



**THE IMPACT OF ORGANIZATIONAL CULTURE ON THE
IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT:
A COMPARATIVE STUDY BETWEEN DASHEN AND HABESHA
BREWERIES S.Cs.**

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**DEPARTMENT OF MANAGEMENT
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DEBRE BREHAN UNIVERSITY**

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Debre Berhan, Ethiopia**



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APPROVAL OF THE THESIS

As members of Board examiners of the final MSc. Thesis open defense examination, we certify that we have read and evaluated the thesis prepared by Girma Asfaw entitled “**The impact of organizational culture on implementation of Total Quality Management: A comparative study between Dashen and Habesha Breweries S.C’s**” and examined the candidate. We recommend that thesis be accepted as fulfilling the thesis requirement for the degree of masters of Science in MBA.

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DECLARATION

I, the undersigned, declare that this thesis is my own original work and has not been presented in any other university. All sources of materials used for this thesis have been duly acknowledged.

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STATEMENT OF CERTIFICATION

As Thesis Research advisor, I hereby certify that I have read and evaluated this thesis prepared, under my guidance, by Girma Asfaw, entitled “**The impact of organizational culture on implementation of Total Quality Management: A comparative study between Dashen and Habesha Breweries S.Co’s**”. I recommended that it be submitted as fulfilling the thesis requirement for the degree of masters of Art in MBA.

Dejene Tulu (PHD)

Advisor Name

Signature

Date

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LIST OF ACRONYMS

TQM: Total Quality Management

TMC: Top management commitment and Leadership

CF: Customer focus

PeoM: People management

ProM: Process management

SR: Supplier quality relationship

CI: Continuous improvement

OC: organizational culture

GC: group culture

DV: Developmental culture

RC: Rational culture

HC: Hierarchical culture

CSFs: Critical Success Factors

CVF: Competing Values Framework

Companies: Dashen and Habesha breweries

S.C. Share Company

MBNQA: Malcolm Baldrige National Quality Award

EFQM: European Foundation for Quality Management

OCAI: Organizational Culture Assessment Instrument

ISO: International Standard Organization

SPSS V25: Statistical Software Packages for Social Science: Version 25

ANOVA: Analysis of Variance

ABSTRACT

The purpose of this research, a comparative study, was to investigate the impact of organizational culture on the implementation of TQM between Dashen and Habesha breweries S.Cs. to gain a more comprehensive understanding of the factors affecting TQM implementation. Accordingly, the research used four types of organizational culture as independent variables and six critical success factors of TQM implementation were identified through the literature as dependent variables. The study employed an explanatory and descriptive research design and uses quantitative approaches. A quantitative research approach of data collection was used and 220 questionnaires were distributed out of which 192 of them were returned with a response rate of 87.27%. Stratified sampling method was used and employees were selected from each stratum with a simple random sampling technique. Data analysis was done by descriptive statistics method, correlations, multiple linear regression and t-test analysis used by Statistical Package for Social Sciences (SPSS version 25) data analysis tool. The correlation analysis indicates all relationship between the independent variables. The results of data analysis show that both the breweries have dominantly a mixture of hierarchical and rational cultures. Regarding the level of TQM implementation it was found was medium in both breweries. The findings showed that group culture and developmental culture had a positive impact on all TQM implementation. Moreover, the result of the study revealed that there is significant difference between the two breweries regarding the organizational culture types and the extent of TQM implementation. Thus, this study recommended that managers in both breweries have to give more attention in their managerial function and organizational culture to successfully implement TQM practices.

Key Words: Organizational culture (OC), Total Quality Management (TQM), Competing Values Framework (CVF) and Critical Success Factors (CSFs).

CHAPTER ONE

1. INTRODUCTION

1.1. Back Ground of the Study

In today's era of intense competition and globalization organizations all over the world are struggling with changes in market conditions, technological innovations, political and economic uncertainties, and increased focus on customer and quality. In an attempt to improve quality, performance and to remain competitive within the current uncertain business scenario, many companies have focused on adopting different Quality Management initiatives most notably Total Quality Management (Psonas & Jaca, 2016).

Total quality management (TQM) is one of the most significant evolutions of management practices for managing business effectively. To this effect, TQM has become one of the popular business strategies in numerous leading manufacturing industries over the last three decades (Gimenez, Jiménez & Martínez, 2013). Therefore, many organizations all over the world have been implemented TQM as a means of improving the quality product of services, and satisfying the needs and the expectations of customers. This has positively resulted in an increased global market share, higher profits and better financial performance (Georgiev & Ohtaki, 2016).

Although the literature in the field relates the success of many organizations in the implementation of TQM, in practice; a considerable number of organizations have fallen short in implementing their quality programs unsuccessful (Tata and Prasad, 2005; Rad, 2006; Salaheldin, 2009). Furthermore, they argued that these failures or barriers to adoption and implementation are due not only to a lack of top management commitment or weak understanding of total quality management, but also encompass organizational cultural factors. Hence, to nurture TQM implementation success, it is important that companies need to understand their organizational culture profiles in order to integrate the quality management principles and choose most appropriate approach for strategy development and continuous improvement (Yong and Pheng 2008; Zu, Robbins & Fredendall, 2010).

Oakland (2005) also stressed that development of quality and business excellence can't be achieved merely by rudimentary improvement strategies but by fostering capability to do the right things through a persistent and lasting set of norms and values. Such built in norms, values, beliefs; behaviors and climate are referred by many scholars as an organizational

culture (Cameron and Quinn, 2011; Prajogo and McDermott, 2011; Zu *et al.*, 2010). Therefore, understanding the cultural profile of an organization and mapping this profile to the steps needed to accomplish a change is an important part of the TQM journey. In the same way, Baird, Hu & Reeve, 2011; Gimenez *et al.*, 2013) highlighted the importance of organizational culture when making decisions to implement quality practices to achieve performance advantage.

The Ethiopian brewery industry has been recognized as one of the key sectors that contributed to the economic growth of the country. It has been growing fast in a less than a decade time. According to Rate Beer.com (2017), currently there are more than 15 breweries in Ethiopia from those of two are found in Debre Berhan city namely Dashen and Habesha. However, with many brands penetrating the market, there is also a fierce competition among the beer companies. Hence, to be competitive within the current business, breweries in Ethiopia are increasingly adopting quality management systems such as TQM. Despite, many studies conducted and the articles published in relation to developed countries, so far no study have been carried out in Ethiopian context to explore the influences of organizational culture on the implementation of TQM (Daniel and Fasika, (2014). This study therefore seeks to compare the impact of organizational culture on TQM implementation between aforementioned companies.

1.2. Statement of the Problem

In recent decades total quality management become a competitive strategy for organizations and has been widely implemented throughout the world. The development and implementation of effective TQM has made it possible for organizations to occupy advantageous positions, and to be more competitive in the world-market. Therefore, TQM has been implemented as a means of achieving better product quality, improving the quality of services, and satisfying the needs and the expectations of customers.

However, in practice, it is not a simple task to achieve the benefits of TQM. Despite its success across several organizations, there is evidence to suggest that attempts to implement TQM are often unsuccessful (Haffar *et al.*, 2013). Moreover, past studies have signified that several organizations failed to achieve the expected benefits of TQM due to their ignorance of cultural factors (Yong and Pheng 2008; Zu *et al.*, 2010; Prajogo and McDermott, 2011). Similarly, Tata and Prasad (2005) have stated that the lack of significant success in implementation is often not viewed as a failure of the TQM philosophy, but more as a result

of not paying sufficient attention to the cultural variables that affect it. It is clear, then, that culture has an important influence on organizational performance and TQM implementation. It is consequently important to understand and define organizational culture type in order to study an organization's readiness for the adoption and implementation of TQM.

Although a significant number of studies supported that organizational culture has a direct relationship to the success of TQM implementation, some researchers found that organizational culture as mediator (Benny, Endang, Raharjo & Hamid, 2013; Mohd, 2016) or moderator (Al-Swidi & Mahmood, 2012). Whilst Zeitz, Johannesson and Ritchie (1997) claimed that organizational culture is different from TQM practices even though there is a relationship between both variables. Due to the variances in the findings, the researcher aimed to examine the variables of organizational culture and TQM implementation in one study.

While some authors consider that TQM implementation leads to a change in OC it has been argued by many other scholars such as Zu et al. (2010); Prajogo & McDermott, (2011), and Baird et. al., (2011), that the implementation of TQM is affected by the OC, rather than the other way around. This study takes the viewpoint that OC precedes and influences TQM practices and that OC can function as a driver, or a barrier to the implementation of TQM.

Currently, many of the Ethiopian manufacturing organizations particular the brewery companies have implemented TQM practices including continuous quality improvement, customer focus, total employee involvement in improving quality, supplier quality management, process management quality, and quality tools training (Birhan and Daniel , 2014). In spite of these activities, a few studies have been carried out in the country related to the TQM, such as Haile (2016), Gebremedehin, (2016) and Seifemiale, (2018). They all aimed to assess the extent of TQM implementation in Ethiopian manufacturing firms. The results of those studies indicate a low level of TQM implementation in Ethiopian manufacturing organization. None of these studies investigated the impact of organizational culture on TQM implementation. Therefore, this study differs from the previous studies mainly it has attempted to address those issues not examined previously.

In the light of the above-mentioned theoretical gaps and a serious lack of empirical studies on the relationship between OC dimensions and TQM implementation in the Ethiopia context, this study aimed to fill gaps left by the previous researches specifically in examining the impacts of organizational culture and TQM implementation. Thus, the main purpose of this

research was to compare the impact of organizational culture on the implementation of TQM between Dashen and Habesha breweries S.Cs.

1.3. Research Objectives

1.3.1. General objectives

The general objective of this study was to compare the impact of organizational culture on TQM implementation between Dashen and Habesha breweries to gain a better understanding of which types of culture affects TQM implementation.

1.3.2. Specific objectives

In order to achieve this, the following four objectives are formulated:

1. To identify the types of organizational culture existing in Dashen and Habesha breweries.
2. To determine the level of TQM implementation between Dashen and Habesha breweries.
3. To investigate the impact of organisational culture types on TQM implementation in Dashen and Habesha breweries.
4. To find out if there is any significant difference in the impact of Organizational culture types on TQM implementation between Dashen and Habesha breweries.

1.4. Research Hypotheses

Recent literature in the field of TQM shows that there is an increasing recognition of the influence of four OC types, namely group, developmental, rational and hierarchical cultures on the success or failure of TQM implementations (Baird *et al.*, 2011 and Haffar *et al.*, 2014). The third objective of this study is to examine the impact of organizational culture on TQM implementation. Therefore, in order to meet the objectives of the study the following hypothesis were formulated:-

***H1:** Organizational culture types have a positive impact on TQM implementation of Dashen and Habesha breweries*

The following sub-hypotheses were derived from the main hypothesis, to investigate the impact the four types of organizational culture on TQM implementation:

H1a: *Group Culture has a positive impact on TQM implementation of Dashen and Habesha breweries.*

H1b: *Developmental culture has a positive impact on TQM implementation of Dashen and Habesha breweries.*

H1c: *Rational culture has a positive impact on TQM implementation Dashen and Habesha breweries.*

H1d: *Hierarchical culture has a positive impact on TQM implementation Dashen and Habesha breweries.*

H2: *There is a significant difference in the impact of organizational culture types on TQM implementation between Dashen and Habesha Breweries.*

1.5. Significance of the Study

This research have several contributions in both academic and practical terms. Theoretically, positioning organizational culture as an antecedent of TQM implementation, this study is the first approach that attempts to empirically investigate which type of organizational culture is related to which TQM implementation in Ethiopian context. Thus, Understanding the nature, strength and direction of these relationships can help to inform and support future TQM implementation attempts. Practically, this research will benefit organizations who have not been able to fully realize TQM, or who are in the process of planning the introduction of TQM. The findings of the study can help Dashen and Habesha Breweries to realize the long term quality objectives.

Furthermore, the findings of the study can help both practitioners wishing to examine their readiness for TQM or progress in creating a TQM culture, and for future researchers wishing to extend understanding of the influence of TQM implementation factors and/or culture on major organizational improvement interventions. This helps in determining the most important factors that organizations should essentially take into account in order to increase the level of the TQM implementation's success. Moreover, understanding the complex relationship among TQM and OC helps to provide sound managerial practice to improve the success of TQM implementation. It is also expected that replication of this study in other organizations with different culture and context may further help in developing an improved model of TQM implementation.

1.6. Scope of the Study

Delimiting a research project using specific location, population, time frame, or issue to be investigated helps the researcher to focus the center of attention and address the research problem in a resource and time efficient manner (Creswell, 2009). Accordingly, the scope of this study was limited to the impact of organizational culture on TQM implementation between two brewery companies of Ethiopia by determining the organizational culture types which has the most impact on successful implementation of TQM, and if the impact of organizational culture varies or change with the organizational profile. For this reason, this study was limited to Habesha and Dashen brewery companies located in Debre Berhan city.

1.7. Limitation of the study

One of the major limitations of this study is that it did not incorporate the views from the consumers and other stakeholders; it includes only the views of employees of the two brewery companies. Besides the research was limited in two breweries in Debre Berhan city and it has not include other brewery companies, which would increase the generalzability of the research.

1.8. Definitions of Terms

For the purpose of this research, the following concepts were defined:

Organizational culture (OC): Many definitions of organizational culture exist. For the purpose of this study, organizational culture is defined as the underlying values, beliefs, and assumptions that shape employee behavior (Hofstede, 2005; Armstrong, 2006; and Schein, 2010).

Total quality management (TQM): In this study, TQM is defined as a firm-wide management philosophy of continuously improving the quality of the products/services/processes by focusing on the customers' needs and expectations to enhance customer satisfaction and firm performance

Critical Success Factors (CSFs) of TQM: Precisely, in this study CSFs of TQM defined as a comprehensive set of TQM practices that should be implemented by organizations to attain its objectives and missions. These are top management commitment and leadership, customer focus, people management, process management, supplies quality relationship and continuous improvement.

Competing Values Framework (CVF): It is a framework used to classifying organizations in four types, referred to as hierarchical, rational, developmental, and group cultures (Cameron and Quinn, (2011).

1.9. Organization of the Study

The study is composed of five chapters. The first chapter contains background of the study, statement of the problem including basic research questions, objectives of the study (general and specific objectives), scope and limitations of the study and significance of the Study. In the second chapter, the works of some authors pertaining to the concept of TQM and organizational culture were reviewed, bearing in mind the objective of the study. Chapter three includes the research design and methodology employed (the research method, sources and types of data, sampling methods and sample size, instruments of data collection, techniques of data analysis and ethical considerations were explained). In chapter four the researcher summarized the results, interprets and discusses the findings. The fifth chapter consisted of the summary, conclusions and recommendations in line with the most important findings of the study.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

In this chapter the existing literature on the related concepts appropriate to this study were examined. The objective of this chapter was reviewing the literature on the impact of Organizational culture (OC) and total quality management (TQM) implementation. It presents the theoretical and empirical reviews of the study variables, which are total quality management (TQM) and organizational culture (OC), and their relationships. Finally, based on literature review conceptual framework of the study was developed.

2.1. The concept of Quality

The concept of “quality” is very broad and correlates to a wide range of human needs. The literature revealed that there are various definitions of quality. These definitions are related to knowledge of products, services, and customer and client satisfaction. There is no single universal definition of quality, and several authors and experts have defined it in as follows:

Deming (1986), define of quality as “satisfy the customer, not merely to meet his expectations, but to exceed them”. This implies quality is meeting and/or exceeding customers’ expectation. Deming's philosophy starts and finishes with the customer. The purpose is to add value which the customer wants. Nothing, which does not do this, is a quality feature.

Similarly, Crosby (1984) defined quality as “conformance to requirements”, thus the requirements of a product need to be defined and specified clearly so that they are properly understood. Juran (1988) also defines quality as "fitness for purpose or use". This definition is applicable to all organizations that are manufacturing, service, profit making; or nonprofit-makers. The user or customer judges quality. Quality is “Meeting the customer requirements” (Oakland, 2005, p. 4).

It can be concluded from these definitions that quality is perceived as meeting the needs and expectations of customers through providing superior products and services in order to achieve the goals of the organization.

