes their utility. The estimated marginal willingness to pay that all attribute levels are statistically significant at 5 percent level of significance based on the confidence interval test.

Attribute levels	MWTP	[95% conf. Interval]
Tana2	85.100576	15.95079, 154.25036
Tana3	133.46389	19.581164, 247.34661
Palm2	241.61601	15.476386, 467.75563
Palm3	271.45162	30.093947, 512.80929
Park2	103.15359	8.0177708, 198.28941
Park3	75.56375	16.829209, 134.29829
Scl2	42.850927	4.164623, 81.537231
Scl3	40.857478	9.9807006, 71.734256

Table 3 Marginal Willingness to Pay Result

The result from Table 3 indicates that the MWTP of palm tree attribute levels are dominated over the other attribute levels which indicates that from the households point of view on average the palm tree attribute of environmental amenity is more preferable than the other environmental amenity attributes identified by the researcher based on focus group discussion followed by the recreation comfort ability of Lake Tana which is the second preferable environmental amenity attribute and it followed by the other environmental amenity attribute which is the quality and quantity improvement of urban park. The least preferable environmental amenity attribute is street cleanliness which measured by decreasing the stock of pollution and makes the streets comfortable for enjoyment. This is confirmed with the previous finding Sander et al. (2010) urban trees are more preferable for residents in the city.

Welfare Estimation

The estimated MWTP indicates that the average willingness to pay for environmental amenity improvement. This cannot provide welfare estimate for future policy scenario proposed by this study. The study need to compare the utility of status quo with the future proposed policy intervention each described attribute levels improvement employed in the experiment. The utility estimated from each separate policy intervention proposed by this study is transformed into impacts that different policy intervention on the respondent's welfare. To estimate welfare effect the study proposed the following two policy intervention scenario:

Scenario one (medium improvement): Improved lake Tana by building public lodge, improved urban parks by building standardized toilet and DSTV for the existing parks, improved palm tree by replacing the old trees but stay the existing quantity, and improve the quality of street cleanliness by reduced the stock of pollution by 25%.

Scenario two (higher improvement): improved Lake Tana by building public loge and treatment plant, improved urban park by building standardized toilet and DSTV and expand availability by increase additional parks, improved palm tree by replacing old trees and increased availability by adding additional tree and the quality of street cleanliness more improved by reducing stock of pollution on the street by 50%.

Attributes	Scenario one: medium improvement	Scenario two: higher improvement
Lake Tana	Building public lodge	Building public lodge and treatment plant
Urban Park	Building standardized toilet and DSTV	Building standardized toilet and DSTV and expand the park in terms of quantity
Palm Tree	Replacing the old trees	Replacing old trees and increased in terms of quantity
Street Cleanliness	Reduced stock of pollution by 25%	Reduced stock of pollution
Welfare change	ETB 68978.75796	ETB 90527.33733

Table 4 Welfare Estimation Result

The welfare change estimation result is presented in Table 4. The compensating surplus from the status quo to the alternative policy scenarios increase with improved environmental amenity attributes described by its level of improvement as expected. The higher improvement scored ETB 90527.33733 welfare change this indicates that when if this scenario is implemented the welfare gain from the policy intervention will be this amount expresses in terms of monetary terms. Similarly when if the first scenario will implement the welfare gain will be ETB 68978.75796, which is lower as compared to the second scenario. Therefore, implementation of the second policy scenario will be better to gain more welfare change to the residents'.

4. CONCLUSION AND RECOMMENDATION

4.1. Conclusion

Bahir Dar city is the third largest and fast growing city in Ethiopia. Now a day Bahir Dar is one of the tourist destinations in Ethiopia, with a variety of attractions in the nearby Lake Tana and attractive environmental amenity like urban parks, palm trees and comfortable streets which bordered by different tree species. The aim of this study was to estimate the economic value of local environmental amenity in Bahir Dar city. The study conducted mixed logit model to estimate the economic value of environmental amenity attributes and analyses the preference of households. The study found that there are positive and significant benefits of various levels of environmental amenity attributes in Bahir Dar city. As expected and consistency with economic theory, monetary cost is negative and significant.

The study also found that considerable preference heterogeneity indicated by the significance of their standard deviation from the mixed logit model. The source of heterogeneity was identified by conducting mixed logit model with interaction which to a large extent determined by age of respondents, gender of respondents, family size, annual income, respondents occupation being government employee or not and educational level of respondents. From this the study conclude that the socioeconomic factors which affect the preference of households for improved level of environmental amenity attribute were age, annual income, level of education in terms of year of schooling, gender of respondents being male or female, occupation being government employee or not and family size of respondents have influence the preference of households.

The study estimated marginal willingness to pay for each improved level of environmental amenity attributes. The study concludes that households have willingness to pay for the improved level of environmental amenity. Regarding with the order of preference improvement palm tree quality and quantity is the most preferable amenity attribute from the households point of view followed by improvement of Lake Tana more comfortable for recreation by building public lodge and treatment plant. The improvement of urban park in terms of improving the quality of the existing quantity as well as increasing quantity in the city has significant and positive marginal willingness to pay and ranked the third preference from the households' point of view. The least preferable amenity attribute from the identified amenity attributes is improvement of the quality of street cleanliness in terms of reduce the stock of pollution on the street.

Finally, the study estimated welfare change by proposed two hypothetical policy scenarios. The study concludes that the welfare changes from the two hypothetical scenarios of environmental amenity improvement would be ETB 68978.75796 and ETB 90527.3373 for medium and high improvement.

4.2. Recommendation

The final task of the study is providing some policy recommendation for the policy makers, the beneficiary (public) and other concerned body. Hence, some policy recommendations can be highlighted from the study.

