

## ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES

# CHALLENGES OF INDEGINOUS OIL COMPANIES IN ETHIOPIAN MARKET DUE TO INTERNATIONAL OIL COMPANIES OPERATION

BY:

YOHANNES WONDIMU

## CHALLENGES OF INDEGINOUS OIL COMPANIES IN ETHIOPIAN MARKET DUE TO INTERNATIONAL OIL COMPANIES OPERATION

#### BY:

YOHANNES WONDIMU ID NUMBER: - SGS/0106/2006

A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINSTRATION (GENERAL).

> JUNE 2015 ADDIS ABABA, ETHIOPIA

## ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES FACULTY OF BUSINESS

## CHALLENGES OF INDEGINOUS OIL COMPANIES IN ETHIOPIAN MARKET DUE TO INTERNATIONAL OIL COMPANIES OPERATION

BY: YOHANNES WONDIMU ID NUMBER: - SGS/0106/2006

#### APPROVED BY BOARD OF EXAMINERS

Dean, Graduate studies	Signature
Advisor	Signature
External Examiner	Signature
Internal Examiner	Signature

#### **DECLARATION**

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Dr. Mesfin Lemma. All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or full to any other higher learning institution for the purpose of earning any degree.

Name	Signature

St. Mary's University, Addis Ababa June 2015

### **ENDORSEMENT**

This thesis has been so	ubmitted to St. Mary's universi-	ty, school of Graduate Studies for
examination with my	approval as a University adviso	r.
Advisor		Signature
	St. Mary's University, Addis A	baba June 2015

## **Table of Contents**

Acknowledgements	i
List of Abbreviation and Acronyms	ii
List of Tables	iii
List of Figures	iv
Abstract	v
CHAPTER ONE: INTRODUCTION	
1.1. Background of the Study	
1.2.1. Research Questions	4
1.2.2. Objective of the Study	4
1.2.3. General Objective	4
1.2.4. Specific Objective	4
1.3. Significance of the Study	5
1.4. Scope of the Study	6
1.5. Limitation of the Study	6
1.6. Definition of key Terms	7
1.7. Organization of the Study	7
CHAPTER TWO: RELATED LITRATURE REVIEW	
2.1. Background of Oil Industry	8
2.1.1. Overview of the Upstream & Downstream Sector of the Industry	
I. Upstream	9
II. Downstream	10
2.2. Related Literature	17
2.3. Empirical Review	19
2.4. Conceptual Framework	23
2.5. Ethiopian oil Industry Prospect	24

CHAPTER THREE: RESEARCH DESIGN AND METHODS	
3.1. Research Design.	26
3.2. Source of Data	27
3.3 Target Population	27
3.4. Sampling Size and Sampling Techniques	27
3.5. Methods of Data Collection	29
3.6. Procedures of Data Collection	29
3.7. Methods of Data Analysis	30
3.8. Ethical Consideration	30
CHAPTER FOUR: RESULTS AND DISCUSSION	
4.1. Introduction	31
4.2. Respondents Characteristics	32
4.3. Companies Financial Capability	33
4.4. Expertise and Formation of Local Company	38
4.5. Brand Awareness of Local Company Products	42
4.6. Customers Perception to Local Company Products	46
4.7. Interview Results	
4.8. Secondary Data Presentation and Analysis	53
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND	
RECOMMENDATIONS	
5.1. Summary of findings	57
5.2. Conclusions	.58
5.3. Recommendations	59
References	vi
Appendixes	.viii
Declaration	.viii
Endorsement	ix

#### ACKNOWLEDGMENTS

First and foremost, many thanks is directed to the Almighty God, everlasting father, the prince of peace and love for giving me the endurance and patience in accomplishing this piece of work.

I would like to express my deepest and heartfelt thanks to my advisor Dr. Mesfin Lemma for his compassion, quality guidance, endless encouragement and great support throughout this research. I am very grateful for his very patient, careful reading and valuable comments for each chapter of this thesis. The brotherly treatment he accorded me has served as an inspiration for the completion of this study. It would not have been possible to complete this research without the support of Dr. Mesfin Lemma.

Many people assisted me to accomplish this work; I would also like to express my deepest and heartfelt thanks to my mother W/ro Wudewa Teshome for her advice and prayer, W/ro Kebebush Wondimu and Ato Tamiru Meskele for their kindness and support throughout the study and my stay with them as well, thank you.

Let me take this opportunity to forward my thanks to my friends Ato Abebe Hailu, Ato Assegid Alemu, Ato Ashenafi Tadesse and Ato Timotios Yonas for having memorable and funny time. I respect and love you all.

#### **List of Abbreviations**

CSR Corporate Social responsibility

DP Data Processing

EIA Energy Information Administration

EoS Economic of Scale

EPSE Ethiopian Petroleum Supply Enterprise

FDI Foreign Direct investment

GHG Green House Gas

IKM Information knowledge management

IOC International Oil Companies

LPG Liquefied Petroleum Gas

MIS Management Information System

MoT Ministry of Trade

NGL Natural Gas Liquid

NOC National Oil Ethiopia

OOC Other Oil Companies

OPEC Organization of Petroleum Exporting Countries

YBP Yetebaberute Beherawi Petroleum

## **List of Tables**

Table 1: Respondents demographical composition	32
Table 2: Financial capability of local companies	33
Table 3: companies ability in expanding service stations	34
Table 4: Local oil company's ability to supply all type of products	35
Table 5: Company's ability to work with stakeholders	35
Table 6: Liquidity of local companies	36
Table 7: local Company's expertise power	39
Table 8: The effect of long time existence of foreign companies	39
Table 9: Companies structure and formation	40
Table 10: local company's ability to attract knowledgeable expertise	40
Table 11: Company has created strong brand awareness	42
Table 12: Company's effort to create product awareness	43
Table 13: product loyalty created by local companies	43
Table 14: The benefit of brand created in securing price premium	44
Table 15: the brand able to compete and win in the market	44
Table 16: Customers level of awareness	46
Table 17: Customers product preference	47
Table 18: Company coming to mind first, while thinking the industry	47
Table 19: Ability and way of companies to keep in mind	48
Table 20: The preferred company differentiation	48
Table 21: Defect encountered using others products	49
Table 22: The competence of local companies	49

## **List of Figures**

Figure 1: Departmental Composition of the Respondents	33
Figure 2: Market Share Trend of the by Companies	54
Figure 3: Lubricant Market Share	55
Figure 4: Industry Lubricant Sales Volume	55

#### Abstract

In their attempt to attract Foreign Direct Investment (FDI), most African countries have liberalized trade and attempted to create enabling environment in recent decades. Ethiopia, like many African countries, took some steps towards liberalizing trade and the macroeconomic regime. This paper attempts to study the challenges of indigenous oil companies in Ethiopian market due to the operation of international oil companies. The study gives an extensive account of the main face up to the local oil companies. The research has conducted to portray the local company challenges in the industry due to the operation of foreign companies, by focusing on their financial capability, branding, expertise knowledge and experience in the industry, structure and formation of the local companies respondents were approached. The research has been descriptive by using both primary and secondary data through interview, questionnaires and secondary data respectively. The above mentioned parameters addressed in through questionnaire and by interviewing the selected employees of the local companies. In addition their overall performance has been analyzed by using secondary data. The research result demonstrated that the local companies are not competitive enough, as they have immense gap in all parameters mentioned above. They are not competent in terms of financial capability, creating awareness about their products, knowledge of the business and structure and formation of the company. As finance is the main element to operate all business activities, local companies should be able to manage their working capital and efficiently control their resource and have a real power over their stakeholders the like of dealers and transporters. Beating the negative attitude and lack of awareness from the customer side towards the local company and their products are also expected from the indigenous firms, as branding play a great role in today's business environment. Giving more emphasis to the business operation rather than making a structured and well designed organization, the local companies are not competent enough. The researcher suggests that following recommendations: they have to develop ensuring strong interface between their stakeholders, implement clear and effective credit policy, hire and train and retain expertise, develop a strong operational manual and organizational structure.



#### **CHAPTER ONE**

#### INTRODUCTION

#### 1.1 .Background of the Study

Ethiopia is currently on the edge of rapid economic development with consistent double-digit growth over the last successive years. The trend in sustainability of economic growth is being witnessed in all the critical areas of consumption indicators such as power, energy, cement etc. The consumption of petroleum products such as petrol, diesel and kerosene and lubricants has been significantly growing. Petroleum is a necessity product and its demand is inelastic makes the growth sustainable even in times of any economic slowdowns.

Petroleum is the main source of energy for any industry, As *fuels*, they keep us warm in cold weather and cool in hot weather; they cook our food and heat our water; they generate our electricity and power our appliances; and they take us by car, bus, train, ship or plane to places near and distant. The global energy mix has become increasingly more diversified, with improvements in technology enabling generation from new renewable sources. Finding innovative ways of storing and transporting the energy generated from renewable sources is set to become a key challenge for the future of the energy market (Rossini. and Mair, 1951).

Ethiopia is currently not a producer of oil but as with many of its regional neighbors, it is seeing a growing level of interest from exploration companies and some of them are involved to the operation. There are currently no producing wells in the country, but there are a number of promising areas being explored. Currently the country engaged fully in importing gas and petroleum products from abroad.

The Ethiopian oil industry has been growing over the past two decades by involving all investors from both the local and international companies. Because of the governments incentives and other encouraging packages for those who involved in the industry; many of local investors are interested and engaged in the business rapidly. The current statistics shows that four local inventors (companies), five foreign companies are engaged in the business namely, NOC, TAF, YBP, Dalol, Total, Oilibiya, Nile and WAS and three prospect local companies are in the pipe line to join the market.

The petroleum industry includes the global processes of exploration, extraction, refining and marketing petroleum products. The largest volume products of the industry are fuel oil and gasoline (petrol). Petroleum (oil) is also the raw material for many chemical products, including pharmaceuticals, solvents, fertilizers, pesticides, and plastics. The industry is usually divided into three major components: upstream, midstream and downstream. Midstream operations are usually included in the downstream category, our oil Industry also categorized under the downstream, as it's only involved in retail marketing (Sweeney, 1950).

#### 1.2. Statement of the Problem

In today's volatile business environment the fast growing oil industry and companies have been facing various challenges and problems all the way through their operations. Ethiopia has opened the oil business both for local and international investors after the fall of Derg regime; accordingly many companies entered to the business for the past two decades.

Our local (indigenous) oil companies have a very huge/immense gap in the industry when we compare to the international companies, by their financial capability, branding, reliable and dependable suppliers, Economic of scale, experience in the field, cost of their main products (packed products), formation, leadership quality, logistics and etc are the main challenges to local companies. In addition to the above challenge, they have another big problem is the attitude of the customers to local companies and their products, they determine or perceive foreign companies and products are more preferable than the local one, beating this negative attitude of the customers is also expected from this local companies.

Financial capability is obviously the back bone of any organization to sustain in the business. The financial competence will help the companies to expand their business and address their customers easily by opening a new branches based on the analysis of the demand and satisfying their customers through supplying to their spot. International companies explore their competitive advantage of having adequate finance capacity over the local companies, which is limit their business and source of financing only locally.

In any businesses or activities having adequate experience in the field is important and preferable in order to run the business knowledgeably. The international companies have enriched experience of the field in and out of their home country, both in exploration and retail market of the industry for many years. The formation of an organization also means of their competitive advantage, a clear hierarchy or work procedure and manuals etc by itself boost the confidence of both the internal and external stakeholders; employees, management, clients, suppliers, customers and government. Many of our local companies lack this kind of working environment and conditions, which might cause for the lack of trust and confidence from the customers.

Price is very sensitive in order to attract or repel the customers; which is highly related to the affordability of the products. In order to set the price of their products; primarily they consider the cost of the product, transportation and other related cost of the item in order to set the selling price of the an item. Companies who have manufacturing plants in their home country, produce in mass and the unit cost of the product is very low, hence local companies who have only the option of importing the products from abroad can face the loss of gaining that advantage in the market; because the cost of buying the items from international market is higher when we compare, obviously in the current Ethiopian market this is happened.

Presently, another problem to the local oil company is the emerging of oil manufacturing company in the country and it has been involved in the market, which might win the confidence of the customers by branding and price through time. In other way, the emerging of this company would bring to an end the out flow of foreign currency; it will be diverted for the purchase of other commodities as the amount is very material, as well it has a direct importance in the country's economy where foreign direct investment (FDI) is highly encouraged.

The local companies engaged in the business have only the experience of retail marketing; it's also difficult to compare them with the abroad one those who have the experience both on exploring and retail. The international companies operating in the country have been treated as a branch and the facility also fulfilled with the set standard of their head office. Investing and competing in the same market have its own opportunities and difficulties for both of them, whereas for local companies even though they are working in their own country, they are struggling with many problems those which is tried to mention in the above and the like.

Therefore, this research is conducted to assessing the challenges of Indigenous oil companies in Ethiopian market when it's compared or evaluated with the international oil companies and to find out some important thoughts and recommendations to the concerned bodies. The study has a pioneer in the industry; as it hasn't been done before in the area.

#### 1.3. Research Questions

For assessing the challenges of indigenous oil companies in Ethiopian market due to international oil companies operation, the following basic research questions are stated.

- To what extent huge capital of International oil Companies can affect the operation of local companies in order to compete and win in the market?
- How can branding of foreign companies affect customers' preference in their buying decisions?
- What are the effects of expertise knowledge and long time existence of an organization in the business?

#### 1.4. Objectives of the Study

The study has both general and specific objectives. The general and specific objectives are described as follows:

#### 1.4.1. General Objectives

The general objective of the study is clearly state the challenges (gaps) between the indigenous (local) and international oil companies in Ethiopian market and attempt to demonstrate the problems and the possible alternative solutions in order to solve or reduce those problems by providing basic information to the companies and to help as a reference for further research on subject matter.

#### 1.4.2. Specific Objectives

The specific objectives of the study include:

❖ To analyze the impact of huge capital of international companies investing in the country on local companies. It gave the chance to see and analyze its merit and demerit of EOS in the industries briefly.

- ❖ Analyzing and examining the competitive advantage of having adequate knowledge of the business and experience in the field. Experience gives lesson in each and every level of the operations, consequently it's also one means of gaining a competitive advantage of the industry.
- Scrutinizing the value and implication of brand in the industry. It also associated with the customers' preference in their buying decisions; that has an adverse impact to the companies.
- ❖ To evaluate the benefit of having quality leadership and organizational formation and its merit/demerit to the companies.

## 1.5. Significance of the Study

This study is a pioneer in the industry; accordingly it would benefit all local oil companies by depicting the main challenges/gaps and possible alternative solutions in order to lock the loops of the industry in the market by comparing their capability/competence with the international one. For the imminent researchers on the field; it will assist and help as a reference.

- ❖ The study could benefit the local companies by making clearly aware and articulate their main challenge in the market.
- ❖ It could help the companies to analyze their most common challenges in organized and well documented way in order to use as a reference and present it to the concerned units
- ❖ It helps to the governing body to review the current legal frame work and playing field of the industry in order to protecting the local companies.
- ❖ It initiates other researchers in the field to study in broad and help them as a reference.

In addition, the study could benefit both local and international companies; by portraying the challenges and possible solutions. The study would benefit the local companies in terms of notifying their main challenges, they would get and take the necessary action in order to combat those stated problems. In other hand, it also initiates them to investigate the problems in appropriate and organized ways, use the paper as a convincing evidence for problems beyond their capacity.

The international companies also get advantage from the study by acknowledging their main competences over the local companies those which are engaged in the business.

#### 1.6. Scope of the Study

The study has been conducted in Addis Ababa, by addressing four retail Oil companies, which are Indigenous companies currently engaged in the business. The companies have been contacted at their head office and their sample clients also enclosed in the study. The respondents are chosen from every organization; which includes all staff members of the organization from higher management to the lower experts, those chosen by the researcher according to the sampling techniques from marketing, operation and supply and logistics departments of each company.

#### 1.7. Limitation of the Study

In the process of conducting this research, the researcher faced the following limitations.

- ➤ The local companies are not willing to give their secondary data, the like of profit and loss statement, operating manuals other documents.
- > Shortage of time to collect the required data.
- Lack of adequate Literature on the field.
- > Some of the distributed questionnaires to the respondents are not returned to the researcher.
- > Negligence of respondents to answer open ended questionnaires.
- > Shortage of finance to cover the cost of the study.
- ➤ The locations of the companies are highly dispersed.

#### 1.8. Definition of Key Terms

- → Oil: oil is any neutral, nonpolar chemical substance that is a viscous liquid at ambient temperatures and is both hydrophobic and lipophilic. Oils have a high carbon and hydrogen content and are usually flammable and slippery
- **Economies of Scale (EoS)**:- are the cost advantages that enterprises obtain due to size, output, or scale of operation, with cost per unit of output generally decreasing with increasing scale as fixed costs are spread out over more units of output.
- ♣ Branding: A collection of feelings about a company, product, or service collected by a user as a result of previous experiences. Brand includes logo or symbols that represent implicit values and ideas of the product. Marketers seek to develop brand image through branding.

#### 1.9. Organization of the Study

The study is organized in five chapters. The first chapter deals with background of the study, definition of terms, statement of the problem, basic research questions, objectives of the study, scope of the study, limitation of the study. The second chapter comes across with the review of review of literatures, conceptual frame work and related lecturers. The third chapter illustrates the research design, sample and sampling techniques, source of data, methods of data collection, and procedures of data collections and methods of data analysis. The fourth chapter summarizes the results and findings of the study and interpretation of discussion of findings. The fifth chapter, which is the closing chapter of focused on summary of the findings, conclusions and recommendations.

#### **CHAPTER TWO**

#### RELATED LITERATURE REVIEW

#### 2.1. Background of Oil Industry

The 19th century was a period of great change and rapid industrialization. The iron and steel industry spawned new construction materials, the railroads connected the country and the discovery of oil provided a new source of fuel. The discovery of the Spindle top geyser in 1901 drove huge growth in the oil industry. Within a year, more than 1,500 oil companies had been chartered, and oil became the dominant fuel of the 20th century and an integral part of the American economy.

Settlers used oil as an illuminant for medicine and as grease for wagons and tools. Rock oil distilled from shale became available as kerosene even before the Industrial Revolution began. While traveling in Austria, John Austin, a New York merchant, observed an effective, cheap oil lamp and made a model that upgraded kerosene lamps. Soon the U.S. rock oil industry boomed as whale oil increased in price owing to the growing scarcity of that mammal. Samuel Downer, Jr., an early entrepreneur, patented "Kerosene" as a trade name in 1859 and licensed its usage. As oil production and refining increased, prices collapsed, which became characteristic of the industry (Giddens, 1938).

Oil and gas are highly demanded in industries as well as for commercial and domestic purposes. The products are used for lots of purposes ranging from the driving of machineries to the production of plastics and fertilizers. Indeed, the world would lose its taste if oil and gas are removed from existence. No modern society can run smoothly without oil and gas. This is why the costs of other commodities increase with increase in the cost of oil and gas. This makes it very important to regulate the cost of oil and gas in order to ensure that the costs of other goods and services are reduced or kept optimal. This is why these products are very important today. Essentially, the demand of oil and gas exceed their production. This also explains the reason why countries with huge deposit of crude oil are among the richest nations of the world. Since the functionality of a

modern society relies to a huge extent on crude oil, it is then very important to employ high tech and cutting edge technological processes towards this important field in order to ensure effectiveness in the process.

Oil and gas are highly demanded in industries as well as for commercial and domestic purposes. The products are used for lots of purposes ranging from the driving of machineries to the production of plastics and fertilizers. Indeed, the world would lose its taste if oil and gas are removed from existence (http://www.pbs.org: 15/02/2015).

#### 2.1.1. Overview of the Upstream and Downstream Sector of the Industry

To really understand the processes involved in the oil and gas industry, it makes sense to consider its subdivisions. The oil and gas industry is essentially subdivided into three phases and these include:

- Upstream sector
- Midstream sector
- Downstream sector

Before examining these phases, it is important to note that the midstream sector is also included in the downstream sector (http://www history.com, 24/02/2015).

#### I. Upstream sector

The upstream sector of the oil and gas industry involves processes including the searching for and the recovery of crude oil as well as its production. In the upstream sector, discovery or exploration of crude oil takes place. This involves intensive and extensive efforts towards ascertaining the actual places where crude oil is located.

Exploration is a very difficult process and therefore requires the service of experts in the field. More so, information technology plays active roles in the exploration or searching of crude oil in order to easily discover new grounds where oil is located and therefore take advantage of them.

The upstream sector includes different operations such as the searching for prospective underwater oil and gas fields, drilling of exploratory wells and also making requisite operations on the well so as to bring the crude oil or natural gas to the ground surface (Nelson, 1958).

#### II. Downstream sector

The downstream sector of the oil and gas industry involves the refining of the crude oil and/or raw natural gases obtained in the upstream sector as well as selling or distributing the products obtained. Many products are derived from the refining of crude oil and these may include diesel oil, liquefied petroleum gas (LPG), asphalt, petroleum coke, gasoline, fertilizers, antifreeze, plastics, rubbers, pesticides, synthetic rubber, jet fuel and many more.

The downstream sector of the industry is the sector that relates with the consumers. Facilities involved in this sector include petrochemical plants, oil refineries, natural gas distribution companies, retail outlets and so forth. The main processes involved in the upstream and downstream oil and gas operation include the following:

- ✓ Exploration
- ✓ Extraction
- ✓ Refining
- ✓ Transporting
- ✓ Marketing

Exploration includes prospecting, seismic and drilling activities that take place before the development of a field is finally decided. Refining is where oil and condensates are processed into marketable products with defined specifications such as gasoline, diesel or feedstock for the petrochemical industry. Refinery offsite such as tank storage and distribution terminals are included in this segment, or may be part of a separate distributions operation (Sachanen, 1945).

#### **■** Upstream Challenges

We can look at the challenges and opportunities in the upstream oil and gas industry facing in current information technology era.

#### 1. Management and Information

Global forces such as geopolitical pressures are troubling the industry. We therefore need the knowledge, contacts and skills to effectively adapt to these troubles and geopolitical insecurity in

the industry. It is also very important that we make appropriate efforts towards anticipating and reacting to the radical changes on the global sphere.

Some challenges in the upstream oil and gas industry can be effectively resolved if we lay emphasis on the new interdependencies between senior management information, operational effectiveness and decision making. We also need to appraise and understand their impact on our overall profit margins. This can go a long way in solving our problem (http://prnewswire.co.uk, 25/03/2015).

#### 2. Increasing the production of liquid fuels

Oil and Gas has facing a real challenge of shortage of liquid fuel in this era. There is great need to increase the production of liquid fuel in the upstream sector. The output from Canada's oil sand can be increased by threefold by 2035 which is equivalent to 4.5 billion barrels per day has the capacity to extract more oil and made effective. Not only that, but also there should be efficient avenues in place to bring the extracted products to the market. The American Petroleum Institute pointed out that oil sand production can be limited in 2014 because of shortage or inadequacy of pipelines leading from refineries to the market (Hobson, 1973).

#### 3. Sources of Crude Oil

If we take a close look at the sources of oil and gas, we will realize that they are not renewable natural resources. The intensive use of oil and gas today places the fate of the world's crude oil supply at risk. In some countries like Brazil, China, and India, crude oil is used in alarming rate on a daily basis. Thus, this is a big challenge to the oil and gas industry. However, it is quite obvious that the challenge cannot be solved by preventing people from using oil and gas or their products. Oil and gas are very pivotal to the modern society and without them the modern society will not run smoothly or effectively. Thus, an alternative means should be sought in order to solve this challenge (McCain, 1970).

#### 4. Operational Challenges

The models used by the oil industry in the 20th century are becoming rather antique. The models are now seriously facing challenges and of course new models are being invented. The integrated model has an original digital logic aimed at providing a natural hedge, market access and balanced funding. With the help of integration, the operation and value chain can be optimized. The downstream sector can finance the upstream sector in order to achieve greater operation. By

ensuring better integration, the oil and gas industry can balance its upstream and downstream operation and hence reduce volatility and risks.

Oil industries such as ExxonMobil, Royal Dutch Shell, and Conoco Philips oftentimes employ vertical integration model which involve the entire value chains. Anxiety in investment has also increased since capital market does not realize the value of integration. Economies of scale and access to technology are not enough to solve the problems faced in the upstream sector of the oil industry. Some of the challenges faced in the upstream sectors today are caused by the structure of the downstream sector and investors (Tabieh, and Al-Horani, 2010).

#### 5. Energy Demand and Supply

There is intense problem of demand and supply in the upstream sector of the oil and gas industry. It is quite obvious that the demand for crude oil is greater than its supply. Ongoing tensions in the Middle East and economic uncertainty were pointed out in the 13th international Oil Summit but this points towards improved outlook of course the risks cannot be denied.

Due to population and economic growth, the global energy demand may double in the first half of the century. IEA stated that the global fuel demand could rise by 26 percent in the next 25 years; that is over 110 million barrels per day. Asian emerging economies will experience the most of the growth. Vehicle fleet in China could triple to 600 million vehicles in 20 years time. Global oil supply will struggle to keep pace with the demand due to decreasing output in mature fields by about 80 percent in 2035 (EIA, 2005).

#### 6. Environmental Pollution

Environmental pollution is a major issue in the upstream oil and gas sector. There is lots of oil and corroded pipelines still used today resulting to oil spill which degrades the environment. For example: Shell has led to lots of environmental pollution in the Niger Delta. Lots of their pipelines in the region are old and corroded, resulting to oil spillage and pollution (USDE, 1999).

#### 7. Fluctuating Crude Prices

Political instability and problems in various regions of the world has led to the fluctuation in fuel prices. Crude price went from a high value of \$150 per barrel in the middle of 2008 to less than \$40 per barrel at the beginning of 2009. The political issues resulting to the fluctuation in crude prices

include slow approval of new capital projects, the squeezing of talents as a result of early retirements and acquisition activity. It is very important to maintain effective operation as well as ensure that the margin is maintained in the environment. Atomization of drilling mechanism and robotic technology can play a pivotal role to overcome this challenge.

#### 8. Economic Uncertainty

This is another risk faced in the oil and gas sector which has led to the slow movement of some firms in the upstream sector. Most people will not classify economic uncertainty as a challenge or risk but on carefully analyzing, it will become very obvious that this is a challenge.

It is simply the uncertainty in economics. It can be defined as the unknown prospect or possibility of gain or loss. Whether this factor is quantified as a risk or not, it has a direct impact on employment, income aspects and communication among the various companies and firms in the value chains of the oil industry.

#### 9. The People Shortage

The lack of skilled personnel and manpower or main operations requiring high tech processes in the oil and gas industry is a challenge in most parts of the world especially in the upstream sector of the industry. Processes in the upstream sector such as exploration and production requires high technicality and therefore there is need for skilled manpower. This problem can however be solved by attracting and encouraging more talented young men and women into the science and engineering discipline and hence into the oil and gas industry.

#### 10. Marketing

Marketing is another heavy issue in the oil and gas industry. China produces far less crude oil and has less than half the refining power than the United States of America but research states that the oil demands of China will exceed that of the US by 2035. To have these problems solved or adapted to, the IEA made estimation that there is need for \$10 trillion new oil infrastructures by 2035. This involves \$3 million investment per second for up to 25 years, adding to the huge challenge. Therefore the available resources have to be channeled towards making better investments to improve marketing and pricing in the upstream oil and gas operations (EIA, 2005).

In upstream and especially in downstream, the most engaging modification of the strategy to the marketing feature because the millennium has actually been changing from Outbound Marketing to Inbound Marketing. Building from the experiences picked up from doing business in the new Web 2.0 era, businesses have actually pertained to acknowledge the overwhelming benefits of drawing consumers towards their item, as opposed to driving their products towards their customers.

#### **Downstream Challenges**

The downstream sector of the industry has broad scope and tentacles. These include crude supply, trading, refining, product distribution, marketing and retailing. Lots of products are involved here including conventional fuels such as gasoline and diesel and low carbon fuels such as bio diesel.

Lots of challenges are faced in the downstream oil and gas sector. The operating capacity of the global refining industries is continually constrained and therefore there is need for expansion in their various phases. Crude oil produced today is becoming heavier and sourer and product specifications are tightened by increasing strict environmental legislation. This has led to the need for changes in the refining configuration of many oil players. More so, marketing margins are getting lower as a result of competition from advantaged entrants (Yergin, 1990). The main challenges faced by downstream sector are:

#### 1. Business Joint Ventures

Downstream sector is facing serious challenge due to lack of Information knowledge management. In order to overcome, there is need for joint forces and alliances between various industries to be able to arrest this problem in the oil and gas sector. Some important industries such as oil companies, service companies, academia, government and so forth should poll their knowledge together so as to achieve a better result and solve problems plaguing our industry at reduced cost and as fast as possible.

To really achieve the desired aim at purposes then it is important to ensure the following: The various value chains of the oil industries should integrate and target at the same purposes. Joint and targeted investment should be made in the industry outside the host country. Risks should be shared and there should be diverse commercial terms. The workforce is very important and therefore should be developed. More so, state of the art technologies should be transferred in order to aid efficiency at all levels and value chains of the industry (Eneh, 2007).

#### 2. Global Refining Capacity

There is an emergence of a structural global surplus with significant economic growth in various areas. This is driven by increasing refining capacity in various regions such as Asia (China and India), the Middle East (Saudi Arabia and the United Arab Emirates) and in Latin America (Brazil). However, the key factors of the growth are as follows: Much of the planned expansions were sponsored by national oil companies most of the new capacity will capture economies of scale with greater degree of efficiency and sophistication. Old refineries will rather die than close and also environmental and social costs of closure can be very high in countries like Europe and America. The industry has to do a number of things to avoid these risks. These include increasing liquid fuel supplies, diversifying the transport fuel mix and building greater flexibility in the downstream infrastructure.

#### 3. Corporate communication

Corporate communication involves orchestrating and managing different internal and external communications in order to create favorable point of view among stakeholders. This involves issuing a message by an organization to its audiences which might include the employees, the media, partners and so forth. With the aid of corporate communication, organizations will be able to explain their missions and gear towards achieving their purposes and visions. It helps stakeholders to be linked to the company in question. In the downstream oil and gas operation, corporate communication is very important in order to determine efficiency in the various processes. The stakeholders should be able to know issues taking place in the trading and refining of the oil.

#### 4. Distribution Activities for Oil Products

Distribution and trading is a very vital aspect of the downstream sector of the oil industry. Without establishing appropriate avenues for trading, the operation of the oil and gas industry will be futile. Thus, the value chains should be properly examined in order to ensure efficient trading and distribution of the products. More so, efficient avenues should be devised for ensuring that the products are maintained at steady prices when it comes to distribution. In some parts of the world, the price of the products is unnecessarily increased in their distribution centers leading to intense burdens on the consumers.

Like upstream industry Outbound Marketing to Inbound Marketing must be examined. Building from the experiences selected up from doing company in the new Web 2.0 age, businesses have in fact concerned recognized the overwhelming perks of attracting consumers to their item, as opposed to steering their products towards their clients.

#### 5. Crude Supply Mechanism

Various challenges are faced in the supply mechanism of crude oil. The performance of the supply chain can be greatly affected by timely flow of accurate information. All hope lies on information technology to ensure optimization in the process although it currently seems to be a huge challenge. To ensure efficiency in this process, various processes and technicalities should be brought together. These include modeling, designing and monitoring of engineering assets. With the use of reliable transport system and quick method of disseminating information, oil supply can be mechanized and carrying cost can be reduced (Kymisis and Hadjistavrou, 2008).

#### 6. Health, Safety and Environmental Security

The safety of the human environment as well as health protection should be the number one priority or concerns in the oil and gas industry. Legislation like implementation of ISO15926 has forced oil and gas companies to comply it. Hydraulic fracturing, a common technique in extracting gas from unconventional reservoirs have resulted to lots of environmental concerns and issues with the water table. Therefore, oil firms should pay greater attentions to health and safety issues with broader operation concerns through the various stages of the value chains (Sharma, 2002).

#### 7. Manpower and Economy

The oil and natural gas industry supports over a million people jobs and makes significant contribution to the economy which is under immense pressure and has become a serious challenge. Oil and natural gas is the backbone of the any countries economy. It is a major source of growth and job creation in the nation. It was a succor during recession time and creates more jobs and employment than any other industry.

#### 8. Refinery incapability and the Need for Expansion

It has not really been easy in the downstream sector of the industry to meet the challenge of refining incapability. Lots of factors such as economic downturn, higher oil prices and improving vehicle efficiency has reduced demands in the downstream sectors. Refinery closures have also been

erupted by tightened margins. To solve these problems, there is need for more efficient, flexible and integrated refineries. With the tough investment climate of today, this is obviously a big task.

#### 9. **Pricing**

Some major challenges in different regions of the world pose lots of problems and results to increased pricing. For instance, the easily accessible oil is trapped in some regions of the world and therefore is inaccessible. Therefore supply oftentimes comes from challenging and remote regions of the world and this result to high oil prices. If the production cost of crude is high then prices will also get high. Because of the above mentioned factors, crude prices are relatively high in the world.

#### 10. The cost of Services

Increased cost of services is another huge challenge facing oil and gas. This increased cost cuts across the value chains from exploration to production as well as refining and transportation. This simply results to higher commodity prices and it has driven the industry activity to a point where the service industry lacks the capacity to respond.

#### 2.2. Related Literature

Nelson (1954) wrote on two plausible schools of thought on the origin and formation of petroleum. The older one, "the **organic matter** theory", suggests that petroleum was formed from the decomposition of dead marine organisms, like plankton. Compounds (e.g., fats) which are very similar to hydrocarbons and even traces of certain hydrocarbons themselves, are present in virtually all forms of plant and animal life.

The theory is supported by the finding that very recent marine deposits (10,000 to 15,000 years old) contain hydrocarbon and asphaltic material. Besides, there is a similarity between the molecular structures of some of the minor constituents of crude oil and those of compounds found in living organisms. Again, it is hard to see where else the carbon content of petroleum could have come from other than biological material, if indeed its origin is geologically fairly recent.

Also, supporting this view, Arene and Kitwood (1979), submit that petroleum is crude oil that occurs naturally in sedimentary rocks. It had collected into small pools from seepage from

underground. Aligning with this claim, EIA (2005) states that petroleum was formed from the remains of animals and plants that lived millions of years ago in a marine (water) environment before the dinosaurs. About 300-400 million years ago, tiny sea plants and animals died and were buried on the ocean floor. Over time, layers of silt and sand covered them. About 50 - 100 million years ago the remains were: buried deeper and covered by layers of mud. The enormous heat and pressure from these layers turned the remains into crude oil and gas. Today, drilling down through the layers of silt, sand and rock help to reach the rock formations that contain crude oil and gas deposits.

Arene and Kitwood (1979), note that crude oil is capable of flowing up the well pipe either under the pressure existing in the reservoir, or with mechanical assistance from a pump or applied pressure. Since Drake, in Pennsylvania, United States of America (USA), drilled crude oil, the petroleum industry has steadily grown and a large number of petroleum deposits have been discovered and drilled in various parts of the world.

According to EIA (2005), scientists and engineers explore a chosen area by studying rock samples from the earth. Measurements are taken and, if the site seems promising, drilling begins. Above the hole, a structure called a 'derrick' is built to house the tools and pipes going into the well. When finished, the drilled well will bring a steady flow of oil to the surface. The world's top five crude oil-producing countries are Saudi Arabia, Russia, United States, Iran and China. Over one-fourth of the crude oil-produced in the United States is produced offshore in the Gulf of Mexico. The top crude oil-producing states are Texas, Alaska, California, Louisiana and New Mexico (NRC, 2003).

The amount of crude oil produced in the United States has been getting smaller each year. On the other hand, the use of products made from crude oil has been growing, making it necessary to bring more oil from other petroleum producing countries. Thus, about 58% of the crude oil and petroleum products used in the United States come from other countries.

According to the OPEC (2011), the Organization of the Petroleum Exporting Countries (OPEC) was founded in Baghdad, Iraq, with the signing of an agreement in September 1960 by five countries, namely Islamic Republic of Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. They were to become the Founder Members of the Organization. Qatar (1961), Socialist People's Libyan Arab

Jamahiriya (1962), the United Arab Emirates (1967), Algeria (1969), Nigeria (1971), Ecuador (1973) and Angola (2007) later joined these countries.

The OPEC Statute distinguishes between the Founder Members and Full Members - those countries whose applications for membership have been accepted by the Conference. It stipulates that "any country with a substantial net export of crude petroleum which has fundamentally similar interests to those of Member Countries may become a full member of the Organization, if accepted by a majority of three-fourths of full members, including the concurring votes of all Founder Members." The Statute further provides for Associate Members who are those countries that do not qualify for full membership, but are nevertheless admitted under such special conditions as may be prescribed by the Conference.

Petroleum is used mostly, by volume, for producing fuel oil and gasoline, both important "primary energy" sources. 84 percent by volume of the hydrocarbons present in petroleum is converted into energy-rich fuels (petroleum-based fuels), including gasoline, diesel, jet, heating, and other fuel oils and liquefied petroleum gas. The lighter grades of crude oil produce the best yields of these products, but as the world's reserves of light and medium oil are depleted, oil refineries increasingly have to process heavy oil and bitumen, and use more complex and expensive methods to produce the products required. Because heavier crude oils have too much carbon and not enough hydrogen, these processes generally involve removing carbon from or adding hydrogen to the molecules, and using fluid catalytic cracking to convert the longer, more complex molecules in the oil to the shorter, simpler ones in the fuels.

#### 2.3. Empirical Review

The oil and gas industry's economic and fiscal impacts are occur at a time of economic volatile, notably, the recession of 2007–2009 and the subsequent recovery. While commodity volatility has been true over the past half-decade, analysts' expectations for natural gas are for comparatively lower volatility in both the short run and the long run due to reserve discoveries (e.g., shale gas), technological improvements in drilling and extraction, greenhouse gas (GHG) rules, and integrated national and continental pipelines. Compounding the impacts of price volatility on state and local revenues, the Office of Natural Resources Revenue cut federal mineral royalty disbursements to states due to federal sequestration.

The oil and gas industry is one of the largest and most complex industries in the world today that touches on peoples' everyday lives with services ranging from transportation, electricity, heating, lubricants and a host of chemical and petrochemical products. Globally, a whopping 30 billion barrels of oil is consumed per year. The United States Energy Information Administration (EIA) in its 2011 International Energy Outlook projects that the world's energy consumption will increases by 53% by the 2035 (Waddams, 1973). In Europe and Asia, oil accounts for 32% of energy consumption, whilst in the Middle East, 53%. For South and Central America the figure is 44% whereas in North America it is 40%. The total energy consumption in Africa is 41%.

The petroleum industry includes the global processes of exploration, extracting, refining, transporting and marketing petroleum products. The industry is usually divided into three major sectors: upstream, midstream and downstream. The upstream is concerned with exploration and production, the midstream deals with storage, marketing and transportation of commodities like crude oil, natural gas, natural gas liquids (NGLs, mainly ethane, propane and butane) and sulphur. The downstream sector involves oil refineries, petrochemical plants, petroleum products distributors, retail outlets and natural gas distribution companies. Midstream operations are considered a part of the downstream sector.

The goal of supply chain is to provide maximum customer service and satisfaction at the lowest cost possible. Currently, more opportunities exist for coordinating supply chain activities across oil and gas operations due to improved information and communication systems and technologies (Kimberlin, 1957).

According to Van der Linde, C., 2000, the downstream oil distribution is increasingly adopting a variety of supply chain solutions ranging from crude selection to product distribution at the retail outlet in the face of uncertainties relating such as oil prices, refining margins and long lead times associated with crude purchasing and product trading. The Oil and Gas industry is going through massive disruption and, as we continue to be extremely dependent of these organic sources of energy, we have to look at the emerging new macro and micro trends affecting this global industry.

The Oil and Gas industry investments in the energy renaissance will continue to shift. As a result, new innovative trends will flow from the upstream sector to midstream infrastructure,

refinery operations, and petrochemical facilities. The Upstream operators in the oil and gas industry will focus on harvesting value from recent discoveries and acquisitions through more efficient operations, looking at measuring the risks the industry is facing and the application of new technologies and innovations.

The challenges for this industry come at the same time with some fantastic opportunities emerging for the sector. In the issue of Petroleum Review, February 2012, the Energy Institute listed the top 10 opportunities for oil and gas industry in 2012. Following on this report as well as the study by Ernst & Young on the top 10 risks for oil and gas companies, we elaborated some thoughts on the subject and made a highlight on 'Challenges' rather than view current issues as 'Opportunities'. Below are the top 10 Challenges the Oil and Gas Industry:

#### 1. Frontier acreage and access to reserves.

'Frontier acreage' challenge represents exploration and development of new fields that previously regarded as too difficult, too expensive or too politically unstable to justify operations. I would add also the remote locations, with newly discovered reserves, like Arctic, far North Sea, pre-salt basins in deep water of Brazil etc. Access to reserves involves competition for access to proven reserves what became more difficult in comparison to decades ago due to expansion of government role.

#### 2. Unconventional resources.

These resources were not commercially viable until recently. Only due to technology advancement, 'unconventional' became so popular nowadays resolving partially the issue of global demand. The unconventional resources are shale gas, oil sands and coalbed methane (CBM). Although it is a convenient solution for our energy needs, the technology it involves, i.e. hydraulic fracturing, raises debates among communities and professionals about harm it makes to nature conservation and water resources. This in turn might impede its development through government unfavorable legislation.

#### 3. Conventional reserves in challenging areas.

This represents mostly unstable political regime, what in turn leads to lack of security for investments. There are countries with unstable political situation (Nigeria, Lybia, Iran) or areas with new discoveries in unfamiliar environments where environmental legislation is represented by soft law.

#### 4. Rising emerging market demand.

As per the Energy Institute, 51% of oil and gas respondents reported making significant investments to achieve growth in emerging markets, i.e. China and other Asian economies. Since performance in emerging markets mostly is dependent on government pricing policy, a significant risk is involved for any foreign direct investments and creates the issue of 'bargaining power' of the state.

#### 5. NOC-IOC partnership.

One of the main goals of this partnership from the IOC viewpoint is access to acreage, which is another big challenge. National Oil Companies (NOC) are the gatekeepers of their national reserves, while International Oil Companies (IOC) is the gatekeepers of their advanced technology. The growth of NOCs not only in their states but also outside their home markets, will lead to increase in power and possibility to acquire the necessary technological knowledge, what have to be very alarming for IOCs future concerns (Stevens, 2008).

#### 6. Investing in Innovation and R&D.

Every company understands nowadays, that R&D and Innovation is a key to growth and prosperity. This position creates severe competition between market-players with sufficient resources for R&D.

#### 7. Alternative fuels, including second generation biofuels.

The environmental pressure and market demand that oil companies experience today force them to explore new industries, i.e. renewable. According to Petroleum Review, 47% of respondents had already invested in 'cleantech'. This urge requires additional resources, company policy and revised strategy.

#### 8. Worsening Fiscal terms.

The fluctuation of fiscal regime in Host-Governments makes enormous pressure on oil companies, creates insecurity for the entire company financial strategy and investment policy. According to the first meeting of UK OII and Gas Fiscal Forum, (Oil and Gas UK), the industry needs secure and predictable fiscal regime as there is £2.3 billion drop in expected tax revenues due to dramatic fall in exploration drilling and production. Thus, measures to stimulate investment need to be introduced as a matter of urgency. Brazil might be another example of concerns with oil and gas industry fiscal regimes, (Deloitte, 2014), as current tax policy is extremely complex and impedes

the growth of the industry. Innovation in tax regimes is another 'headache' for operating companies. China recently introduced experimental resource tax on crude oil and natural gas products with 5%-10% on sales.

## 9. Price volatility and role of speculators.

The role of speculators involves huge debate between the leading energy agencies, as well as investment institutions and governments. However, this is only one of the influencing factors on oil and gas prices. The fundamental economy drivers play currently main role in reaching the equilibrium in natural gas prices. As we see, the abundance of supply today leads to lower prices. US is a perfect example.

#### 10. Corporate social responsibility.

This challenge includes relations with various stakeholder groups, health and safety concerns, i.e. human rights, employee rights, stakeholder rights, environmental protection, community relations, transparency and corruption issues. CSR requires oil companies to success in each criterion in order to build a reputation as a reliable potential partner for public-private strategic partnerships: cross-sector and government. The above challenges represent only tiny part of concerns of this extremely complex industry. However, it provides brief overview of trends the interested party, whether it is oil company or investment institution, needs to take into consideration while building its strategy.

# 2.4. Conceptual Framework

East Africa is fast becoming one of the world's most interesting oil and gas hotspots. For many years the area was neglected by the world's oil and gas industry, and even in Africa it was overshadowed by the rapid development in West Africa and the established markets in North Africa. However, with the discovery of both oil & gas reserves in the region over the past five years, opportunities are being created within a number of East African nations.

The reserve estimates in the region have increased rapidly over the past few years and yet only a small percentage of the region has been properly explored. The market has changed too, as major international companies are becoming involved alongside smaller companies, thus indicating the industry's confidence in East Africa's immense potential.

Ethiopia has been involved in oil exploration process through foreign companies those engaged in the business in recent years, however there is no successful operation could be happened yet. The country evolved in Oil retail market and the industry has been growing rapidly by attracting many multinational and local companies in the operation. Despite of their growth and formation, the industry cannot exploit fully as needed and no one can give enough attention so far. Accordingly, there is no enough studies have been done and the main purpose of this study also to be lead the way for the coming researchers and to assess the main challenges of local companies, those engaged in the business and give the necessary recommendation.

#### 2.5 Ethiopian Oil Industry Prospect

Ethiopia is endowed with energy resources such as biomass, Hydropower, solar energy, Coal and natural gas and is not a great consumer of petroleum fuels. However, more than 85% of the energy consumed in Ethiopia is still derived from traditional energy resources. The balance is made up of electricity and oil products. 6% of the population, however, is supplied with electricity. The sector is regulated by the Government. Price and margin for supply of fuels and lubricants are controlled by the Government. The biggest and unresolved challenge facing the industry at present is the declining company and dealers margins and the continuous rise of operating costs that affect the return on investment and working capital required to maintain the operation.

In addition the decline of oil price in the world market will also be another challenge for the industry. Global demand is low because of weak economic activity, increased efficiency, and a growing switch away from oil to other fuels. Second, turmoil in Iraq and Libya—two big oil producers with nearly 4m barrels a day combined—has not affected their output. The market is more sanguine about geopolitical risk. Thirdly, America has become the world's largest oil producer. Though it does not export crude oil, it now imports much less, creating a lot of spare supply. Finally, the Saudis and their Gulf allies have decided not to sacrifice their own market share to restore the price. They could curb production sharply, but the main benefits would go to countries they detest such as Iran and Russia. Saudi Arabia can tolerate lower oil prices quite easily. It has \$900 billion in reserves. Its own oil costs very little (around \$5-6 per barrel) to get out of the ground.

The main effect of this is on the riskiest and most vulnerable bits of the oil industry.

In Ethiopia's context, however there are developments from the government side to stimulate the Oil Industry by improving Company as well as Dealers' margin which may, to some extent, answer the queries being raised by Oil Companies for years which is expected to happen in the first quarter of the year 2015.

# **CHAPTER THREE**

## RESEARCH DESIGN AND METHODS

The process by which the researcher collected the information needed to answer the research problem. In collecting the data, the researcher must decide; which data to collect, how to collect the data, who will collect the data, when to collect the data and etc Methodology refers to rules and procedures that the researcher followed while conducting the research. This chapter presents the step by step procedure of the research. It outlined the population, sample selection, sampling techniques, data collection, data processing and analysis, interpretation and summarizing.

## 3.1. Research Design

This shows the master plan specifying the methods and procedures for collecting and analyzing the required data. This study is designed to assess the challenges of indigenous oil companies in Ethiopian Market with comparison to the international oil companies. To collect the required data, both primary and secondary data sources has been utilized. The researcher used both qualitative and quantitative research methods in order to collect the data from primary and secondary sources. To collect primary data both questionnaires and interview tools have been employed. Quantitative data is collected from employees of the study organizations, by using questionnaires and qualitative data also collected through interviewing the management staff members and their selected foremost customers. To collect secondary data, the researcher used the market share, their annual financial reports (mainly profit and loss statements) and other manuals of the study organization.

Descriptive research method has employed to describe the results and findings of the study. The researcher chose descriptive method because it is suitable to describe the gathered data both qualitatively and quantitatively, and help easily to interpret the results of the findings. The collected data are analyzed and processed by using quantitative analyzing tools like averages, percentages, and tables. The final findings of the research are described both qualitatively and quantitatively to give meaning out of it.

#### 3.2. Source of Data

The Sources of data is refers to gathering of various data required for research. