ASSESSMENT OF THE EFFECT LEADERSHIP STYLE AND CULTURE ON PROJECT PERFORMANCE- THE CASE OF HIGH-GRADE ETHIOPIAN AND CHINESE CONTRACTORS IN ETHIOPIA.

BY

ZINABU TEBEJE

(ID No.: GSD/3947/08)

A RESEARCH SUBMITTED TO ADDIS ABABA UNIVERSITY, SCHOOL OF COMMERCE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE MASTER OF ARTS IN PROJECT MANAGEMENT

ADVISOR:

FESSEHA AFEWERK (AST. PROFESSOR)

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ADDIS ABABA UNIVERSITY
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APPROVED BY BOARD OF EXAMINERS:

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Advisor	Signature	Date
_____	_____	_____
Internal Examiner	Signature	Date
_____	_____	_____
External Examiner	Signature	Date

Declaration

I hereby declare that the study which is being presented in this research entitled "Assessment of The Effect Leadership Style and Culture on Project Performance- The Case of High-Grade Ethiopian and Chinese Contractors in Ethiopia" is original work of my own. It had not been presented for a partial fulfilment for any educational qualification at this University or any other and in any projects by any means, and all the resources materials used for this research had been accordingly acknowledged.

_____ _____

Zinabu Tebeje **Date**

Declaration

I hereby declare that the study which is being presented in this research entitled "Assessment of The Effect Leadership Style and Culture on Project Performance- The Case of High-Grade Ethiopian and Chinese Contractors in Ethiopia" is conducted by Zinabu Tebeje for the partial fulfilment of the requirements for the award of master's degree in Project Management. To the best of my knowledge it is original work carried out by him. It had not been presented for a partial fulfilment for any educational qualification at this University or any other and in any projects by any means.

_____ _____

Fesseha Afewerk (Assistant Professor) **Date**

Abstract

*The focus of previous researches done on the construction sector have been managerial and technical features of contraction projects. This study aims to explores and evaluate three fundamental issues: first, it aims to compare leadership styles adopted by Ethiopian and Chinese construction mangers; second, it examines the culture effect on leadership styles; and third, the non-parametric (Mann-Whitney) and parametric result (T-Test) for five-point Likert scale analysis has been computed and compared. Date was collected using structured questionnaire using random sampling technique for the Ethiopian contractors. For Chinese contractors who are registered in Ethiopia, the whole population were considered and all of them were requested to fill the questionnaire. Analysis using MWW showed that both Ethiopian and Chinese contractors are prone to use transformational and transactional leadership respectively. However, T-Test showed that both countries are prone to use transformation leadership. Culture exerts a little impact on leadership style, demonstrated by strong correlation only for power distance and transactional leadership style (Correlation=0.641**). Analysis of the effect of culture in leadership indicated that Ethiopia could be concluded to be a country of low power distance, high uncertainty avoidance, collective and feminine society. On the other hand, China is high power distance, high uncertainty avoidance and highly collective society. For the comparison between the non-parametric and parametric analysis, the non-parametric test has to be used as it showed some difference with the parametric result (T-Test). Pearson and Spearman showed the same result for correlation.*

Keywords: Leadership, Leadership Style, Culture, Project Challenge, Project

Dedication

To my late Mother Nigatwa Meshesha who has been the inspiration of my life and my four children who has been my motivation.

Contents

List of Figures

List of acronyms and abbreviations

CPM	Critical Path Method
DATs	Delay Analysis Techniques
DB	Design - Build
DBB	Design – Bid - Build
EOT	Extension of Time
FIDIC	Fédération Internationale des Ingénieurs-Conseils
IPDC	Industrial Parks Development Corporation
LOB	Line of Balance
Ms Project	Microsoft Project
PERT	Program Evaluation and Review Technique
PMI	Project Management Institute

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Last but not least, I would like to thank my family particularly my daughters Yohanna Zinabu and Gelila Zinabu and my boys Anania Zinabu and Nageb Zinabu who have been the sources of my motivation and joy.

Chapter 1

1. INTRODUCTION

The complexity and booming of the construction sector require construction firms to have better managerial and leadership styles. The lack or limited leadership skills among construction mangers is considerably significant and requires special emphasis (Dulaimi, 2005; Koskela and Vrijhoef, 2001). Skipper and Bell, (2006) argued that the emphasis of the construction sector has been on the managerial wing and barely on leadership at all stages of construction management.

The Ethiopian government has notified its concern regarding severe delay and cost overrun in the country's construction sector (ECDIP, 2014). Studies also confirm that cost overrun and significant delay is very common in Ethiopian construction sector (Zinabu, 2016; Zinabu and Getachew, 2015). These studies recommended potential mitigation measures to address cost overrun and delays. Nonetheless, the leadership contribution has been overlooked in both analyzing the causes and remedies for cost overrun and delays (ibid., Gebrehiwet and Luo, 2017; Ayalew et al, 2016; Worku and Jhe, 2016; Nega, 2008).

It is often the case that most construction managers tend to concentrate on the mechanistic manner of projects overlooking its humanistic nature and becoming leaders that inspire the project team to perform better. The Ethiopian education curriculum for engineering students also have the tendency to focus more on technical issues and pay little attention on the leadership part. This in turn has caused project managers to be short sighted.

Considering the current global construction sector trend which lies on new arena of political, economic, social, technological and business environment, there is a need to search for suitable

project leadership in parallel to the management aspect. The European Foundation for Quality Management (EFQM), 1999 assigns 10% of its weighting to leadership because most people react best to leaders who connect with them and are not hierarchical in their approach.

1.1. Background

Ethiopia gives construction license of grade one for foreign contractors and from grade 1 to 10 for local Ethiopian contractors. Grade one is the highest grade to perform any volume of work in terms of complexity and budget.

A contractor is defined as a company, or a person with formal contract to do a specific job, supplying labor and materials (MoWUD, 1994). According to the Ministry of Works and Urban Development, contractors in Ethiopia are categorized into four major classifications. These are General Contractors, Building Contractors, Road Contractors, and Specialized Contractors. A General Contractor is a contractor that is allowed to engage in any types of construction contract works while a Building Contractor only works in building construction. Similarly, a Road Contractor only works in road construction whereas a Specialized Contractor works in a special construction works other than those mentioned.

This study focuses on, Ethiopian and Chinese first grade contractors registered in Ethiopia. A data obtained from the Ministry of Construction website and information from the Ministry of Trade indicates that there are about 151 Ethiopian contractors and 105 Chinese first grade contractors operational in Ethiopia.

1.1.1. Why Chinese Contractors?

As per Ursu & Berg, (2018) the horn of Africa is one of the most geo-strategically important regions of the world which calls for the engagement of Chinese. The Chinese foreign aid policy

views the actual conditions of Chinese and the need of the recipient country, where they provide grant for the construction of hospitals, schools and low-cost houses, and to support medium and small projects for social welfare. The Chinese government provides concessional loans for the execution of projects through its Exim Bank.

The Chinese contractors are penetrating the market by using their engineering, procurement, construction (EPC) package with loan finance as a competitive advantage. Concessional loans are also used by Chinese government to execute large construction projects like the Addis Ababa-Adama Toll Motorway, the Gashena-Sekota Road and the Addis Ababa-Djibouti Railway Project. On top of the concessional and commercial loan, the china government gives loans securitised against the net value of natural resources (oil, minerals, etc) which recipient countries are free to spend as they wish (Ursu & Berg, 2018). Besides, several Chinese contractors are engaged in international tender projects.

China has Belt and Road initiative to inject billions of dollars for infrastructure development along the ancient Silk Road, linking it with countries in Europe, Asia and Africa. It also gave funding for the horn of Africa to make cross boarder infrastructure. The Chinese has done a number of infrastructure projects in Ethiopia and its surroundings. Some of these include the railway construction from Addis Ababa to the newly built port of Doraleh, a pipeline between Ogaden (Ethiopia) and the port of Djibouti, private buildings like the bank headquarters, Chinese-funded African Union headquarters with Chinese funding as ‘China’s gift to Africa’ as well as industry park developments (Figure 1).

Ethiopia seems to consider the basic principle of the Chinese that poverty and underdevelopment as a primary cause of instability and conflict. It has also adopted development under one party as a preferred model to the western model of free-market liberal

democracy. For doing so, the ruling EPRDF party in Ethiopia has been called ‘China’s most eager student’. The EPRDF prefers China/ the Chinese as development partner due to its lack of conditionality and because the western countries have conditions that requires explicit governance and human rights conditions.

The EU and China has their convergence and divergence points regarding their policy towards Ethiopia. Their convergence of interests and complementarity lies primarily in the economic and security domains whereas their divergence and competition are associated with ideological and political domain. While the Chinese are interested in infrastructure building, the EU are inclined in soft sectors (health and education) development and have competitive advantage on labour conditions.

The Ethiopian Government is attracted in the Chinese project execution modality. This is mainly because the project completion time of the Chinese contractors are much faster than the local contractors. This was the reason for giving the industrial parks for the Chinese contractors.

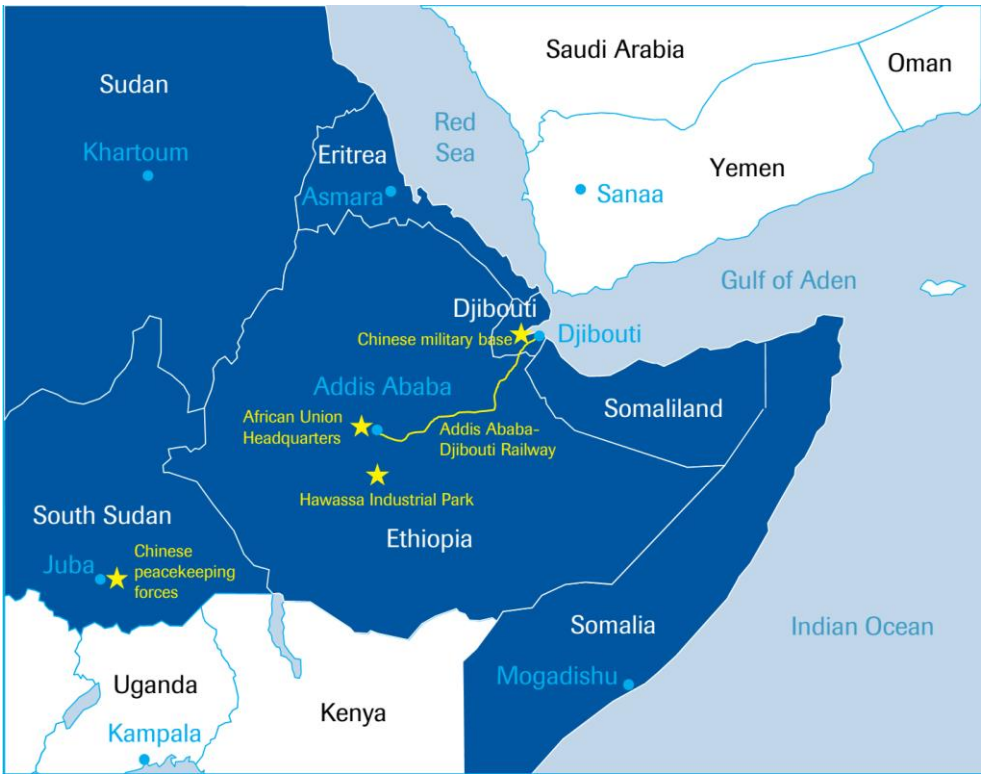


Figure 1: The Horn of Africa, with stars indicating Chinese projects mentioned in this brief (Ursu & Berg, 2018).

Twigg, (2017) stated that over the last 10 years China has poured 21.52 Billion Euro for infrastructure development in Ethiopia. Some of these include the new light rail system in Addis Ababa and the rebuilding and modernizing the old railway line between Addis and Djibouti. The Chinese intention is not exactly philanthropic instead it is to reallocate their factories in Africa where the labour cost is low. China is also the major goods and machinery manufacturer for Ethiopia. Ethiopia has witnessed high rates of economic growth from 2003 onwards. This period also marked the period where the relation between China and Ethiopia is strong. As Twigg, (2017) noted, the Chinese are creating beneficial impact in Ethiopia.

1.2. Problem Statement

Though the construction sector is given high prominence, several defects are being noted in the sector that need immediate action. One significant problem is the fact that current infrastructure and construction projects in Ethiopia show significant delay and cost variation (ECIDP, 2014). With the advancement of project management followed by development of project management tools, it was hoped that performance of projects will improve. However, this has not been the case since poor project performance has continued to manifest in the construction sector (Kariuki, 2015; Talukhaba, 1999).

The construction sector in Ethiopia has shown remarkable cost overrun and delay. Although various studies are conducted on the defects of the construction sector, project management concerns particularly leadership considerations are poorly studied (Zinabu, 2016; Zinabu and Getachew, 2015; Nega, 2018; ECIDP, 2014).

A study by the Project Management Institute (PMI) to determine if a projects manager's leadership style was a success factor on projects showed that an appropriate leadership style can lead to better performance (Turner and Müller, 2005). Yet, the leadership style and culture in the Ethiopian construction sector is not studied. Hence, it is essential to investigate the leadership style and culture in the Ethiopian construction sector. Chinese construction managers are also included in the study in order to make a comparative assessment between the Chinese and Ethiopian contractors leadership style and culture.

Study conducted by	Description	Gap in Leadership style
Abera et al, (2016)	They demonstrated the existence of cost, time, and quality and leadership performance problem in Oromia industry and urban development Bureau building construction projects. The result demonstrated that 13 factors affecting cost performance, 31 factors affecting time performance, 5 factors affecting quality performance and 3 factors affecting leadership performance.	Showed the existence of leadership problem
Mamaru et al., (2017).	They conducted study with the major aim of investigating success factors in building construction projects of Addis Ababa. As per the output of the study, from 68 identified major management success factors; decision making effectiveness, project delivery system, timely decision by owner/owner's representative, contractor's cash flow, leadership skills of project manager and adequacy of fund are the most significant success factors.	Measure only the Leadership skills of project manager, with out knowing the leadership style.
Bahiru et al., (2017)	They conducted a study on the understanding of risk's impact on civil work construction project performance. From the findings it concludes that the main risk factors that affect the project performance very high are equipment/material failure, labor poor productivity, the non-availability of equipment and material.	Leadership is not seen as a challenge
Biyadglign T. (2017).	The research conducted was on performance related problems, to identify the factor that affect project performance and to identify the key performance indicators in south region selected university construction projects and forwarding recommendation	Measure only the client satisfaction factors of Leadership skills

	to minimize performance problems. According, the critical factors that affecting performance has been escalation of material prices, unavailability of resources, number of disputes between owners and project parties, review of failures and solving them and quality of equipment or machineries and raw materials.	for project manager
Solomon, (2015)	The researcher study to improved project performance in Ethiopian road authority. The study concentrate on the management and process part.	The leadership style not seen
Turkey, (2011)	The research attempts to identify the extent of cost overrun, the major risk factors leading to cost overrun and its consequential effects in the Ethiopian Federal road construction sector. The result demonstrated that unexpected inflation/ material price escalation, delays on completion time, scope changes, unstable cost of manufactured materials, inadequate site investigation and right of way problems (access to site and quarry) are identified as major factors leading to cost overrun.	Leadership is not considered as one factor out of 54 factors
Mohammed (2004)	Shortage of skills of manpower, poor supervision and poor site management, poor workmanship; client satisfaction, unsuitable leadership; shortage and breakdown of equipment among others contribute to construction delays	Unsittable leadership has been found,
Gebrehiwet and Luo, 2017; Ayalew et al, 2016; Worku and Jhe, 2016; Zinabu, 2016; Zinabu and Getachew,	Conducted a study on the performance of construction projects in Ethiopia and identified different factors causing challenge to the construction environment.	Leadership was not part of the factors.

2015; Nega, 2018;		

Several researchers posited that there is a direct relationship between the manager's leadership style and workforce performance (Tabassi et al., 2014). Depending on the situation, leaders may apply an appropriate leadership style to direct individuals and teams to achieve a common goal. Now a days, transformational and transactional leadership styles are the most recognized leadership styles (Tabassi et al., 2014). Tabassi et al. (2014) explained that the goal for employing transformational leadership is to bring significant changes to organizational vision, strategy, culture, and attitude. The purpose of transforming individuals or groups is to achieve better performance. Transactional leaders focus on improving the exchanges that may occur between the leader and his or her followers (Tabassi et al., 2014).

Several researchers posited that there is a direct relationship between the manager's leadership style and workforce performance. By applying an efficient and appropriate leadership style, the leader can move a project team in the right direction, improve performance, productivity, and ensure that a construction project runs smoothly (Tabassi et al., 2014). Hence, these factors push for the identification of the existing leadership style in the Ethiopian high-grade construction sector.

On top of the above facts, the following points are the main reasons that made this research particularly look into leadership style and culture in the construction sector in Ethiopia:

- Though there are previous researches conducted in the area of leadership in Ethiopia, the studies never considered the construction sector (Duressa and Debela, 2014);
- Studies conducted in different countries suggested that leadership has direct influence on success of business. Though there are numerous studies on performance challenge in

the Ethiopian construction sector mainly on factors that lead to delay and cost overrun of projects, all the researches lack to see the leadership attribution on the performance of construction projects (Gebrehiwet and Luo, 2017; Ayalew *et al*, 2016; Worku and Jhe, 2016; Zinabu, 2016; Zinabu and Getachew, 2015; Nega, 2008);

- Studies conducted in different countries suggested that leadership has a direct influence on success of business. Yet, there is no research in the area of leadership specially in Ethiopian's construction sector (Malik et al., 2017; Turner and Müller, 2005);
- Even though studies by the Project Management Institute and related bodies indicate that Leadership is a crucial element of project organization and success; and recommend that managers shall adjust their leadership style depending on the ability and willingness of the team, the leadership wing has been given less emphasis in the Ethiopian construction sector and even the leadership style is not clearly known.
- There by, it is stated that successful projects require project managers with strong leadership skills (PMBoK, 2017). However, less emphasis has been given to the construction industry's leadership style at a global level in general and in Ethiopia in particular where the worst-case scenarios are very apparent.
- Limitations of previous studies and lack of coverage with respect to leadership in the construction sector, could be attributed to low knowledge of social scientists in Ethiopian about the construction industry. Hence the author being a civil engineer for more than 15 years and having taken soft studies (MA, MBA), is able to see the gap clearly. And sees filling this gap as an opportunity to contribute to the sector.
- The effect of culture on leadership style has been studied and most of the studies demonstrated that culture has a big influence on leadership styles (Hofstede, 2001; House & Aditya, 1997; Gerstner & Day, 1994). On the other hand, Bass demonstrated

the absence of culture influence on leadership by stating that leadership style can be applied in different cultures (Bass, 1991). Hence, this study also aims to see the effect of culture on leadership style.