Firstly, the estimated economic value can inform improvement of environmental quality is the source of residents' utility by providing amenity service. Hence, the city clean, beauty and green development administration expected to build quality environmental situations by improving the quality and quantity of palm trees and urban parks so as to comfortable for recreation and provide utility to the residents.

Secondly, the estimated value also informed that Lake Tana is one source of residents' utility by providing recreational service. Hence, the government expected to build public lodge as well as treatment plant so as to make more comfortable Lake Tana for recreation.

Thirdly, the estimated marginal willingness to pay informed that the quality of streets needs to improve in some extent even if it is last preferred from households point of view. Hence, the city administration expected to control the society from exerting solid waste on the street so as to eliminate at least reduced stock of pollution on the street and hence, make the streets more comfort for recreation.

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Covid-19 Pandemic Peak Period-Challenges and Overcoming Measures Followed in the Star-Rated Hotels in Gondar Town, Ethiopia

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Abstract

Corona virus (COVID-19) is an infectious disease caused by a newly revealed corona virus. This virus spread worldwide, done severe damages to the lives of many people, and allowed to have a forced closure and lockdown of many activities. This pandemic condition also led to a substantial loss in the hospitality business in various means. This study focused on identifying the challenges encountered by the hotel management during this covid-19 pandemic peak period in star-rated hotels in Gondar town. Descriptive research design and judgmental sampling technique is used, and structured interviews were conducted with the managers working in the star-rated hotels. Study results reveal that AMOR is fallen to the minimum and led to the budget deficit, lack of capacity to pay salary and run the business. However, the hotel management overcomes the accumulated challenges by cost-reducing, minimizing the workforce, offering training programs, rendering essential maintenance and renovation works in the properties, by giving discounts, forced leave to employees and closure of hotels facilities and services and operating the significant activities in the hotels with limited staffs.

Keywords: *Covid-19, Challenges, Hotels, Measures, Star Rated*

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1. INTRODUCTION

1.1 Introduction and Background

Corona virus (COVID-19) is an infectious disease caused by a newly revealed corona virus. Most people infected with the COVID-19 virus drive experience mild to moderate respiratory illness and recover without demanding special treatment sources. Older people and those with fundamental medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to cultivate serious illness sources. This virus spreads primarily through dewdrops of saliva or release from the nose when a diseased person coughs or sneezes.

The UNECA Estimated that COVID-19 would shave 2.9 % points off Ethiopia's economic growth for 2020. The pandemic has affected Ethiopia's flower export industry, and 150,000 employees in this industry are also at the risk of losing their jobs. Ethiopian Airlines reported that it is working at only 10% of its capacity and conveyed a loss of $550 million in January to April 2020 due to corona virus pandemic how do you know? You need sources of the data/information. More than 26 million students were affected by school closures sources. Subsequently, school feeding programs for around 1 million children across the country have immobile due to the corona virus. NEBE released a statement on March 31, affirming that the general elections will not occur on the scheduled date 29 August 2020.

Following Article 93 of the Constitution of the FDRE, the government declared a 5-month state of Emergency to limit the spread of the Corona virus (COVID-19). This period is considered as PPP (Pandemic Peak Period) in this study.

International arrivals to Ethiopia reached 596,341 in 2012, a 39.6% growth since 2009 sources. This upward trend continued in 2013–2017, with a record 933,344 figure in 2017 sources. In 2016, Ethiopia recorded 863,7424 international tourism arrivals, a deceleration compared to the growth registered in previous years, but still high given the problematic country's difficult situation sources.

According to Head of Gondar City Administration, Bureau of Culture, Tourism, Youths and Sports Directorate, the total number of tourists visiting Gondar in the previous year was 86,000. Still, this year only until the end of January 2019, 160,442 tourists have visited Gondar, and from this, the government earned about four million Birr, and the community secures 174,512,422 Birr.

COVID-19 is having an unmatched impact on the Ethiopian hotel industry. Hotel occupancy in Ethiopia has dropped to 43%, and revenue per available room has declined by 30.5% for the week ending March 14, according to Smith Travel Research (STR). The World Travel and Tourism Council (WTTC) in 2020 estimates that more than 50 million jobs in the travel and tourism sector could be at risk globally (Solomon, 2020)

For businesses to succeed in the dynamic global business environment, they need to take advantage of opportunities. This means focusing on new societal needs that were assisted by creative individuals trying to deal with the covid-19 crisis (Vanessa Raten, 2020)

The employees need distinct procedures, education programs vis-à-vis health awareness, and new hygiene equipment in use in times after the COVID-19 outbreak. The hotel industry and all other sectors related to mass travelling were influenced significantly by implementing social distancing as the advised response to epidemics (Tomasz Napierala et al., 2020)

Crisis communication on shared emotions can increase tourists' intentions to visit when the outbreak ends (Haimimg Hang et.al, 2020). The hotel managers should design desirable hotel products satisfying consumers' price preferences in the post-pandemic era (Mengqingwang et.al. 2020)

The future may demand greater localization in how tourism is framed, complex levels of community engagement and the capacity of policymakers and the private sector to listen and respond to voices from these diverse African communities. This African research plan is designed to support the recovery process in small but, we believe, important ways (Christian.M.Rogerson& Tom Baum, 2020,)

1.2 Statement of the Problem:

Corona virus disease (COVID-19) is an infectious disease caused by a newly discovered corona virus. It started in Wuhan, China, spread worldwide, causing severe damage in many people's lives, and allowed to have a forced closure and lockdown of numerous activities. This pandemic situation also led to having a substantial loss in the hospitality business in various means. Hence, this study focused on identifying the challenges encountered by the hotel management during this covid-19 pandemic peak period in star-rated hotels in Gondar town.

1.3 Objectives

The study's general objective is to investigate the challenges faced by the management of the star-rated hotels during the covid-19 pandemic peak period. The specific objectives are:

- To portray the overcoming measures followed by the management of the star-rated hotels during the covid-19 PPP
- To identify the supports that were rendered by the government during the covid-19 PPP for the star-rated hotels

2. MATERIALS AND METHODS

Study Design and Period:

To carry out this research study, the researcher had used a descriptive research design. The qualitative data was obtained from the star-rated hotels' managers in the Gondar town using structured interviews from October to November 2020.

Study Population:

The managers working in the star rated hotels in the Gondar town. The details of the hotels where the study was undertaken are depicted in Table-1

Table 1: List of star-rated hotels taken part in the study

S.No.	Name of the Hotel	Star Category
1	Florida International Hotel	3
2	Jantekel Hotel	3
3	Haile Resort Gondar(Formerly Gondar Landmark hotel)	3
4	Taye Belay Hotel	3
5	AG Hotel	3
6	Goha Hotel	3
7	Quara Hotel	2

Sample Size and Sampling Procedure:

According to the website information of the MOCT, Ethiopia, there are seven star-rated hotels in Gondar town. These hotels hold 451 rooms, 520 beds, 223 male employees, and 379 female employees. Judgmental sampling technique was used in the study. Accordingly, the managers working in the star-rated hotels in Gondar town were selected for the study purpose due to their relevancy to obtain qualitative data from them to strengthen the study. The ultimate sample size was seven managers who voluntarily took part in the survey amidst this covid-19 threat. A face-to-face interview system was engaged in the data collection using pre-prepared questions from these selected respondents and the responses given by the managers during the interview were carefully recorded.

Data Collection Tool and Procedure

The data collector explained this study's tenacity to the managers and obtained proper appointment time in advance for the interview. Accordingly, each manager were interviewed based on the prefixed schedule depicted as follows:

Table 2: Interview schedule and participants details

S.No	Identification Code of the participant	Job Title/position of the participant	Date and Time of Interview conducted
1	GHM1	Front office Manager	November 1,2020 @09:00Hrs
2	GHM2	Human Resource Manager	November 1,2020 @15:00Hrs
3	GHM3	HR & Training Manager	November 3,2020 @11:30Hrs
4	GHM4	General Manager	November 4,2020 @13:00Hrs
5	GHM5	F & B Director	November 5,2020 @10:00Hrs
6	GHM6	Front office Manager	November 7,2020 @09:30Hrs
7	GHM7	General Manager	November 7,2020 @16:00Hrs

Pre-prepared questions were asked, and sufficient time is given to them to respond to the data collector's items.

Data Processing and Analysis

Information collected from the managers was listened carefully and scrutinized by the investigator. Descriptive statistics (percentages, frequency, mean) were used in the analysis for a few responses, and narrative approaches were carried out in the interpretation to disseminate their ideas and actions.

3. RESULTS AND DISCUSSION

The results and discussion pertaining to responses for the interview questions from the managers of the star-rated hotels in Gondar town are furnished below:

Table-3-Socio-demographic characteristics of the respondents (N=7)

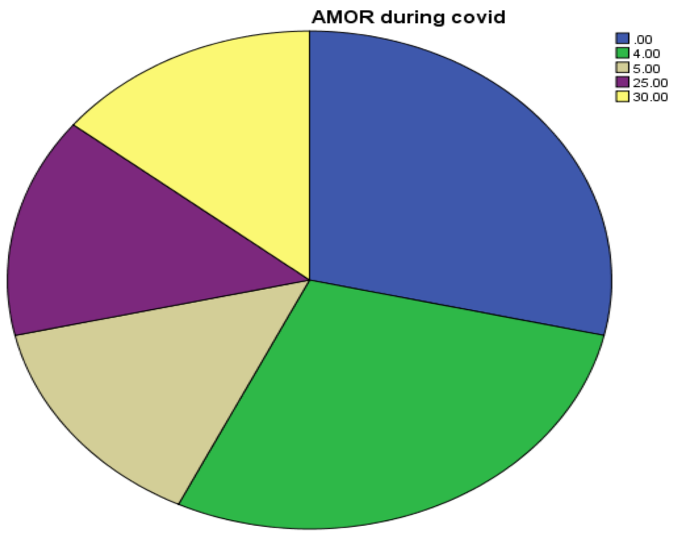
Variables	**N (%)**
Gender	
Male	5(71.4%)
Female	2(28.6%)
Education	
Diploma	0(0%)
Degree	3(42.9%)
Masters	4(57.1%)
Others	0(0%)
Age(In years)	
25-30	3(42.9%)
31-40	2(28.6%)
Above 40	2(28.6%)
Marital Status	
Single	3(42.9%)
Married	4(57.1%)
Divorced/Separated	0(0%)
Job Position	
Front office Manager	2(28.6%)
Human Resource Manager	1(14.3%)
HR & Training Manager	1(14.3%)
General Manager	2(28.6%)
F & B Director	1(14.3%)
Years of Service	
2-4 years	3(42.9%)
4-6 years	1(14.3%)
More than 6 years	3(42.9%)

Table-3 illustrates the socio-demographic characteristics of the managers taken part in the study wherein the majority 5(71.4%) are male, 4(57.1%) of them are Master degree holders, 3(42.9%) of their age falls under 25-30 years. Further, 4(57.1%) are married, 2(28.6%) working as Front office managers and General Managers respectively, and others 1(14.3%) job title is Human Resource Manager, HR & Training Manager and F & B Director. Equally, 3(42.9%) managers' years of experience range from 2-4 years to more than 6 years. Further fewer numbers in the participants such as 2(28.6%) are female participants, 3(42.9%) educational qualifications are degree level and nobody is with Diploma or other educational qualification. Further, equally 2(28.6%) of the participants age group falls under 31-40 and above 40 years respectively. Among the fewer numbers in participants 3(42.9%) marital status is single and nobody is divorced or separated. In addition, 1(14.3%) respondent's year of service is 4-6 years in the hotel industry.

Table-4-AMOR in the star rated hotels during covid-19 PPP

		AMOR during covid PPP
N	Valid	7
	Missing	0
Mean		9.7143
Minimum		.00
Maximum		30.00

Figure-1-AMOR in the star-rated hotels during covid-19 PPP



The information depicted in Table 4 and Figure 1 about Average Monthly Occupancy Rate (AMOR) during the Covid-19 PPP in the star-rated hotels in Gondar town, states that the minimum occupancy was 0% that means nil occupancy and the maximum was 30%, and the mean value is 9.7143%.

Managers Responses to Interview Questions

For the question “””What are the challenges the hotel management experienced during the covid-19 PPP. The answers given by various managers during the interview are:

- ✓ Budget Deficit/Financial constraints in operating the hotel business is the primary significant challenges faced by the hotel management, and it is confirmed by the managers GHM1, GHM3, GHM5, GHM6 and GHM7
- ✓ All the managers taken part in the interview announced that the following are also the essential challenges faced by the hotel management during the covid-19:
  - Lack of customers and losing entire business
  - Unable to pay salary for employees and offering meals to them.
  - Forced to send employees on annual leave
  - Lack of financial or credit support from lending institutions.
  - Government restrictions
  - Inflation in the cost of commodities/raw materials
  - Forced closure of properties, facilities and services
- ✓ Hotel managers GHM2, GHM5, GHM6 and GHM7 responded that the hotel management was forced to close some of the facilities and services such as swimming pool, health club, bar, gymnasium, massage etc.
- ✓ The managers GHM3 and GHM4 stated that their hotel management closed their hotels during the said period
- ✓ The managers GHM1, GHM2, GHM4, GHM5 and GHM7 stated that lack of knowledge about covid-19 and its protection methods among employees were also the additional challenges for the hotel management.

For the question, “””How the hotel management solved the raised challenges encountered during the covid-19 PPP. The responses given by the managers at the time of the interview are**:**

Almost all (100%) of the managers participated in the interview declared that they involved in the following activities so that to solve the challenges encountered for the hotel management during the covid-19 PPP

1. Offered training programs to employees and implemented Covid-19 protection procedures.
2. Provided voluntary annual leave without pay for employees.
3. Reduced the staffs to 10%
4. Cutting costs for some expenses like a staff meal, transportation and introduced various limited convenient shift timings
5. Essential maintenance and renovation work in the properties.
6. Giving a discount for the customers, special discount for loyal customers etc
7. Closed some facilities like swimming pool, parlor, massage, gymnasium etc
8. Operated the significant activities in the hotels with limited staffs.
9. Offered meal services in open-air locations within the business environment.
10. Practiced dining activities and party gatherings maintaining social distances.
11. Encouraged contact less reservation and check-in for the customers.
12. Practiced cash less transactions for the customers.
13. Periodical cleaning and sanitizing of the premises.

For the similar Question stated above, the manager GHM3 stated that their hotel management managed the challenges by providing long-term loans to employees; the manager GHM1 informed that his hotel management introduced selling breads to local people part of income generation mechanism. Further, the managers GHM1, GHM2, GHM5, and GHM6 announced that their hotel management was involved in outdoor catering services for their customers in their homes for various occasions/ceremonies. Also, the managers GHM1, GHM2, and GHM7 informed that Special attractive discount packages were introduced and applied low season marketing strategies to overcome the aroused challenges. Finally, the manager GHM6 replied that his hotel management managed by taking PPE experience.

For the Question, “””What are the supports obtained from the government in running the hotel business during the Covid-19 PPP. The responses given by the managers at the time of the interview are**:**

The managers GHM1, GHM2, GHM5, GHM6 and GHM7 informed that some adjustment or flexible bank rule was a credit or loan rule provided by the government that supported them operate their hotel business in a manageable way during the Covid-19 PPP.

The manager GHM1 stated that the government had instructed them to postpone employee pension payment. The manager GHM5 mentioned that the government has given relaxation and allowed an extension in the date for tax payments. Further, all (100%) managers in this study declared that the government had offered health and Covid-19 protection related training programs to hotel employees with the help of health care specialists and experts.

4. CONCLUSION

Corona virus (COVID-19) is a transferrable disease caused by a newly revealed corona virus. This virus spread wide-reaching made severe harms to human lives and restrictions in several activities. This pandemic condition also directed to have a sizeable loss in the hospitality business in various means. The study on the challenges and overcoming measures during the Covid-19 pandemic peak period in the star--rated hotels in Gondar town declares that there were budget deficits or economic concerns, lack of ability to pay salary, and run the business to fulfillment of its goals. As a part of overcoming the accumulated challenges, the hotel management applied cost reducing, minimizing the work force, offering training programs, rendering basic maintenance and renovation works in the properties, giving discounts, forced leave to employees and closure of hotels facilities and services and operating the major activities in the hotels with limited staffs.

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Cultural Heritage Management Practices in Gondar; Conservation, & Stakeholder Involvement

By

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Abstract

Heritage management encompass managing visitor impacts, ensuring adequate spending on conservation, inclusion of stakeholders, appropriate interpretation, education and the development of sustainable management strategies. The main purpose of this research is to assess cultural heritage management practices and challenges in Gondar city in terms of conservation, community ownership, & stakeholder involvement. The researcher used descriptive research design with quantitative and qualitative research approaches. The researcher used Non-probability sampling technique specifically snowball and judgmental sampling technique were applied to collect data from the local community and religious institution leaders. The data collected from primary and secondary sources. Findings of the study reveal that the overall management status of the cultural heritage of Gondar city is poor. It is found that the cultural heritage management of the city has faced a lot of unfavorable factors like lack of long term planning, inadequate legal base and system of heritage administration, unmanaged development, limited capacity and number of professionals, scant attention to community based heritage and tourism development, beggars and illegal vendors, dirtiness and drainage problems, problems in variety and quality of visitor experiences, problems with stakeholder involvement and cooperation, lack of sense of ownership among the community, etc. Thus, re-organization of the management system, creating platform for coordination among stakeholders, introducing common practices of visitor management, introducing community based heritage management.

Keywords: *Cultural Heritage, Conservation, Involvement, Management &Stakeholder*

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1. INTRODUCTION

1.1. Background of the Study

Sustainable heritage management encompass managing visitor impacts, ensuring adequate spending on maintenance, inclusion of stakeholders, appropriate interpretation, education and the development of sustainable management strategies (UNESCO, 2014). The involvement and co-operation of local and/or indigenous community representatives, conservationists, tourism operators, property owners and policy makers is necessary to achieve a sustainable tourism industry and enhance the protection of heritage resources for future generations (Pansiri, J. 2015)

Fontaine (2015) stated that heritage management needs to establish strategic planning whose central issue is a long-term plan view that looks at partnership, sustainable development, interpretation, and conservation and visitor management. Integrating conservation and valorization of cultural heritage in the domain of community development; education and tourism as well as encouraging access and knowledge; and conservation and promotion are helpful in raising awareness among communities on the importance of cultural heritage and involving the community in the management of the heritages (Australia's Sustainable Tourism Cooperative Research Center, 2018).

As per to ICCROM (2010), the main problems facing the conservation of immovable cultural heritage in sub-Saharan Africa are outdated and ineffective legislations; lack of awareness among stakeholders on heritage management; problem of stakeholder involvement and coordination; incomplete inventories; illicit trafficking; and insufficient professionals and resources.

Ethiopia possesses the highest number of UNESCO World Heritage Sites on the continent. Ethiopia has also inscribed 12 sites into the World Heritage List which are spread throughout the country. Ethiopia has a great deal to offer to the international arena when it comes to site significance and this will be if conservation, stakeholder involvement and management of the heritage are strengthened (Chernet, 2008).

According to the World Bank (2013), much of the heritages of Ethiopia are being eroded by rapid development and urban growth. Accessibility to historical heritage sites, conservation, stakeholders' involvement, and quality of guides are among the problems which need urgent attention.

Gondar is endowed with great cultural and historical heritage and such heritage is exposed to the above mentioned threats. Therefore, this research assessed the need for sustainable management of the cultural heritage from conservation, and stakeholder involvement perspectives.

1.2. Objectives of the Study

The overall objective of the study is to assess how the cultural heritage sites of Gondar is sustainably managed from conservation, and stakeholder involvement. Specifically, the study is intended:

- ✓ To assess the sustainability of conservation practices in Gondar's cultural heritage sites; and
- ✓ To assess the involvement of stakeholders in the management of cultural heritage in Gondar city.

1.3. The Scope and Limitations of the Study

The study mainly has dealt with the sustainable management of the tangible cultural heritage in Gondar city from conservation and stakeholder involvement viewpoints. The study has tried to inculcate idea from professionals, and various stakeholders. In line with the limitation of the study, the researcher faced problems of getting documented local secondary data.

2. LITERATURE REVIEW

Concepts of Heritage:

A heritage is our legacy from the past, what we live with today, and what we pass on to future generations. Our cultural and natural heritages are both irreplaceable sources of life and inspiration (UNESCO, 2008). Likewise, according to the heritage council (2061), our heritage is our inheritance - what the past has conceded to us, what we value in the present and what we choose to preserve for future generations. A heritage can be classified in to two categories as cultural heritage and natural heritage. The cultural heritage is further classified as tangible (historical sites, buildings, monuments, objects in museum artifacts and archives) and intangible (customs, sports, music, dance, folklore, crafts, skills, and knowledge). And the natural heritage comprises of waterways, landscapes, woodlands, bogs, uplands, native wildlife, insects, plants, trees, birds and animals (UNESCO, 1972).

Heritage shapes people's lives, feelings, emotions, hopes, and memories. It can teach us about cultures and peoples of the past… how they lived, the challenges they faced, and how they overcame them. Heritage is also, therefore, a powerful lens through which to extract lessons from the past. Importantly, those lessons can be applied to understand and tackle present and future world challenges, such as climate change, migration, conflict, and decolonization (ICOM, 2015).

Heritage Management:

Heritage management is about striking a balance between developing the tourism industry, generate revenue while still conserving the physical integrity of sites, promoting and celebrating their educational, historic and cultural values (IESA arts and culture, 2018).

The broadening of properties under the heritage 'umbrella' has dramatically increased the number of places and landscapes that require preservation, stewardship, and promotion. There has also been an increase in complexities and threats to heritage properties in recent times, such as tourism, climate change, human conflict, and resource constraints. The practice of heritage management might involve strategic and financial planning, disaster preparation, and people, project and site management. It might also include fundraising, arts sponsorship, external funding, and the marketing of heritage sites. Ultimately, heritage management is the practice of preserving, protecting and promoting heritage in its various forms (ICOMOS, 2016).Heritage management is a collective effort of diverse actors, which includes public, private, media, tourist, trustees, governments, volunteers, and others, for the purpose of full optimization and sustainable utilization of it.

3. Methodology

Research Design

This study used a descriptive research design as it helps to describe the existing situation and practise of

the study's attention. Both qualitative and quantitative research approaches were applied. Quantitative data was obtained using questionnaire survey while qualitative data through interviews, observation and document analysis.

Target Population

This study addressed Gondar city culture and tourism office, Gondar city guides association, religious institution leaders, the local communities' representatives, and mainly tourism and heritage professionals.

Sample and Sampling Procedure:

- ***Sampling Methods***

Both probability and non-probability sampling technique applied. From non-probability sampling, snowball and convenient sampling techniques have used to select professionals, religious and community leaders, and others. On the other hand, from the probability sampling, simple random sampling has used to include stakeholders, culture and tourism office staffs, and city's guide association.

- ***Sample Size***

The sample size of the research has been determined by using Yamane (1967)'s formula which determines minimum required sample size at 90% confidence level and level of precision e=10%

Where: n: The sample size

N: The population size

E: The level of precision or sampling error

Instrument Procedure:

Sources of Data

For this study, both primary and secondary sources of data had been used.

Primary Sources of Data

This study collects primary data via interview, questionnaire and personal observation with open ended and closed ended questions *fromrespondents*.

Secondary Sources of Data

The secondary data collected from different secondary sources; books, published and unpublished papers, research papers, and internet.

Methods of Data Collection

Interview

Face to face interviews were conducted with selected key research informants. The prominent interviewees were Gondar city guides' association leaders, Tourist Information Center, Gondar city culture and tourism office head, intellectuals from university and colleges. .

Questionnaire Survey

The study used closed ended questionnaires based on the liker's five scale format. The majority of the questionnaires were mainly administered to local communities,

Personal Observation

Physical observation has conducted to assess and analyse the current situation of the heritage sites with regards to mainly conservational efforts and endeavours.

Methods of Data Analysis

Both qualitative and quantitative data were analysed through statemental narrative, and descriptive statistical method, respectively. The qualitative data were further analysed and presented based on theme to theme format while the quantitative data through frequency, percentage, mean and tabular formats.

4. RESULTS & DISCUSSIONS

Demographic Characteristics of Respondents (Questionnaires)

Based on the sample taken, 120 copies of questionnaires were distributed to the sampled respondents of the study and 111 (92.50%) were returned and used for analysis. The demographic characteristics of the respondents were presented below.

Table 1: Demographic characteristics of respondents

Variables	Categories of responses	Frequency (F)	Percentage (%)
	Male	70	63.63%
Sex	Female	41	36.37%
	Total	111	100%
	Uneducated	10	9%
	Elementary	11	9.9%
Level of education	Diploma	30	27%
	BA/BSC	32	28.82%
	MA/MSc and above	28	25.22%
	Total	111	100%

	Culture and Tourism Office	9	8.11 %
	Universities	21	18.92 %
	Colleges	5	4.50 %
	Student	5	4.50 %
	Unemployed (university graduate)	12	10.81 %
Work Place	Private business	10	9.01 %
	Local communities	27	24.32 %
	Religious institutions	10	9.01 %
	Others	12	10.81 %
	Total	111	100. %

Source: Compiled data

As Table 4.1 above reveals that the dominancy of the male can be noticed in terms of sex with 63 to 37 or 63% to 37% around. As far as the educational level of the research respondents are concerned, With regard to level of education of the respondents, the top three were degree holders (28.82%), diploma holders (27%), and master and above holders (25.22%). However, the least qualifiers among the respondents were uneducated people (9%).Depending on the work place the research respondents associated, the majority of the respondents would be belonged to local communities (24.32 %), universities (18.92 %), religious institutions (9.01 %), others (10.81 %) and job seekers (10.81 %) took the highest rank accordingly, and the rest, as revealed in the table clearly, take the lowest point in terms of their number.

Cultural Heritage Conservation in Gondar city

In this sub-section, conservation of the cultural heritages of Gondar is discussed in detail based on the data gathered through the different gathering instruments from the sampled respondents of the study.

Table 2: Responses on heritage conservational activities of Gondar

S.No	Indicator Phrases	Relative Responses									
		VP		PR		AV		GD		VG	
		F	%	F	%	F	%	F	%	F	%
1	Cultural heritage authenticity	8	14	12	21.1	20	35.1	8	14	9	15.79
2	Cleanliness	7	12.3	13	22.8	15	26.3	10	17.5	12	21.05
3	Easy movement to and within	12	21.1	16	28.1	17	29.8	5	8.77	7	12.28
4	Security	11	19.3	18	31.6	13	22.8	8	14	7	12.28
5	Risk preparedness	16	28.1	14	24.6	15	26.3	8	14	4	7.018
6	Boundary and demarcation	-	-	5	8.77	22	38.6	19	33.3	11	19.3

S.No	Indicator Phrases	Relative Responses									
		VP		PR		AV		GD		VG	
		F	%	F	%	F	%	F	%	F	%
7	Conservation management plan and minimum intervention	-	-	-	-	25	43.9	15	26.3	17	29.82
8	Management of traffic congestion and related problems	20	35.1	19	33.3	11	19.3	6	10.5	1	1.754
9	Preventing theft and illicit trafficking	17	29.8	18	31.6	15	26.3	4	7.02	3	5.263
10	Adaptation of old buildings and regulation on new developments	15	26.3	19	33.3	12	21.1	6	10.5	5	8.772
11	Success of resettlement programs	14	24.6	19	33.3	11	19.3	7	12.3	6	10.53
12	Continuous follow up	19	33.3	15	26.3	13	22.8	8	14	2	3.509
13	Overall conservation and sustainability condition of heritages	21	37	20	35.1	11	19.3	2	3.51	3	5.263

Where, VP= Very Poor, PR= Poor, AV= Average, GD= Good, VG= Very Good

Source: Researcher's own data, 2018

The detail account of the research findings, which is based on table 2, has been presented as follows;

- **Cultural Heritage Authenticity**

The Authenticity of the cultural heritage of Gondar, as the research reveals that, has faced tragic problems to maintain and sustain its unique and novel features due to so many reasons. As it is clearly indicated by the research respondents showed that more than half of the respondents agreed on the deterioration of the Authenticity of the heritage currently. There might be a lot of factors which could associate for these bottleneck problems. Some of them might be unskilled and unprofessional conservators, no regular and continuous maintenance and restoration by the concerned bodies especially by the government, no stakeholder's attention and participation, conflict of intents among the key stakeholders of the heritage especially government, private and religious institutions.