Modern quality management philosophy practices and concepts has been strongly influenced by the thoughts of quality gurus Deming, Juran, Crosby, Feigenbaum, and Ishikawa (Prajogo & McDermott, 2011;), However, Mensah et al. (2012) as mentioned by Psomas and Jaca

(2016) stated that in this modern era the definition of quality should be seen as beyond merely meeting requirements, it should have additional and important dimensions of internal and external customer satisfaction focus, training, education and empowerment of employees. As described by them among all quality practices, increasingly organizations have focused on total quality management (TQM).

2.2. Quality management in Ethiopia

The need for quality control in Ethiopia was recognized since 1972 making an establishment of Ethiopian standard institute. In recent years, many efforts were under way to promote quality of products and services in the country (Daniel and Fasika, 2003). Quality related problems are severe threat of several industries. As the manufacturing sector is dominated by these industries addressing this problem will have a far-reaching impact on the whole economy of the country market is of one that have been affected by these problems. Poor performance of product in the local and international market, decline computation, and under utilization companies are good examples where quality related market problems are manifested (Ezera, 2014).

According to Birhan and Daniel (2014), the reasons for poor quality practice are basically two; the first one is lack of awareness about basic concepts of quality. The second reason is that the customer's knowledge about quality is not adequate. Customers do not impose quality as requirements on the part of the industries. The status of Ethiopian manufacturing firms quality management fail far below companies with other countries (Haile, 2016). In general, quality management in Ethiopia was found to be low in all areas including leadership, policy and strategy, resource management, process management, customer satisfaction, business performance and impact on society (Birhanu & Danial, 2014).

2.3. An Overview of Total Quality Management and its Implementation

2.3.1. Origin and Evolution of TQM

Total quality management (TQM) movement can be traced back to the 1980s, yet many fundamental elements were developed during the period between the 1950s and 1970s. Most theoretical developments in the advancement of the concept were made in the US; although Japan has held the initiative in terms of application (Martinez *et al.*, 2013; Gupta, 2005; Fonseka, 2015). Krüger (2001) considers Deming, Juran, Ishikawa, Crosby, and Feigenbaum

to be the most important gurus of the quality management movement, and calls them the “big five”.

In the 1950's total quality movement started in the United State of America (USA) more as quality control, went back to Japan and came back to the United State of America strengthened as a total quality management philosophy (Fonseska,2015). TQM first implemented in the developed countries as a means of maximizing customer satisfaction, gaining better product quality, and obtaining higher productivity through the systematic removal of waste and the reduction of non-productive activities (Yusuf *et al.*, 2008).

The evolution of TQM happened in a few stages which are identified as Inspection, Quality Control, Quality Assurance and now Total quality management (Loughlin, 2008; Singh, 2014). 1) **Inspection**: This was the first stage in evolution of TQM. This stage involves examination, measurement, testing and gauging of material or items. 2) **Statistical Process control**: It is a method of quality control by using statistical methods. The tools used in statistical process control were control charts. 3) **Quality Assurance**: It is a way of preventing defects in manufactured products and avoiding problems when delivering services to customers. 4) **Total quality Management**: It is the combination of all the functions and process within an organization in order to achieve continuous improvement in goods and services.

2.3.2. Definition TQM

Different quality gurus and philosophers defined TQM differently with respect to different perspectives. One of the most prominent features of the TQM literature is the absence of any uniform definition of TQM (Talib, 2012). Although there is no universally accepted definition of quality management, there have been attempts to arrive at a description for the ideal of total quality management. Examples include:

Juran (1999, p.337) one of the quality gurus defined TQM as “a management approach that centered on quality within an organization, based on involving all its members and aiming at long-term success through customer satisfaction, and benefits to all members of the organization and to society”.

Oakland (2005, p.03) 'define TQM as "A comprehensive approach for improving competitiveness and flexibility through planning, organizing and understanding each activity, and involving everyone at each level. TQM ensures that the management adopts a strategic overview of quality and focus on prevention rather than inspection."'

Singh (2014) also defined total quality management as integration of all the functions and process within an organization in order to achieve continuous improvement in goods and services. Total quality management also reduces wastes and invaluable activity while improving quality, efficiency and safety.

From the above definitions, it is reasonable to conclude that TQM can be defined as a philosophy or approach that involves the application of quality management principles, practices and techniques to all aspects of the organisation including management, employees, customers and suppliers and their integration with the key business processes. TQM is both a philosophy and a set of guiding principles for managing an organisation to the benefit of all stakeholders. It is a continuous improvement approach that focuses on doing things right first time in order to meet the needs and expectations of both external and internal customers.

2.4. TQM and Quality Award Models

In recent years, countries around the world have begun to institute quality awards, with a view to promoting awareness of quality within the productive process and with the aim of fostering the exchange of information. This encourages organizations to adopt new strategies for the improvement of quality and productivity. Each award model is based on a perceived model of TQM. The most widely known models in the world are the Deming Prize, the Malcolm Baldrige National Quality Award, the European Quality Award and International organization for standardization (ISO).

2.4.1. Deming Prize

The Japanese Union of Science and Engineering (JUSE) instituted the Deming Prize in 1951, in recognition of Dr W. Edwards Deming's contribution to the development of industry quality in Japan. Its main purpose is to spread the quality gospel by recognizing performance improvements flowing from the successful implementation of firm-wide quality control based on statistical quality control techniques. The quality criteria for the Deming Prize are (Deming Prize (2006): 1) Top management leadership, vision, and strategies. 2) TQM

frameworks .3) Quality assurance systems 4) Management systems for business elements. 5) Human resource development. 6) Effective utilization of information. 7) TQM concepts and values 8) Scientific methods 9) Organizational powers 10) Contribution to realization of corporate objectives.

2.4.2. The Malcolm Baldrige National Quality Award (MBNQA)

The Malcolm Baldrige National Quality Award was established in 1987. It is intended to promote awareness of the importance of quality improvement to the national economy, recognize organizations that have made substantial improvements in products, services, and overall competitive performance, and foster the sharing of best-practice information among US organizations (Goetsch and Davis, 2010). The award criteria reflect the requirements of performance excellence in seven categories. The seven categories are: Leadership, Strategic planning, Customer focus, Measurement, analysis, and knowledge management, Workforce focus and Customer focus Results.

2.4.3. The European Quality Award (EQA)

The European Foundation established the European Quality Award (EQA) in 1991 for Quality Management, with the support of the European Organization for Quality and the European Commission. EQA (2010) indicated that the award's main function is to promote and support the implementation of effective strategies for TQM at European organizations. The main elements are Leadership; Policy and strategy; Partnership and resources; People management Process; People results; Customer results Society results; Key performance results.

2.4.4. Ethiopia Quality Award (EQA)

Ethiopia Quality Award was introduced in 2008 in order to recognize the need for implementation and integration of quality concepts in the operation of Ethiopia manufacturing and services industries. It is designed to support in the development of organizational excellence and recognize organizations for their achievements in quality and performance. It is also aimed at raising awareness about the importance of quality and performance excellence as global competitive edge. The main elements, which are used to evaluate, are leadership, policy and strategy, resource management, process management, customer satisfaction, business and Impact on society (EQA, 2016).

2.4.5. International Organization for standardization (ISO 9001) certification

ISO 9000 was published in 1987 by the International Organization for Standardization (ISO), and is granted to organizations able to demonstrate that they have reached a certain standard of quality control. ISO 9001 provides a set of standardized requirements for a quality management system, regardless of the user organization's industry, size, or whether it operates in the public or private sector. These principles are (ISO, 2008): 1) Customer focus. 2) Leadership. 3) Involvement of people. 4) Process approach. 5) System approach to management and 6) Continual improvement.

2.5. Critical Success Factors for TQM Implementation

According to Irfan and Kee (2013) critical success factors, means critical areas which organizations had to accomplish to attain its mission by examining and categorizing its impacts. The critical factors informing the TQM approach can best be described as practices in which organizations and their employees embark on business activities informed by key processes.

According to Talib and Rahman (2012) successful implementation of total quality management (TQM) is mainly linked with the critical success factors (CSFs) which are responsible for achieving effective results. However, the previous literatures have provided different sets of critical success factors considered essential for the successful implementation of TQM but no study has identified a common set of practices for successful implementation of TQM (Talib, Rahman & Al-Sabi *et al.*, 2017).

To identify appropriate CSFs of TQM, extensive literature review of previous studies was made from two different perspectives. 1) From formal evaluation models (EQA, MBNQA, The Deming Award, Ethiopia Quality Award and ISO 9001 certification). 2) From empirical researches (Saraph, (1989), Flynn *et al.*, (2006), Sureshchandar *et al.*,(2010), Fotopoulos and Psomas (2010), Ooi, (2011), Talib *et al.* (2012), Irfan and Kee (2013) and Al-Sabi *et al.*, (2017).

Thus, after reviewing selected literature six TQM factors the meets the study objective and give holistic view were identified. This consists of top management and leadership commitment, customer focus, people management, process management, continuous improvement and supply quality management.

Abuse (2011), confirmed that the six CSFs of TQM implementation factors (top management committee members', customer satisfaction, people management, supply management, process management and continuous improvement) are strongly grounded in literature and derived from cultural setting and experience of several developing countries. In addition, Haile (2016), Gebremedehin, (2016) and Seifemiale, (2018), have supported these factors.

2.5.1. Top management commitment and Leadership

Top management commitment is a TQM factor that has been mentioned almost in all TQM literatures as a critical success factor of TQM (Saraph et al, 1989; Flynn et al 1995; and, Motwani, 2003). Top management commitment represents as an engine in mobilizing everyone in the organization and creates conducive environment for the successful implementation of TQM.

According to Aletaiby, Kulatunga and Pathirage (2017) in a TQM process, effective leadership should develop a clear mission statement and then build up strategies to support the mission. A sound foundation for initiating TQM activities is laid out by top management. Managements' commitment towards quality sends positive signals down up to the shop floor and can inspire the whole organization. Top management support is very crucial in implementing quality in an organization; however TQM process can be implemented effectively only when the whole organization accepts the responsibility and commitment of quality management (Talib & Rahman, (2012).

2.5.2. Customer Focus

Customer focus is the extent to which an organization continuously satisfies customer needs and expectations (Zu al, 2010). Organizations should understand customers' demands and wants work to meet their requirements to satisfy customers and at the same time achieve organizational goal and missions. Thus, the fundamental concept of TQM, according to Goetsch and Davis (2010) is customer focus for improving and enhancing business performance. Conforming customer's needs and expectations is the essence for success in today's business. For continuous improvement, a customer's requirements must be consistently measured and satisfied, methods such as market research, enquiring sales staff, and comparing competitors can be used to collect information.

2.5.3. People Management

People management is frequently recognized as one of the most important requirements for the success of TQM systems (Mosadeghrad, 2015). People management in TQM refers as a general component that encompasses a variety of organizational development practices such as employee training, involvement, empowerment, recognition, teamwork, etc. Satisfied, motivated, trained and committed human resources improve performance and customer satisfaction (Abusa, 2011). This followed by effective communication and orientation about the organization mission, values, goals, information about duties and responsibilities and their involvement in quality standards of a specific job.

2.5.4. Process Management

Process management focuses on managing the manufacturing process so that, it operate as expected. Without break downs, missing materials, fixtures, tools etc...and despite work force variability (Flynnnet *al.*, 2006) In addition it can define as an administrative activates aimed at defining process, establishing responsibilities, evaluating process performance and identifying opportunities of components (Juran,1994). Process improvement aims at managing continually reducing variations. The reduction in process variation leads to benefits such as increasing output uniformity, continual reduction of work and mistakes and machine time, material wastage (Deming, 1986).

2.5.5. Supply Quality management

The quality of the product could depend on the equipment and materials supplied by the vendors thus it is important to have a fewer dependable supplier. Selecting a high-quality supplier is important, not only it ensures on-time delivery but also prevent quality problem as some materials and parts can be the main source of quality problems (Sadikoglu *et al.*, 2014). It is important to maintain a close and long-term cooperative relationship with suppliers as it gives them a chance to get involved in product/service design and production processes and helps to improve firms the competitiveness (Mosadeghrad, 2015). Some firms that practice TQM management require the supplier to implement TQM management or to have a certain quality program to be considered.

2.5.6. Continuous Improvement

As stated based on MBNQA, (2008) core values, the concept of continuous improvement includes both incremental and breakthrough improvement activities in every operation,

function, and work process in the company. It stresses that improvements may be made through enhancing value to customers; reducing errors, defects, and waste; improving responsiveness and cycle-time performance; improving productivity and effectiveness in the use of all resources; and improving the company's performance and leadership position in fulfilling its public responsibilities and corporate citizenship (Oakland, 2004.), this requires asking everyone to do their jobs and ensure processes that are more effective, efficient, and adaptable. The principle of continuous improvement is keeping the never-ending concept in everyone's mind and in every job.

2.6. Culture

Quality practitioners, experts and academics consider culture as an important factor for any business. Hofstede and Hofstede (2005, p.4) described culture as "the shared philosophies, ideologies, values, assumptions, beliefs, expectations, attitudes, and norms that knit a community together. These psychological qualities reveal group agreement, implicit or explicit, on how to approach decisions and problems, the way things are done here".

Culture is an important player in implementing quality tools, techniques, theories and models (Abusa & Gibson, 2013 Schein, (2010, p.14), who was one of the most influential authors in this field, justifies the need for understanding the culture as "Culture matters because it is a powerful, latent, and often unconscious set of forces that determine both our individual and collective behavior, ways of perceiving, thought patterns, and values. Organizational culture in particular matters because it has an influence on productivity, adopting new systems, and future changes to the organization. If we want to make organizations more efficient and effective, then we must understand the role that culture plays in organizational life".

2.6.1. Definitions of Organizational culture

Researchers in academic sector have given various ways of defining organizational culture. Although there are many definitions of organizational culture, nearly all definitions consist of a combination of values, beliefs, and important assumptions that organizational members consider proper, adequate, and acceptable behavior (Hofstede and Hofstede, 2005).

Cameron and Quinn (2011, p.16) defined organizational culture as "The taken for granted values, underlying assumptions, expectations, collective memories, and definitions present in an organization. Inside an organization, sub-units such as functional departments, product groups, hierarchical levels, or even teams may reflect their own unique cultures. In more

details, it means “the collection of traditions, values, policies, beliefs, and attitudes that constitute a pervasive context for everything we do and think in an organization” (Mullins, 2010).

In relation to the above definitions, Armstrong (2006, p. 384) also define organizational culture or corporate culture as “the pattern of value, norms , beliefs, attitudes and assumptions that may not have been articulated but shape the ways in which people in organizations behave and things get done”. These description highlights that organizational culture is created assumptions, which are accepted as a way of doing things and are passed on to new members of an organization. Therefore, organizational culture is to an organization what personality is to an individual.

2.6.2. Measuring organizational culture

Measuring culture has presented a challenge to organizational scholars and change agents (Schein, 2010), because no single instrument provides a valid measure of a sufficiently large set of generic cultural dimensions. A big challenge in most organizations is whether they know what their culture is and whether it is the right culture to support their strategy. In order to identify the type of culture in organizations, a range of methods and instruments have been designed. In this context, the Competing Values Framework developed by (Cameron and Quinn (2006), is considered to be the most suitable for the purpose of this research.

2.6.3. The competing value framework (CVF)

In order to examine the impact of organizational culture on TQM implementation, a competing value framework (CVF) was selected. This is selected to identify types of organizational culture. The first reason for choosing a competing values framework is that it helps to identify a more comprehensive approach to TQM because it highlights the key elements of the four main cultures which underlie organizational performance. The second reason, it is also one of the most significant and extensively used and empirically validated models for constructing the profile of an organization’s culture (Prajogo and McDermott, 2011; Zu et al., 2009). These high impact studies have tested the CVF instrument for validity and reliability (Cameron and Quinn, 2011).

The CVF has proven to be a useful framework for assessing and profiling the cultures of organizations because it helps identify the underlying cultural characteristics that exist in organizations. CVF has four orientations (control vs. flexibility and internal vs. external) in four quadrants representing four culture types. Each culture type further consists of six commonly accepted dimensions (organizational character; leadership demonstration; management style; binding force; organizational emphasis; and success criteria). Therefore, the structure of CVF is manageable and has broad implications (Cameron and Quinn, 2006 and Stock *et al.*, 2007).

2.6.4 Types of culture

Although there are four distinctive cultural categories, in reality, organizations are unlikely to reflect only one cultural type. To be effective, the adoption of some elements of each of the four ideal culture types (group, developmental, rational and hierarchical) is necessary (Cameron and Quinn, 2006). The implications of each culture type are summarized as follows:

2.6.4.1. Group culture

According to Cameron and Quinn (2006), Group culture places emphasis on flexibility and internal orientation. Organizations with emphasis on this culture promote the development of human resources, emphasizing openness, participation, cohesiveness and commitment to membership. The organization is held together by loyalty, tradition, and collaboration. Commitment is high. The organization emphasizes the long-term benefits of individual development with high cohesion and morale being important. Success is defined in terms of internal climate and concern for people. The organization places a premium on teamwork, participation, and consensus. This culture is characterized by teamwork, consensus and participation (Cameron and Quinn, 2011).

2.6.4.2. Developmental culture

According to Cameron and Quinn (2011), Developmental culture also emphasizes flexibility but with more focus on the external environment. The orientation is towards growth, creativity stimulation, resource acquisition, innovation, and continual adaptation to the external environment. Organization with development culture is characterized as a dynamic, entrepreneurial, and creative workplace. People stick their necks out and take risks. Effective leadership is visionary, innovative, and risk-oriented. Readiness for change and meeting new

challenges are important. The organization's long-term emphasis is on rapid growth and acquiring new resources. Success means producing unique and original products and services.

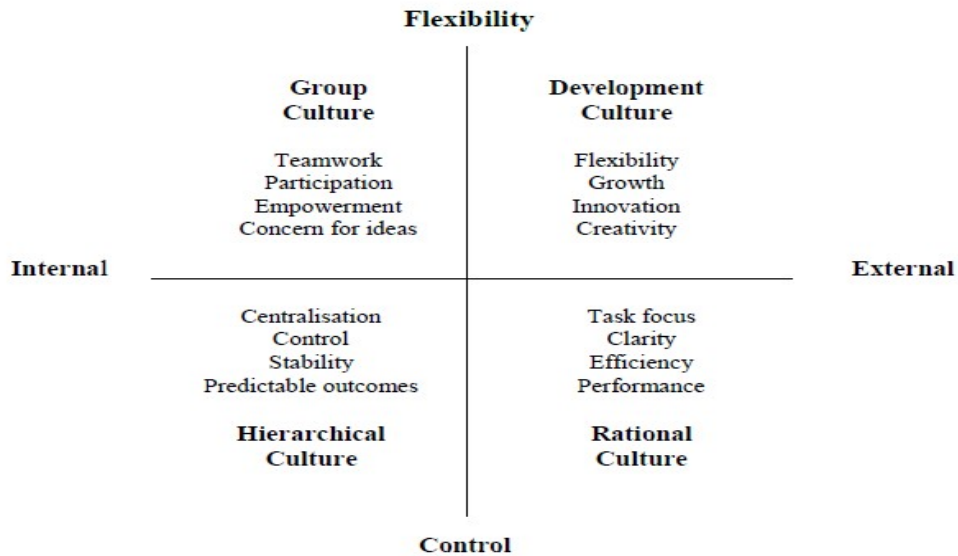
2.6.4.3. Rational/ Market culture

According to Denison and Spreitzer (1999), the Rational /market culture is also focused on the external environment but is control-oriented. It emphasizes productivity, performance, goal achievement, and one of the primary motivating factors is competition. Such organization is a results-oriented workplace. Leaders are hard-driving producers, directors, and competitors. They are tough and demanding. The binding force that holds the organization together is an emphasis on winning. The long-term concern is on competitive actions and achieving stretch goals and targets. Success is defined in terms of market share and penetration. Outpacing the competition, escalating share price, and market leadership dominate the success criteria.

2.6.4.4. Hierarchical culture

According to (Cameron and Quinn, 2006), the hierarchical culture is both control and internal oriented. It emphasizes rules and regulations, and standardization to achieve control and stability. Such organization is characterized as a formalized and structured place to work. Procedures and well-defined processes govern what people do. Effective leaders are good coordinators, organizers, and efficiency experts. Maintaining a smooth-running organization is important. The long-term concerns of the organization are stability, predictability, and efficiency. Formal rules and policies hold the organization together.

Figure 1. The Competing Values Framework of Organizational Culture



Source: (Adapted from Cameron and Quinn, 2006).

Cameron and Quinn, (2006) stress that the four types of organizational culture should be viewed as ideal types informing the culture of the organization. This means that organizations should blend these four types of culture together; in other words, creating a culture-balance, accounting for the presence of the four types within the organization. As a result, organizations which have a high rating in one dimension (e.g. internal orientation) are not excluded from having a similarly high rating in another (e.g. external orientation). It is also assumed in the CVF model that effective organizations will display some form of combination of various orientations.

Cameron and Quinn (2006) stress that the competing value framework can accurately describe other aspects of organizations as well, and it has applicability to various aspects of the organization. They found through, their studies that corresponds between the dominant culture of the organization and its leadership style, management roles, human resource management, quality management, and effectiveness criteria contribute to higher levels of performance than inconsistency; thus this model (CVF) was chosen because many of its elements corresponded with success factors of TQM implementation.

2.7. Organizational Culture and TQM

Although culture and TQM have different origins, recently both fields have converged with the idea that in order to achieve excellence and quality, organizations have to change or work with culture. There are many studies in the literature that deal with culture in order to achieve TQM (Al-Khalifa and Aspinwall 2001; Prajogo and McDermott, 2005; Yong and Pheng 2008 and Zu et al., 2010).

In this context, Prajogo and McDermott (2011) conclude that one of the basic reasons for much of the delay in TQM implementation is that top managers and external consultants are insufficiently aware of the basic issues and values which support the daily practices in the organization, in other words, organizational culture. Most of the authors who explicitly address TQM and culture see organizational culture as a variable which can be affected by internal and external stimuli and which may be consciously managed by organizations themselves (Zeitz et al., 1997).

2.7.1. The Role of organizational culture in TQM implementation

Among several factors which have been attributed as key determinants of TQM success, organizational culture is often among those listed at the top (Prajogo and McDermott, 2011). These authors strongly emphasize that the effective implementation of TQM requires effective change in an organization's culture. Although these researchers have greatly emphasized the impact of culture on TQM implementation, relatively little effort is evident that has explored the intensity and nature of this impact.

Similarly, Cameron and Quinn (2006) stated that organizational culture is an essential factor in adopting any successful change in an organization. The success of TQM implementation will depend, to a large extent, on organizational culture, thus it is essential to the implementation of TQM to take it into consideration. They have argued that organizational culture is important because plans for any changes adopted not including organizational culture would have unforeseen and largely negative consequences. In other words, knowledge of an existing organizational culture is the basis for cultural change. Implementing cultural change within an organization is recognized as one of the primary conditions for the TQM to flourish.

In other words, knowledge of an existing organizational culture is the basis for cultural change. Implementing cultural change within an organization is recognized as one of the primary conditions for the TQM to flourish (Oakland 2004). Several studies have highlighted the fact that appropriate organizational culture drives TQM success. Therefore, it is important to understand and define a proper organizational culture type, to map and study the organization's readiness for the adoption and implementation of TQM. Accordingly, organizational culture should be considered when identifying the factors affecting successful TQM implementation. This means it can be asserted that TQM implementation efforts are significantly related to organizational culture. Hence, organizational culture is one of the most important factors that contribute to the success or failure of the implementation of TQM.

Conversely, many studies have indicated that several organizations have failed in TQM implementation due to their ignorance of organizational culture factors (Al-Khalifa and Aspinwall 2001; Prajogo and McDermott, 2011; Yong and Pheng 2008; Zu *et al.*, 2010). Therefore, it is evident that; organizational culture is a key factor in the adoption of the implementation of TQM. Therefore, it is essential that the implementation of quality management require changes to value systems and organizational culture of organization. It could be argued that TQM can be successfully implemented when a corresponding organizational culture is taken into consideration. Therefore, it is evident that TQM programs are more likely to succeed if existing organizational cultural characteristics are in tune with the values and assumptions inherent in TQM implementation plans.

2.8. Empirical Evidences

A number of empirical studies have adopted the CVF to explore the effect of organizational culture on various operations and management practices, such as advanced manufacturing technology, leadership roles, TQM, organizational effectiveness, organizational effectiveness (Georgiev,2009),Knowledge management (Rad, 2006), and in particular TQM (Jabnoun and Sedrani, 2005; Prajogo and McDermott, 2011; Stock *et al.*, 2007; Zu *et al.*, 2010). These varied applications of CVF suggest that it is a universal framework that explains a range of organizational phenomena. It would seem that there is basic support for CVF being a two-dimensional model with four quadrants, whether it is applied to management or to organizational culture.

Al-khalifa and Aspinwall (2001) conducted a study into TQM in Qatar, employing CVF to investigate how suitable Qatar's national culture was in light of the effective implementation of TQM. Their findings lead to the conclusion that companies in Qatar would find it difficult to implement TQM because they have been traditionally dominated by a corporate culture of rationality and inflexible hierarchies. Furthermore, People must feel that they are participants and that their level of morale, trust and participation are high. Building teamwork, opportunities for growth and development, and decentralized decisions are important steps towards creating the necessary culture.

Rad (2006, p.619) found that organizational culture had a significant effect on a successful TQM implementation in Iran, writing that: "Organizational culture has a significant effect on successful TQM implementation in Iran, writing that: "Organizational culture has a significant effect on successful TQM implementation. For TQM programs to succeed, a collaborative and corporate organizational culture supported by the long-term management and employees commitment and involvement, organizational learning, innovation and entrepreneurship, team working and collaboration, open communication, risk taking, continuous improvement, customer focus, partnership with suppliers, and monitoring and evaluation of quality should be developed.

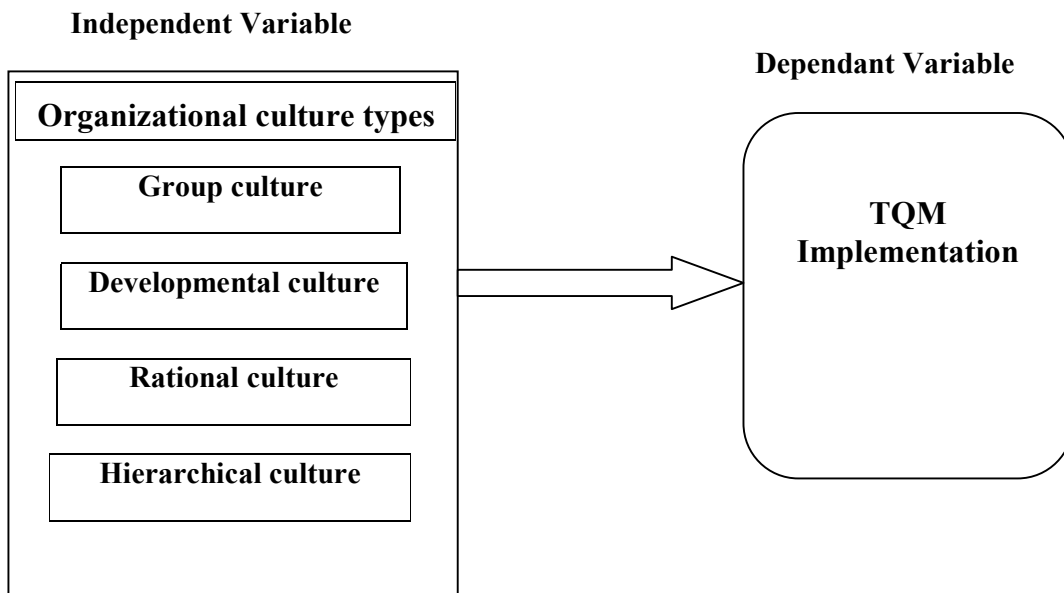
A few previous studies were conducted in Ethiopia context regarding TQM implementation such as Haile (2016), Gebremedehin (2016) and Seifemichael (2018). They all aimed to assess the extent of TQM implementation in manufacturing firms. The results of those studies indicate a low level of TQM implementation. Moreover, they conclude that most organization have failed in their attempt to because of lower attention given to organizational culture, which constitutes the driving force behind it, and acts as a motivator for the implementation of TQM by creating values, goals and systems to satisfy customer expectations and to improve organizational performance.

In the same way, Birhan and Daniel (2012) Quality management practice in Ethiopian Manufacturing Industries. The study used a cross sectional descriptive design. The research was based on a survey conducted on 55 representative industries all over the country. They found out that cultural change is the single most important inhibitor of quality policy implementation; and quality concepts have been diffused unevenly across major functional areas. Because of the poor management commitment in quality, most enterprises do not have their own business culture to support total employees involvement in quality improvement.

2.9. Conceptual Framework of the Study

Based on the review of OC and the TQM implementation literature, the following conceptual framework was proposed. As shown in Figure 2 below, a set of four organizational culture types are hypothesized to be related to TQM implementation.

Figure 2: Conceptual Framework



Source: Adapted from (Cameron and Quinn, 2006; Stock et al., 2007; Zu et al., 2010; Prajogo and McDermott, 2011; Baird et al., 2011; Gimenez et al., 2013 and Heritage et al., 2014).

CHAPTER THREE

3. RESEARCH DESIGN AND METHODOLOGY

This chapter presented detail discussion of the research methodologies, which were employed in the study. Hence, the topics related to research approach and design, data type and source, target population, sampling technique and sample size determination, data collection procedure, method of data analysis, ethical issue, reliability and validity of the study were covered.

3.1. Research Design

The aim of this study was to compare the impacts of organizational culture on the implementation of TQM between Dashen and Habesha Breweries. Thus, to meet the objectives of the research, the study employed explanatory and descriptive research designs; descriptive in the reporting of the phenomena (e.g. organization cultural profiles, TQM practices) and explanatory in the determination of the organizational cultures and their relationships with TQM practices. The study compares TQM implementation and organization culture between the two breweries. According to Saunders, Lewis & Thornhill (2009, p.139), explanatory studies focus on studying a situation or a problem in order to explain the relationships between variables. Descriptive research design is concerned with describing the characteristics of a particular individual or of a group. Moreover, descriptive research enables the researcher to compare two or more groups in terms of independent variable and dependent variable (Saunders *et al.*, p.590).

3.2. Research Approach

The research approach used in this study was quantitative approach in the form of survey questionnaire along with quantitative data analysis procedures. The reason for selecting quantitative approach was it can provide a high level of measurement precision, statistical power, and high levels of reliability of data. Besides, it also helps to show whether there exists significant relationships between the variables of interest (Muijs, (2010).

3.3. Source and Types of Data

Saunders et al. (2009) stated that there are two major approaches used by researchers' namely primary and secondary data. This study used both the primary and secondary data through self-administered questionnaire and relevant company documents. The primary data was

collected from employees of Dashen and Habesha breweries. The Secondary data was collected from relevant company documents; policy and procedure manual, collective agreement, organizational reports, company magazines and websites. Target employees were managers, supervisors, quality coordinators and employees. This sample was chosen for the following reasons: 1) Managers play an important role in effectiveness of TQM. 2) Quality managers have an important role in the implementation of TQM in the organization. 3) Supervisors and employees represent the first line of the management or operational level; they also have an important role in the implementation of quality management and play a role in its daily tasks.

3.4. Population and Sampling

3.4.1. Target Population

The purpose of this study was to compare the impact of organizational culture on TQM implementation between Dashen and Habesha breweries. The companies were chosen for the following reasons: First, both of them have adopted the TQM approach. Second, top management of the companies are willing to provide support to conduct this research; and, third, the limited time and funds available for the researcher. Therefore, the populations of this study were all permanent employees of the two selected breweries. Currently, Dashen and Habesha breweries have 279 and 220 permanent employees respectively. Thus, the total population for this study was 499.

Table 3.1 Target Population

Name of the Company	Total Population	Sample size	Percentage
Dashen Brewery S.C.	279	124	44.5%
Habesha Brewery S.C.	220	98	44.5%
Total	499	222	44.5%

Source: *Dashen and Habesha Breweries, Human Resource offices (2019)*

3.4.2 Sampling Method

Sampling is a process of selecting a number of study units from a defined study population (Kothari, 2009). In this study, since the total population of the study is large, heterogeneous and information required for the study needs different people who have knowledge and awareness about aspects of TQM implementation and organizational culture, proportionate

stratified sampling technique was used. The departments considered as strata were production, administration, finance, marketing and sales, purchasing and procurement. Then, after the sample size of each strata or department were calculated simple random sampling method was used to select respondents from each stratum.

3.4.3. Sample size

Currently, the number of permanent employees in Dashen and Habesha breweries is 490 in total. To get representative sample the researcher used solvin's formula cited by Yemane (1967) considering confidence level 95% and the level of acceptable margins of error 5%. Then the total sample size (n) was calculated by using the following formula.

$$n = \frac{N}{1+Ne^2} \quad \text{Where, } n = \text{the sample size}$$

N= the size of the population (499)
e =error tolerance (0.05)

By using this formula the sample of the study are:-

$$n = \frac{499}{1 + 499(0.05)^2} = 222$$

Based on Slovin's formula, the samples of 220 respondents were selected from target population of 490 employees. In order to have a proportional sample size from each strata, the researcher used the below formula as per to Kothari (2009).

$$\text{Sample size per stratum} = \frac{\text{Sample size}}{\text{Population}} \times \text{stratum size}$$

Table 3. 2: Sample Size determination by using Proportionate stratified sampling.

S/ N	Strata /Department/	Dashen Brewery S.C.			Habesha Brewery S.C.		
		No of Staff	No of sample	Percent	No of Staff	No of sample	Percent
1	Production and Operations	170	75	44%	158	70	44%
2	Inventory system	29	13	45%	13	6	46%
3	Marketing & sales	25	11	44%	14	6	43%
4	Finance & Accounting	23	10	43%	12	5	42%
5	Purchasing & Procurement	18	9	45%	10	5	50%
6	Human resource	14	6	43%	13	6	46%
	Total	279	124	44.5%	220	98	44.5%

Source: researcher's own compilation (2019)

3.5. Instruments of Data Collections

The study used close-ended questionnaire, which was designed to collect quantitative data. The study does not aim to validate or develop new instruments to measure the level of implementation of TQM practices, and OC types. Therefore, this research adopted and translated two widely used, valid and reliable instruments, which fitted and served the objectives of the current study.

In order to identify the dominant culture type of Dashen and Habesah breweries, the OC assessment instrument scale called Organizational Culture Assessment instrument (OCAI) developed by Cameron and Quinn (2011) was used. Several studies have proved the reliability and validity of the CVF and its matched scale, OCAI (Alkhalifa & Aspinwall, 2009; Yu & Wu, 2009). In order to measure the level of implementation of TQM in Dashen and Habesah breweries, the instrument developed by Samson & Terziovski (1999) was adapted. The designed questionnaire consists of three parts as follows:

The first part is about demographic characteristics of respondents and organizations. This part consists of 12 items such as gender, age, and educational background, year of experience as well as the general back ground of the companies. Such information is vital for classification and comparisons. The second part is related to dimensions of the organizational culture, which included measuring the organizational culture (24 items). The third part included measuring TQM implementation. The survey instrument (questionnaire) has 32 items.

The questionnaire on the second and third part are close-ended by which the respondents were asked to indicate their level of agreement using a five Likert rating scale measurement where: Strongly disagree (SD) = 1; disagree (D) = 2; Neutral (N) =3, agree (A) = 4; and strongly agree (SA) = 5.

The original questionnaire was developed in English and translated to Amharic as most respondents have an understanding of these two languages. To increase the validity of the instrument translation from English to Amharic was done by different language professional and senior academic staffs. The type of questions, forms, wording and sequences were considered carefully while translating in to Amharic.

3.6. Measurement of Variables

In this research, independent, and dependent were used to measure the organizational culture types and TQM implementation respectively.

Table 3. 3: Measurement of Variables and supporting literature

Independent Variables	Dimensions	Supported Literature
OC Types	Group, developmental, Rational & Hierarchical	Cameron and Quinn, (2011),Zu <i>et al.</i> , (2010), Gimenez, <i>et al.</i> , 2013 and Heritage <i>et al.</i> , (2014).
Dependent Variable		
TQM Implementation	Top Management Commitment	Saraph <i>et al.</i> , (1989) and, Motwani, (2003), Abuse (2011) and Haile (2016).
	Customer Focus	Abuse (2011) and Talib and Rahman (2012).
	People Management	Fotopoulos and Psomas (2010), Abuse (2011), Ooi, (2011);Haile,(2016).
	Process Management	Abuse (2011), Al Sabi <i>et al.</i> ,(2017) and Seifemicale, (2018).
	Supplier Relationship	Abuse(2011),Gebremedeh,(2016)and Seifemicale, (2018).
	Continuous Improvement	Abuse, (2011),Haffar,(2014) ;Haile ,(2016).

3.7. Pilot Test

Pilot test is a good way of testing and taking feedback on content, clarity and style of the questionnaire (Saunders, Lewis & Thornhill, 2009). Therefore, to increase the clarity of the questionnaires a pilot test was carried before launching the full scale study. The adapted questionnaires were distributed to 20 selected managers, quality managers, supervisors and employees of the `Dashen and Habesha Breweries. Those respondents were selected based on their industry experience. The result were postive Based on the feedback obtained from each group of respondents some modification were made on the questionnaires.

3.8. Specifications of the Research Model

To examine the impact of OC on TQM implementation the following linear regression model was developed. Variables are carefully selected in review of literature, which needs to be specified. As a rule of thumb, the higher R^2 value in multiple regressions implies more likely that the important variables included in the model. Therefore, the model for the multiple regressions, built in line with the hypotheses of the study, is given as follows:

$$\text{TQMI} = \beta_0 + \beta_1\text{GC} + \beta_2\text{DC} + \beta_3\text{RC} + \beta_4\text{HC} + \varepsilon$$

Where; TQMI represents Total quality management implementation which is dependent variable of the study. where as GC (Group culture), DC (Deveomental culture), RC (Rational culture) and HC (Hierarchal culture) are the main independent variables of the study , β_0 is the constant, β represents the coefficients and ε is error term.

3.9. Data Analysis Technique and Procedures

The data collected through the questionnaires was analyzed using the Statistical Package for Social Sciences (SPSS) version 25 software. The descriptive statistics was employed to quantitatively describe variables and summarize results using frequency, percentage mean and standard deviations. Pearson Correlation coefficient particularly bivariate correlations were used to examine the direction and the strength of the relationship between variables. Moreover, multiple regression analysis was performed to examine the impact of independent variables on dependent variable.

The study compares organizational culture and TQM implementation between Dashen and Habesha breweries. Thus, t-test was used to analyze whether there is a statistically significant difference between the two breweries in terms of Organizational culture and TQM implementation.

3.10. Reliability and Validity of Instruments

To measure the quality of the instruments, both reliability and validity measurement was applied. Validity indicates the degree to which the instrument measures what it is supposed to measure (Kothari, 2009, p.73). One of the methods to test validity, content validity, refers to whether or not the content of the manifest variables (questionnaire) is right to measure the impact of OC on TQM implementation that the researcher trying to measure (Muijs, 2010, p.66). Therefore, this research adopted and translated two widely used, valid and reliable

instruments, which fitted and served the objectives of the current study (Zu *et al.*, 2010; Prajogo and McDermott, 2011; Gimenez, *et al.*, 2013; Heritage *et al.*, 2014).

Reliability is the consistency of results obtained in the research study. Reliability is associated with the accuracy and precision of measurement procedure. One of the types of reliability, internal reliability is very important in connection with multi-scale items that determine whether each scale is measuring a single idea, and hence whether the items that make up the scale are internally consistent (Saunders, *et al.*, 2009). Thus, in this study Cronbach's Alpha was applied to measure the reliability of the questionnaire.

Based on the test for reliability shown in Table 3.4 below, OC types and TQM implementation scale was found to be highly reliable (12 items; $\alpha = .794$), with the reliability Cronbach's alpha statistics of individual constructs ranging from 0.773 to 0.866. According to Hair *et al.* (2010) above, 0.7 level of Alpha value considered the scale has overall stability and consistency. Thus, based on the test of the scales and constructs included, it is revealed that each scale represents a reliable and valid construct.

Table 3.4 Reliability Test of independent and dependent Variables

Variables	Cronbach's Alpha	No. of items
Group Culture (GC)	.866	6
Developmental Culture (DC)	.771	6
Rational Culture (RC)	.777	6
Hierarchical Culture (HC)	.785	6
Top Management commitment (TMC)	.790	6
Customer Focus (CF)	.780	4
People Management (PeoMgt)	.784	6
Process Management (ProMgt)	.795	6
Close relationship with supplier (SR)	.771	5
Continuous Improvement (CI)	.785	6
Over all Reliability	.794	51

Source: spss reliability result output V25, 2019.

3.11. Ethical Issues

Ethical issues are very important and should not be overlooked especially in research projects (Creswell, 2009). This is because the researcher might end up violating a respondent's right. The following ethical issues were taken into account for this study. These issues were; voluntary participation and informed consent no harm to participants, anonymity, deceiving subjects, and analyzing and reporting of the research the findings. All participation in this research was voluntary and participants of the study were given a full description of the study before decided to participate. Every effort in this study guarded against harming any research participant and the researcher will use ethical clearance to collect data. All surveys are kept anonymous for the research. Lastly, all of the data that is analyzed was reported in this study.

CHAPTER FOUR

4. DATA PRESENTATION ANALYSIS AND INTERPRETATION

The purpose of this study was to examine the impact of organizational culture (independent variable) on TQM implementation (dependent variable). A quantitative method was applied and data was collected through a survey questionnaire. In this chapter, the data was statistically analyzed using SPSS version 25 and the results were presented in three sections. The first section consists of analysis of personal and organization demographics; profile of organizational culture and TQM implementation. Descriptive statistics was used for this analysis. In the second section data analysis was conducted through correlation analysis and regression analysis to examine the impacts of organizational culture on TQM implementation. In the thired section an independent-sample t-test was performed to test whether there were any differences in organizational culture types and level of TQM implementation between the Dashen and Habesha Breweries.

4.1. Data Response Rate

A total of 222 questionnaires were distributed to the selected employees of Dashen and Habesha breweries. Out of these questionnaires, 203 questionnaires were returned, of which 192 were completed and usable, while 11 questionnaires were either incomplete or ineligible. As a result, the overall response rate was 87.3 percent, which is acceptable for data analysis and discussion of the study.

Table 4. 1: Response rate

Description	Dashen Brewery S.C.	Habesha Brewery S.C.	Total
Questionnaires distributed	124	98	222
Questionnaires returned	111	92	203
Questionnaires not returned	13	6	19
Incomplete	7	4	11
Usable responses	104	88	192
Response rate (%)	86%	. 88.9%	87.3%

Source: researcher's own compilation of Survey data 2019

4.2.1. Demographic characteristics of respondents

The first part of the questionnaire consists of six items about demographic information of the respondents. It covers the personal data of respondents, such as gender, age, educational qualification level, work experience, department/work Unit/, job position and classification. The following table reveals the summary of demographic characteristics of the respondents.

Table 4.2(a) Profile of the Respondents

Variables	Description	Dashen Breweries		Habesha Breweries	
		Frequency	Percent	Frequency	Percent
Gender	Male	76	73.1	68	77.3
	Female	28	26.9	20	22.7
	Total	104	100	88	100
Age	20-29	59	56.7	53	60.2
	30-39	31	29.8	27	30.7
	40-50	12	11.5	8	9.1
	>50	2	2	0	0
	Total	104	100	88	100
Level of Education	TVET	38	36.5	32	36.4
	Diploma	18	17.3	16	18.2
	BA/BSC	45	43.3	39	44.3
	MA/MSC and above	3	2.9	1	1.1
	Total	104	100	88	100

Table 4.3(b) Profile of the Respondents

Variables	Description	Dashen Breweries S.C		Habesha Breweries S.C	
		Frequency	%	Frequency	%
Position of the respondents	Manager	7	6.7	5	5.7
	Supervisor	15	14.4	12	13.6
	Employee	82	78.9	71	80.7
	Total	104	100	88	100
Respondents Department /work unit	Production and Operations	67	64.4	63	71.6
	Inventory system	10	9.6	6	6.8
	Marketing & sales	8	7.7	5	5.7
	Finance & Accounting	7	6.7	5	5.7

	Purchasing and procurement	6	5.8	4	4.5
	Human resource	6	5.8	5	5.7
	Total	104	100	88	100
Work experience	< 3 years	25	24	25	28.4
	3 to 5 years	36	34.6	34	38.6
	6 to 8 years	19	18.3	17	19.3
	8 to10 years	8	7.7	9	10.7
	>10 years	6	1.2	3	3.4
	Total	104	100	88	100

Source: survey result (2019)

Regarding gender distribution, as can be seen from the Table 4.2 (a) above, 73.1% of the Dashen breweries' respondents are male and the rest 26.9% are female. When it comes to Habesha breweries 77.3% are male and the rest 22.7% are female. From this it can be inferred that majority of the respondents in the both Breweries are dominated by male.

As it can be seen in Table 4.2 (a) above, the age composition of the respondents' the majority of the sampled respondents' age group fall between the ages of 20 up to 29 which accounts 56.7% and 60.2% of the total number of sampled respondents in Dashen and Habesha breweries respectively. The percentages of age between 30 and 40 are 29.8% and 30.7% in Dashen and Habesha breweries respectively. In this demographic composition even though the two breweries have unbalanced sex composition in selected sample units which is because of the nature of the work which is mainly practical work and not comfortable to females, the sampled respondents are young and productive work force that can apply better use of methods so as to improve TQM implementation.

According to Table 4.2 (a) above, the educational level of the sample respondents indicates that 36.5% of the respondents are TVET graduates while Diploma, BA/BSc Degree and MA/MSc holders are 17.3%, 43.3%, and 2.9 % respectively in Dashen breweries. When it comes to Habesha breweries 36.4%, 18.2%, 44.3% and 1.1percentage are TVET, Diploma, BA/BSc Degree and MA/MSc holders respectively. This shows that Both the Breweries have an educated work force that can work for the organizational productivity, and this can ensure us the response for the questionnaire which is field by employees' with good educational background to be valid.

As it can be seen in Table 4.2 (b) above, the position held by the respondents' majority of the respondents are employees which amounts to 78.9% and 80.7% of Dashen breweries and Habesha breweries respectively. In the Dashen breweries, the percentage for managers and supervisors is 6.7% and 14.4% respectively. While in the Habesha breweries, the percentage for managers and supervisors is 5.7% and 13.6% respectively. Respondents were taken from the six departments of Dashen and Habesha breweries.

As it can be seen in Table 4.2 (b) above, majority of the respondents, 64.4 % and 71.6 % were taken from production and operations department respectively. In Dashen breweries the remaining 9.6%, 7.7%, 6.7%, 5.8% and 5.8% were taken from inventory system, marketing, sales, finance, accounting, purchasing, procurement, and human resource departments respectively. When it comes to Habesha breweries, 6.8%, 5.7%, 5.7%, 4.5% and 5.7% were selected from inventory system, marketing, sales, finance, accounting, purchasing, procurement, and human resource departments respectively. This shows that representative respondents were taken from the six departments of both the breweries.

Regarding the years of experience of respondents, table 4.2(b) above indicated that, 24.0% of the Dashen breweries respondents have less than 3 years experience. While 34.6%, 18.3%, 7.7% and 1.2% of respondents were between 3 and 5, between 6 and 8, between 8 and 10, and more than 10 years respectively. While in Habesha breweries, 28.4 % of the respondents have less than 3 years experience while 38.6%, 38.6%, 19.3%, 10.7% and 3.4% of respondents were between 3 and 5, between 6 and 8, between 8 and 10, and more than 10 years respectively. This shows that majority of the both the firms have much similarly experienced employees.

4.2.2. Background information about the firms

Background information of the firms includes age of the firm, the number of permanent employees and duration TQM.

Table 4.4 Background information of the firms

Variables	Dashin Breweries S.C.	Habesha Breweries S.C.
Age of the company	7 years	6 years
Number of employees	279	220
TQM Duration	6years	5 years

ISO Certification	ISO 9001 and ISO 14001	on process
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Source: own survey, 2019

As can be in Table 4.4 above, Dashen and Habesha breweries have closely similar years of operation (7 and 6 Years) respectively. Regarding the numbers of permanent employees, Table 4.4 above presented that the number of permanent employees is 279 and 220 respectively for company Dashen and Habesha breweries. It indicated that both companies can be categorized as medium size. With respect to TQM duration, both companies have adequate TQM experience (more than 5 years). Regarding ISO certification only Dashen breweries is ISO 9001 and ISO 14001 certified. Yet, Habesha brewery is in the implementation phase.

4.3 Descriptive Analysis

In this section, descriptive analysis (mean and standard deviation) was performed to identify the existing organizational culture and the level of TQM implementation in Dashen and Habesha breweries.

4.3.1. Identifying the OC types existing in Dashen and Habesha breweries

The mean of the four Organizational culture types were calculated to identify the dominant types of organizational culture existed in Dashen and Habesha breweries. According to Zaidatol and Bagheri (2009), the mean score below 3.39 is considered as low; the mean score from 3.40 up to 3.79 is considered as moderate and mean score above 3.8 is considered as high as shown below.

Table 4. 5: Comparison bases of mean score of five point Likert scale instruments

No	Mean value	Description
1	<3.39	Low
2	3.40 up to 3.79	Moderate
3	>3.8	High

Source: Zaidatol and Bagheri (2009)

For the sake of interpreting the results of the study, this research adopted the interpretation scores from *Zaidatol and Bagheri (2009)*. The mean score below 3.39 is considered as low; the

mean score from 3.40 up to 3.79 is considered as moderate and mean score above 3.8 is considered as high as shown below.

Table 4.6 Mean and Standard Deviation of OC types

Type of organizational culture types	Dashen Breweries (N=104)		Habesha Breweries (N=88)	
	Mean	SD	Mean	SD
Hierarchical	4.01	.224	4.03	.203
Rational	3.85	.286	3.99	.273
Group	3.25	.436	2.88	.539
Developmental	2.83	.522	2.64	.564

Source: survey result spss v.25, (2019).

Table 4.6 indicated that the overall mean and Standard deviation of each organizational culture types in Dashen and Habesha breweries. According to the results, hierarchical culture is the most dominant (mean = 4.01 and 4.03), rational culture with a mean score of 3.85 and 3.99 is the second most dominant, while group culture is third in ranking with a mean score of 3.25 and 2.88. Finally, developmental culture was the weakest (mean = 2.83 and 2.64) in Dashen and Habesha breweries respectively. Thus, the findings show that both breweries are predominantly inclined towards a mix of hierarchical and rational culture types. The general tendency is therefore towards control, centralization, stability, and predictable performance outcomes (hierarchical culture); and task focus, goal achievement, efficiency, productivity and profitability (rational culture).

4.3.2. The Level of TQM implementation in Dashen and Habesha breweries

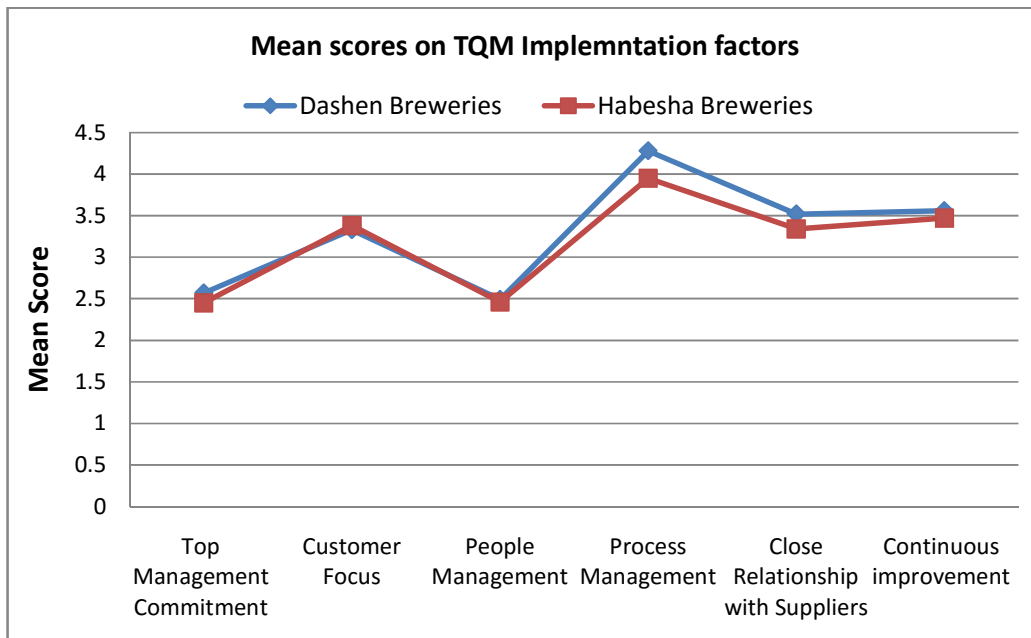
The means of the six critical success factors (CSFs) was computed to analyze the implementation level of TQM practices in Dashen and Habesha breweries.

Table 4.7: Mean and std. deviation of the TQM implementation factors

TQM implementation Factors	Dashen Breweries S.C. (N=104)		Habesha Breweries S.C. (N=88)	
	Mean	SD	Mean	SD
Top Management Commitment	2.57	.744	2.42	.873
Customer Focus	3.33	.679	3.38	.629
People Management	2.49	.789	2.46	.807
Process Management	4.28	.353	3.95	.628
Relationship with Suppliers	3.52	.665	3.34	.661
Continuous improvement	3.56	.604	3.47	.619
Mean of over all TQM implemntation	3.30	.522	3.17	.498

Source: survey result spss v.25, (2019)

Figure 3. Mean scores on TQM implementation of Dashen and Habesha breweries



Source: survey result spss v.25, (2019)

Table 4.7 and fig 3 above, illustrates the mean, standard deviation and total number of respondents for each TQM implementation factors. Overall, the results show relatively medium mean scores on five of the TQM implementation factors in Dashen and Habesha breweries respectively. Comparing the factors score by the brewery companies in table 4.7 and fig 3 Dashen breweries had the highest process management factors score (4.28) whilst Habesha breweries had a slightly lower score (3.95). Continuous improvement was the moderate in Dashen breweries (3.56) and slightly lower in Habesha breweries (3.47). Close relationship with suppliers score in Dashen breweries was moderate (3.52) but a little lower (3.24) in Habesha breweries. The customer focus score in Dashen breweries was low (3.33) but a little higher (3.38) in Habesha breweries. The score on top management commitment was lowest in Dashen breweries (2.57), and Habesha breweries (2.57). The people management factor had the lowest score in Dashen breweries (2.49) and lowest in Habesha breweries (2.42). Based on the results given in table 4.7 and fig 3, the overall mean of Dashen and Habesha breweries is 3.30 and 3.17 respectively. This shows that TQM is implemented in both breweries at a low level.

4.4. Correlation Analysis

According to Saunders *et al.*, (2009, p.490) a correlation analysis used to identify the direction and relationship between the variables. Another reason why this research carries out correlation test is to measure the multicollinearity. Multicollinearity is an unfavorable situation which occurs when two or three independent variables are highly associated among each other ($R > 0.9$), which would lead to a wrong data interpretation.

As cited by Hair *et al.*, (2009) the range of correlation is more likely to have a stronger the relationship between the variables is a correlation close to -1 or 1. A correlation of 0.01 to 0.3 indicates a weak positive relationship; while a correlation of -0.01 to -.3 indicates a weak negative relationship. A correlation of 0.31 to 0.69 indicates a moderate positive relationship while a correlation of -0.31 to -0.69 indicates a moderate negative relationship. A correlation above 0.7 indicates a strong positive, and a correlation below -0.7 indicates a strong negative relationship. In this study, the researcher has used the above range in order to established relationship with the perspective variables.

4.4.1. Correlation Analysis of Dashen breweries S.C

Table 4.8 Correlation Coefficients

	Variables	1	2	3	4	5
1	Group culture	1				
2	Developmental	0.670*	1			
3	Rational Culture	0.410*	0.468**	1		
4	Hierarchal culture	0.582**	0.489**	0.462**	1	
5	TQM	0.746**	0.605**	0.170	0.131	1
*.Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed). N=104						

Source: *survey, SPSS V25, 2019*

As shown in the Table 4.8, dependent variable TQM implementation has strong and positive correlation with the two independent variables, group culture ($r=.746$, $P<0.01$) and developmental culture ($r=.605$, $P<0.01$). When it comes to the other two independent variables correlation coefficient association with the dependent variable is not statically significant, rational culture ($r=0.170$, $P >0.01$) and hierarchal culture ($r=0.131$, $P>0.01$). The table also indicated that no multicollinearity among independent variables (all variables scored $r<0.8$). The table also shows that the highest correlation of 0.746 was for the correlation between process management, and continuous improvement, while the lowest correlation, 0.131, was for the correlation between group culture, and continuous improvement.

4.4.2. Correlation Analysis of Habesha breweries S.C

Table 4. 9: Correlation Coefficients

	Variables	1	2	3	4	5
1	Group culture	1				
2	Developmental	0.670*	1			
3	Rational Culture	0.444*	0.542*	1		
4	Hierarchal culture	0.352**	0.489**	0.526**	1	
5	TQM	0.686*	0.582*	0.029	-0.063	1
*.Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed). N=88						

Source: *survey, SPSS V25, 2019*

As can be seen in the Table 4.9; above, dependent variable TQM implementation has strong and positive correlation with the two independent variables, group culture ($r=.686$, $P<0.01$) and developmental culture ($r=.586$, $P<0.01$). When it comes to the other two independent variables correlation coefficient association with the dependent variable is not statically significant, rational culture ($r=.029$, $P >0.01$) and hierarchal culture ($r=-.063$, $P>0.01$). The table also shown that no multicollinearity among independent variables (all variables scored $r<0.8$). The table also shows that the highest correlation of $.686$ was for the correlation between process management, and continuous improvement, while the lowest correlation, $-.063$, was for the correlation between hierarchal culture, and TQM implementation. Therefore, the researcher performed a regression analysis in order to conduct a conclusive and statistically significant out come on whether there is an effect of OC types on TQM implementation.

4.5 Diagnostics in Regression

Prior to the statistical analysis, the assumptions required for the correct application of regression analysis needs to checked (Hair *et al.*, 2009). The important assumptions that are to be tested in this section are; independent variables should not be too strongly correlated to one another (Multicollinearity), the value of residuals to be independent from one another (autocorrelation), and the residuals should be normally distributed (normality). Thus, for this following tests were performed using over all data to check whether the data fits the assumptions of linear regression in order to conclude the analysis results are valid and reliable.

4.5.1 Autocorrelation

It is an assumption that the value of residuals to be independent from one another (or uncorrelated). To check this assumption we need to look at the regression output of model summary box. Durbin-Watson statistic uses to test the assumption that our residuals are independent (or uncorrelated). This statistic can vary from 0 to 4. For no autocorrelation assumption, Durbin-Watson statistic value needs to be close to 2. A value of two indicates no autocorrelation. A value of towards zero indicates positive autocorrelation. A value towards four indicates negative autocorrelation (Saunders et al., 2009, p.622).

Table 4. 10: Autocorrelation model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.741	.682	.617	.5964	1.919
Predictors: (Constant), Group culture, Developmental culture, Rational culture, Hierarchal culture. Dependent Variable: TQM Implementation					

Source: own survey, SPSS V25, 2019

From Table 4.10, it can be seen that the value of Durbin Watson equal to 1.92, since the result lies within the suggested number 2. From this, it can be inferred that there is no autocorrelation.

4.5.2 Multicollinearity

If there is a high degree of correlation between independent variables, there is a problem of multicollinearity (Kothari, p.142). This is essentially the assumption that the predictors are not too highly correlated with one another. Multicollinearity of this study is checked by computing *correlation matrix* (Pearson's bivariate correlations) among all independent variables; the magnitude of the correlation coefficients should be less than .90. Since, the correlation matrix result on table 4.7 and 4.8 revealed that the highest correlation is $r = .886$. Therefore, multicollinearity is not an issue in this study.

Multicollinearity assumption can be also tasted by looking at the coefficients table. As explained by Muijs (2010, p.181) Tolerance and Variance Inflation Factors (VIF) do exactly the same thing, tolerance is the amount of variance in the individual variable not explained by the other predictor variables. It varies from 0 to 1, a value close to 1 indicates that the other predictors do not explain the variance in that variable. A value close to 0 implies almost all the variance in the variable is explained by the other variables. This permits us to more formally check that our independent variables are not too highly correlated. To meet multiple regression assumptions we need tolerance score above 0.2 and VIF scores below 10.

Table 4.11 Multicollinearity test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Group culture	.497	2.010
	Developmental culture	.533	1.876
	Rational culture	.491	2.037
	Hierarchal culture	.392	2.550

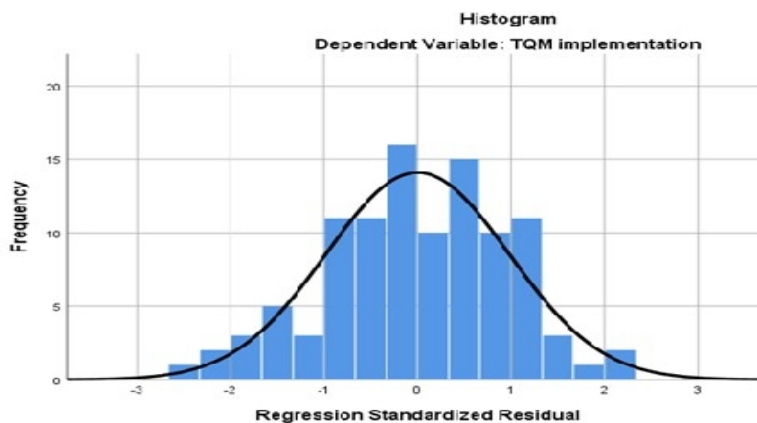
Source: own survey, SPSS V25, 2019

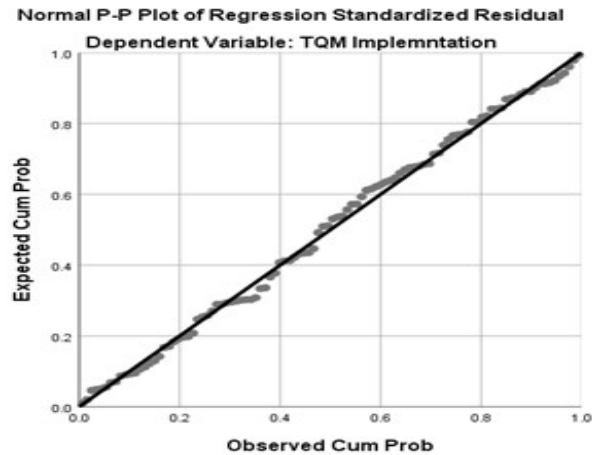
As indicated in the above Tables 4.11 analysis of collinearity statistics show this assumption has been met, as no relationship of predictors equals or above coefficient value of 0.8 and VIF scores shown below 10, and tolerance scores above 0.2.

4.5.3 Normality

This assumption is used to determine whether the residuals (the errors between observed and predicted values) are normally distributed. This can be tested by looking at the Histogram and P-P plot for the model. To say the Normality assumption of this study is met, the Histogram should be symmetric along the center 0 and the dots at the P-P Plot should be closer to the diagonal line; Normal P-P plot –points should lie in reasonably straight diagonal line from bottom left to top right. In this case, figures below depicts that Histogram is symmetric and the P-P plot the dots are also drawn closer to the diagonal line, indicating that assumption of normality is met.

Figure 4: Normality test





Source: SPSS V25, 2019

4.6. Testing the Hypotheses

In this research five hypotheses (H) have been developed:

H1: *Organizational culture types have a positive impact on TQM implementation of Dashen and Habesha breweries*

H1a: *Group Culture has a positive impact on TQM implementation of Dashen and Habesha breweries.*

H1b: *Developmental culture has a positive impact on TQM implementation of Dashen and Habesha breweries.*

H1c: *Rational culture has a positive impact on TQM implementation Dashen and Habesha breweries.*

H1d: *Hierarchical culture has a positive impact on TQM implementation Dashen and Habesha breweries.*

H2: *There is a significant difference in the impact of organizational culture types on TQM implementation between Dashen and Habesha Breweries.*

In the following section, the hypotheses will be tested using multiple regression for **H1**, **H1a**, **H1b**, **H1c** and **H1d**, and an independent sample t-test for **H2** will be tested .

4.7. Regression Analysis

Multiple regressions was used to test the hypotheses of the third objective, which aim to examine the impact of organizational culture types (Developmental, Hierarchical, Group, and Rational Culture) as independent variables on TQM implementation as dependent variable. In this study first standard regression, method was used to determine the overall predication equation and then statistical/stepwise/ method of regression used to identify the unique contribution of each independent variable under study. The hypotheses were tested at 5 percent level of significance as a statistic basis for drawing conclusions.