- Winter and Dodou (2010) stated that Likert questionnaires are widely used in survey research, but it is unclear whether the item data should be investigated by means of parametric or nonparametric procedures. In conclusion Winter and Dodou (2010) demonstrated that for five-point Likert items, the t-test and Mann-Whitney-Wilcoxon (MWW) generally have similar power, and researchers do not have to worry about finding a difference whilst there is none in the population. Hence, for the study t-test, MWW and correlations (Pearson and Spearman) were conducted to make comparison between them.

On top of the above facts, PMBoK, (2017) in its 6th edition stated that there is a necessity of three skills for a project manager namely technical project management, strategic and business management and leadership skills. On top of that, a study by the Project Management Institute (PMI) showed that an appropriate leadership style can lead to better performance (Turner and Müller, 2005).

The management wing has been studied and investigated in Ethiopia (Gebrehiwet and Luo, 2017; Ayalew et al, 2016; Worku and Jhe, 2016; Nega, 2008). Skipper and Bell, (2006) argued that the emphasis of the construction sector has been on the managerial wing and barely on leadership at all stages of construction management. The same is true for the Ethiopian construction sector, where the leadership skill has not been examined and the leadership style is not known. This is in contrary to the findings of PMBoK (2017), which stated that leadership is

a crucial element of project organization success (PMBoK, 2017; Dulaimi, 2005; Koskela and Vrijhoef, 2001).

Different authors also recommended more research into cultural orientations, particularly Hofstede's dimensions, in order to gain a greater understanding of the influence of culture on leadership (Xiaoxia and Jing, 2006; Gibson, 1995). The right type of leadership style with in a specific culture has to be examined, since culture demonstrated a big influence on leadership styles (Hofstede, 2001; House & Aditya, 1997; Gerstner & Day, 1994). On the other hand, Bass demonstrated the absence of culture influence on leadership by stating that leadership style can be applied in different cultures (Bass, 1991). Hence, this study also aims to see the effect of culture on leadership style.

These study on the assessment of leadership style and the effect of culture on leadership will hopefully shed new light on that issue for the Ethiopian construction sector. The output of this study coupled by the previous managerial and strategic management studies enable to bring a full perspective to resolve the challenge of the already suffering Ethiopian construction sector (Gebrehiwet and Luo, 2017; Ayalew et al, 2016; Worku and Jhe, 2016; Zinabu, 2016; Zinabu and Getachew, 2015; ECDIP, 2014; Nega, 2008).

To summarize the study explores and evaluate two fundamental issues: first, it aims to compare leadership styles adopted by Ethiopian and Chinese construction mangers; second, it examines the culture effect on leadership styles; and third, the non-parametric (Mann-Whitney) and parametric result (T-Test) for five-point Likert scale analysis has been computed and compared.

This is true, considering the fact that the traditional leadership theories are insufficient for understanding the relationship between superiors and subordinates in the fast-paced world of international business, better classification of transformational and transactional leadership

styles has been considered. Where, the transformational leadership style focuses on the relationship of leaders and employees. Hence, the types of leadership styles adopted by Ethiopian and Chinese contractors has been examined.

Some authors stated the influence of culture on leadership styles (House & Aditya, 1997; Gerstner & Day, 1994; Hofstede, 2001). On the contrary, Bass (1990) argues that inexistence of culture effect on leadership style, leadership styles can be applied in different culture. On the other hand, Winter and Dodou (2010) demonstrated that for five-point Likert items, the t test and Mann-Whitney-Wilcoxon (MWW) generally have similar power and there is no difference in the comparison. Gombolay and Shah (2016) concluded that the t-test is quite robust and is a reasonable method for testing even individual Likert items. Others argued that Likert scale has to be only analysed by suing non parametric test (Carifio and Perla, 2007).

At last, based on the above-mentioned researches, eight hypotheses have been created using Z model with the aim to see the effect of culture on leadership styles.

1.3. Objective

1.3.1. General Objectives

The overall objective of this paper is to better understand the leadership style of Ethiopian construction sector and the effect of culture on the leadership styles for future betterment of the construction sector.

1.3.2. Specific Objectives

Besides the study has the following specific objectives: -

1. To assess leadership style of locally registered Chinese contractors in Ethiopia.
2. To assess the leadership style of registered first grade Ethiopian contractors;
3. To access the impact of culture on transformational and transactional leadership style in Ethiopian construction projects; and
4. To check the possibility to use parametric and non-parametric test for five-point Likert scale.

1.4. Research Questions

The study sought to answer the following research questions: -

1. What is the leadership style of locally registered Chinese contractors in Ethiopia?
2. What is the leadership style of registered first grade Ethiopian contractors?
3. What is the impact of culture on transformational and transactional leadership style of construction projects between locally registered Chinese contractors and locally registered first grade Ethiopian contractors in Ethiopia? and
4. To see the possibility to use parametric and non-parametric test for five-point Likert scale?

1.5. Significance of Study

Having clear information and thorough understanding on the factors that lead to leadership challenge in construction projects is the basis for a detail analysis and understanding of the

current challenges. The study being its first in the Ethiopian construction sector platform, it ignites interest for further study. The government is ambitious plan of achieving Gross Transformational Plan (GTP) II goals needs much more investment on the infrastructure. This in turn requires understanding the challenges and being able to point out possible mitigating measures. This has to be done since the construction sector's efficiency and effectiveness is among the determinant factors to realize the goals of GTP II. The same can be applied by involving productive local and foreign investors who can accomplish projects on time and with budget.

This research will be in alignment with the 2014 construction policy of the country and can be a help full tool for mitigating the challenge associated with delay and cost overrun by making the first assessment on the leadership style of the Ethiopian construction sector (ECIDP, 2014). Hence, the study will provide important understanding of how leadership styles are practiced in local and foreign contractors and how culture affects the leadership style. Contractors will benefit by having knowledge beforehand to be able to estimate risks they are likely to encounter; whenever inappropriate leadership style is applied to their projects. This study will also inform areas for further training for project managers to equip them with the most effective leadership skills.

Finally, researchers will use this study to appreciate the leadership styles, and how the success of construction projects in Ethiopia depend on leadership style by providing knowledge on the topic. The study recommended areas of potential research that require further study, hence give an opportunity to researchers to fill gaps in the study. Findings of this study will therefore inform a proper balance of interactions between project managers and employees that will help the team meet project objectives.

1.6. Delimitation/ Scope of the Study

This study will be confined to selected top management civil engineering professionals in construction companies from first grade Ethiopian and Chinese contractors who are operating in Ethiopian. The study aims to find the leadership style in the construction sector and to see the impact of culture on the leadership style.

1.7. Limitation of the Study

- The research excludes low grade BC/GC contractors (from grade two to ten) and all foreign contractors who are working in Ethiopia except China.
- There is a possibility that the conclusions that will be drawn is non-transferable to other project management types which differ from construction sector due to the fact that individuals that are attracted to firms with in construction industry have unique characteristics that are not present in other groups.
- The limitations related to the research mainly based on the data collection process. Data were collected from large size construction companies established mainly in Ethiopia. Although some of the respondent companies work in a foreign country, measures were determined according to their availability in Ethiopian construction industry since respondents were professional employees of Ethiopian or Ethiopian registered Chinese companies. Importance and rating levels of some measures as well as the relations between them would be somehow different if the questionnaire was administered in a different country.

- Since the construction industry is very dynamic, the study is not a guarantee for future scenarios, which needs continuous study following the advancement of the construction sector.

1.8. Definition of Significant Terms.

Contractor: is defined as a company, or a person with formal contract to do a specific job, supplying labour and/or materials (MoWUD, 1994).

Project performance: The extent to which construction projects are able to meet the desired outcome through adherence to time schedules, budget allocation (PMBOK, 2017).

Transactional leadership style: Project leader allocate roles, provides clear instructions, psychological rewards, active vigilance and prompt intervention to correct mistakes so as to ensure that the project team meet their desired goal in their specific construction phase in the project (Bass, 1990).

Contingent Reward (CR): Contingent reward shows the degree to which leaders tell others what to do in order to be rewarded, emphasize what leaders expect from them, and recognize their accomplishments.

Management-by-Exception (MBE): Management-by-exception assesses whether leaders tell others the job requirements, are content with standard performance, and are a believer in “if it ain’t broke, don’t fix it.

Laissez-Faire Leadership (LF): Laissez-faire measures whether leaders require little of others, are content to let things ride, and let others do their own thing.

Transformational leadership style: Project leader's tendency to emphasize on characteristics that develop trust, vision, respect and pride. This is meant to enhance participation among the team members of construction projects (Xiaoxia and Jing 2006; Bass, 1990).

Idealized Influence (II): Idealized Influence indicates whether leaders hold subordinates' trust, maintain their faith and respect, show dedication to them, appeal to their hopes and dreams, and act as their role model.

Inspirational Motivation (IM): Inspirational motivation measures the degree to which leaders provide a vision, use appropriate symbols and images to help others focus on their work, and try to make others feel their work is significant.

Intellectual Stimulation (IS): Intellectual stimulation shows the degree to which leaders encourage others to be creative in looking at old problems in new ways, create an environment that is tolerant of seemingly extreme positions, and nurture people to question their own values and beliefs and those of the organization.

Individualized Consideration (IC): Individualized consideration indicates the degree to which leaders show interest in others' well-being, assign projects individually, and pay attention to those who seem less involved in the group.

1.9. Organization of the study

The study is organized under five chapters: Chapter One includes the introduction, background and objective of the study. Chapter Two focuses on reviewing the available literature on the subject area. Chapter Three deals with the methodology and data analysis. Chapter Four shows

us the outcome and discussions of the study. And Chapter Five discusses the conclusions and recommendations of the study.

Chapter 2

2. LITERATURE REVIEW

2.1. Theoretical Study on Leadership Style and Culture

The construction industry involves different type of resources namely human, financial, information, physical and service & management. Among them the human resource is the vital ones for proper management of the project and execution of the same. Timely and with budget completion of a construction project is frequently seen as a major criterion of project success by clients, contractors, consultants and other stakeholders. The Project Management Institute Project Management Body of Knowledge (PMBoK) Guide defines a project as ‘‘a temporary endeavour undertaken to create a unique product or service” (PMBOK, 2017). In the PMBoK the emphasis is given to project management is good except the fact that the leadership wing is given less weight. In general, project success shall focus on effective development and deployment of project management strategy coupled with effective and efficient leadership (David and Tony, 2003). The concept of project leadership shall not serve a single parent organization, but it should recognize a project’s autonomy as well as its unique environment in order to define and implement its own strategy (Xiaoxia and Jing, 2006).

Currently, Ethiopia is in a struggle to undertake mega projects that demand huge finance and political decisions. This shows the country’s decision to topple poverty as witnessed by the case of the GERD construction which was thought as far back as the 12th century, where the Ethiopian emperor Amda Syon threatened to divert the waters unless the Egyptian Sultan stopped persecuting Coptic Christians[1]. At the moment, this idealistic view is becoming reality

[1] Richard Pankhurst, The Ethiopian Borderlands (Asmara: Red Sea Press, 1997)

which is guaranteed by the nations dedication and ability to fund major projects from domestic source results in an astonishing growth trajectory regardless of the argument that average GDP growth of 11 percent over the past 8 years and that of 7 to 8 average by Ethiopia and IMF respectively (MoFED, 2013; IMF, 2011). Housing development has been a crucial problem in urban areas and did not go in line with the increasing population in urban areas. In response to this, the MoUDHC has planed to build 2.45 million houses for GTP II period. This plan includes 750,000 houses in urban and 1.7 million houses in rural areas under 10/90, 20/80 and 40/60 housing schemes[2]. However, MoUDHC at the start of the GTP I aimed to reduce the percentage of old houses from 60 percent (pc) to 30 pc. And so far it has managed to reduce the percentage to 45pc. The government's plan on housing also shows huge investment. Though, the government's initial target was to finish 70,000 houses in the fiscal year, the Ministry of Urban Development, Housing & Construction (MoUDHC) says that it is ready to begin the construction of 65,000 additional ones on 800ha of land that has been availed in Addis Abeba. Moreover, the MoUDHC has allocated 11 billion birr for the execution of urban infrastructure constructions in the coming 4 years. However, this budget will only be used for building drainage materials, market centres, flooding avoider tunnels, butchery centres and municipality house services.

The construction sector in Ethiopia is booming and still continuing to have a leading part in the industry. The fast growth of the construction industry has resulted in the increase in the number of contractors joining the industry. During the period 2000 up to 2008, the number of Ethiopian contractors increased by 1.912[3]. Consequently, there are 7259 BC/RC/GC Ethiopian contractors registered in the 2014/15 budget year by the Ministry of Urban Development, Housing and

[2] http://ethiopiafirst.info/etnews/index.php/component/k2/item/884-ethiopia-construction-ministry-plans-245-million-residential-houses-for-next-gtp.html

[3] www.mwud.gov.et accessed on March 2, 2014.

Construction of Construction Industry Development and Regulatory Bureau. And currently there are more than ten thousand contractors.

To work as a contractor and participate in Construction in Ethiopia, one needs to have a construction license form Ethiopian ministry of construction. There are grades under different categories; General Contractors (GC 1-10) are licenced to work any civil construction work except water works. Building Contractor (BC 1-10) are licenced to work in construction of buildings. Road Construction (RC 1-10) are licenced to participate in road construction. And Special contractors (SC 1-4) are specialized in single area of construction like foundation drilling. For foreign investor only GC-1, BC-1, RC-1 or SC-1 registration is allowed.

Considering the high role of the construction sector in the economy and the increasing demand to licence to participate in the sector, the former Ministry of Urban Development and Construction revised its guideline and developed the "Amended Directives for the registration of Construction Professionals and Contractors No. 23/2013". This directive is effective starting July 8th, 2013. This directive allows the contractors to register in the same grade but with revised project cost up to 18 times of the old legislation. Where, the legislation specifies that contractors of category 4 to 2 are not permitted to build above twelve floors including basement and similarly category of 6 and 5 are not permitted to build above eight floors. The foreign contractors get only the first-grade construction licence which has a capacity to do unlimited work.

2.1.1. Overview of Leadership Theories

For the purpose of this research various leadership definitions have been examined and the appropriate ones are selected. PMBoK, (2017) in its 6th edition stated that leadership is associated with knowledge, skills and behaviours needed to guide, motivate and direct a team

for the attainment of organizational business goal. As per the PMBoK there are a necessity of three skills for a project manager namely technical project management, strategic and business management and leadership skills. Leadership is a crucial element of project organization success (PMBoK, 2017). The Project manager in relation to leadership style shall focus on the following four major factors:

- Leader Characteristics (attitude, moods, needs, value, ethics etc)
- Team Member Characteristics (attitude, moods, needs, value, ethics etc)
- Organizational Characteristics (its purpose, structure, type of work performed etc) and
- Environmental Characteristics (social situation, economic state and political elements)

Characteristic of leadership theories

There are four main characteristics of leadership theories and they are classified based on:-

- Who is taking the leads (i.e. characteristic of leaders)
- How they lead (i.e. behaviour of the leader)
- Under what circumstance they lead (i.e. situational theory, contingent theory)
- Who follows the leader (i.e. relational theory)

In recent years, transformational leadership has been getting popularity, unlike transaction leadership which favours the reward and/or punishment based style, it focuses on intellectually stimulation of the followers to use their ability. In general, transactional leadership focus on incremental change as per the performance of the followers but transformational leadership motivates the creation of fundamental change.

The project manager personal characteristics motivational factors associated with the search of the motivational factors leads to the success of leadership in construction industry (Dulaimi and Langford, 1999). Generally, the study of leadership in the construction sector is limited

(Keegan and Hartog, 2004; Odusami *et al.*, 2003). The limitation of leadership in the construction arena could be attributed to low knowledge of social scientists in the construction industry or construction professional lack in soft skill required in the industry (Langford *et al*., 1995). This goes hand in hand with the Cleland, (1995) argument which states that even the Project Management Body of Knowledge (PMBOK) lacks full coverage of leadership. In fact, the author stated that the leadership part is termed as the “the unknown territory” and even the latest version of PMBOK shows scope limitation on leadership.

A number of leadership styles have been identified for organizational leaders that are "transactional, transformational, laissez faire, charismatic, democratic, autocratic, consultative, joint decision making, authoritative, participative, servant, tyrant, task oriented, relationship oriented, production-oriented, employee-oriented, performance or maintenance, directing, coaching, supporting, delegating, authority-compliance, impoverished management, country club management, team management, middle of the road management, and soon". Hence, the leadership style can be cascaded and implemented in construction project arena from one of the above types (Becker and Huselid, 1998; Keller, 1992). The challenges of the construction industry ranges from industry specific and general challenges to ethical, political, economic, socio-cultural, legal and regulatory and technological challenges. The construction industry faces major leadership challenges of lack of quality and talented people; ageing workforce; teamwork and communication challenge coupled with training and education (Songer *et al.*, 2006). The general and specific challenges need a call for effective and efficient business leadership. Where, the economic challenge is associated with increase in inflation, exchange rate and cash flow problems; technological challenges are associated with information and communication technology, transfer of technology and innovation; legal and regulatory challenges are associated with litigation methods and arbitration methods; sustainability and

environmental challenges associated with sustainable construction awareness and ethical challenges include corruption (Zinabu, 2016).

2.1.2. Categories and types of leadership

Leadership has formal and informal wing, where the formal wing could be associated with political and business leadership. On the other hand, the informal wing of leadership could be associated with friendship.

2.1.2.1. Types of leadership styles

Bureaucratic leader: which is very structured and follows the procedures as they have been established. This type of leadership has no space to explore new ways to solve problems and is usually slow paced to ensure adherence to the ladders stated by the company. Leaders ensure that all the steps have been followed prior to sending it to the next level of authority. Universities, hospitals, banks and government usually require this type of leader in their organizations to ensure quality, increase security and decrease corruption. Leaders that try to speed up the process will experience frustration and anxiety (Weber, 1905).