- **Cleanliness of the Heritage Sites**

Cleanliness is one of the top prerequisite for the heritage destination to be competent among the top destinations of the world. as the research equivocally produced the data that there is relatively better performances of the municipality and culture and tourism office in maintaining and promoting cleanliness and sanitation of the heritage sites of Gondar. This is really the most appreciable and encouraging practices which could other cities of the country can take the lesson from it. Almost more than 70% of the respondents replied that the cleanness of the city amazing and proud of it.

- **Easy movement to and within**

Gondar is one of the few historical cities of the country. The city has designed and architected to be a center of the king and royal families especially in the 17^{th} and 18^{th} centuries. The city has further designed to be very narrow roads and other physical infrastructures. As the research clearly proofed that the city has experienced a chronic problem when it comes to the movement within and outside of the heritage sites. This really restricts the free movement of the local and international tourists from one site of the heritage to the other sites of it. At the end, this problem aggravates the bad experience of the tourists in the city.

- **Security of the Heritage Sites**

Security is the top priority and criteria for the herniated sites to assure and maintain. It is only the security that makes a positive difference in the growth and development of any country. For the visitors and the tourists, the first thing that comes to their mind while they select a tourist destination that it is only the peace and stability of the destinations. In this regard, the security of Gondar at the city level due to political and social problems of the current situations, it is not sustaining and maintained properly though it has been improved from time to time due to the intervention of the key stakeholders. However, the security at the main gate of the heritages sites, would be very frustrated and discouraging, has been the worst scenario across all the situations and the destinations. As the respondents of the research showed that the security of the city as well as the destination has been very problematic and a lot has to be done as much as possible.

- **Risk Preparedness**

It is the contingency and preventive mechanisms which help to safeguard the heritage sites or properties from risks and possible accidents as quickly as possible without losing the valuables of it. In this connection, the respondents showed that the majority of them (53%) were very concerned and agreed that the risk preparedness of the government and other stakeholders are very far behind in achieving the concept of risk preparedness.

- **Boundary and Demarcation**

It is the issue of legalization and formalization of the areas where the heritage lays. The boundary and demarcation of the heritage sites should always be maintained and respected by any subjects. But, nowadays due to population pressure, urbanization, and new development initiatives, the boundary of the heritages are at critical and chronic stages. As the research respondents further elaborated that even though most of the heritage sites of Gondar has maintained their historic boundary as they have a strong fence and compound such as Royal Enclosure, Fasiledes Bath, there are still herniated sites which have experienced the problem of maintaining and respecting their boundaries especially Queskuam complex and DebreBirhan Selassie Church due to the aforementioned factors.

 Conservation Management Plan and Minimum Intervention

Conservation management plan is the working document which has prepared to develop, manage, promote and utilize the heritage sites/properties of any country. It is set to be used for a minim of five years and a maximum of fifteen years though it might be revised and modified in the meantime as a result of some certain push and pull factors. In this connection, as the research respondents revealed that Gondar's heritage sites have a good management plan for sustaining and maintain the heritage for the next ten years. As the discussion with the concerned bodies especially with intellectual from the university, and authority for research and conservation of cultural heritage (ARCCH) explained that all the world heritages of Gondar has a management plan as it was developed by University of Gondar especially Department of Tourism Management. As it is witnessed from the table above that the majority of the respondents have responded positively that the heritage sites of Gondar has a conservation management plan. But, here, one should notice that having a comprehensive and holistic conservation management plan is not an end rather the means to achieve the sustainability of the heritage by satisfying all the concerned bodies of the heritage.

 Management of Traffic Congestion and Related Problems

The study finding showed that the majority of the respondents (68%) agreed that the city has experienced the heritage sites as well as the city's traffic is highly congested and over-crowded. As the interview with city's culture and tourism department, Ato Aschalew, explained that

> *"There are contributing factors for the congestion and overcrowding of the traffic in the city. Some prominent factors were the non-developed nature of the road around the heritage sites, the increment of vehicles, the nearness of the terminal of the cross country buses, increment of the population, and others".*

The management plan of the heritage clearly elaborated that the extent of the traffic congestion and over-crowdedness could lead to the demolishment of the heritage from the surface of the earth. As the management document has also proposed alternatives and gateways to alleviate the problems.

 Preventing Theft and Illicit Trafficking

Theft and illicit trafficking is a criminal act according to the constitution of Ethiopia. It has also an international features and connection and linkage with mafias and gangsters who are well trained in organized theft and illicit. In this regard, the country's heritages especially movable ones have moved out from the country in an organized way. This phenomenon is also the features of Gondar's heritage as it is witnessed from the research findings. As a discussion with the key informants of the research told to the researcher about the preventive mechanisms of theft and illicit trafficking have explained as follows;

> *It is an individual and local level efforts and endeavors that have made a difference when it comes to the prevention of the theft and illicit trafficking though it has never stopped the case. At the national level, there is no unified and organized body that is diligent and committed in the fight against theft and illicit trafficking.*

As the research finding from the above table revealed that the greater number of the participants in questionnaire (61%) replied that there is not mechanism and techniques in the fight against theft and illicit trafficking.

 Conservational Sustainability of the Heritages

Witness of the research told to the researcher that overall conservation and sustainability condition of the research of the heritage sites of the city is at critical stage. 72% of the respondents approved that the conservational status of the heritage sites of Gondar city has to do something to safeguard and sustain the continuous deterioration of the site/property. As we witnessed the recent movement of the people of Amhara and other associates have made continuous awareness creation campaign and telethon to collect a sum of money to alleviate the conservation problems of the heritages in the region.

Stakeholders' Involvement

Table 3: Stakeholders' Involvement

Indicator Phrases	Relative Responses									
	VP		PR		AV		GD		VG	
	F	%	F	%	F	%	F	%	F	%
Awareness of key stakeholders	8	14	12	21.1	20	35.1	8	14	9	15.79
participation of key stakeholders	12	21.1	18	31.6	10	17.5	8	14	9	15.79
Cooperation among stakeholders	12	21.1	16	28.1	17	29.8	5	8.77	7	12.28

VP= Very Poor, PR= Poor, AV= Average, GD= Good, VG= Very Good

Source: Researcher's own data

 Awareness of Stakeholders towards Heritage Management and Conservation

As revealed in table 3 above, awareness of key stakeholders in heritage management and conservation has revealed that 35% of the respondents have no awareness in the engagement and involvement arena. It is a huge number. The same figure/percentage as of awareness has an average level of awareness which is not bad but needs more awareness creation initiative and programs. Whereas, 30% of the respondents have forwarded that the stakeholders have proper awareness in terms of heritage conservation and management.

- **Participation of Key Stakeholders in Heritage Management**

Participation has many folds of advantages. It is a form of exercising democratic rights, foster transparency and accountability, and create sense of ownership. As the respondents reported that more than half of the respondents (53%) have not been participated in heritage management of the city. Meanwhile, 17.5% of the respondents have said that the key stakeholders of the stakeholders might be participated but uncertain about it. The remaining percentage of the respondents (30%) proofed that the stakeholders are participated in the heritage management of the city. This report of the questionnaire respondents has been cross-checked and triangulated at interview survey with key informants. The city's culture and tourism department head, Ato Aschalew, forwarded his experience and views as follows;

> *As far as the participation of the key stakeholders is concerned, there are encouraging and brightest future especially from a couple of years onwards due to the regional movement for change among the youth and elites. There are a lot of positive changes on this regards. However, it is not a complete task that has been done overnight. There are still problems in mobilizing and participating the entire stakeholders in the heritage management due to internal and external factors. What can I assured you that yesterday is not today or tomorrow. Things are changing over time. There are considerable changes from the stakeholders' side in participation.*

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The primary aim of this study was to assess how the unique, irreplaceable and fragile cultural heritage of Gondar is managed for its future sustainable existence and development. Different tools can be employed to manage heritage in a sustainable manner among which conservation, and stakeholder involvement and partnership are the core tools of assessment used in this study. Such tools are strongly interrelated to each other. Based on the assessment of the tools, many of the cultural heritages of Gondar are found in poor condition of sustainability.

The legislations, management system and plans for the management, and usage of heritages are found either nonexistent or outdated. There are no significant legal frameworks to protect the heritage at local or regional level except the management plan which was developed by University of Gondar. Due to the absence of effective implementation of the existing management plan, the boundaries of heritages with core and buffer zones are not still demarcated clearly with detailed map.

The past and current authenticity of the cultural heritages of Gondar have been disturbed by Improper poles and wires; less integrated walls and gates; and unclear description between original and reconstructed parts of heritage, new development and master plan of the city.

The security of the heritages of the city has been associated with limitations in the number and capacity of guards, problems of drainage system, illegal quarry, 'agriculture and settlement unplanned development' (Quesquam church), poor check-in system and lack of security camera, heavy truck traffic

The awareness, involvement, and cooperation of stakeholders in the sustainable management of the heritages in Gondar are also subject to different limitations and impreciseness.

Generally, the sustainability of heritage resources in Gondar is facing a lot of unfavorable factors. These include lack of long term planning, inadequate legal base and system of heritage management, uncoordinated development, limitation in number and capacity of professionals, scant attention to community based heritage and tourism management, problems with stakeholder involvement and cooperation, and others.

5.2. Recommendations

Based on the findings and conclusion of the study, the following recommendations are suggested to the concerned bodies to address some of the problems that are affecting the present and future existence of the cultural heritages of Gondar. These suggestions can be implemented through short term and long term strategies.

- Boundary demarcation of the heritages should be given due consideration. Boundary map should be developed for the world heritage property with the cooperation of ARCCH and UNESCO and in consultation with other institutions.
- Most of the heritage sites of Gondar have a problem of easy movement to and within the heritages. It has to be improved via prohibiting trucks around the sites, divert the roads around the heritages, arrange reliable and comfortable transportation alternatives, avoid hassles, illegal vendors, and guides by the concerned bodies.
- To keep the integrity and authenticity of the heritages, inappropriate infrastructures should be re-designed and re-developed by the government.
- The security of the heritage sites should be enhanced so as to protect them from different threats. Hence, more guards should be hired and regular follow-up, capacity development and incentive should be given to the guards. Enclosure wall maintenance, proper check-ins, shelters and monitoring should be also applied to minimize risks.
- The awareness, participation and collaboration of the key stakeholders of the heritage should be improved and changed via creating platforms for discussion, training, mobilization and consultative sessions by using different Medias such as broadcast, printing, social and audio Medias.

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