4.7.1. Regression Analysis for Dashen Breweries

4.7.1 (a) Overall impact of organizational culture types on TQM implementation for Dashen Breweries

To know about the overall impact of organizational culture types on the implementation of TQM multiple regressions using the following model was run for Dashen breweries:

$$Y = a + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \epsilon$$

$$TQMI = \beta_0 + \beta_1 (\text{group culture}) + \beta_2 (\text{developmental culture}) + \beta_3 (\text{rational culture}) + \beta_4 (\text{hierarchical culture}) + \epsilon$$

Table 4.12 Summary of Regression Model for Dashen Breweries

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.764	.672	.625	0.672
Predictors: (Constant), Group culture, developmental culture, rational culture Hierarchical culture Dependent Variable: TQM Implementation				

Source: Survey data, SPSS V25, (2019)

Table 4.12 above shows that the value of adjusted R square which is called the coefficient of determination, is the percent of the variance in the dependent explained uniquely or jointly by the independent variables. The model had an adjusted R square coefficient of .625 signifying that 62.5% of the variation in TQM implementation is explained by the variation in organizational culture types and the remaining 37.5% of the variance is explained by other factors.

Table 4.13 Analysis of variance (ANOVA) for Dashen Breweries

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	24.177	4	4.030	80.051	.000
	Residual	3.404	100	.035		
	Total	27.582	104			
Predictors: (Constant), Organizational Culture						
Dependent Variable: TQM implementation						

Source: survey, SPSS V25, 2019

The above ANOVA Table indicates the statistical significance of the regression model that was run. table 4.13 above shows the F-test results (4, 100) = 80.051, was positive and significant at $p = 0.000 < 0.05$. It indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data). Therefore, the hypothesis proposed that *Organizational culture types have a positive impact on TQM implementation is accepted.*

Table 4. 14: Regression coefficient for Dashen Breweries

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.112	.088		1.272	.001
	Group Culture	.392	.095	.384	3.602	.000
	Developmental Culture	.286	.084	.278	2.959	.000
	Rational Culture	.016	.053	.129	0.294	.069
	Hierarchical Culture	-.172	.062	-.170	-1.792	.075
Dependent Variable: TQM Implementation						

Source: own survey, SPSS V25, 2019

Results in Table 4.14 indicate a multiple linear regression Analysis for Dashen breweries. The regression model of this study indicated as follows:

$$TQM (\text{Dashen Breweries}) = 0.112 + 0.392 GC + 0.268 DC + 0.016 RC + -0.172 HC + \varepsilon \dots (1)$$

From the above regression equation, it was revealed that holding group, developmental, rational and hierarchical cultures to a constant zero, TQM implementation of Dashen breweries would be at 11.2%, a unit change in group culture would lead to 39.2% change in TQM implementation, while a unit change in developmental culture would change TQM implementation by 28.6%. However, the effect of rational culture and hierarchy culture are not significant. The finding of the study indicates that the composite index of quality management practices was significant, and thus group culture and developmental culture had an impact on TQM implementation.

4.7.1(b) Regression on the impact of each organizational culture types on TQM implementation for Dashen Breweries

In order to see the impact of each independent variables (organizational culture types) on TQM implementation, step-wise regression analysis was conducted for Habesha breweries.

Table 15: Step: Step-wise regression of independent variables for Dashen breweries

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Model Summery
		B	Std. Error	Beta			
1	(Constant)	.083	25.08		1.272	.051	F sig. P=.000 Adjusted R ² =.413
	Group Culture	.392	.095	.384	3.602	.000	
2	(Constant)	.892	5.80		1.533	.000	F sig. P=.000 Adjusted R ² =.617
	Group Culture	.386	.084	.374	2.959	.000	
	Developmental Culture	.279	.084	.268	2.959	.000	
Dependent Variable: TQM Implementation							

Source: own survey, SPSS V25, 2019

Table 4.15 above also shows the relative contribution of each of the independent variables on dependent variable. From table 4.18, above the standardized beta coefficient, it can be seen that only the two independent variable, group culture ($\beta = 0.374$, $p < 0.001$) and developmental culture ($\beta = 0.268$, $p < 0.005$) have positive and significance impact on TQM implementation. However, rational culture and hierarchical culture are not significant. Hence, it is concluded that **H1a** and **H1b** are accepted, indicating that group culture and developmental culture had an impact on TQM implementation, and **H1c**, and **H1d** are

rejected, meaning that hierarchical culture and market culture did not have any impact on TQM implementation.

4.7.2. Regression Analysis for Habesha Breweries

4.7.2(a) Overall impact of organizational culture types on TQM implementation

Table 4.15 Model Summary for Habesha Breweries

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.741	.613	.574	0.574
Predictors: (Constant), Group, developmental, rational ,Hierarchical cultures Dependent Variable: TQM Implementation				

Source: Survey data, SPSS V25, (2019)

Table 4.15 above shows that the value of adjusted R square which is called the coefficient of determination, is the percent of the variance in the dependent explained uniquely or jointly by the independent variables. The model had an adjusted R square coefficient of .574, signifying that 57.4% of the variation in TQM implementation can be explained by the variation in organizational culture types and the remaining 38.3% of the variance is explained by other factors.

Table 4. 16: Analysis of variance (ANOVA) for Habesha Breweries

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.523	4	5.381	122.484	0.000
	Residual	3.646	84	.044		
	Total	25.169	88			
Predictors: (Constant), Organizational Culture types Dependent Variable: TQM implementation						

Source: survey, SPSS V25, 2019

The ANOVA results, Table 4.16 above indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data). The F-test results (4, 100) = 80.051, was positive and significant at $p = 0.000 < 0.05$. Therefore, the

hypothesis proposed that *Organizational culture types have a positive impact on TQM implementation is accepted.*

Table 4. 17: Regression Coefficients for Habesha Breweries

Model		Un standardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.890	5.80		1.533	.132
	Group Culture	.381	.048	.364	3.602	.000
	Developmental Culture	.248	.049	.278	2.966	.003
	Rational Culture	.024	.053	.138	0.352	.057
	Hierarchical Culture	-.163	.062	-.160	-1.765	.240
Dependent Variable: TQM Implementation						

Source: own survey, SPSS V25, 2019

Results in Table 4.17 indicate a multiple linear regression analysis for Habesha breweries. The regression model of this study indicated as follows:

$$TQM \text{ (Habesha Breweries)} = 0.089 + 0.381 GC + 0.248 DC + 0.024 RC + 0.163 HC + \varepsilon \dots\dots (2)$$

From the above regression equation, it was revealed that holding group, developmental, rational and hierarchical cultures to a constant zero, TQM implementation of Dashen breweries would be at 8.9 %, a unit change in group culture would lead to 38.1% change in TQM implementation, while a unit change in developmental culture would change TQM implementation by 24.8%. However, the effect of rational culture and hierarchy culture are not significant. The finding of the study indicates that the composite index of organizational culture types was significant, and thus group culture and developmental culture had an impact on TQM implementation.

4.7.2(b) The impact of each organizational culture types on TQM implementation for Habesha Breweries

In order to see the impact of each independent variable (organizational culture types) on TQM implementation, step-wise regression analysis was conducted for Dashen and Habesha breweries.

Table 4.18 Step-wise regression of independent variables for Habesha breweries

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Model Summery
		B	Std. Error	Beta			
1	(Constant)	.713	24.03		1.352	.000	F sig. P=.000 Adjusted R Square=.413
	Group Culture	.392	.232	.384	3.602	.000	
2	(Constant)	.874	5.74		1.533	.000	F sig. P=.000 Adjusted R Square=.581
	Group Culture	.396	.084	.381	2.959	.000	
	Developmental Culture	.249	.084	.243	2.959	.000	
Dependent Variable: TQM Implementation							

Source: own survey, SPSS V25, 2019

Table 4.18 above, shows the relative contribution of each of the independent variables on dependent variable. From table 4.18, above the standardized beta coefficient, it can be seen that only the two independent variable, group culture ($\beta = 0.381$, $p < 0.001$) and developmental culture ($\beta = 0.243$, $p < 0.005$) have positive and significance impact on TQM implementation. However, the effect of market culture and hierarchy culture are not significant; rational culture (and hierarchical culture. Hence, it is concluded that **H1a** and **H1b** are accepted, indicating that group culture and developmental culture had an impact on TQM implementation, and **H1c**, and **H1d** are rejected, meaning that hierarchical culture and market culture did not have any impact on TQM implementation.

4.8. Independent Sample T-test

An independent-sample t-test was also conducted to test whether there were any differences in the impact of organizational culture types on the level of TQM implementation between the Dashen and Habesha breweries. Hypotheses were formulated as follows:

H2. There is a significant difference in the impact of organizational culture on TQM implementation between Dashen and Habesha Breweries.

Table 4. 19: Independence sample T-test for Dashen and Habesha breweries

Variable	Dashen Breweries S.C (N=104)		Habesha Breweries S.C (N=88)		Independent Sample T-test Results	
	Mean	SD	Mean	SD	T	Sig. (2-tailed)
Group culture	3.25	.436	2.88	.539	3.39	.001
Developmental culture	2.83	.522	2.64	.564	7.40	.000
Rational culture	3.85	.286	3.99	.273	-3.54	.001
Hierarchical culture	4.01	.224	4.03	.203	4.21	.677
TQM implantation	3.30	.522	3.17	.498	2.99	.003

Source: survey result ,spss v.25, (2019)

The t-test results as shown in Table 4. 18 confirm that the two breweries differ significantly in the types of existing organizational culture and the level of TQM implementation scores, [(M=3.25, SD=.436; t(190) =3.39, p <.01] for group culture, [(M=2.83, SD=.522; t(190) =7.65, p <.01] for developmental culture, [(M=3.85, SD=.286; t(df=190) =-3.52, p <.01] for rational culture and [(M=3.30, SD=.522; t(190) =-2.99, p <.01] for TQM implementation. However, the two breweries are not significantly different in one area which is hierarchical culture ($p < 0.05$). In this case, the null hypothesis “*There is no significant difference in level of TQM implementation between Dashen and Habesha breweries*” is rejected for group, developmental, rational cultures, TQM implementation and is accepted only for hierarchical culture.

4.9 Discussion of Findings

The study was carried out in order to compare the impacts of organizational culture on TQM implementation between Dashen and Habesha Breweries. Based on the result of the above data analysis the following findings are discussed.

According to the study findings, both breweries are predominantly inclined towards a mix of hierarchical and rational culture types. The general tendency is therefore towards control, centralization, stability, and predictable performance outcomes (hierarchical culture); and task focus, goal achievement, efficiency, productivity and profitability (rational culture). Due to the dominant role of control oriented culture types, both breweries show a propensity for a stable, predictable, and mechanistic character while TQM is more perceived to need a changing, adaptable, and organic character to fully flourish.

Both breweries have a 'low score' in group culture which is a sign of a potentially considerable lack of employee participation in decision making; open discussion and communication; empowerment of employees to act; value of human relations, teamwork and cohesion; and developing human resources through training. Under such conditions, employees may find it difficult to justify their commitment and contribute whole-heartedly to the production of quality products and services, or to the improvement of the business operations (Prajogo and McDermott, 2009). Perhaps the most central prerequisite of successful TQM program is good communication between top management and employees, mentioned explicitly by most of the authors, while a second important dimension is employee involvement or empowerment (Zeitz et al., 1997). According to the findings, both of these critical characteristics are somewhat deficient in the survey population. Similarly the low score on developmental culture also suggests that the organizations in the survey population lack flexibility and decentralization that in turn is likely to restrain expansion, growth and development due to lack of innovation and creative problem solving processes (Baird *et al.*, 2011 and Gimenez *et al.*, 2013). The study also computed the means of the six critical success factors (CSFs) to compare the implementation level of TQM practices between Dashen and Habesha breweries. The results show that TQM was implemented in both breweries at a medium level.

The study also further analyzed through the application of Pearson's coefficient of correlation and regression analysis. The finding shows that dependent variable TQM implementation has strong and positive correlation with the two independent variables, group culture and

developmental culture. When it comes to the other two independent variables correlation coefficient association with the dependent variable is not statically significant, rational culture and hierarchal culture.

The value of multiple coefficient of determination (Adjusted R^2) in Dashen and Habesha breweries .625, signifying that 62.5% of the variation in TQM implementation is explained by the variation in organizational culture types while the rest of 38.3% TQM implementation is influenced by some other variables. For Habesha breweries Adjusted R^2 is .574 , suggesting that 57.4% of the variation in TQM implementation is explained by the variation in organizational culture types while the rest of 42.6% TQM implementation is influenced by some other variables. Moreover, the coefficients variables show that only the two independent variable shows that two independent variables (developmental culture and group culture) had a significant contribution (p -values=.000) to the TQM implementation. However, two independent variables (rational culture and hierarchical culture) did not make a significant contribution to the TQM implementation.

Several researchers (e.g., Zu et al., 2009; and Prajogo and McDermott, 2009) have investigated the impact of the group culture on the TQM implementation. Largely, these studies highlighted the significant impact that group culture can have on the TQM implementation factors. The results of these studies thus inferentially support the argument that promoting group culture will help to effectively improve TQM implementation. Like group culture, developmental culture would be expected to help TQM implementation factors such as employee participation, empowerment, involvement and communication (Gimenez *et al.*, 2013).

Moreover, independent t-test was conducted in order to see whether there is difference in impact of organizational culture on TQM implementation between Dashen and Habesha breweries and the results were significant leading to conclude that there is significant difference between Dashen and Habesha breweries in the level of TQM implementation and organizational cultural background.

4.9.1 Summary of hypothesis Testing

The Hypothesis of this study were tested by using multiple regression techniques and independent T-Test. The results are summarized in the Table 4.20 below.

Table 4. 20: Summary of Results of hypothesis Testing

Hypothesis	Description	Decision
H1	Organizational culture types have a positive impact on TQM implementation in Dashen and Hanesha Breweries.	Accepted
H1a	Group Culture has a positive impact on TQM implementation factors.	Accepted
H1b	Developmental culture has a positive impact on TQM implementation factors.	Accepted
H1c	Rational culture has a positive impact on TQM implementation factors.	Rejected
H1d	Hierarchical culture has a positive impact on TQM implementation factors.	Rejected
H2	There is a significant difference in the impact of organizational culture types on TQM implementation between Dashen and Habesha Breweries.	Accepted

Source: Hypothesis testing result, 2019

CHAPTER FIVE

5. SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter comprises of the summary of findings, conclusions, and recommendations of the research study.

5.1 Summary of Findings

This study aimed to compare the impacts of organizational culture on TQM implementation between Dashen and Habesha breweries. A total of 220 questionnaires were distributed for randomly selected employee of the two breweries. From the distributed questionnaire 192 were returned and the response rate was 87.27%. which is acceptable for data analysis.

The background information of respondents in both breweries indicates that the majority of the respondents are male which account 144 (77.3%) of the total respondent. The age distribution shows that most of respondents are aged in the range of 20-30 with 58.4% of the total respondents. 43.8% are degree holders, and 36.5% of respondents have tenure of three to five years. When it comes to background information of the firms, both firms have similar TQM duration and year of operation with a medium number of employees.

The results of the descriptive analysis indicated that hierarchical culture (mean = 4.01 and 4.03) and rational culture with a mean score of 3.85 and 3.99 are the dominant cultures, while group (3.25 and 2.88) and developmental culture (2.83 and 2.64) were the weakest in Dashen and Habesha breweries respectively. Thus, the findings show that both breweries are predominantly inclined towards a mix of hierarchical and rational culture types. The general tendency is therefore towards control, centralization, stability, and predictable performance outcomes (hierarchical culture); and task focus, goal achievement, efficiency, productivity and profitability (rational culture). The means of the six critical success factors (CSFs) of TQM were computed to determine the implementation level of TQM practices in Dashen and Habesha breweries. Overall, the result shows that TQM is implemented in both breweries at a medium level ($M < 3.39$).

The result of correlation shows that for Dashen breweries dependent variable TQM implementation has strong and positive correlation with the two independent variables, group culture ($r = .746$, $P < 0.01$) and developmental culture ($r = .605$, $P < 0.01$). When it comes to the

other two independent variables correlation coefficient association with the dependent variable is not statically significant ($P > 0.01$). Similarly, for Habesha breweries group culture ($r = .686$, $P < 0.01$) and developmental culture ($r = .586$, $P < 0.01$) have strong and significant correlation with the dependent variable (TQM implementation) while rational culture and hierarchal culture ($r = .029$, $P > 0.01$) and hierarchal culture ($r = -0.063$, $P > 0.01$) are not significantly correlated.