Charismatic leader: this leads by infusing energy and eagerness into their team members. This type of leader has to be committed to the organization for the long run. If the success of the division or project is attributed to the leader and not the team, charismatic leaders may become a risk for the company by deciding to resign for advanced opportunities. It takes the company time and hard work to gain the employees' confidence back with other type of leadership after they have committed themselves to the magnetism of a charismatic leader (Weber, 1905).

Autocratic leader: this is given the power to make decisions alone, having total authority. This leadership style is good for employees that need close supervision to perform certain tasks. Creative employees and team players resent this type of leadership, since they are unable to enhance processes or decision making, resulting in job dissatisfaction (Lewin *et al.*, 1939).

Democratic leader: listens to the team's ideas and studies them but will make the final decision. Team players contribute to the final decision thus increasing employee satisfaction and ownership, feeling their input was considered when the final decision was taken. When changes arises, this type of leadership helps the team assimilate the changes better and more rapidly than other styles, knowing they were consulted and contributed to the decision making process, minimizing resistance and intolerance. A shortcoming of this leadership style is that it has difficulty when decisions are needed in a short period of time or at the moment (Lewin *et al.*, 1939).

Laissez-faire ("let do") leader: gives no continuous feedback or supervision because the employees are highly experienced and need little supervision to obtain the expected outcome. On the other hand, this type of style is also associated with leaders that don't lead at all, failing in supervising team members, resulting in lack of control and higher costs, bad service or failure to meet deadlines (Lewin *et al.*, 1939).

People-oriented leader: this is the one that, in order to comply with effectiveness and efficiency, supports, trains and develops his personnel, increasing job satisfaction and genuine interest to do a good job (Fiedler, 1967).

Task-oriented leader: this focuses on the job and concentrates on the specific tasks assigned to each employee to reach goal accomplishment. This leadership style suffers the same motivation issues as autocratic leadership, showing no involvement in the teams needs. It requires close supervision and control to achieve expected results (Fiedler, 1967).

Servant leader: this facilitates goal accomplishment by giving its team members what they need in order to be productive. This leader is an instrument employee use to reach the goal rather than an commanding voice that moves to change. This leadership style, in a manner similar to democratic leadership, tends to achieve the results in a slower time frame than other styles, although employee engagement is higher (Greenleaf, 1977).

Environment leader: this is the one who nurtures group or organisational environment to affect the emotional and psychological perception of an individual's place in that group or organisation. An understanding and application of group psychology and dynamics is essential for this style to be effective. The leader uses organisational culture to inspire individuals and develop leaders at all levels. This leadership style relies on creating an education matrix where groups interactively learn the fundamental psychology of group dynamics and culture from each other. The leader uses this psychology, and complementary language, to influence direction through the members of the inspired group to do what is required for the benefit of all (Burns, 1978).

Transaction leader: this is given power to perform certain tasks and reward or punish for the team's performance. It gives the opportunity to the manager to lead the group and the group agrees to follow his lead to accomplish a predetermined goal in exchange

for something else. Power is given to the leader to evaluate, correct and train subordinates when productivity is not up to the desired level and reward effectiveness when expected outcome is reached (Burns, 1978).

Transformation leader: motivates its team to be effective and efficient. Communication is the base for goal achievement focusing the group in the final desired outcome or goal attainment. This leader is highly visible and uses chain of command to get the job done. Transformational leaders focus on the big picture, needing to be surrounded by people who take care of the details. The leader is always looking for ideas that move the organization to reach the company's vision (Burns, 1978).

2.1.2.2. Transformational and transactional leadership styles

Recent studies demonstrated that leadership style could be classified in to transformational and transactional leadership by agglomerating the different attributions and dimensions toward leadership. Multifactor Leadership Questionnaire (MLQ) studies leadership styles mainly on the assessments of transformational and transactional leadership styles (Bass and Avolio, 1994; Xiaoxia and Jing, 2006). Accordingly, there are about five dimensions of transformational leadership namely

1. Idealized influence - attributions
2. Idealized influence - behaviors
3. Inspirational motivation
4. Individualized consideration
5. Intellectual stimulation

On the other hand, as per Bass and Avolio in 1994 the three dimensions of transactional

leadership are:

1. Contingent reward
2. Management by exception (active)
3. Management by exception (passive)

2.1.3. Overview of Transformational Leadership Style and Performance of Construction Projects.

Transformational leadership includes intellectual stimulation idealized influence, inspirational motivation and individualized consideration Bass (1990). Malik *et al.*, (2017) studies on banking sector and demonstrated that transformational leadership has significant influence on job satisfaction and organizational commitment of employees, and the authors suggested that the managers shall focus on core component of transformational leadership for its implementation. The paper finally put a suggestion that transformational leadership leads to fruitful outcome. Transformational leadership motivates employee's and enable them to achieve the project goal. There are considerable studies which shows that transformational leadership has a positive relationship to performance of projects (Kariuki, 2015; Liphadzi *et al.*, 2015; Kibuchi, 2012; Kissi, *et al*, 2012; Tabassi and Babar, 2010; Becker and Huselid, 1998; Keller, 1992; Bass, 1990). However, all the studies have been done outside of Ethiopia and to context the result needs detail study of the available project contractors. Oyaya (2017) made a study on 78 ongoing construction projects in Kenya and the finding demonstrated that transformational leadership style to have the most influence on performance of construction projects.

2.1.4. Overview of Transactional Leadership Style and Performance of Construction Projects.

Transactional leadership is about the achievement of the project goal at any cost using contingent reward and/or punishment (disciplinary action) for meeting the expectation and lacking any progress respectively (Bass, 1990). However, according to different authors transactional leadership is not advisable to achieve good project performance (Bass, 1990;

Bass *et al*, 2003; Deal and Kennedy, 2000).

Though the recent study in Ethiopia showed that development projects with clear goal could achieve project performance when transactional leadership is applied, however the study outcome might not be applicable in the construction sector (Aga *et al.*, 2016).

Oyaya (2017) made a study on 78 ongoing construction projects in Kenya and the finding demonstrated that transactional leadership style had the least influence than the transformational leadership. Besides, the study found that although generally transformational leadership style to be the best, individual aspects of transactional leadership style had a higher rating and therefore necessary upon manager to adopt the methods to ensure desirable project performance, hence the transaction leadership style with contingent rewards, management by exception, to be used for better result.

2.1.5. Performance Research in Ethiopian Construction Industry and Gap on Construction Leadership Aspect

Zinabu and Getachew (2015) has done research on causes of contractor cost overrun in Ethiopia. We listed out 41 possible cost overrun factors and 140 respondents were given the opportunity to rank them. According to the responses, the top five factors that causes cost overrun in the construction projects in Ethiopia are poor planning, fluctuation of price of materials, poor productivity, inflationary pressure and project financing in descending order. The study did not consider the challenge of the leadership wing as a factor for the cost overrun.

On the other hand, Nega (2008) stated that 95.7% of public projects suffer from cost overrun ranging up to 126% of the contract amount. Out of 39 cost overrun factors, the most frequent ones that causes cost overrun are listed as inflation or increase in the cost of construction

materials, change in foreign exchange rate, change in order, failure to identify problems and slow decision. Nega (2008) demonstrated that among the most common causes of cost overrun factors, delay is the predominant one. The study lacks to involve the leadership wing among the factors that causes cost overrun.

Gebrehiwet and Luo (2017) pointed out that out of 52 factors, the top five most important causes of delay in Ethiopian construction projects are corruption, unavailability of site utility, inflation, lack of quality material and late design. The paper also showed that time and cost overruns were the two most common effects of delay, the paper like the aforementioned ones, did not consider the leadership's role on the construction sector's performance.

Worku and Jhe (2016) stated that out of 88 factors that causes delay, the top five factors are listed as contractors financial difficulty, escalation of materials price, ineffective project planning and scheduling, delay of interim payment and lack of skilled professionals. This study also does not consider the leadership part among the factors the causes delay. Ayalew et al, (2016) also conducted a research on the performance of Ethiopian constrcuiton industry in relation to construction management practice and showed a schedule slippage between 61 to 80% and planned cost slippage from 21 to 40%. The paper also showed that time, cost and risk management has very low level of practice. However, like the others, this paper does not see the leadership part's contribution to better performance, instead concentrate on the managerial part (Ayalew *et al.*, 2016).

Similarly, Zinabu (2016) conducted a study on time delay factors for the Ethiopian construction industry, accordingly the top five factors that result in delay of construction projects were cash flow problem during construction, mismanagement by contractor, improper planning, slow decision making and late delivery of materials in descending order. The study excludes the

challenge of leadership style or application as a delay factor on the Ethiopian construction sector.

Duressa and Debela (2014) conducted a study on public organizations in Ethiopia and showed the need of Ethiopia to develop leadership development program to initiate system based thinking for the realization of vision.

2.1.6. Culture in the Perspective of Leadership

2.1.6.1. An Overview of Theories of Culture and Leadership Styles

Hofstede (2001) stated that culture is a narrow sense, and it was given a better definition "the collective programming of the mind which distinguishes the members of one group or category [nation] from another". Where, the culture is seen from every group or category of people sharing common mental structure which constitutes its culture.

Xiaoxia and Jing (2006) demonstrated the different layers of culture by considering the fact that the majority people in a certain nation share common belief and values and practices. As most of the construction works here are done by either Chinese or Ethiopian contractors and there is a visible difference between the two in terms of project completion time, the study focuses on the cultural differences between the two nations construction mangers and tries to explain the impact of cultural differences on the leadership style they follow based on Hofstede's four dimensions of culture.

Table 2.2: Demonstration of different layers of culture Xiaoxia and Jing (2006)

The national culture	It is associated with the nation as a whole.
The organizational culture	It is associated with the particular culture of an organization. Moreover, it is applicable to those who are employed.
The regional culture	It is associated with ethnic, linguistic, or religious differences that exist within a nation.
The gender culture	It is associated with gender differences (female vs. male)
The generation culture:	It is associated with the differences between grandparents and parents, parents and children
The social class culture	The social class culture: It is associated with educational opportunities and with a personas occupation or profession.

2.1.6.2. Theories of Previous Researches on culture and Leadership Styles

Leadership style is associated with the various cultures within different countries. As a consequence, the leader adopts the leadership style from his home country, which demonstrates that the leadership is in tie with the nationality of the leader (Hofstede, 2001; Gerstner & Day, 1994). On the other hand, leadership styles of transformational-transactional styles has a universal paradigm depending on culture. The same author stated that transformation leadership is more fruitful regardless of culture (Bass, 1997; Bass, 1991). As the Bass stated the leadership style could be tuned to different cultures, this results in some change in the specific behaviour and decision styles.

Avolio *et al.* (1995) stated that transformational leadership is more sound in collective culture than in individual culture and high uncertainty avoidance cultures may require more transaction-based leadership, while low uncertainly avoidance cultures will tolerate more innovative, transformational behaviors. On the other hand, high power distance favours autocratic leadership style (Elenkov, 1998).

2.1.6.3. Hofstede's Four Cultural Dimensions of National Culture

Based on a large number of survey data about the values of IBM employees in over 50 countries around the world, Geert Hofstede identified common problems among societies. All these 116000 IBM employees he analyzed were similar in all respects except nationality, which improved the authenticity of influences on nationality differences.

According to Hofstede (2005, 23) the four dimensions are:

- Power distance (from small to large)
- Collectivism versus Individualism,
- Femininity versus Masculinity,
- Uncertainty Avoidance (from weak to strong).

According to Hofstede, (2005) power distance, collectivism, masculinity and uncertainty avoidance are defined as follows. Power Distance can be defined as the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally (Hofstede, 2005, 46). Collectivism versus Individualism means the degree to which individuals are inte-grated into groups. On the individualist side we find societies in which the ties between individuals are loose: everyone is expected to look after him/herself and his/her immediate family. On the collectivist side, we find societies in which people from birth onwards are integrated into strong, cohesive in-groups. Moreover, in collectivist society, the interests of the group prevail over the interests of the individual. Masculinity versus Femininity refers to the distribution of roles between the genders which is another fundamental issue for any society to which a range of solutions are found. A society is called masculine when emotional gender roles are clearly distinct: men are supposed to be assertive, tough, and focused on material success. On the other hand, a society is called feminine when emotional gender roles overlap: both men and women are supposed to be modest, tender, and concerned with the quality of life. Uncertainty Avoidance can be defined as the extent to which the members of a culture feel threatened by ambiguous or unknown situations. This feeling is, among other things, expressed through nervous stress and in a need for predictability: a need for written and unwritten rules (Hofstede, 2005, 167).

2.1.6.4. Hofstede's Four Cultural Dimensions VS. Leadership Styles

Power Distance VS. Leadership Styles according to Hofstede's view of power distance in workplace, there are big differences between countries with small power distance and large power distance. Collectivism/Individualism VS. Leadership Styles according to Hofstede's view of collectivism versus individualism in workplace. Femininity/ Masculinity VS. Leadership Styles according to Hofstede's view of masculinity versus femininity in workplace, there exist some differences between masculinity countries and femininity countries. Uncertainty Avoidance VS. Leadership Styles according to Hofstede's view of uncertainty avoidance in workplace, some differences between countries based on the four cultural dimensions (Table 2.3).

Table 2.3: Key Differences between Small Power Distance and Large Power Distance Countries in Terms of Leadership styles

Power Distance		*Collectivism/Individualism*	
Small Power Distance	*Large Power Distance*	*Collectivism*	*Individualism*
Decentralization is popular.	Centralization is popular	Direct appraisal of subordinates spoils harmony.	Management training teaches the honest sharing of feelings
There are fewer supervisory personnel.	There are more supervisory personnel.	Relationship prevails over task. Relationship-oriented.	Task prevails over relationship. Task-oriented
Subordinates expect to be consulted.	Subordinates expect to be told what to do.	Hiring and promotion decisions take an employee's in-group into account.	Hiring and promotion decisions are supposed to be based on skills and rules only.
The ideal boss is a resourceful democrat	The ideal boss is a benevolent autocrat, or "good father."	Employees are members of in-groups who will pursue their in-group's interests.	Employees are "economic men" who will pursue the employer's interest if it coincides with their self-interest
Managers rely on their own experience on subordinates.	Managers rely on superiors and on formal rules.	The employer-employee relationship is basically moral, like a family link. Pay more attention on employee's	The employer-employee relationship is a contract

		development	between parties on a labour market.
Subordinate-superior relations are pragmatic.	Subordinate-superior relations are emotional		
Hierarchy in organizations means an inequality of roles, established for convenience.	Hierarchy in organizations reflects existential inequality between higher and lower levels		
Femininity/ Masculinity		*Uncertainty Avoidance*	
Femininity	*Masculinity*	*Weak Uncertainty Avoidance*	*Strong Uncertainty Avoidance*
Careers are optional for both genders.	Careers are compulsory for men, optional for women.	Focus on decision process.	Focus on decision content.
Managers tend to intuition and consensus	Mangers tend to decisive and aggressive	Belief in generalists and common sense.	Belief in experts and technical solutions.
Humanization of work by contact and cooperation.	Humanization of work by job content enrichment.	More changes of employer, shorter service.	Fewer changes of employer, longer service.

Resolution of conflicts by compromise and negotiation	Resolution of conflicts by letting the strongest win.	There are fewer self-employed people.	There are more self-employed people.
Managers more likely to reward people on the basis of equality, according to employee's competency and skills	Managers stress results and try to reward on the basis of equity	Better at invention, worse at implementation.	Worse at invention, better at implementation.
		There is tolerance for ambiguity and chaos.	There is a need for precision and formalization.
		Top managers are concerned with strategy.	Top managers are concerned with daily operations
		There should be no more rules than strictly necessary.	There is an emotional need for rules, even if there will not work.
		Motivation by achievement and esteem or belonging.	Motivation by security and esteem or belonging.
Source: *Cultures and Organizations: Software of the Mind*, Geet Hofstede & Gert Jan Hofstede, 2001			

2.1.6.5. Hofstede's Four Cultural Dimensions Index of China & Ethiopia

The Power Distance Index (PDI)

Hofstede's research shows the score of PDI in China is 80, and that of Ethiopia is 70. Thus, the PDI in china is higher than Ethiopia.

The Individualism/Collectivism Index

Concerning China, it scores only 20, while Ethiopia also gets 20 scores. At a score of 20 Ethiopia and China is a highly collectivist culture where people act in the interests of the group and not necessarily of themselves.

The Masculinity/Femininity Index

Scores are put into a range from 0 as the most feminine to 100 as the most masculine country. Regarding China, it scores 66, while Ethiopia gets 65; which shows both countries has more or less the same score.

Ethiopia scores 65 on this dimension and is thus a Masculine society. In Masculine countries people "live in order to work", managers are expected to be decisive and assertive, the emphasis is on equity, competition and performance and conflicts are resolved by fighting them out.

The Uncertainty Avoidance Index

With regard to China, it scores 30 and the score of Ethiopia is 55. Thus, China has relatively low uncertainty avoidance in this experiment. The need to ensure success can be exemplified by the fact that many Chinese will scarify family and leisure time giving priority to work.

2.1.7. Parametrica and non-parametric test

Winter and Dodou (2010) stated that Likert questionnaires are widely used in survey research, but it is unclear whether the item data should be investigated by means of parametric or nonparametric procedures. In conclusion Winter and Dodou (2010) demonstrated that for five-point Likert items, the t test and Mann-Whitney-Wilcoxon (MWW) generally have similar power, and researchers do not have to worry about finding a difference whilst there is none in the population. Vieira (2016)[4] concluded that applicability of t-test to compare groups even when the variable is measured a Likert scale and the populations does not have a normal distribution. Gombolay and Shah (2016) empirically evaluate the validity of the t-test vs. the Mann-Whitney U test for Likert items and scales and concluded that the t-test is quite robust and is a reasonable method for testing even individual Likert items. They presumed that the Likert scale can reasonably be approximated as an interval scale even though it is inherently ordinal. Hence, t-test has been used to analyze the Likert scale questioners (Gombolay and Shah, 2016, Winter and Dodou, 2010; Carifio and Perla, 2007). Winter and Dodou (2010) conducted a research on ten thousand random samples were drawn for each of the 98 distribution combinations and subjected to the t test and MWW and in their conclusion stated that for five-point Likert items, the t test and MWW generally have similar power, and researchers do not have to worry about finding a difference whilst there is none in the population.

[4] https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2770035 (accessed on August, 2018).

2.2. Discussion of the Z Model (Conceptual Framework)

With the purpose to explain the influence of culture on leadership styles of first grade Ethiopian and Chinese contractors in operating Ethiopia Z Model has been developed. Finally, eight hypotheses developed from the theories for further discussion.

2.2.1. Explanation for the Z Model

The model helps to perform analysis on two factors of leadership style and culture. The model is named Z Model, which is an acronym for author Zinabu. Hence, with the help of the model the influence of culture on leadership styles of transformational and transactional leadership has been accessed. A cross-cultural comparative analysis in relation to leadership style's is the first of its kind in Ethiopia, especially in the area of the construction industry. Specially, considering the fact that the government is investing a considerable amount of its budget in the construction sector and as the Chinese and Ethiopian contractors are the leading contractors in terms of number and percentage of total budget, this paper focuses on the grade one (high grade) Ethiopian and Chinese contractors.

The model is created by focusing on the culture dimension of Hofstede and the leadership style of transformational and transactional to see the cultural dimension influence. Where, the culture factor as per Hofstede's four Cultural Dimension are: power distance, individualism/collectivism, masculinity/femininity and uncertainty avoidance. The Z Model is presented as follows:

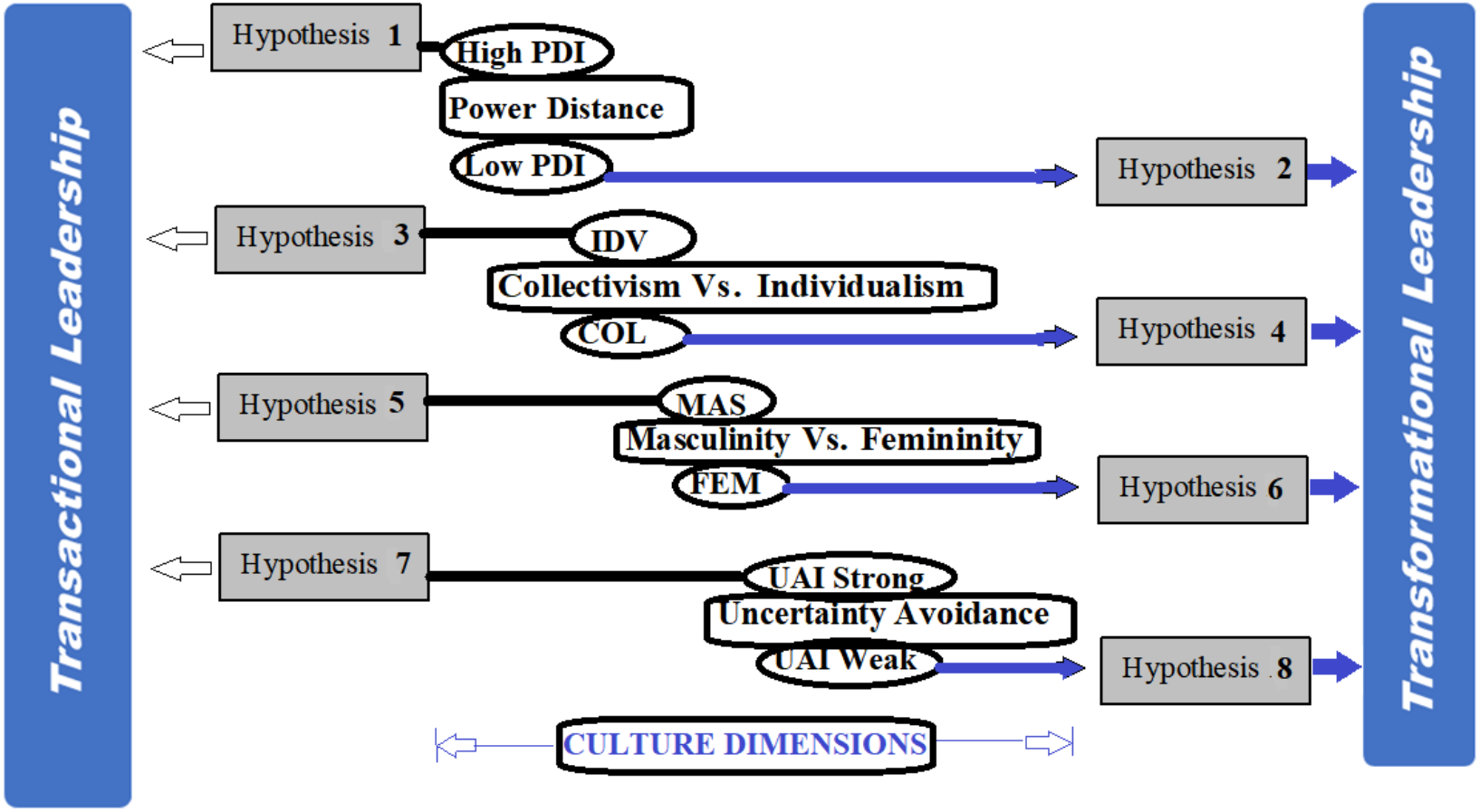


Figure 2: The Z Model

For bettering explain the model, the following hypotheses are derived:

2.2.2. Hypotheses: Hypotheses of Influence of Four Cultural Dimensions on Leadership Styles

Based on Hofstede's theories, the key characteristics has been summarized under the four cultural dimensions in terms of leadership styles. We found that there were some connections between the four cultural dimensions and transformational and transactional leadership styles. More details about our hypotheses with respect to the influences of four cultural dimensions on leadership style are explained below:

Large Power Distance

In a large power distance situation, superiors and subordinates consider each other as unequal. Organizations centralize power as much as possible in a few hands. Subordinates expect to be told what to do (Hofstede, 2005). According to the characteristics of transactional leadership identified in previous section, transactional leaders seldom give their subordinates personal attention and advices. Besides, their subordinates expect to be told what to do. Based on the factors above, we can see that some characteristics of large power-distance in terms of leadership style share similarities with those of transactional leadership style. Thus, we posited our hypothesis 1 in the following:

H1: Managers in countries with high power distance tend to employ a more transactional leadership.

Small Power Distance

In a small power-distance situation, subordinates and superiors consider each other as equal. The ideal boss is a resourceful democrat (Hofstede, 2005). Superiors pay more attention to how to intellectually stimulate the followers' use of their abilities, and their subordinates expect to be consulted. Transformational leaders care more about their subordinates' advices, and they give their

subordinates adequate rights to take part in decision-making process. Then we can see that some characteristics of small power-distance in terms of leadership style share similarities with those of transformational leadership style. Thus, we posited our hypothesis 2 in the following:

H2: Managers in countries with small power distance tend to employ a more transformational leadership.

Individualism

In an individualist culture, managers stress the employee's independence from the organization. The employer-employee relationship is a contract between parties on a labour market. Management in an individualist society is management of individuals. Task prevails over relationship. If incentives or bonuses are given, these should be linked to an individual's performance (Hofstede, 2001, 101). Transactional leaders generally reward or discipline the follower depending on the adequacy of the follower's performance. Accordingly, we can see that some characteristics of individualism in terms of leadership style share similarities with those of transactional leadership style. Thus, we posited our hypothesis 3:

H3: Managers in individualist countries tend to employ a more transactional leadership.

Collectivism

In a collectivist culture, managers stress employees' dependence on the organization. The employer-employee relationship is basically moral, like a family link. Relationship prevails over task (Hofstede, 2005). According to characteristics of transformational leadership identified in previous section, transformational leaders pay more attention to the relationship between managers and employees, and they care more about their subordinates. Based on the factors above, we can see that some characteristics of collectivism in terms of leadership style share similarities with those of transformational leadership. Thus, we posited our hypothesis 4 below:

H4: Managers in collectivist countries tend to employ a more transformational leadership.

Masculinity

In a masculine culture, a humanized job should give more opportunities for recognition, advancement and challenge. Besides, organizations in masculine societies stress results and try to reward it on the basis of employees' performance (Hofstede, 2005). Transactional leaders generally reward their subordinates depending on the adequacy of the follower's performance. Therefore, we can see that some characteristics of masculinity in terms of leadership style share similarities with those of transactional leadership. Thus, we posited our hypotheses 5 below:

H5: Managers in masculine countries tend to employ a more transactional leadership.

Femininity

In a feminine culture, a humanized job should give more opportunities for cooperation and social contacts. This means managers in feminine cultures tend to ask their subordinates for advice and give their subordinates adequate rights to take part in decision-making process. Besides, organizations in feminine societies are more likely to reward people on the basis of equality, that is, to everyone according to need (Hofstede, 2005). According to characteristics of transformational leadership identified in the previous chapter, transformational leaders encourage their subordinates to share their ideas with them, and allow them to take part in the decision-making process. Based on these factors mentioned above, we can see that some characteristics of femininity in terms of leadership style share similarities with those of transformational leadership style. Thus, we posited our hypothesis 6:

H6: Managers in feminine countries tend to employ a more transformational leadership.

Strong Uncertainty Avoidance

In a strong uncertainty avoidance society, managers try to avoid uncertainty and ambiguity by providing stability for their subordinates, establishing more formal rules. They tend to discard deviant ideas and behaviors. There is a strong need for written rules, formalization, regulations and rituals (Hofstede, 2005). According to characteristics of transactional leadership identified in previous chapter, transactional leaders focus on formal rules, standards, they intervene the idea only if standards are not met. So we can conclude that some characteristics of strong uncertainty avoidance in terms of leadership style share similarities with those of transactional leadership style. Thus, we posited our hypothesis 7:

H7: Managers in strong uncertainty avoidance countries tend to employ a more transactional leadership.

Weak Uncertainty Avoidance

In a weak uncertainty avoidance society, managers more easily accept the uncertainty inherent in workplace. Thus, they encourage innovation and creation. Besides, managers in weak uncertainty avoidance cultures are more flexible, and depend not as much on experts as on themselves (Hofstede, 2005). According to characteristics of transformational leadership identified in previous chapter, transformational leaders encourage others to be creative in looking at old problems in new ways and create an environment that is tolerant of seemingly extreme positions.

Thus, we can see that some characteristics of weak uncertainty avoidance in terms of leadership style share similarities with those of transformational leadership style. Thus, we posited our hypothesis 8 as following:

H8: Managers in weak uncertainty avoidance countries tend to employ a more transformational leadership.

2.3. Empirical Method

In this section, the empirical method is discussed mainly in reference with the development of the questioner. The questioner part consists of three main parts, namely background information and leadership styles. Where the first part consists of six questions from one to five which are name of the company (optional), back ground information on age, gender, experience, nationality and position.

On the other hand, the second part of the questioner contains 24 questions related to leadership styles mainly on the assessments of transformational and transactional leadership styles. Where the questioner commonly makes use of the Multifactor Leadership Questionnaire (MLQ), developed by Bass and Avolio in 1990 and modified by Xiaoxia and Jing (2006). For this paper the seven-point Likert scale of Xiaoxia and Jing is changed to five point for the easiness of its management. The modified version of the questioner has been adopted for this research due to its applicability in terms of language, where there is the English and Chinese version of the questioner. The Chinese version ease and speed up the filling of the questioners by the Chinese construction mangers.

The questioner accesses five dimensions of transformational leadership namely idealized influence (attributions), idealized influence (behaviors), inspirational motivation, individualized consideration and intellectual stimulation. On the other hand, the three dimensions of transactional leadership measured by the MLQ, as per Bass and Avolio in 1990, cover contingent reward, management by exception (active) and management by exception (passive).

This research utilizes for its questionnaire the modified version of the Multi-Factor Leadership Questionnaire (MLQ). The MLQ is a good tool to access the perceived frequency of transformational and transactional leadership style (Xiaoxia and Jing, 2006).

Questions in relation to leadership style mixes the original MLQ of Bass and Avolio in (1990), to

mention the adoption of five-point Likert scale and utilize also the modified version by Xiaoxia and Jing, (2006) which adds the risk perspective on transformational leadership and make the language a little bit simpler from Bass and Avolio in (1990). Considering the fact that the MLQ is a popular and important tool but has license-imposed challenge to access the whole copy of the original MLQ, the adoption of other authors modified MLQ is utilized.

The modified version excludes the evaluation by manager's subordinates, the manager's superiors, and the managers' peers and considers only the manger perspective due to time limitation but most importantly by considering the fact that the manager's perceived leadership style, might be highly rated and may be different from actual leadership style. However, this study accepts the collection of questioners from mangers since the assessment is about collection of their style from their own perspective and high focus is given to inspire managers to give realistic response and this is also aided by making the respondents confidential. This questioner, unlike the modified version utilizes the five-point Likert scale which is much easier for us to examine and analyze different choices leading to different results. The number 0 to 4 stands for scores, where 0 point stands for totally disagree. On the contrary, 4 points is the highest score of the answer which means totally agree.

For this study the questioner is prepared for transformational and transactional leadership style assessment. Accordingly, the transformational leadership style consists of five dimensions of 15 questions. The five dimensions include Idealized Influence, Inspirational Motivation, Intellectual Stimulation, Individualized Consideration, and Risk Acceptance where each one has three questions as follows:

Idealized Influence

Q7: I make others feel good to work with me.

Q15: Others are proud to be associated with me.

Q23: I talk about my most important values and beliefs to my employees.
Inspirational Motivation Q8: I encourage employees to make the most of their real skills and capacities to their jobs. Q16: I help others find meaning in their work. Q24: I articulate a compelling vision for the future.
Intellectual Stimulation Q9: I enable others to think about old problems in new ways. Q17: I provide others with new ways of looking at puzzling things. Q25: I get others to rethink ideas that they had never questioned before.
Individualized Consideration Q10: I let others know how I think they are doing. Q18: I give personal attention to others who seem rejected. Q26: I give careful attention to the working conditions of my employees.
Risk Acceptance Q11: I think making risky decisions alone does not bother me. Q19: I think intuition is the best guide in making decisions. Q27: I make quick decisions when necessary.

The three dimensions of transactional leadership include contingent reward, management by exception and Laissez-Faire leadership with each containing three questions as follows:

Contingent Reward Q12: I tell others what to do if they want to be rewarded for their work. Q20: I provide recognition/rewards when others reach their goals. Q28: I clearly clarify the responsibility for achieving targets.
Management-By-Exception Q13: I am satisfied when others meet agreed-upon standards. Q21: As long as things are working, I do not try to change anything. Q29: I tell others the standards they have to know to carry out their work.
Laissez-Faire Leadership Q14: I am content to let others continue working in the same way as always. Q22: Whatever others want to do is O.K. with me. Q30: I don't care much what others do unless the work is absolutely essential.

The third part of the questioner contains 16 culture dimension questions from question questioner number 31 to 45. Where, the culture dimension involves four questioner each for power distance, uncertainty avoidance, collectivism and feminine dimensions. For each part the questions were adopted from Xiaoxia and Jing, (2006) and changed to five point Likert scale.

Power Distance

Q31: I am entitled to privileges compared to my subordinates.

Q35: There is a wide salary range between the top and bottom of the organization.

Q39: I think my subordinates should only follow my order without knowing why it should be done.

Q43: I think that my subordinates are afraid to disagree with me, even if they have better ideas.

Uncertainty Avoidance

Q32: I think company rules should not be broken even when the employee thinks his decision is within the company's best interests.

Q36: It is important to be on time to business appointments.

Q40: I only consider written contracts to be binding.

Q44: In my organization, change is viewed as a threat.

Individualism/Collectivism

Q33: Once given tasks, I prefer to work: individually or in a group?

Q37: In my workplace, I consider myself to have close family like bonds with my subordinates.

Q41: I consider to be most important: individual achievements or group performance?

Q45: When it comes to decision making, I prefer: a single leader or group consensus?

Masculinity/Femininity

Q34: What is more important about the job: a high salary or feeling satisfied.

Q38: What is more important: a better position or employment security? Q42: I tend to put more emphasis on: work goals or personal goals?

(Note: work goals refer to earnings, advancement; while personal goals refer to friendly, getting along well with your subordinates.)

Q46: I prefer to solve the conflict though: negotiation and compromise or confrontation and argument?

Chapter 3

3. RESEARCH METHODOLOGY

3.1 Introduction

The research methodology part clearly demonstrates the research design, targeted population, proposed sampling technique, data collection methods, data analysis techniques and ethical considerations.

3.2 Research Design

The purpose of this study is to empirically evaluate the different leadership styles of contractors in Ethiopia and China and identify the influence of culture on leadership styles. In order to answer the research questions, eight hypotheses have been formulated concerning the correlation between culture and leadership styles. The two independent variables analyzed are leaderships styles and culture dimensions. With the aim to test the hypotheses, a survey using a questionnaire has been decided in order to collecting responses from a large sample prior to quantitative analysis.

This study is descriptive study which accessed the finding of the objectives through a questioner and showed the findings using statistical methods (Cooper and Schindler, 2003). Samples were taken from the Ethiopian construction mangers using simple random sampling. On the other hand, the total population of the Chinese construction companies registered in Ethiopia were chosen to give a response. Self-administered questionnaire has been distributed to the managers/ employee of the construction firms.

3.3.1. Questioner Design

The questioner consists of three main parts, namely, background information, on leadership styles and culture dimensions (Appendix 1). Where the first part consists of six questions that focus on name of the company (optional) and back ground information (on age, gender, experience, nationality and position). On the other hand, the second part of the questioner contains 24 questions related to leadership styles mainly on the assessments of transformational and transactional leadership styles. The third-part of the questioner is associated with the measurement of culture dimensions. For the second part of the questioner, the questioner commonly makes use of the Multifactor Leadership Questionnaire (MLQ), developed by Bass and Avolio in 1990 and modified by Xiaoxia and Jing (2006). For the purpose of this paper, the seven-point Likert scale of Xiaoxia and Jing is changed to five point for the easiness of its management. The modified version of the questioner has been adopted for this research due to its applicability in terms of language, where there is the English and Chinese version of the questioner. The Chinese version ease and speed up the filling of the questioners by the Chinese construction mangers.

The questioner accesses five dimensions of transformational leadership on the other hand, the three dimensions of transactional leadership measured by the MLQ, as per Bass and Avolio in 1990, cover contingent reward, management by exception (active) and management by exception (passive).

This research utilizes in its questionnaire the modified version of the Multi-Factor Leadership Questionnaire (MLQ). The MLQ is a good tool to access the perceived frequency of transformational and transactional leadership style (Xiaoxia and Jing, 2006).

Questions in relation to leadership style mixes the original MLQ of Bass and Avolio in (1990), to mention the adoption of five-point Likert scale and also utilize the modified version by Xiaoxia and Jing, (2006) which adds the risk perspective on transformational leadership and make the language

a little bit simpler from Bass and Avolio in (1990). Considering the fact that the MLQ is a popular and important tool but has license-imposed challenge to access the whole copy of the original MLQ, the adoption of other authors modified MLQ is utilized.

The modified version excludes the evaluation by manager's subordinates, the manager's superiors, and the managers' peers and considers only the manger perspective due to time limitation but most importantly by considering the fact that the manager's perceived leadership style, might be highly rated and may be different from actual leadership style. However, this study accepts the collection of questioners from mangers since the assessment is about collection of their style from their own perspective and high focus is given to inspire managers to give realistic response and this is also aided by keeping the respondents confidentiality. This questioner, unlike the modified version utilizes the five-point Likert scale which is much easier for us to examine and analyze different choices leading to different results. The number 0 to 4 stands for scores, where 0-point stands for totally disagree. On the contrary, 4 points is the highest score of the answer which means totally agree (Appendix 1). The 0-point to 4-point ranking in the five point Likert scale was used in the modified version of the MLQ and intentionally left the same for this study. The main reason is that, both ratios and intervals are meaningless for ordinal data. So a scale of 1-5 versus 0-4 doesn't matter and won't affect the analysis, starting with 1 is due to tradition rather than necessity. Nevill and Lane (2007) argued that interval data have no fixed ''zero'' point – that is, the scale could go, for example, from -2 to +2, from 0 to 4, or from 1 to 5. All three scales will result in identical conclusions when analyzed using parametric or non-parametric statistical tests except for the consideration of Log scale. Hartley, (2013) also demonstrated that mostly likert scales are used and most of them use 4 or 5 scale points. Where, most of the likert scale start with 0 (or 1) - the negative end of the scale - and progress to 5 (or 7) - the positive end (Hartley, 2013; Webster, 2003).

For this study the questioner is prepared for transformational and transactional leadership style

assessment. Accordingly, the transformational leadership style consists of five dimensions of 15 questions. The five dimensions include Idealized Influence, Inspirational Motivation, Intellectual Stimulation, Individualized Consideration, and Risk Acceptance where each one has three questions. Similarly, the three dimensions of transactional leadership include contingent reward, management by exception and Laissez-Faire leadership with each containing three questions. The third part of the questioner contains 16 culture dimension questions from question questioner number 31 to 45. Where, the culture dimension involves four questioner each for power distance, uncertainty avoidance, collectivism and feminine dimensions. The answers in the cultural dimension part were of two different kinds; one where the participants could choose between two different options marked 0 and 1, and the other type is a Likert-Style rating scale, the same as the leadership style part did.

Where, the sample population involved 151 Ethiopian grade one contractors and 105 Chinese contractors who has been engaged in construction works in Ethiopian. The data was obtained from the official web site of construction ministry, information from Ethiopia investment commission and other relevant websites.

3.3 Sample size and Sampling Procedure

Considering the homogeneity of the construction sector of first grade contractors in terms of formulation and category, for Ethiopian contractors simple random sampling was adopted for questionnaire distribution to the Ethiopian contractors. Random sampling was used because their address is available on the ministry of construction website, office and/or site locations are known. On the other hand, for the Chinese contractor managers an email and hard copy has been distributed to all the contractors through the addresses found in ministry of trade and Ethiopian investment commission. Besides, further reminder through text message, telephone and email has been applied to get reliable response and to have high number of returns of the questioners.

Besides, hard copy and soft copy has been sent to known addresses in Ethiopia through consultant, contacts and known professional engineers.

For this study maximum care is given to get the highest sample size. In general, the study has reached part of 151 grade one Ethiopian contractors and 105 Chinese contractors.

Where the numbers of Ethiopian contractors up to level three are: 151 BC1/RC1/GC1; 72 BC2/RC2/GC2; 201 BC3/RC3/GC3. The first-grade Ethiopian contractors that are registered are 2151 in number (Table 3.1). According to Ethiopian Investment Commission, there are 105 registered Chinese contractors in Ethiopia starting from 2010.

Table 3.1: Number of contractors and their trend[5]

Category	1994 E. C. (2001/02 G. C.)	2000 E. C. (2008 G. C.)	2006 E. C. (2014/15 G. C.)	2011 E. C. (2017/18 G. C.)
(BC-1, GC-1, RC-1)	35	56	263	151
(BC-2, GC-2, RC-2)	3	3	73	72
(BC-3, GC-3, RC-3)	30	62	163	201
Total from Grade 1 to 3	68	121	499	424
Total from Grade 1 to 10	941	1799	7259	6315

Where:---BC: Building Contractor; GC: General Contractor; RC: Road Contractor

Accordingly, the sample size was determined based on Yamane formula for Ethiopian Contractors. According to Yamane formula, sample size of 59 was needed to be collected from Ethiopian contractors. However, to the Chinese contractors the questioner sent was, with email and hard copy, to the whole population of Chinese contractors in Ethiopia. The whole population of the Chinese contractors were selected due to lower response rate during the pilot test.

[5] www.MoUDHC.gov.et and Zinabu, 2009

Hence, finally it was possible to collect 65 and 54 response from Ethiopian and Chinese contractors with a response rate of 76% (86 questioners were sent to Ethiopian construction mangers) and 51% (questioners were sent to all available address of Chinese construction mangers) respectively. The response of the Chinese contractors was smaller, it might be due to the change of address or the contractors might cease existing in Ethiopia.

According to the formula used to determine the sample size by Yamane (1967, P.258),

$$n_o = \frac{z^2 p(1-p)N}{z^2 p(1-p) + N e^2}$$

Where:

no = sample size

z = confidence interval corresponding to a level of confidence

p = population proportion

N = population size

e = precision or error limit

For Contractors in Ethiopia Building Construction Sector

Again, taking Yamane (1967, P.258) formula for determining the required response rate for the amount of sample size determined, the researcher used the below method of determination.

$$r = \frac{n}{1 + ne^2}$$

Where:

n = sample size

r= required responses

e^2= error limit or the level of precision) 10%

Table 2.4: Distributed questioners and number of responses

Contractors	Population	Sample distributed	Response (No.)	Response (%)
Ethiopian	151	86	65	76%
Chinese	105	To all	54	51%

3.4 Research instruments

For the provision of detailed individual feedback, the use of questionnaires is very advisable. Hence, in this study, a structured questioner is used to get a more accurate picture of leadership styles and the effect of culture on leadership styles.

3.4.1. Pilot Testing

Taking this in to consideration, a pilot test was conducted for this study to find loopholes in design and instrumentation to produce substituted data for selecting the sample. The questionnaire was distributed to 14 respondents of 7 China managers and 7 Ethiopian managers. The Ethiopian managers response was 6 out of 7 but the China managers response was only 2 out of 7. The data obtained was evaluated to ensure the questions were properly understood and answered by the respondents. It is then after; the sample distribution was decided to be done for the whole population of China construction mangers, considering the low rate of questioner return.

Considering the fact that the reliability is high if the results are the same findings each time by testing, however, due to limited resources including time and finance, it was not able to test the questionnaire more than once. However, the Cronbach's alpha becoming 0.718 reveals the existence of internal consistency among the data.

Reliability Statistics

Cronbach's Alpha	N of Items

Reliability Statistics

Cronbach's Alpha	N of Items
.718	45

Case Processing Summary

		N	%
Cases	Valid	8	100.0
	Excluded[a]	0	.0
	Total	8	100.0

a. Listwise deletion based on all variables in the procedure.

Validity is concerned with whether the findings are really about what they appear to be about. Hence, the gap has been filled by using questionnaire which has been already widely used and thus guarantees us high extent of validity. On top of this, in the questionnaire, five-point Likert has been adopted to each question, which aims to eliminate the risk of choosing neutral answers by respondents. The language barrier by the Chinese contractors has been eliminated by adopting the Chinese version of the questioner adopted from Xiaoxia and Jing, (2006). In addition, the original MLQ use a five-point rating scale from 1 to 5, which was changed to a range from zero to six (Xiaoxia and Jing, 2006). The reason for the inclusion of 0 was that it would have been possible to reduce the possibility of choosing neutral answers by respondents.

3.5 Data Analysis

This study used descriptive data analysis method owing to the nature of its design being a descriptive survey. Data from questionnaires has been coded using spreadsheet and SPSS. The data was tabulated, analyzed and interpreted using spreadsheet and SPSS. The five-point scale was converted to T-Test, Mann-Whitney-Wilcoxon (MWW) then correlations test was examined using Pearson and spearman methods. Hence, for the study t-test and correlations (Pearson and Spearman) were conducted to make comparison between them (Mugenda and Mugenda, 1999).

In order to analyse the cultural effect upon leadership style, the cross-cultural data was calculated by using the statistical software SPSS. When giving two data sets, each characterized by its mean, standard deviation and number of data points; we can use some kind of t-test to determine whether the means are distinct, provided that the underlying distributions can be assumed to be normal. For this study, the two variables are independent of each other, so an independent t-test and Mann Whitney test with a 95% confidence interval has been computed and compared. When the statistical significance calculated based on two single means is below 0.05, the null hypothesis that the two groups do not differ is rejected in favor of an alternative hypothesis, which typically states that the groups do differ. Through observing the differences between various mean values and the significance coefficient, the leadership style and the culture effect has been evaluated.

For the analysis of culture effect on leadership style, correlation test using Pearson and Spearman correlation has been computed and compared. The correlation indicates the strength and direction of a linear relationship between two variables. If two variables are independent and irrelative, the correlation is 0. The correlation is more important when the correlation is nearer to 1 or -1. Through studying the correlation figure, the cultural effect upon leadership styles has been judged.

3.6 Ethical Consideration

All the respondents were aware of their liberty to participate in the study. The researcher ensured that all the respondents participated in the study voluntarily and assured them of at most confidentiality throughout the study. The researcher has been keen to acknowledge borrowed works from other authors.

Chapter 4

4. Result and Discussion

4.1. Introduction

The study is to access the leadership style of Chinese and Ethiopian construction mangers who are working in Ethiopia. With the help of questioner and statistical spreadsheet analysis tool quantitative analysis has been done using samples that are collected from 65 Ethiopian and 54 Chinese contractor managers/ professional engineers. The questioner enables us to collect a large sample using electronic and hard copy in an efficient way and to present reliable sample. The analysis tool enables us to get total score (Index), t-test, Pearson coefficient, Spearmen coefficient, and significance.

The leadership style and effect of culture on leadership style has been analyzed using statistical software with 95% confidence level. In case of two data sets where each is characterized by their Index, correlation and number of data points; one type of t-test to determine whether the Indexes are distinct. For this paper of two independent variable analysis, an independent t-test with 95% confidence level is used.

The acceptance and rejection of the null hypothesis depends on the statistical significance calculated based on two single Index. In case the significance is below 0.05 the null hypothesis that the two groups do not differ is rejected and the alternative hypothesis is accepted. Where, the alternative hypothesis shows the existence of difference between the two groups. The Pearson as well as Spearman correlation method is used to see the effect of culture on leadership style and to see the result of both correlations. Where, the strength and direction of the linear relationship between the two variables are identified as follows, when the two variables are independent and irrelative, the correlation is 0, on the other hand when the correlation is nearer to ±1 it shows important relation. Hence, based on the correlation, the culture effect on leadership style has been analyzed.

4.2. Leadership Styles

4.2.1. Result of Survey on Leadership Styles

The leadership style of Chinese and Ethiopian contractors who are working in Ethiopia is the primary focus of the study. With the help of some empirical support, we assumed that Ethiopian managers tended to adopt a transactional leadership style, while Chinese managers were prone to employ a transformational leadership style. To access the same, 15 and 9 questions were adopted to test for transformational and transactional leadership style respectively. Where, the transformational leadership style was tested by its characteristics of *Idealized Influence*, *Inspirational Motivation*, *Intellectual Stimulation*, *Individualized Consideration*, and *Risk Acceptance*; and on the other hand, transactional leadership tested using its characteristics of *Contingent Reward*, *Management-by-Exception*, and *Laissez Faire*. Accordingly, three questions for each characteristic were used to see the leadership style (Table 4.1). The first part of the questioner which is associated with the leadership style contains 30 questions which is chopped to eight parts of three questions each for transformational (five dimensions) and transactional (three dimensions) leadership styles as shown in Table 4.1.

Table 4.1: The Questions related to Transformational Leadership Style

Leadership Style	Characteristic	Question related to the characteristic
Transformational Leadership	Idealized Influence	Q 7, 15, 23
	Inspirational Motivation	Q 8, 16, 24
	Intellectual Stimulation	Q 9, 17, 25
	Individualized Consideration	Q 10, 18, 26
	Risk Acceptance	Q 11, 19, 27
Transactional Leadership	Contingent Reward	Q 12, 20, 28
	Management-By-Exception	Q 13, 21, 29
	Laissez-Faire Leadership	Q 14, 22, 30

4.2.2. Transformational Leadership Style

According to the questioner gathered, 65 and 54 managers from Ethiopian and Chinese contractors gave a response respectively. As per the mean rank of Mann-Whitney Test, the transformational leadership score of China and Ethiopia are 72.88 and 49.30 respectively. Hence, it is clear that Chinese contractors' managers are more transformational leaders than the Ethiopian construction mangers. As per the mean rank of Mann-Whitney Test, the transactional leadership total score of China and Ethiopian contractors' managers are 80.50 and 42.97 respectively, which shows that both countries are more prone to follow transformational leadership. The response from China and Ethiopia mangers showed highly significant difference (Sig < 0.01). The result is the same if T-Test is deployed.

Table 4.2: Comparison of Transformational Leadership between Ethiopia and China (T-Test and Mann-Whitney Rank)

Transformational Leadership Style	Ethiopia (N= 65)	China (N=54)	Significance (2-tailed)
Idealized Influence (II): T-Test	9.88	10.93	0.000
Idealized Influence (II): Mann-Whitney Rank	50.45	71.49	0.001
Inspirational Motivation (IM): T-Test	11.26	11.19	0.572
Inspirational Motivation (IM): Mann-Whitney Rank	63.05	56.32	0.252
Intellectual Stimulation (IS): T-Test	10.09	10.17	0.737
Intellectual Stimulation (IS): Mann-Whitney Rank	60.21	59.75	0.939
Individualized Consideration (IC): T-Test	10.43	10.00	0.017
Individualized Consideration (IC): Mann-Whitney Rank	67.06	51.50	0.010
Risk Acceptance (RA): T-Test	7.32	9.35	0.000
Risk Acceptance (RA): Mann-Whitney Rank	46.52	76.23	0.000
Overall: T-Test	48.98	51.63	0.001
Overall: Mann-Whitney Rank	49.30	72.88	0.000

The data analysis of T-Test and Mann-Whitney test has been computed for 65 and 54 Ethiopian and Chinese construction respondents respectively. As per the result Ethiopian and Chinese first grade construction managers are prone to use transformational leadership styles.

According to the result of the respondents China has a better transformational leadership style than Ethiopian first grade contractor managers as demonstrated by the total score of Mann-Whitney test 72.88 and 49.30 respectively. The significant difference as witnessed by the significant value of 0.000 which is below 0.01, which proved the existence of highly significant difference between the

tested variables. The result is the same if T-Test is deployed. The Ethiopian contractor managers overall transformational leadership (Mean Rank= 49.30) is higher than its overall transactional leadership style (Mean Rank= 42.97). The result is the same if T-Test is deployed.

As per the score of Mann-Whitney test, China construction managers demonstrated better application of transactional leadership style (Mean Rank= 80.50) than the transformational leadership (Mean Rank= 72.88) than. The result is opposite if T-Test is deployed. Hence, Ethiopia managers inherit the transformational leadership style, but China mangers inherit transactional leadership style (Table 4.1 and 4.2).

As per the score of Mann-Whitney test, the II characteristic of the transformational leadership which is associated with the creating of team feeling and belongingness with the manager is higher for Chinese contractor mangers (Mean Rank= 71.49) than that the Ethiopian ones (Mean Rank= 50.45) as witnessed by the significant value of 0.001 which is below 0.01, which proved the existence of highly significant difference between the tested variables. The result is the same if T-Test test is deployed.

As per the score of Mann-Whitney test, the IM characteristic of the transformational leadership which is associated with the creation of motivation to increase productivity and to create long term awareness of the employers is higher for Ethiopian construction mangers (Mean Rank= 63.05) than that the Chinese construction managers (Mean Rank= 56.32). However, based on the result of the significant value of 0.252 which is above 0.05, it has proved the occurrence of inexistence of significant difference between the tested variables. The result is the same if T-Test is deployed.

As per the score of Mann-Whitney test, the IS characteristic of the transformational leadership which is associated with the formation of creativity and making opportunity out of challenges by the employers is more or less the same by the Ethiopian construction managers (Mean Rank= 60.21) as well as the Chinese counterparts (Mean Rank= 59.75). However, based on the result of the

significant value (Sig= 0.939) which is above 0.05, it has proved the non-existence of significant difference between the tested variables. The result is the same if T-Test is deployed though the mean of the two countries showed inverse relation.

Among all the five characteristics of transformational leadership style, Risk Acceptance (Sig.=0.000) is the biggest differences between Ethiopia and China. The result shows that Chinese managers (Mean Rank= 76.23) tend to be more risk-taking than their Ethiopian counterparts (Mean Rank= 46.52). Chinese managers make quicker decisions and feel easier to make risky decisions alone than Ethiopian managers. The result is the same if T-Test is deployed.

As per the score of Mann-Whitney test, for IC, the result indicates that Ethiopian managers (Mean Rank= 67.06) are better than Chinese ones (Mean Rank= 51.50) to let employees know how they think employees are doing. The IC (Sig.=0.010) has significant differences between Ethiopia and China. The result is the same if T-Test is deployed. As to Risk Acceptance (Sig.=0.000), there is a highly significant difference between China and Ethiopia. And Ethiopian managers care much more about employees and their working conditions than Chinese counterparts. This could be due to the existence and the common action of workers' union in the Ethiopian construction sector.

Summary:

Among the dimension of transformational leadership styles, the ones that matters based on the significance values, which are below 0.05, are the idealized influence (Sig=0.001), individualized consideration (Sig=0.010) and risk acceptance (Sig=0.000). The idealized influence of China managers (Mean Rank= 71.49) is higher than the Ethiopian mangers (Mean Rank= 50.45) which shows Chinese managers are more persuasive in making employees to work with them and to be proud, this could be achieved by sharing the most valuable values and believes. The IC Ethiopian mangers (Mean Rank= 67.06) is higher than that of China managers (Mean Rank= 51.50) which shows Ethiopian managers are better in giving the required attention to the employers. The RA of

China managers (Mean Rank= 76.23) is higher than the Ethiopian mangers (Mean Rank= 46.52) which shows Chinese managers are better in using intuition and make quick decision. At last, the analysis demonstrated that the result of T-Test and Mann-Whitney Test leads to different conclusion. As per the score of Mann-Whitney test, Ethiopia managers inherit the transformational leadership style, but China mangers inherit transactional leadership style. But the result based on T-Test demonstrated that both countries are prone to use transformational leadership style.

4.2.3. Transactional Leadership Style

For transactional leadership style significant value is below 1%, indicating the existence of highly significant difference between the two tested variables of management by exception, laissez faire and overall result. The result demonstrated that China mangers are more prone to focus on reward, to manage between exception and to engage by the rule than the Ethiopian managers.

Table 4.3: Comparison of Transactional leadership between Ethiopia and China (T-Test and Mann-Whitney Rank)

Transactional	Ethiopia (N= 65)	China (N=54)	Significance (2-tailed)
Contingent Reward: T-Test	10.80	10.91	0.652
Contingent Reward: Mann-Whitney Rank	62.13	57.44	0.437
Management-by-Exception: T-Test	8.98	9.52	0.007
Management-by-Exception: Mann-Whitney Rank	51.60	70.11	0.002
Laissez Faire: T-Test	3.71	7.09	0.000
Laissez Faire: Mann-Whitney Rank	42.69	80.83	0.000
Overall: T-Test	23.49	27.52	0.000
Overall: Mann-Whitney Rank	42.97	80.50	0.000

In the case of transactional leadership style, there are also differences between Chinese managers (Mean Rank= 80.50) and Ethiopian managers (Mean Rank= 42.97), where the result of the significant value which is below 0.01, proved the existence of highly significant difference between the tested variables. The result is the same if T-Test is deployed. The result further shows that Chinese managers are much more reward-minded and rule-minded than their Ethiopian counterparts. In other words, Chinese managers are much more reluctant to change anything unless the work necessitates it. The Chinese managers are in a better condition of giving clear

responsibility to get the desired target and to leave workers to do what must be done with less intervention. On the other hand, the Ethiopian contractor mangers are strict in controlling the workers, less value in Laissez Faire characteristics scoring 42.69, which shows the absence of freedom by the workers to do the way they like. The result is the same if T-Test is deployed.

Summary

The transactional leadership style is higher by the Chinese contractor managers (Mean Rank= 80.50) than the Ethiopian ones (Mean Rank= 42.97), the result is witnessed by the low significant value which is 0.000 which is below 0.01, which proved the existence of highly significant difference between the tested variables. Similarly, the lower significant value below 0.01 is demonstrated by the transactional leadership style dimensions of management by exception and Laissez Faire indicating the existence of highly significant difference between the tested variables. The result is the same if T-Test is deployed.

4.2.4. Comparative Study on Leadership Styles

Chinese and Ethiopian managers are prone to be more transformational and transactional in leadership styles respectively. However, the extent of transformational and transactional leadership is more prone in Chines managers in comparison to Ethiopian mangers. Therefore, the study find that the result of leadership style of Chinese and Ethiopian managers contradicts with our initial assumption. Among the main reasons that could result in transformational leadership in both China and Ethiopian managers could be: First, the questioner type and its application in the research showed certain gap, since MLQ was originally designed to access managers' leadership style from multiple source and the questioner gathered for this research only considers the reply of the managers. Hence, this could limit the detection of the many reasons that lead to difference in leadership style. On top of this fact, the MLQ questioner was designed in US by Bass- an American researcher, which in turn might give better result for the Americans manager in their arena. The age distribution is fair as the majority of both contractor manager personnel are in the same category. the reason might be concerned with the age-level of respondents. The result showed that the majority of the Chinese respondents are between the age of 31 and 40 years, similarly majority of the Ethiopian contractor managers are in the same range of age.

Table 4.4: The Age-Level of Chinese Participants

China	Percent (%)	Cumulative Percent
Up to 30 years old		
31- 40 years old	79	79
41-55 years old		
56 years and Older	21	100
Total	100	100

Table 4.5: The Age-Level of Ethiopian Participants

Ethiopia	Percent (%)	Cumulative Percent
Up to 30 years old	18	18.0
31- 40 years old	64	82.0
41-55 years old	18	100.0
56 years and Older		
Total	100	100.0

The third reason could be associated with the industry and the size of companies which were investigated and selected. The Ethiopian contractors has a higher percentage (64%) from 200 to 1000 employee and the Chinese contractors has a higher percentage (43%) with more than 1000 employee. Hence, a higher prevalence of transactional leadership style in Chinese companies could be associated with the higher number of employees in the Chinese companies than the Ethiopian ones.

Table 4.6: The size of Chinese Companies

China Construction Contractors	Percent	Cumulative Percent
Up to 20		
21 to 99	21	21.0
100 to 199		21.0
200 to 1000	36	57.0
More than 1000	43	100.0
Total	100	100.0

Table 4.7: The size of Ethiopian Companies

Ethiopia Construction Contractors	Percent	Cumulative Percent
Up to 20		
21 to 99	18	18.0
100 to 199		18.0
200 to 1000	64	82.0
More than 1000	18	100.0
Total	100	100.0

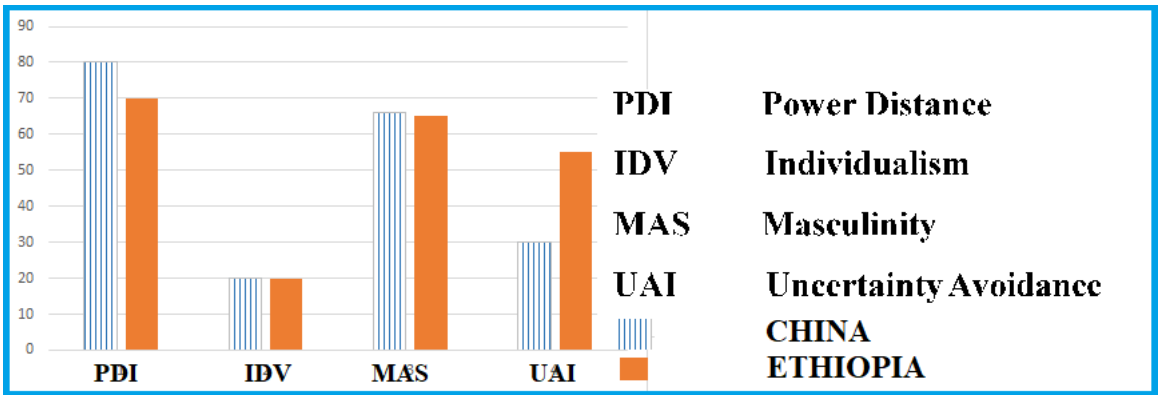
Summary

The finding of the research shows Chinese and Ethiopian contractor mangers follows transactional and transformational leadership respectively.

4.3. The Influence of Culture on Leadership Styles

4.3.1. Result of Four Cultural Dimensions of Ethiopia and China

The scores of Hofstedes' cultural dimension of China and Ethiopia can be showed in Figure 3. Where, the four cultural dimensions are power distance, individualism/collectivism, masculinity/ femininity and uncertainty avoidance (Figure 3).



Source: http://www.geert-hofstede.com/

Figure 3: The scores of Hofstede's cultural dimension concerning Ethiopia and China:

According to Hofstede's, our assumption is that China is a highly collectivistic, masculine society, characterized by low uncertainty avoidance and high-power distance. In contrast, Ethiopia's cultural dimensions should be relatively low in power distance and masculinity but high in uncertainty avoidance and similarly collective with china.

This section investigates the culture dimension effect on leadership style, transformational and transactional leadership styles in Ethiopian construction sector by the Chinese and Ethiopian contractors. On top of the leadership style assessment by the questioner, the second part is about "the culture dimension". The cultural dimension part in the questionnaire aided with the t-test and Mann-Whitney; Pearson and Spearman correlation analysis, aimed to assess if there are some differences between the theory and the reality of Hofstede's cultural dimensions and to see also the output of the parametric and non-parametric tests.

The research considers, Hofstede's cultural dimensions which are studied on employees in the multinational company IBM, the results found by Hofstede's may not stand for the whole population of a specific country. More importantly, since the participants of our questionnaires are demarcated in the management level, this small group of people may present different cultural characteristics compared with the whole population. One of the main tasks of this study is to investigate whether the cultural stereotypes according to Hofstede's study is applicable to our specific research objectives.

The cultural dimensions between Ethiopia and China have been investigated with the help of 16 questions equally divided in to four cultural dimensions of power distance, uncertainty avoidance, individualism and masculinity (Table 4.8).

Table 4.8: The Questions related to Cultural Dimensions

Description	Characteristic	Question related to the characteristic
Cultural Dimensions	Power Distance	Q 31, 35, 39, 43
	Uncertainty Avoidance	Q 32, 36, 40, 44
	Individualism/Collectivism	Q 33, 37, 41, 45
	Masculinity/Femininity	Q 34, 38, 42, 46

4.3.2. The Respondents Cultural Dimensions Analysis

According to the questioner gathered, 65 and 54 managers from Ethiopian and Chinese contractors gave a response respectively. As per the score of Mann-Whitney and T-test, the power distance and collectivism the Chines score is high but for the dimensions of uncertainty avoidance and femininity the Ethiopian managers score high.

Table 4.9: Comparison of Cultural Dimensions between Ethiopia and China (T-Test and Mann-Whitney Rank)

Cultural Dimensions	Ethiopia (N= 65)	China (N=54)	Significance (2-tailed)
Power Distance (PD) (overall): T-Test	7.46	8.24	0.107
PD: Mann-Whitney Rank	54.00	67.22	0.034
Uncertainty Avoidance (overall): T-Test	11.88	9.85	0.000
Uncertainty Avoidance: Mann-Whitney Rank	68.87	49.32	0.002
Collectivism (overall): T-Test	3.45	3.78	0.002
Collectivism: Mann-Whitney Rank	52.98	68.44	0.004
Femininity (overall): T-Test	2.53	2.00	0.000
Femininity: Mann-Whitney Rank	67.80	50.61	0.004

The data analysis of t-test and total score has been computed for 65 and 54 Ethiopian and Chinese construction respondents' cultural dimension respectively.

Power Distance

According to Hofstede's PD result Ethiopia scored 70 and China scored 80. Hence, according to Hofstede's result the PD of Chinese managers are expected to be higher. As the analysis of Mann-Whitney test, the reply of the respondents shows, the PD dimension of Ethiopia construction managers (Mean Rank= 54.00) is in the lower bound and that of China construction mangers (Mean Rank= 67.22) is in the upper bound. As per the significance value which is found to be below 0.05 (Sig=0.034), it showed the existence of significance difference between Ethiopian and Chinese construction managers. PD of China is higher than the Ethiopian counterparts and this is in alignment with Hofstede result. Using T-Test, as per the significance value which is found to be

above 0.05 (Sig=0.107), it showed the inexistence of significance difference between Ethiopian and Chinese construction managers. The result is not the same, if T-Test is deployed.

Uncertainty Avoidance (UA)

According to Hofstede's result of uncertainty avoidance, Ethiopia scored 55 and China scored 30. Hence, the uncertainty avoidance result from the respondents are expected to be more for Ethiopia, this in turn means Chinese are more risk taker.

As per the score of Mann-Whitney test, the mean rank for the uncertainty avoidance of Ethiopia and China are 68.87 and 49.32 respectively. As per the significance value which is found to be below 0.01 (Sig=0.002), it showed the existence of highly significance difference between Ethiopian and Chinese construction managers. Ethiopia scoring high agrees with the conclusion of Hofstede's result. The scores showed that both countries have high uncertainty avoidance which favours to follow the usual routine or keeping the states-quo. The result of uncertainty avoidance (low risk taking) could be associated with the nature of contract terms that are common in Ethiopia construction arena which favours the meeting of the three constraints of time, cost and quality. The result is the same if T-Test is adopted.

Collectivism/ Individualism

According to Hofstede's result of collectivism/ individualism index, Ethiopia and China score the same result of 20. Hence, the result of the respondents are supposed to be fairly close enough in collectivism/ individualism index. As per Hofstede's both countries are collective countries, showing a lower value which means higher value in our questioner.

From Table 4.9 Ethiopia collectivism/ individualism index score is high (Mean Rank= 52.98) and China collectivism/ individualism index score is also high (Mean Rank= 68.44). As per the significance value (Sig= 0.004) there is highly significance difference between Ethiopia and China respondents. The result goes hand in hand with the conclusion of Hofstede's for collectivism/

individualism index. The small difference of collectivism/ individualism responded by the mangers could be associated with the company size in terms of employees' number and the industry type (mostly the Chinese contractors are governmental owned) which could give an upper hand to the Chinese to be more collective society. The result is the same if T-Test is adopted.

Femininity/ Masculinity

Hofstede's result score for femininity/ masculinity for Ethiopia and China are 65 and 66 respectively. Thus, the result of the respondents are supposed to be fairly close enough in femininity/masculinity index. As per Hofstede's femininity/ masculinity index both countries are considered masculine societies.

The respondent's analysis demonstrated lower score and upper score for masculine and feminine society respectively. As per the score of Mann-Whitney test, the result demonstrated that the mean rank for Ethiopia and China construction mangers are 67.80 and 50.61 respectively, which demonstrates that Ethiopia is more feminine than the China managers, the higher the total score indicates the higher the femininity. This could lead to the conclusion that Ethiopian are more sensitive to employee security, personal goal keeping of the employee and worry about employee satisfaction than the Ethiopian construction mangers. The difference between the feminine cultural dimensions in Ethiopia and China is overwhelming as witnessed by the significance value of 0.004 which is less than 0.01. The result is the same if T-Test is adopted.

Summary

PD of China is higher than the Ethiopian counterparts and this is in alignment with Hofstede result. For UA, Ethiopia scoring higher than China agrees with the conclusion of Hofstede's result. For collectivism, the result goes hand in hand with the conclusion of Hofstede's which shows that both countries are collective society, China managers becoming more collective than Ethiopia. Ethiopia is more feminine than the China managers, the higher the total score indicates the higher the

femininity. Only for PD out of the four culture dimensions, the result of Mann-Whitney and T-Test is different, where the significant value is below and above 0.05 respectively. The result demonstrated the existence of cultural difference for the dimensions of power distance, uncertainty avoidance, collectivism and femininity except power distance. In summary, for the above three cultural dimensions Ethiopia could be concluded to be a country of low power distance, high uncertainty avoidance, collective and feminine society. On the other hand, China is high power distance, high uncertainty avoidance and highly collective society.

4.3.3. Correlation of Cultural Dimensions and Leadership Styles

The relation between the cultural dimensions and leadership styles are demonstrated with the help of significance (2-tailed), Pearson and Spearman correlation (Table 4.10). As per the result both Pearson and Spearman correlations demonstrated the same conclusion.

Table 4.10: Correlation Cultural Dimensions and Leadership Styles

Cultural Dimensions	Descriptions	Transformational Leadership Style	Transactional Leadership Styles
Power Distance	Pearson Correlation, Sig. (2-tailed)	0.138, 0.134	0.641**, 0.000
	Spearman's rho, Sig. (2-tailed)	0.063, 0.499	0.656**, 0.000
	N	119	119
Uncertainty Avoidance	Pearson Correlation, Sig. (2-tailed)	0.065, 0.479	0.278**, 0.002
	Spearman's rho, Sig. (2-tailed)	0.060, 0.517	0.331**, 0.000
	N	119	119
Collectivism	Pearson Correlation, Sig. (2-tailed)	0.055, 0.552	0.639**, 0.000
	Spearman's rho, Sig. (2-tailed)	0.116, 0.211	0.624**, 0.000
	N	119	119
Femininity	Pearson Correlation, Sig. (2-tailed)	0.037, 0.686	-0.255**, 0.005
	Spearman's rho, Sig. (2-tailed)	0.034, 0.710	-0.277**, 0.002
	N	119	119

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

Table 4.10 shows the results of the culture dimension and leadership styles aided with Pearson, Spearman correlation and t-test.

Power Distance

For the power distance index, the significant value (sig= 0.000) demonstrates the existence of highly significant difference between the two set of variables only for the case of transactional leadership style. Considering the correlation value of 0.641** (Sig= 0.000) indicates that there is positive correlation between power distance and transactional leadership styles. Which means when the

power distance increases the transactional leadership style increases. As per the result, Hypothesis 1 is supported. Just to label the strength of the association of Pearson[6] correlation, for absolute values of r, 0-0.19 is regarded as very weak, 0.2-0.39 as weak, 0.40-0.59 as moderate, 0.6-0.79 as strong and 0.8-1 as very strong correlation. Hence, Pearson correlation value of 0.641** shows strong relation between power distance and transactional leadership style. The same is true if we compare based on Spearman correlation.

With respect to power distance and transformational leadership the correlation value is 0.138 (Sig= 0.134) demonstrating positive relation between power distance and transformational leadership styles. Hence, the result is opposite to Hypothesis 2, as a result Hypothesis 2 is rejected. Besides, the significant value is above 0.05 which showed the inexistence of significant difference between the measured variables, leading to the rejection of Hypothesis 2. The same is true if we follow Spearman correlation.

Individualism/ Collectivism

For the case of collectivism and transactional leadership, the result of the correlation is 0.639** (Sig= 0.000). Hypothesis 3 says "Managers in individualist countries tend to employ a more transactional leadership" and the result is opposite to the hypothesis. Hypothesis 3 is rejected the same is true if we follow Spearman correlation. Hypothesis 4 is rejected since the significant value is above 0.05 and the same is true if we follow spearman correlation.

Masculine/ Feminine

For the case of femininity and transactional leadership, the result of the correlation is -0.255 (Sig=0.005), hypothesis 5 is which states that "Managers in masculine countries tend to employ a

[6] https://www.bmj.com/about-bmj/resources-readers/publications/statistics-square-one/11-correlation-and-regression accessed on October 2018.

more transactional leadership" is accepted but it has a week correlation. The same is true, if we see the Spearman correlation.

However, for the case of femininity and transformational leadership, the result of the correlation is 0.037 (Sig=0.686), hypothesis 6 is rejected since the significant value is above 0.05. The same is true, if we see the Spearman correlation.

Uncertainty avoidance

For the case of uncertainty avoidance and transactional leadership, the result of the correlation is 0.278** (Sig= 0.002). Since hypothesis 7 states "Managers in strong uncertainty avoidance countries tend to employ a more transactional leadership" is accepted but it has a week correlation. The same is true, if we see the Spearman correlation.

Uncertainty avoidance and transformational leadership the correlation result is 0.065 (Sig= 0.479). Hypothesis 8 states that "Managers in weak uncertainty avoidance countries tend to employ a more transformational leadership." Hence, Hypothesis 8 is rejected. The same is true, if we see the Spearman correlation.

Summary

The summary of the report that Pearson (Spearman) correlation method is used to see the effect of culture on leadership style. Based on the correlation, the culture effect on leadership style has been analysed and better correlation is registered for power distance increase a tendency to achieve transactional leadership style (Correlation=0.641**). On the other hand, the correlation of femininity and uncertainty avoidance increase resulting to transactional leadership, but it has a week correlation. The result of the correlation by Pearson and Spearman reveals the same output. The summary of the hypothesis are shown below:

Table 4.10: Correlation Cultural Dimensions and Leadership Styles

Hypotheses	Testing		Hypotheses	Testing	
	Supported	Rejected		Supported	Rejected
H1	√		H5	√	
H2		√	H6		√
H3		√	H7	√	
H4		√	H8		√

Hence, it could be said that Hofstede's four cultural dimensions are slightly corelated to leadership style, since only Hypothesis 1 has strong correlation. The remaining H5 and H7 has a week correlation and the rest hypothesis are rejected.

Accordingly, the research questions are answered as follows:

- The first research question is "what is the leadership style of locally registered Chinese contractors in Ethiopia?"
    - Chinese construction mangers are prone to use transactional leadership style than the transformation leadership.
- The second research question is "what is the leadership style of registered first grade Ethiopian contractors?"
    - Ethiopian construction managers are prone to use transformational leadership style than transactional leadership style.
- The third research question is "what is the impact of culture on transformational and transactional leadership style of construction projects between locally registered Chinese contractors and locally registered first grade Ethiopian contractors in Ethiopia?"

- Culture exerts a little impact on leadership style, demonstrated by strong correlation only for power distance and transactional leadership style.

- The fourth research question is “to see the possibility to use parametric and non-parametric test for five-point Likert scale?”
    - For the analysis of mean the non-parametric (Mann-Whitney) test has to be used as it showed some difference with the parametric result (T-Test). However, for the case of correlation Pearson and Spearman showed the same result.

Chapter 5

5. CONCLUSIONS AND RECOMMENDATIONS

As discussed in chapter 2 of this study, leadership style of Chines and Ethiopian contractors has been analysed in chapter 4. Hence, based on these processes the following summary, conclusion and recommendations are derived.

5.1. Summary of the Study

The study explores and evaluate two fundamental issues: first, it aims to compare leadership styles adopted by Ethiopian and Chinese construction mangers; second, it examines the culture effect on leadership styles and finally the non-parametric (Mann-Whitney) and parametric result (T-Test) for five-point Likert scale analysis has been computed and compared.

Considering the fact that the traditional leadership theories are insufficient for understanding the relationship between superiors and subordinates in the fast-paced world of international business, better classification of transformational and transactional leadership styles has been considered. Where, the transformational leadership style focuses on the relationship of leaders and employees. Hence, the types of leadership styles adopted by Ethiopian and Chinese contractors has been examined.

Some authors stated the influence of culture on leadership styles (House & Aditya, 1997; Gerstner & Day, 1994; Hofstede, 2001). On the contrary, Bass (1990) argues that inexistence of culture effect on leadership style, leadership styles can be applied in different culture. On the other hand, Winter and Dodou (2010) demonstrated that for five-point Likert items, the t test and Mann-Whitney-Wilcoxon (MWW) generally have similar power and there is no difference in the comparison. Gombolay and Shah (2016) concluded that the t-test is quite robust and is a reasonable

method for testing even individual Likert items. Others, argued that Likert scale has to be only analyzed by suing non parametric test (Carifio and Perla, 2007).

Hence, based on the above-mentioned researches, eight hypotheses has been created using Z model with the aim to evaluate to what extent culture exert impact upon leadership styles. The deductive approach was chosen as methodology and quantitative data was gathered with the help of an empirical study of structured questionnaire. Based on the questioner response, the following summery has been derived.

First, as per the analysis of Mann Whitney rank Ethiopian and Chinese construction managers are more prone to transformational and transactional leadership styles respectively.

Secondly, the research finding demonstrated that the impact of culture on leadership styles is quite small. It shows that there is no strong correlation between the Hofstede's four dimensions and leadership, except the index of power distance.

In conclusion, it could be said that Hofstede's four cultural dimensions are slightly corelated to leadership style, since only Hypothesis 1 has strong correlation. The remaining H5 and H7 has a week correlation and the rest hypothesis are rejected. Yet, some differences on leadership styles has been examined between Ethiopian and China, proved by the significance value. When comparing these two countries, we find that China is a bit more transactional while Ethiopia is a bit more transformational. Further research on a broader scale and in a more typical national industry may lead to different results where the cultural influence is more obvious.

At last, to see the possibility to use parametric and non-parametric test for five-point Likert scale analysis has been made using non-parametric (Mann-Whitney) and parametric result (T-Test). Accordingly, for the analysis of mean the non-parametric (Mann-Whitney) test has to be used as it showed some difference with the parametric result (T-Test). However, for the case of correlation Pearson and Spearman showed the same result.

5.2. Applicability of the Model

The Z model has been derived based on two factors of leadership style and culture. The assumption was that culture would affect the leadership style more than other factors such as industry, age and personal trait. Then the correlation between leadership style and culture has been computed by using the 8 hypotheses that has been formulated in the model. Since 6 of the hypotheses has been rejected, 2 showed week correlation it can be concluded that the applicability of the model does not exist. However, there could be a number of factors that may lead to such result such as limited number of samples, homogeneity of the participant, nature of MLQ, etc.

5.3. Conclusions

The research explores, evaluates and compare leadership styles adopted by managers of first grade contractors of China and Ethiopia. Amongst many other theories on leadership, transformational and transactional leadership theories are chosen as the main research topic in this research.

Chinese contractors are more prone to use transformational leadership than Ethiopian contractors. The research indication is that Chinese managers and Ethiopian construction managers are prone to be more transformational and transactional respectively. Among the dimension of transformational leadership styles, the ones that matters based on the significance values, which are below 0.05, are the idealized influence (Sig=0.001), individualized consideration (Sig=0.010) and risk acceptance (Sig=0.000). The idealized influence of China managers (Mean Rank= 71.49) is higher than the Ethiopian mangers (Mean Rank= 50.45). Similarly, The risk acceptance of China managers (Mean Rank= 76.23) is higher than the Ethiopian mangers (Mean Rank= 46.52). However, The IC Ethiopian mangers (Mean Rank= 67.06) is higher than that of China managers (Mean Rank= 51.50). The transactional leadership characteristics of Contingent Reward, Management-by-Exception and Laissez Faire showed higher RII score for Chines contractor mangers. Chinese and Ethiopian contractor mangers follows transactional and transformational leadership respectively.

PD of China is higher than the Ethiopian counterparts and this is in alignment with Hofstede result. For UA, Ethiopia scoring higher than China agrees with the conclusion of Hofstede's result. For collectivism, the result goes hand in hand with the conclusion of Hofstede's which shows that both countries are collective society, China managers becoming more collective than Ethiopia. Ethiopia is more feminine than the China managers, the higher the total score indicates the higher the femininity. There exists cultural difference for the dimensions of power distance, uncertainty avoidance, collectivism and femininity. In summary, for the above three cultural dimensions Ethiopia could be concluded to be a country of low power distance, high uncertainty avoidance, collective and feminine society. On the other hand, China is high power distance, high uncertainty avoidance and highly collective society.

Between power distance and transactional leadership style demonstrated a good correlation (0.641**). However, the correlation between femininity and uncertainty avoidance against transactional leadership is a week correlation. Besides, the other five Hypothesises are rejected and it is concluded that the Hofstede's four cultural dimensions are slightly corelated to leadership style.

At last, the analysis demonstrated that the result of T-Test and Mann-Whitney Test leads to different conclusion. As per the score of Mann-Whitney test, Ethiopia managers inherit the transformational leadership style, but China mangers inherit transactional leadership style. But the result based on T-Test demonstrated that both countries are prone to use transformational leadership style. Only for PD out of the four culture dimensions, the result of Mann-Whitney and T-Test is different, where the significant value is below and above 0.05 respectively.

5.4. Recommendations

After undertaking an in-depth assessment using structure questioner for Chinese and Ethiopian construction managers who are operational in Ethiopia the recommendations suggest making a study by considering MLQ from multiple sources, the manager herself/himself; the manager's subordinates, the manager's superiors, and the managers' peers - which result in more objective and reliable facts.

5.5. Future Research

- Since transactional and transformational leaderships are relatively new concepts, it would be interesting to do further researches within this area.

- Since our survey only focuses on high grade construction managers of China and Ethiopia, it is difficult for us to get general results concerning the leadership style of the construction sector as a whole. Thus, a research with a larger sample by incorporating contractors from grade 2 to 20 would give a more dependable and generalized result.

- Since we only focus our investigation on high grade construction companies, another interesting topic in future would be to replicate this study in various industries to find out whether our findings can be generalized for other industries.

- As mentioned earlier, the data for this study were gathered through self-rating. An alternative, and better but more difficult approach is to distribute the questionnaires also to the managers' superiors, peers, and subordinates to rate the managers' leadership style. Different results may be obtained.

5.6. Practical Implication

- It is helpful for managers to gain a better understanding of leadership styles, namely, transformational leadership and transactional leadership. Besides, the research reveals that transformational leadership style tends to be a better choice for managers to adopt.

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Appendix 1

The questionnaire will probably cost you 10 minutes. Please choose the best answer which you think is the most appropriate to your situation. Try to complete at a time when you are unlikely to be disturbed. Also, please do not spend too much time on any one question. Your first thoughts are usually the best!

Please note that your answers are very important for us to test the different leadership styles between Chinese and Ethiopian contractors, therefore, we have your attention to complete all the questions even though some of them do not suit you perfectly.

Concerning our questionnaire, each question contains 5 options, which stands for 5 different answers. The number 0-4 stands for scores, by which you can show the extent of your agreement to all the statements. For example, if you agree the statement totally, then mark 4 scores. On the contrary, If you disagree the statement extremely, then mark 0 score, which is the lowest score of our answer.

0. Totally disagree
1. Moderately disagree
2. Undecided
3. Moderately Agree
4. Totally Agree.

Thank you very much for taking the time off your busy schedules. And please do not hesitate to contact us if you have any questions. Once again, thank you very much for your sincere cooperation!

Zinabu Tebeje (Zinabut@yahoo.com)

0911220817

QUESTIONNAIRE (English Version)

Background information

1. Company Name (Optional)……..

2. Are you a female or a male?

☐ *A). Male* ☐ *B). Female*

3. What's your nationality?

☐ *A). Foreign* ☐ *B). Ethiopian* ☐ *C).*

4. How old are you?

☐ *A). up to 30 years* ☐ *B). 31-40 years* ☐ *C). 41-55* ☐ *D). 56 years and older*

5. What's your position at the company?

(*If you are titled as manager, for instance, sales manager, then you can choose manager for your answer; otherwise, you may choose employee)*

☐ *A). manager* ☐ *B). employee*

6. How many employees in your company?

☐ *A). less than 20* ☐ *B).20-99* ☐ *C). 100-199* ☐ *D). 200-1000* ☐ *E). more than 1000*

Leadership Styles

7. I make others feel good to work with me.

☐ ☐ ☐ ☐ ☐

0 1 2 3 4

8. I encourage employees to make the most of their real skills and capacities to their jobs.

☐ ☐ ☐ ☐ ☐

0 1 2 3 4

9. I enable others to think about old problems in new ways.

0 1 2 3 4

10. I let others know how I think they are doing.

0 1 2 3 4

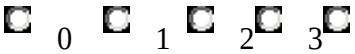
11. I think making risky decisions alone does not bother me.

0 1 2 3 4

12. I tell others what to do if they want to be rewarded for their work.

0 1 2 3 4

13. I am satisfied when others meet agreed upon standards.

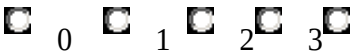


0 1 2 3 4

14. I am content to let others continue working in the same way as always.

0 1 2 3 4

15. Others are proud to be associated with me.



0 1 2 3 4

16. I help others find meaning in their work.

0 1 2 3 4

17. I provide others with new ways of looking at puzzling things.

0 1 2 3 4

18. I give personal attention to others who seem rejected.

0 1 2 3 4

19. I think intuition is the best guide in making decisions.

0 1 2 3 4

20. I provide recognition/rewards when others reach their goals.

0 1 2 3 4

21. As long as things are working, I do not try to change anything.

0 1 2 3 4

22. Whatever others want to do is O.K. with me.

0 1 2 3 4

23. I talk about my most important values and beliefs to my employees.

0 1 2 3 4

24. I articulate a compelling vision for the future.

0 1 2 3 4

25. I get others to rethink ideas that they had never questioned before.

0 1 2 3 4

26. I give careful attention to the working conditions of my employees.

0 1 2 3 4

27. I make quick decisions when necessary.

0 1 2 3 4

28. I clearly clarify the responsibility for achieving targets.

☐ ☐ ☐ ☐ ☐

0 1 2 3 4

29. I tell others the standards they have to know to carry out their work.

☐ ☐ ☐ ☐ ☐

0 1 2 3 4

30. I don't care much what others do unless the work is absolutely essential.

☐ ☐ ☐ ☐ ☐

0 1 2 3 4

Cultural Dimensions

31. I am entitled to privileges compared to my subordinates.

☐ *0* ☐ *1* ☐ *2* ☐ *3* ☐ *4*

32. I think company rules should not be broken even when the employee thinks his decision is within the company's best interests.

☐ *0* ☐ *1* ☐ *2* ☐ *3* ☐ *4*

33. Once given tasks, I prefer to work_____: individually or in a group?

☐ *0. Individually* ☐ *1. In a group*

34. What is more important about the job, a high salary or feeling satisfied?

☐ *0. A high salary* ☐ *1. Feeling satisfied*

35. There is a wide salary range between the top and bottom of the organization.

☐ *0* ☐ *1* ☐ *2* ☐ *3* ☐ *4*

36. It is important to be on time to business appointments.

☐ *0* ☐ *1* ☐ *2* ☐ *3* ☐ *4*

37. In my workplace, I consider myself to have close family like bonds with my subordinates.

☐ *0* ☐ *1* ☐ *2* ☐ *3* ☐ *4*

38. What is more important, a better position or employment security?

☐ *0. A better position* ☐ *1. Employment security*

39. I think my subordinates should only follow my order without knowing why it should be done.

☐ *0* ☐ *1* ☐ *2* ☐ *3* ☐ *4*

40. I only consider written contracts to be binding.

☐ *0* ☐ *1* ☐ *2* ☐ *3* ☐ *4*

41. I consider to be most important, individual achievements or group performance?

☐ *0. Individual achievements* ☐ *1. Group performance*

42. I tend to put more emphasis on_____: work goals or personal goals?
(*Work goals: earnings, advancement; personal goals: friendly getting along well with your subordinates*)

☐ *0. Work goals* ☐ *1. Personal goals*

43. I think that my subordinates are afraid to disagree with me, even if they have better ideas.

☐ *0* ☐ *1* ☐ *2* ☐ *3* ☐ *4*

44. In my organization, change is viewed as a threat.

☐ *0* ☐ *1* ☐ *2* ☐ *3* ☐ *4*

45. When it comes to decision making, I prefer_____: a single leader or group consensus?

☐ *0. A single leader* ☐ *1. Group consensus*

46. I prefer to solve the conflict though_____: negotiation and compromise or confrontation and argument?

☐ ☐

0. Confrontation and argument *1. Negotiation and compromise*

QUESTIONNAIRE (Chinese Version)

领? 风格问卷调查

1……..

背景问题 2.?

是?

□ A). 男性□ B). 女性

3. ? 的国籍?

□ A). 中国□ B). 瑞? □ C). ?他，请填写。

4. ? 的? 纪?

□ A). ?十岁以? □ B). 31-40□ C). 41-55□ D). 56 岁以?

5. ? 在公司中的职??

?经理:只要您有任何经理的头衔（比如，部门经理），即可选择 ā经理ā，反之，请选 择 ā员工ā.?

□ A).经理□ B). 员工

6. ? 公司有 ?员工?

□ A).少于 20 人□ B).20-99□ C). 100-199□ D). 200-1000□ E). 1000 以?

领? 风格

7.能够和? 一起工作，? 的员工感觉很?错.

□ *0* □ *1* □ *2* □ *3* □ *4*

8. ? 能够鼓励? 的员工充分发挥他们的真? 水? 和能力到他们的工作中去.

□ *0* □ *1* □ *2* □ *3* □ *4*

9.? 能够经常鼓励员工从多个角度考虑问题的解决办法,特别是新的解决办法.

□ *0* □ *1* □ *2* □ *3* □ *4*

10.？让员工充分了解？对他们工作表现的看法.

□ 0 □ 1 □ 2 □ 3 □ 4

11.？觉得做出比较有风险的决定并?会困扰？.

□ 0 □ 1 □ 2 □ 3 □ 4

12. ？对？的员工奖惩分明. ？经常告诉他们,如果他们想得到什M奖赏,需要做出什M样的业绩.

□ 0 □ 1 □ 2 □ 3 □ 4

13.如果？的员工能够达到原？工作任务的要求，？一点会让？很满意.

□0 □1 □2 □3 □4

14. ？满足于让？的员工能够按照他们惯常的方式去工作.

□0 □ 1 □ 2 □ 3 □4

15. ？的员工为能在？公司工作而感到自豪.

□ 0 □ 1 □ 2 □ 3 □ 4

16.？能够帮助员工？找到他们工作的意H所在.

□ 0 □ 1 □ 2 □ 3 □4

17. ？帮助员工用创新的视角去看待复?棘手的问题.

□0 □ 1 □ 2 □ 3 □4

18. ？能够关心员工的工作,生活和？长，真诚地为他(她)的发展提出建议.

□ 0 □ 1 □ 2 □ 3 □4

19.？经常凭着直觉做出一些决定.

□0 □ 1 □ 2 □ 3 □4

20.当员工达到工作目标时,？会做出奖金鼓励.

□0 □ 1 □ 2 □ 3 □4

21. 只要工作都在轨道?，？就?大愿意去改变些什M.

□0 □12 □3 □4 □

22. 只要员工做的事情?会出大的毛病,？ ?会去？ 涉.

□ 0 □ 1 □ 2 □ 3 □ 4

23. ？ 能够给员工指明奋斗目标和前进方向.

□ 0 □ 1 □ 2 □ 3 □ 4

24.？ 能够? 员工乐？ 地畅谈未来.

□ 0 □ 1 □ 2 □ 3 □ 4

25.？ ?满足于现状, 在工作中能?断地推陈出新.

□ 0 □ 1 □ 2 □ 3 □ 4

26.？员工打交道的过程当中,？ 会考虑到员工个人的？ 际情况.

□ 0 □ 1 □ 2 □ 3 □ 4

27. 当有必要的时候,？ 能够快速的做出决定， ?会考虑太久.

□ 0 □ 1 □ 2 □ 3 □ 4

28.？ 能够非常清楚的向员工陈述他们所要达到目标的职责.

□ 0 □ 1 □ 2 □ 3 □ 4

29. ？ 制订了非常？ 尽的工作标准, 以便让？ 的员工?责分明.

□ 0 □ 1 □ 2 □ 3 □ 4

30. 除非那项工作非常？ 要, 否则？ ?会关心？ 的员工在做什M.

□ 0 □ 1 □ 2 □ 3 □ 4

文化部分

31. 跟我的下属相比，我有很多特权.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4

32. 即使我的员工作出的一些违反公司制度的决定是为了公司的利益，我也认为公司制度 不容破坏.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4

33. 当接到工作任务时，我喜欢:

☐ 0. 一个人独自完成 ☐ 1. 和别人合作

34. 我觉得这项更重要_____

☐ 0. 很高的收入 ☐ 1.工作的成就感

35. 在我的公司里，最上层的员工和最低层的员工的收入差别很大.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4

36. 在商务约会时，我总是能够非常守时.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4

37. 在公司里,我认为自己和我的下属有着非常亲密的如同家人般的关系.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4

38. 哪个对我来说更重要? _____

☐ 0. 更高的职位 ☐ 1. 一个安全职位 (我不会被炒)

39. 我觉得我的员工只需要服从我的决定,不需要问我为什么.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4

40. 我认为只有书面合同才具有约束力.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4

41. 我认为_____更重要.

☐ 0. 个人成就 ☐ 1. 集体表现

42. 我更加强调_____.

(工作目标包括：薪水，提升，个人成就等等，个人目标比如与同事员工相处融洽，愉快 的工作氛围等等.)

☐ *0.* 工作目标 ☐ *1.* 个人目标

43. 我认为我的员工不敢否定我的决定.

☐ *0* ☐ *1* ☐ *2* ☐ *3* ☐ *4*

44. 在我的公司里，改变被认为是一种危机的标志. 大家比较喜欢维持现状.

☐ *0* ☐ *1* ☐ *2* ☐ *3* ☐ *4*

45. 当需要作出决定的时候，我比较喜欢_____.

☐ *0.* 自己作决定 ☐ *1.* 征求大家的意见，争取达到共识.

46. 当遇到争端的时候，我比较喜欢_____.

☐ *0.* 争论或对峙. ☐ *1.*谈判和妥协

Appendix 2[7]

Number	*Company Name (Ethiopian Contractors)*
1	3M Engineering & Construction PLC
2	Abebe Girmay Asfaw
3	Abita Construction
4	Afework Gidey General Contractor
5	Afro-Tsion Construction PLC
6	Akir Construction PLC
7	Alas Construction P.L.C
8	Alliance Construction
9	Altabe PLC
10	Amel Construction
11	Amhara Road Works Enterprise
12	Amhara Water Works Construction Enterprise
13	Anchor Foundation Specialist PLC
14	ANSIF Construction
15	Aser Construction PLC
16	Asfawosen Gugsa Building Contractor
17	Asmelash & Sons Construction PLC
18	ATEM Building Contractor PLC
19	Aynalem Gashaw Argie
20	B.G.M Construction
21	Bamacon Engineering PLC
22	Beaeka General Business PLC
23	Beha Construction
24	Bekele Sorsa Joli
25	Belayneh Tesfaye Gebre
26	Bereket Endashaw W/Hana
27	Berhan Tobiaw Building Contractor
28	Berhane Adane Construction
29	Bermog Construction PLC
30	Birhanu Ashebir Construction PLC
31	Biruk Beser Achew
32	Bright Construction PLC
33	Capstone Engineering
34	Crafts Construction PLC
35	Cross Land Construction
36	D.M.C. Construction PLC

[7] Accessed on September 10th, 2018 https://ethiopiaconstruction.com/directory/contractor/general-contractors/

37 Daniel Tsegaye G/Yohannes
38 Data Construction PLC
39 Dawit Emiru Building Contractor
40 Dawud Hamolo Building Contractor
41 Diriba Defersha General Contractor
42 Dugda Construction PLC
43 EL General Business PLC
44 Emnete Endeshaw General Contractor
45 Enyi General Business PLC
46 Equator Engineering Construction PLC
47 Etete Construction
48 Ethio Canadian Business Group PLC
49 Ethiopian Construction Works Corporation
50 F.E Construction PLC
51 FAL General Contractor
52 Felema Construction PLC
53 Flintston Engineering
54 GAD Construction PLC
55 Gashaw Melese Building Contractor
56 Gemshu Beyene Construction PLC
57 Genale Construction PLC
58 Getachew Atsbeha Building Contractor
59 Grace Engineering
60 Gutema Firisa Building Contractor
61 Habcon Construction
62 Hazi II General Construction & Trading
63 Henok and Family General Business PLC
64 Homa Construction PLC
65 Huda Real Estate PLC
66 Jack Hameer PLC
67 Justice Building Contractor PLC
68 K.K.G Construction
69 Kasma Engineering PLC
70 Kassa & Sons Construction P.L.C.
71 Kibish Construction
72 Koracon Construction
73 Libu Kifle Burdamo
74 Lorat Construction
75 Loza Construction PLC
76 Lucy Engineering PLC
77 Macro General Contractor & Trading PLC

78 Magercon PLC
79 Man General Contractor
80 Markan Trading PLC
81 Mat General Contractor PLC
82 MCG Construction PLC
83 MEDCON Engineering & Construction Plc
84 Mela Engineering & Construction PLC
85 Melcon Construction
86 Merid Dechasa Garedew
87 Mesay Oli Atomsa
88 Mescon Construction
89 Michael Abreha Building Contractor
90 Midroc Foundation Specialist PLC
91 Mohamed Yesuf Building Contractor
92 Mohammed Abas Building Contractor
93 Mulu Hadgu Construction
94 Mureza Leja Balcha
95 NKH Construction PLC
96 Nahiet Business PLC
97 Narucon Construction PLC
98 Nasew Construction PLC
99 Nejib,Aden,Hassen Building Contractor
100 Orbit Engineering & Construction PLC
101 Orchid Business Group PLC
102 Orrix Construction PLC
103 Powercon PLC
104 Rabah & Sons PLC
105 Radar Construction
106 Rediete Dagem Engineering & Construction PLC
107 SA Construction PLC
108 Samkete Engineering & Construction PLC
109 Samson Chernet Bedada
110 Samson G/Yohannes
111 Samuel S/Mariam Endale
112 Santa Maria Construction PLC
113 Satcon Construction PLC
114 Shade General Contractor PLC
115 Solomon Tilahun Building Contractor
116 Sunshine Construction
117 SUR Construction PLC
118 Tamrat Temsgen H/Wolde
119 Tayam Engineering & Commerce PLC

120 Tekeste Tesfaye Woldu
121 Teklehaimanot Asgedom
122 Terra Construction
123 Tesfaye Legese Construction
124 Tesfaye Tsegaye Building Contractor
125 Tewolde Gidey G/Egziabher
126 TIKS Construction
127 Tiku Berhane Building Contractor
128 Tower PLC
129 Trust Construction
130 Two Y Engineering
131 United Construction PLC
132 Unity Engineering PLC
133 Universal Construction P.L.C.
134 Wegeret Constrution PLC
135 Wogen Building Construction
136 Wonder Construction PLC
137 Workneh Guday Teshale
138 Y.H.A. Industry & Trade PLC
139 Yared Tekelemedhin General Contractor
140 Yemane Girmay Bisrat
141 Yencomad Construction PLC
142 Yerer Construction PLC
143 Yeshi PLC
144 Yirgalem Construction PLC
145 Yohannes Haile Building Contractor
146 Yoseph Wondimu Workineh
147 Yotek Construction PLC
148 Yousef Kassaye Building Contractor
149 Zamra Construction PLC
150 Zeleul Yohanes General Contractor
151 Ziquala Building Contractor

Appendix 2

T-Test

Group Statistics

	Nationality 2	N	Mean	Std. Deviation	Std. Error Mean
Trans_II_score	China	54	10.9259	.98770	.13441
	Ethiopia	65	9.8769	1.68177	.20860
Trans_IM_score	China	54	11.1852	.51667	.07031
	Ethiopia	65	11.2615	.87101	.10804
Trans_IS	China	54	10.1667	.60657	.08254
	Ethiopia	65	10.0923	1.52810	.18954
Transf_IC	China	54	10.0000	.82416	.11215
	Ethiopia	65	10.4308	1.07484	.13332
Transf_RA	China	54	9.3519	.89353	.12159
	Ethiopia	65	7.3231	2.43739	.30232
Trans_Overall	China	54	51.6296	1.76225	.23981
	Ethiopia	65	48.9846	5.50140	.68236

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Trans_II_score	Equal variances assumed	38.568	.000	4.049	117	.000	1.04900	.25908	.53471	1.56329
	Equal variances not assumed			4.227	105.092	.000	1.04900	.24815	.55702	1.54098
Trans_IM_score	Equal variances assumed	42.189	.000	-.555	117	.572	-.07835	.13479	-.34530	.18860
	Equal variances not assumed			-.592	106.802	.555	-.07835	.12890	-.33389	.17719
Trans_IS	Equal variances assumed	33.343	.000	.335	117	.737	.07435	.22125	-.35383	.51255
	Equal variances not assumed			.360	86.808	.720	.07435	.20673	-.33653	.48527
Transf_IC	Equal variances assumed	2.831	.095	-2.413	117	.017	-.43077	.17849	-.78425	-.07729
	Equal variances not assumed			-2.473	116.302	.015	-.43077	.17422	-.77582	-.08572
Transf_RA	Equal variances assumed	54.342	.000	5.798	117	.000	2.02877	.34991	1.33580	2.72175
	Equal variances not assumed			5.228	83.735	.000	2.02877	.32593	1.38074	2.67681
Trans_Overall	Equal variances assumed	32.112	.000	3.389	117	.001	2.64501	.78037	1.09954	4.19049
	Equal variances not assumed			3.657	79.325	.000	2.64501	.72328	1.20545	4.08457

Group Statistics

	Nationality 2	N	Mean	Std. Deviation	Std. Error Mean
TranZ_CR	China	54	10.9074	.89587	.12191
	Ethiopia	65	10.8000	1.54313	.19140
TraZ_ME	China	54	9.5185	.94651	.12880
	Ethiopia	65	8.9846	1.13870	.14124
TranZ_LF	China	54	7.0926	1.97406	.26864
	Ethiopia	65	3.7077	2.95129	.36606
TRAZ_OVERALL	China	54	27.5185	2.36915	.32240
	Ethiopia	65	23.4923	4.26147	.52857

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
TranZ_CR	Equal variances assumed	7.025	.009	.452	117	.652	.10741	.23787	-.33329	.57810
	Equal variances not assumed			.473	105.495	.637	.10741	.22693	-.34253	.55734
TraZ_ME	Equal variances assumed	.746	.389	2.743	117	.007	.53390	.19464	.14883	.91897
	Equal variances not assumed			2.783	116.999	.006	.53390	.19115	.15534	.91247
TranZ_LF	Equal variances assumed	3.118	.080	7.194	117	.000	3.38490	.47051	2.45308	4.31672
	Equal variances not assumed			7.455	112.200	.000	3.38490	.45406	2.48523	4.28454
TRAZ_OVERALL	Equal variances assumed	13.023	.000	6.191	117	.000	4.02621	.65037	2.73818	5.31424
	Equal variances not assumed			6.593	103.228	.000	4.02621	.61073	2.73833	5.25409

Correlations

Correlations

		Trans_Overall	CPD	CUA	CIC	CMF
Trans_Overall	Pearson Correlation	1	.138	.065	.055	.037
	Sig. (2-tailed)		.134	.479	.552	.686
	N	119	119	119	119	119
CPD	Pearson Correlation	.138	1	.381**	.304**	-.170
	Sig. (2-tailed)	.134		.000	.001	.065
	N	119	119	119	119	119
CUA	Pearson Correlation	.065	.381**	1	.423**	-.246**
	Sig. (2-tailed)	.479	.000		.000	.007
	N	119	119	119	119	119
CIC	Pearson Correlation	.055	.304**	.423**	1	-.271**
	Sig. (2-tailed)	.552	.001	.000		.003
	N	119	119	119	119	119
CMF	Pearson Correlation	.037	-.170	-.246**	-.271**	1
	Sig. (2-tailed)	.686	.065	.007	.003	
	N	119	119	119	119	119

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

Mann-Whitney Test

Nonparametric Correlations

Ranks

	Nationality 2	N	Mean Rank	Sum of Ranks
Trans_II_score	China	54	71.49	3860.50
	Ethiopia	65	50.45	3279.50
	Total	119		
Trans_IM_score	China	54	56.32	3041.50
	Ethiopia	65	63.05	4098.50
	Total	119		
Trans_IS	China	54	59.75	3226.50
	Ethiopia	65	60.21	3913.50
	Total	119		
Transf_IC	China	54	51.50	2781.00
	Ethiopia	65	67.06	4359.00
	Total	119		
Transf_RA	China	54	76.23	4116.50
	Ethiopia	65	46.52	3023.50
	Total	119		
Trans_Overall	China	54	72.88	3935.50
	Ethiopia	65	49.30	3204.50
	Total	119		

Test Statistics[a]

	Trans_II_score	Trans_IM_score	Trans_IS	Transf_IC	Transf_RA	Trans_Overall
Mann-Whitney U	1134.500	1556.500	1741.500	1296.000	878.500	1059.500
Wilcoxon W	3279.500	3041.500	3226.500	2781.000	3023.500	3204.500
Z	-3.413	-1.146	-.077	-2.579	-4.751	-3.735
Asymp. Sig. (2-tailed)	.001	.252	.939	.010	.000	.000

a. Grouping Variable: Nationality 2

Ranks

	Nationality 2	N	Mean Rank	Sum of Ranks
TranZ_CR	China	54	57.44	3101.50
	Ethiopia	65	62.13	4038.50
	Total	119		
TraZ_ME	China	54	70.11	3786.00
	Ethiopia	65	51.60	3354.00
	Total	119		
TranZ_LF	China	54	80.83	4365.00
	Ethiopia	65	42.69	2775.00
	Total	119		
TRAZ_OVERALL	China	54	80.50	4347.00
	Ethiopia	65	42.97	2793.00
	Total	119		

Test Statistics[a]

	TranZ_CR	TraZ_ME	TranZ_LF	TRAZ_OVERALL
Mann-Whitney U	1616.500	1209.000	630.000	648.000
Wilcoxon W	3101.500	3354.000	2775.000	2793.000
Z	-.778	-3.031	-6.078	-5.951
Asymp. Sig. (2-tailed)	.437	.002	.000	.000

a. Grouping Variable: Nationality 2

Ranks

	Nationality 2	N	Mean Rank	Sum of Ranks
CPD	China	54	67.22	3630.00
	Ethiopia	65	54.00	3510.00
	Total	119		
CUA	China	54	49.32	2663.50
	Ethiopia	65	68.87	4476.50
	Total	119		
CIC	China	54	68.44	3696.00
	Ethiopia	65	52.98	3444.00
	Total	119		
CMF	China	54	50.61	2733.00
	Ethiopia	65	67.80	4407.00
	Total	119		

Test Statistics[a]

	CPD	CUA	CIC	CMF
Mann-Whitney U	1365.000	1178.500	1299.000	1248.000
Wilcoxon W	3510.000	2663.500	3444.000	2733.000
Z	-2.118	-3.111	-2.906	-2.875
Asymp. Sig. (2-tailed)	.034	.002	.004	.004

a. Grouping Variable: Nationality 2

Correlations

			CPD	CUA	CIC	CMF	TRAZ_OVERALL
Spearman's rho	CPD	Correlation Coefficient	1.000	.400**	.279**	-.228*	.555**
		Sig. (2-tailed)	.	.000	.002	.013	.000
		N	119	119	119	119	119
	CUA	Correlation Coefficient	.400**	1.000	.487**	-.240**	.331**
		Sig. (2-tailed)	.000	.	.000	.009	.000
		N	119	119	119	119	119
	CIC	Correlation Coefficient	.279**	.487**	1.000	-.268**	.624**
		Sig. (2-tailed)	.002	.000	.	.003	.000
		N	119	119	119	119	119
	CMF	Correlation Coefficient	-.228*	-.240**	-.268**	1.000	-.277**
		Sig. (2-tailed)	.013	.009	.003	.	.002
		N	119	119	119	119	119
	TRAZ_OVERALL	Correlation Coefficient	.555**	.331**	.624**	-.277**	1.000
		Sig. (2-tailed)	.000	.000	.000	.002	.
		N	119	119	119	119	119

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

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