The researcher also implemented multiple regression analysis to understand to what extent the organizational culture impacts TQM implementation in Dashen and Habesha breweries. The over model summary of multiple regression analysis revealed that the adjusted R square value of .596 for Dashen and Habesha breweries signifying that 59.6% of the variation in TQM implementation is explained by the variation in organizational culture types. More specifically, multiple regression analysis was performed to examine the impact of each organizational culture types (group culture, development culture, and market hierarchical culture) on TQM implementation. The result revealed that that two independent variables (developmental culture and group culture) have positive and significant effect on TQM implementation (p -values = .000) to the TQM implementation. But, rational and hierarchical cultures did not make a significant contribution to the TQM implementation.

Moreover, independent t-test was conducted in order to see whether there is difference in impact of organizational culture on TQM implementation between Dashen and Habesha breweries and the results were significant leading to conclude that there is significant difference between Dashen and Habesha breweries in the level of TQM implementation and organizational cultural background.

5.2. Conclusion

The main objective of this research was to compare the impact of organizational culture on TQM implementation in Dashen and Habesha Breweries.

In order to achieve this, the following four specific objectives were formulated:

1. To identify the types of organizational culture existing in Dashen and Habesha Breweries.
2. To determine the level of TQM implementation between Dashen and Habesha Breweries.

3. To investigate the impact of organisational culture types on TQM implementation in Dashen and Habesha Breweries.
4. To find out if there is any significant difference in the impact of Organizational culture types on TQM implementation between Dashen and Habesha breweries.

The conclusions drawn from this study are presented in relation to each of the above objectives:

First objective: To identify the types of organizational culture existing in Dashen and Habesha breweries.

To achieve the first objective, the mean score of the four Organizational culture types (group, developmental, rational and hierarchical) were computed. The finding indicated that both breweries are predominantly inclined towards a mix of hierarchical and rational culture types. This implies that the general tendency is towards control, centralization, stability, and predictable performance outcomes (hierarchical culture); and task focus, goal achievement, efficiency, productivity and profitability (rational culture). While TQM is more perceived to need a changing, adaptable, and organic character to fully flourish. Previous research suggests that those cultures which are characterized by flexibility (group and developmental) rather than control (hierarchical and rational), are most likely to support the implementation of TQM effectively. This cultural profile in the two breweries appears partly unfavorable for TQM interventions because of the dominant existence of rational and hierarchical culture types. (Baird *et al.*, 2011 and Gimenez *et al.*, 2013).

Second objective: To determine the level of TQM implementation Dashen and Habesha breweries.

The mean score of the six critical success factors (CSFs) of TQM implementation were computed to determine the implementation level of TQM practices in Dashen and Habesha breweries. The results show relatively low mean scores on five of the TQM implementation factors (top management commitment, customer focus, and close relationship with suppliers, continuous improvement and people management). However, process management factor have the highest score in both breweries. Generally, the level of TQM implementation in both breweries was found to be low for most TQM factors. Perhaps the most central prerequisite of successful TQM program is good communication between top management and employees, mentioned explicitly by most of the authors, while a second important dimension is employee involvement or empowerment (Zeitz *et al.*, 1997). According to the findings, both of these critical characteristics are somewhat deficient in the survey population.

Third objective: To investigate the impact of organisational culture types on TQM implementation.

Multiple regression and independent T-test were used to test the hypotheses of the third objectives, which aimed to investigate the impact of organisational culture types (Developmental, Hierarchical, Group, and Rational Culture) as independent variables on TQM implementation as dependent variable. From the regression result we can conclude that organizational culture has a significant impact on TQM implementation in general, but when the researcher tried to test the impact of each organizational culture types on the TQM implementation separately the result was different. Multiple regression analysis clearly shows that two organizational culture types (developmental and group culture) had a significant impact on TQM implementation with a regression coefficient (beta) values that was statistically significant at the level of $P < 0.05$. However, hierarchical culture and rational culture did not have significant impact on TQM implementation. Therefore, promoting the aforementioned cultures had a positive and significant impact on the level of TQM implementation in Dashen and Habesha breweries.

Fourth objective: To find out if there is any significant difference in the impact of Organizational culture types on TQM implementation between Dashen and Habesha breweries.

From the independent T-test analysis made it is implicated that there is significant difference between Dashen and Habesha breweries in the level of TQM implementation and organizational cultural background.

5.3. Recommendation

Based on the findings and conclusions of the research the following recommendations are forwarded to Dashen and Habesha breweries:

- Managers of Dashen and Habesha breweries need to realize that any style of management that is hierarchical or authoritative and low in human orientation is not conducive to successful implementation of TQM. The management should seek to create and sustain supportive group and developmental culture values to improve TQM. In other words, they first need to create a supportive culture to serve as a fertile environment to prepare employees physiologically and minimize their resistance to change and subsequently prepare them to commit to TQM implementation.

- Dashen and Habesha breweries should value teamwork, cohesion, employee involvement, human resource development, flexibility and creativity.
- The management of the two breweries should also encourage their organizational members to get more involvement in TQM implementation by developing a fair incentive scheme and reward the members who contribute towards a successful TQM implementation. This leads to enhance of the members' feelings of personal benefits which result from participating in TQM implementation. This in turn leads them to behave in a manner consistent with TQM principles showing higher levels of involvement in TQM execution efforts.
- Total quality management also needs to be integrated throughout an organization's processes and functions. This requires a change in the culture, behavior, attitudes and working practices of employees.
- Top management should recognize that TQM can achieve tangible business advantages, and so strive to achieve the several benefits of TQM implementation to benefit the organization. This belief should be the driving force informing top management commitment and involvement, which should then be achieved through the development of a comprehensive quality policy, promoting a quality culture among employees, and improving their skills, as-well-as providing a clear strategic vision for the organization.
- Top management need to be fully committed and supportive of quality management efforts. Leaders must create a vision and inspire their employees to achieve the organization's objectives, and change its culture, looking towards a process of continuous improvement. Top management should ensure all departments and employees are involved in quality management program.
- Managers in both Dashen and Habesha breweries should also appreciate that implementing TQM takes time, effort and requires change throughout the entire organization. In this context, managers need to convince the staff that real benefits can be obtained through the implementation of TQM as part of the organization's business strategy.
- Appropriate resources should be allocated by Dashen and Habesha breweries to create awareness about TQM practices for the employees in order to increase quality.
- A cultural and behavioral shift in the mind-set of management in the Dashen and Habesha breweries, especially top management, is necessary if organizations want to successfully implement TQM with high levels of implementation.

- A focus on customer satisfaction is a vital factor in TQM implementation; thus, Dashen and Habesha breweries require a better understanding of their customers' needs and expectations. They also should pay more attention to how to satisfy these customers.
- Dashen and Habesha breweries should determine the training needs of their employees systematically, and put more emphasis on training in TQM for employees at all levels, which will lead to continuous improvement in their processes.
- Employee involvement is an important factor in the implementation of TQM. Dashen and Habesha breweries should pay more attention to promoting employee involvement in the decision-making process, and delegation of authority and responsibilities. This will make all employees feel they have the responsibility and authority to participate in decision-making and problem solving at the appropriate operating levels.
- Continuous improvement is an important factor in TQM. The breweries need to give this factor further consideration to effect a constant improvement to products, services, and organizational systems and so yield improved value to customers.

5.4. Future research

In this study, the researcher has tried to compare, the impact organizational culture on TQM implementation between Dashen and Habesha breweries. This study did not incorporate the views from the consumers; it includes only the views of employees of the two brewery companies. In future research, the sample should include more type of stockholders such as consumers and road suppliers. Besides comprehensive research can be conducted future by involving a variety of manufacturing and service sectors. Therefore, it's the researcher's recommendation that future studies should incorporate the suggestion above.

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APPENDICES

Appendix A: Survey Questionnaire (English)



Debre Berhan University
College of Business and Economics
Department of Management
MBA Program

Dear participant:

This questionnaire is designed to collect data for the master thesis on the topic “**The impact of organizational culture on Total Quality Management implementation in Dashen and Habesha Breweries**” for partial fulfillment of the requirements for Masters of Arts Degree in Business Administration (MBA). The study intends for academic purpose only and the information you provide will be kept confidential. Besides, the outputs of the study will help as input for the companies’ decision makers. I, therefore, kindly request you to fill the questionnaire honestly and accurately, so that quality of information you provide determines the ultimate reliability of the study.

General Instructions

- There is no need for writing your name
- Please put a “√” mark on your choice in the space provided

Thank you very much, in advance for your cooperation.

Contact Address

If you have any question regarding this questionnaire, please contact

Girma Asfaw : Mobile phone: 0912655256

E-mail: girmaa15@gmail.com

Part I. General Information

A. Respondent profile

Listed below are questions about you. Please put sign (√) in the box for the choice appropriate for you.

1. **Gender:** Male Female
2. **Age:** 20-29 years 30-39 years 40-50 years' over 50 years
3. **Highest level of education:**
 TVET Diploma B.A/ B.Sc. Degree M.A. /M.Sc and above
4. **Your current position in your company**
 Manager Supervisor Employee Other
5. **Your department /work unit/**
 Production and Operations Inventory system Marketing & sales
 Finance& Accounting Purchasing and procurement Human resource
6. **Work experience:**
 < 2 years 3 - 4 years 5 - 6years 7 – 10 years >10 years
- B. Background of the company**
7. **Name of your company** _____.
8. **How long has the organization been operating?**
 < 1year 1 –3 Years 4 – 6 years 7 – 10years' Over 10 years
9. **Number of permanent employees in your company**
 <100 101 -250 250-500 above 500
10. **Total Quality Management duration in your organization**
 < 1year 1 -3 years 3 - 5 years > 5years
11. **Does your company have international quality management (ISO) certification**
 Yes No
12. **If yes please specify**_____

Part II: Questionnaire Related with Identifying Organizational Culture Profile

Statements below are designed to give information on the types of Organizational culture which exist in your organization. Please select the appropriate response for each statement depending on how similar the statement is to your Organization. **1=strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=strongly agree.** *(Please tick only one box).*

No	1. Group Culture	1	2	3	4	5
1.1	The company is a very personal place. It is like an extended family. People seem to share personal information.					
1.2	The leadership in the company is generally considered to exemplify mentoring, facilitating or nurturing.					
1.3	The management style in the company is characterized by teamwork, consensus and participation.					
1.4	The glue that holds the company together is loyalty and mutual trust. Commitment to this company runs high.					
1.5	The company emphasizes human development. High trust, openness, and participation persist.					
1.6	The company defines success on the basis of the development of human resources, teamwork, employee commitment, and concern for people.					
	2. Developmental Culture	1	2	3	4	5
2.1	The company is a very dynamic and entrepreneurial place. People are willing to try new things and take risks.					
2.2	The leadership in the organization is generally considered to exemplify entrepreneurship, innovation or risk taking.					
2.3	The management style in the organization encourages individual initiative and freedom.					
2.4	The glue that holds the company together is commitment to innovation and development. The emphasis is on being on the leading edge.					
2.5	The company's long-term emphasizes is on growth and acquiring new resources.					

2.6	The company defines success on the basis of having the most unique or newest products. It is a product leader and innovator.					
	3. Market /Rational/ Culture	1	2	3	4	5
3.1	The company is very results-oriented. A major concern is with getting the job done.					
3.2	The leadership in the company is generally considered to exemplify a straightforward, aggressive, results-oriented focus.					
3.3	The management style in the company is characterized by hard-driving competitiveness, high demands, and achievement.					
3.4	The glue that holds the company together is the emphasis on achievement and goal accomplishment.					
3.5	The company emphasizes competitive actions and achievement. Hitting stretch targets and winning in the marketplace are dominant.					
3.6	The company defines success on the basis of winning in the marketplace and outpacing the competition.					
	4. Hierarchy Culture	1	2	3	4	5
4.1	The company is a very controlled and structured place. Formal procedures generally govern what people do.					
4.2	Managers in the company are rule-enforcers. They expect employees to follow established rules, policies, and procedures.					
4.3	The management style in the organization is characterized by security of employment, conformity, predictability, and stability in relationships.					
4.4	The glue that holds the company together is formal rules and policies. Maintaining a smooth running organization is important.					
4.5	The company emphasizes permanence and stability. Efficiency, control, and smooth operations are important.					
4.6	The company defines success on the basis of efficiency. Dependable delivery, smooth scheduling, and low-cost production are critical.					

Part III: Questionnaire Related with TQM Implementation

The following questions are pertaining to the extent your company currently practices total quality management. Please read the following statements carefully and indicate how true each is about your organization. **1=strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=strongly agree. (Please tick only one box).**

1. Top management Commitment and Leadership		1	2	3	4	5
1.1	Senior management have clear vision toward quality, this guides all aspects of running our business.					
1.2	Senior managers in our organization show visible commitment and support to Quality.					
1.3	Top management allocates adequate resources and time for quality management efforts.					
1.4	The leaders in our organization frequently set goals and objectives for quality and improvement.					
1.5	Top managers often discuss the importance of quality at company meetings and give high priority to quality.					
1.6	Top managers support any change required in style or structure in order to promote the new culture.					
2. Customer Focus		1	2	3	4	5
2.1	Our company has an effective system to measure customer satisfaction .					
2.2	Our company frequently measures customers' satisfaction.					
2.3	Our customers give us feedback on quality and delivery performance.					
2.4	We frequently are in close contact with our customers.					
3. People management		1	2	3	4	5
3.2	Employees are empowered to apply quality improvement efforts in their area.					
3.2	Employees are actively involved in quality-related activities.					

3.3	Our company provides training on the “total quality concept” (i.e., philosophy of company-wide responsibility for quality) throughout the organization.					
3.4	Top management emphasizes teamwork to accomplish various tasks.					
3.5	Employees and teams are often recognized for achievements in quality improvements.					
3.6	Our company have an appropriate evaluation and reward system.					
	4. Process management	1	2	3	4	5
4.1	The quality imitative in our organization includes all functions/departments.					
4.2	Processes in our plant are designed to be “mistake-proof” to minimize the chances of errors.					
4.3	Our company’s shop floors are well organized and clean					
4.4	Quality data are always provided in a timely fashion in our company.					
4.5	Standardized and clear work or process instructions are given to employees.					
4.6	There is consistent use of statistical process control and preventive maintenance.					
	5. Supplies Quality Relationship	1	2	3	4	5
5.1	Our company has established long-term relationships with suppliers.					
5.2	Our company relies on a small number of high quality suppliers.					
5.3	Our suppliers are evaluated according to quality, delivery performance, and price order.					
5.4	Our company has a systematic supplier rating system.					
5.5	Our company provides technical assistance to our suppliers such as trainings on quality managements.					
	6. Continuous Improvement	1	2	3	4	5

6.1	Continuous quality improvement is an important goal of this organization.					
6.2	People in this organization are continually looking for better ways of doing their work.					
6.3	Continuous improvement of quality is stressed in all work processes throughout our organization.					
6.4	The company encourages creativity and all new ideas and solutions offered by employees.					
6.5	The company continuously compares its products quality with competitors' products in order to improve them.					

Appendix B: Survey Questionnaire (Amharic)



ደ/ብርሃን ዩኒቨርሲቲ የቢዝነስና ኢኮኖሚክስ ኮሌጅ የማኔጅመንት ትም/ት ክፍል የፅሁፍ መጠይቅ

ውድ የጥናቱ ተሳታፊዎች :-

እኔ ግርማ አስፋው በደ/ብርሃን ዩኒቨርሲቲ የቢዝነስ አስተዳደር ትምህርት ክፍል የ2ኛ ዲግሪ ተማሪ ስሆን ይህ መጠይቅ የተዘጋጀው መመረቂያ ጽሁፍ ለማዘጋጀት ታስቦ ነው። የመጠይቁ ዋና ዓላማም በዳሽን ቢራ እና ሀበሻ ቢራ ኩባንያዎች ውስጥ ያለው የድርጅት ባህል organizational culture/ በአጠቃላይ የጥራት አስተዳደር (Total Quality Management) ትግበራ ላይ የሚያሳድረውን ተፅዕኖ በሚመለከት መረጃዎችን ለመሰብሰብ ነው። መጠይቁም የተዘጋጀው ለትምህርታዊ ዓላማ ሲሆን ከመጠይቁ የሚገኝ መረጃ በማንኛውም መንገድ ለሶስተኛ ወገን ተላልፎ እንደማይሰጥ ከወዲሁ አረጋግጣለሁ። ስለሆነም ለጥናቱ መሳካት የእርስዎ ትክክለኛና ግልፅ ምላሽ አስፈላጊ ስለሆነ ከዚህ በመቀጠል ያሉትን ጥያቄዎች በጥንቃቄ እንዲሞሉ በትህትና እጠይቃሁ።

መጠይቁን ሲሞሉ

- ስም መጻፍ አያስፈልግም
- ትክክለኛ ነው ብለው ለሚያምኑት ምላሽ “√” ምልክት ያስቀምጡ

አድራሻ

በመጠይቁ ላይ ማንኛውም ጥያቄ ካላዎች በሚከተሉት አድራሻ ማግኘት ይችላሉ፡

ስ.ቁ. 09 13 23 39 03

ኢ.ሜል girmaa15@gmail.com

ስለመልካም ትብብርዎ በቅድሚያ አመሰግናለሁ!

ክፍል አንድ:- የመላሾች እና የካምፓኒ አጠቃላይ መረጃ

ሀ. የምላሽ ሰጭ ግላዊ መረጃ

- 1. ምጽ ፣ ወንድ ፣ ሴት
- 2. እድሜ ፣ 20-29 ዓመት ፣ 30-39 ዓመት ፣ 40-50 ዓመት ፣ 50 ዓመት በላይ
- 3. የትምህርት ደረጃ ፣ ቴክኒክና ሙያ ፣ የኮሌጅ ዲግሎማ ፣ ዲግሪ ማስተርስ እና በላይ
- 4. በኩባንያ ውስጥ ያለዎት የስራ ድርሻ ፣ ኃላፊ ፣ ተቆጣጣሪ ሰራተኛ ፣ ሌላ
- 5. የአገልግሎት ዘመን ፣ ከ2 ዓመት በታች ፣ 3-4 ዓመት ፣ 5-6 ዓመት ፣ 7-10 ዓመት ፣ ከ10 ዓመት በላይ

ለ. የድርጅት አጠቃላይ መረጃ

- 6. የድርጅቱ ስም -----
- 7. ድርጅቱ ከተመሠረተ ጀምሮ ያለው ቆይታ ፣ ከ1 ዓመት በታች ፣ ከ1-3 ዓመት ፣ ከ4-6 ዓመት ፣ 7-10 ዓመት ፣ ከ10 ዓመት በላይ
- 8. የድርጅቱ ቋሚ ሰራተኛ ብዛት ፣ ከ100 በታች ፣ ከ100- 250 ፣ 250-500 ፣ ከ500 በላይ
- 9. በድርጅቱ የአጠቃላይ የጥራት አስተዳደር ትግበራ ቆይታ ፣ ከ1 ዓመት በታች ፣ ከ1-3 ዓመት ፣ 3-5 ዓመት ፣ ከ5 ዓመት በላይ
- 10. ድርጅቱ ላለም አቀፍ የጥራት(ISO) ሽልማት አግኝቷል? ፣ አዎ ፣ አላገኘም
- 11. መልስዎን ከሆነ በዝርዝር ያስቀምጡ -----

ክፍል ሁለት:- የድርጅቱን የውስጥ ባህል የተመለከቱ ጥያቄዎች

ከዚህ በታች ያሉት ጥያቄዎች በድርጅቱ ውስጥ ያለውን ባህል /እሴት/ ለመለየት የሚረዱ ሲሆን እርስዎ ያዩትን ምልክታና አስተያየት በተሠጡት የመስማማትና ያለመስማማት ደረጃዎች “√” ምልክት በማድረግ ይግለጹ:: 1= በጣም አልስማማም 2= አልስማማም 3= እርግጠኛ አይደለሁም 4= እስማማለሁ 5= በጣም እስማማለሁ

ተ.ቁ	በጋራ የመስራት ባህል በተመለከተ	1	2	3	4	5
1.1	የካንፓኒው ሰራተኞች ድርጅቱን እንደራሳቸው ቤት ስለሚቆጥሩ መረጃዎችን ልክ እንደቤተሰብ በመታየት ይለዋወጣሉ።					
1.2	የካንፓኒው ኃላፊዎች ሰራተኞችን ያስተባብራሉ፤ እንዲሁም ምክር እና እገዛ ይሰጣሉ።					
1.3	የካንፓኒው የአስተዳደር ስርዓት በጋራ መግባባትና በማሳተፍ ላይ የተመሠረተ ነው።					
1.4	የካንፓኒው ገዢ መርህ በጋራ መግባባትና በመተማመን ላይ የተመሠረተ ነው።					
1.5	ካንፓኒው ለሰራተኞችን እድገትና መሻሻል ከፍተኛ ትኩረት ይሰጣል።					
1.6	ካንፓኒው የሠራተኞች እድገትና መሻሻልና እንደ ቁልፍ ስኬት ይመለከተዋል።					
የእድገትና የፈጠራ ባህል በተመለከተ		1	2	3	4	5
2.1	ካንፓኒው በየጊዜው አዳዲስ አሰራሮችን እና የስራ ፈጠራዎችን የሚከናወኑበት ስፍራ ነው።					
2.2	የካምፓኒው ኃላፊዎች አዳዲስ አሰራሮችንና ፈጠራዎችን ያበረታታሉ።					
2.3	የካምፓኒው የአስተዳደር ስርዓት ለእያንዳንዱ ሰራተኞች የስራ ነፃነት በመስጠት ላይ የተመኮከ ነው።					
2.4	የካምፓኒው ገዢ መርህ አዳዲስ ፈጠራዎችንና መሻሻሎችን መሰረት ያደረገ ሲሆን ዋናው ትኩረትም በገበያው ቀዳሚ ተወዳዳሪ መሆን ነው።					
2.5	የካምፓኒው የረጅም ጊዜ እቅድ በእድገትና በመስፋፋት ላይ ትኩረት ያደረገ ነው።					
2.6	የካምፓኒው የስኬት መለኪያ ልዩና አዳዲስ ምርቶችን በማምረት ይገለጻል።					
የገበያ ተወዳዳሪነት ባህል/በተመለከተ		1	2	3	4	5
3.1	የካምፓኒው ትኩረት ውጤትን መሰረት ያደረገ ስራን መስራት ነው።					
3.2	የካምፓኒው ኃላፊዎች ለውጤት የሚተጉና ከሰራተኞች ከፍተኛ ውጤታማነትን የሚጠብቁ ናቸው።					
3.3	የካምፓኒው የአስተዳደር ስርዓት በሰራተኞች መካከል ውድድርን የሚያበረታታ ነው።					
3.4	የካምፓኒው ገዢ መርህ ከፍተኛ ውጤት ማስመዝገብ ነው።					
3.5	የካምፓኒው የረጅም ጊዜ እቅድ አዳዲስ የገበያ ቦታዎችን ማስፋፋት ነው።					

3.6	የካምፖኒው ቁልፍ የስኬት መለኪያ የምርት ሽያጭን በከፍተኛ መጠን መጨመርና የገበያውን ውድድር መምራት ነው።					
	የአሰራር ህግና ስርዓት ባህል በተመለከተ	1	2	3	4	5
4.1	ካምፖኒው በጥብቅ አሰራር ስርዓትና ደንብ የሚመራ ነው።					
4.2	የካምፖኒው ኃላፊዎች ዋና ተግባራቸው ሰራተኞች የድርጅቱን ህጎች፣ መመሪያዎች፣ አሰራር እና ደንቦች እንዲከበሩ ማድረግ ነው።					
4.3	የካምፖኒው የአስተዳደር ስርዓት ደንብን የተከተለ እና መመሪያዎችን መሰረት ያደረገ የአሰራር መዘርጋት ነው።					
4.4	የካምፖኒው ገዢ መርህ መደበኛ ህጎች፣ አሰራሮች እና መመሪያዎች ናቸው።					
4.5	የካምፖኒው የረጅም ጊዜ እቅድ ቋሚ ፤ የተረጋጋ እና የማይዋዥቅ አሰራርን መፍጠር ነው።					
4.6	የካምፖኒው ቁልፍ ስኬት የሚነካው በውጤታማ የሃብት አጠቃቀም ላይ የተመሰረተ ሲሆን አስተማማኝ አቅርቦት፣ የማይዋዥቅ የስራ ንግግር እና ዝቅተኛ የማምረቻ ዋጋ ላይ ትኩረት ይሰጣል።					

ክፍል 3:-የአጠቃላይ የጥራት አስተዳደር (TQM) አተገባበር በተመለከተ

ከዚህ በታች የተዘረዘሩት ዓ.ነገሮች በድርጅት ያለውን የአጠቃላይ የጥራት አስተዳደር የሚመለከቱ ናቸው። ስለሆነም ለእያንዳንዱ ጥያቄ ከአማራጮች አንዱን ብቻ “√” ምልክት በማድረግ ምላሽ ይሰጡ። 1= በጣም አልሰማማም 2= አልሰማማም 3= እርግጠኛ አይደለሁም 4= እስማማለሁ 5= በጣም እስማማለሁ

ተ. ቁ	1. የከፍተኛ አመራርን በተመለከተ	1	2	3	4	5
1.1	የካምፖኒው ከፍተኛ ኃላፊዎች ጥራትን እንደ ዋና ራዕይ በማድረግ ይሰራሉ።					
1.2	የካምፖኒው ከፍተኛ ኃላፊዎች ለጥራት ትልቅ ትኩረት እና ድጋፍ ይሰጣሉ።					
1.3	የካምፖኒው ከፍተኛ ኃላፊዎችና አመራሮች ለጥራት ስራ አስፈላጊውን ኃብትና በጀት እንዲመደብ ያደርጋሉ።					
1.4	የካምፖኒው ከፍተኛ ኃላፊዎች /አመራሮች/ የድርጅቱን የአሠራር ጥራት ለማሻሻል ዕቅድ በማቀድ ሥራዎችን ይሠራሉ።					
1.5	የካምፖኒው ኃላፊዎች የጥራትን ጉዳይ በስብሰባዎች እንደ					

	አንድ አጀንዳ በማድረግ ይወያያሉ።					
1.6	የካምፖኒው ከፍተኛ ኃላፊዎች ጥራትን ለማሻሻል የሚረዱ አዳድስ የአሰራር ለውጦችን እድገትን ያበረታታሉ።					
	2. የደንበኞችን እርካታ በተመለከተ	1	2	3	4	5
2.1	ካምፖኒው ውጤታማ የደንበኞች እርካታ መለኪያ ይጠቀማል።					
2.2	ካምፖኒው በየጊዜው የደንበኞችን እርካታ ይለካል።					
2.3	የካምፖኒው ደንበኞች በምርታችን ጥራትና የአቅርቦት ዙሪያ አስተያየት እንድሰጡ ይደረጋል።					
2.4	ድርጅታችሁ ከደንበኞች ጋር በየጊዜው ውይይት ያካሂዳል።					
	3. የሰው ሃብት አመራርን በተመለከተ	1	2	3	4	5
3.1	የድርጅቱ ሰራተኞች በየስራ ክፍላቸው ጥራትን ለማሻሻል የሚያስችል ስራ እንዲሰሩ ኃላፊነት ይሰጣቸዋል።					
3.2	የካምፖኒው ሰራተኞች በጥራት ማሻሻል ስራዎች ላይ በንቃት ይሳተፋሉ።					
3.3	ካምፖኒው ለሁሉም ሰራተኞች በአጠቃላይ የጥራት አስተዳደር ፅንሰ ሃሳብ ዙሪያ ተከታታይ ስልጠና ሰጥቷል።					
3.4	የካምፖኒው ከፍተኛ ኃላፊዎች በጋራ የመስራት ባህልን ያበረታታሉ።					
3.5	ካምፖኒው ለሰራተኞች እና ቡድኖች ጥራትን በማሻሻል ላመጡት ስኬት እውቅናና ማበረታቻ ይሰጣል።					
3.6	ካምፖኒው ተገቢ የሆነ የግምገማና የሽልማት ስርዓት ተግባራዊ ያደርጋል።					
	4. አሰራርን /ሂደትን/ በተመለከተ	1	2	3	4	5
4.1	በካምፖኒው የሚተገበሩ የጥራት ማሻሻል ተግባራት ሁሉም የስራ ክፍሎች ያሳተፋ ናቸው።					
4.2	የካምፖኒው አሰራር ብክነትንና ስህተትን በከፍተኛ ሁኔታ እንዲቀነስ የሚያደርግ ነው።					
4.3	የካምፖኒው የማምረቻ ቦታዎች እና ሌሎች ስራ ቦታዎች በአግባቡ የተደራጁና ንፅህናቸው የተጠበቁ ናቸው።					
4.4	በካምፖኒው ውስጥ ባሉ የስራ ክፍሎች ጥራት ያለው መረጃ ወቅቱን ጠብቆ ለሚመለከተው አካል ሪፖርት ይደረጋል።					
4.5	ካምፖኒው ስታንዳርዱን የጠበቁና ግልፅ የሆኑ የስራ መመሪያዎች ለሠራተኞች ይሰጣል።					
4.6	ካምፖኒው በከምፖውተር የታገዙ የጥራት መቆጣጠሪያዎች እና የጥገና ክፍሎቹ አሉት።					

5. የአቅራቢዎችን ጥራት ቁጥጥር በተመለከተ		1	2	3	4	5
5.1	ካምፖኒው ከአቅራቢዎች ጋር የረጅም ጊዜ ግንኙነት ፈጥሯል።					
5.2	ካምፖኒው አቅራቢነት በቁጥር ትንሽ እና ጥራት ባላቸው አቅራቢዎች ላይ የተመሰረተ ነው።					
5.3	ካምፖኒው አቅራቢዎችን በጥራት ፣ በጊዜ ፣ በአፈፃፀምና በዋጋ ደረጃዎች መሰረት ይገመግማል።					
5.4	ካምፖኒዎችን ስርዓትን የተከተለ የአቅራቢዎች ደረጃ ማውጣት ስራ ይሰራል።					
5.5	ካምፖኒዎችን በጥራት ዙሪያ ለአቅራቢዎች የቴክኒካልና ሌሎች ድጋፎችን ይሰጣል።					
6. ተከታታይ ማሻሻያ በተመለከተ		1	2	3	4	5
6.1	ካምፖኒው ተከታታይ የጥራት ማሻሻያን እንደ ዋና ግብ ይዞ በመስራት ላይ ይገኘኛል።					
6.2	የካምፖኒው ሰራተኞች ዘወትር ስራቸውን በተሻሻለ ሁኔታ ለመስራት ይጥራሉ።					
6.3	ካምፖኒው ተከታታይ የጥራት ማሻሻያ ተግባር በሁሉም የስራ ክፍሎች ትኩረት ይሰጠዋል።					
6.4	ካምፖኒው የሰራተኞችን አዳዲስ የፈጠራና የመፍትሄ ሃሳቦችን እንደግብዓት በመውሰድ ተከታታይ የጥራት ማሻሻያ ያደርጋል።					
6.5	ካምፖኒው የራሱን ምርት ጥራት ከሌሎች ድርጅቶች ጋር በማወዳደር ተከታታይ የጥራት ማሻሻያ ያደርጋል።					

Appendix C: Independent Samples Test (SPSS V25 Result)

Appendix C: Independent Samples Test (SPSS V25 Result)										
	Levene's Test for Equality of Variances			t-test for Equality of Means						
	F	Sig.	T	df	Sig.(2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
GC	Equal variances assumed	0.224	0.672	1.42	34	.026	0.12	.377	.110	1.645
	Equal variances not assumed			1.56	34.000	.015	0.12	.342	.183	1.572
DC	Equal variances assumed	0.143	0.793	1.31	34	.097	-0.05	.399	-.286	1.336
	Equal variances not assumed			1.29	25.381	.234	-0.05	.441	-.370	1.447
RC	Equal variances assumed	1.175	0.309	1.25	34	.219	.219	.430	-.335	1.411
	Equal variances not assumed			1.21	25.381	.234	.234	.441	-.370	1.447
HC	Equal variances assumed	4.971	0.750	1.50	34	.002	0.18	.306	-.162	1.081
	Equal variances not assumed			1.54	30.584	.001	0.18	.296	-.146	1.064
TQMI	Equal variances assumed	1.492	0.273	3.16	34	.017	0.12	.292	.430	1.618
	Equal variances not assumed			3.16	33.216	.017	0.12	.273	-.1.70	1.579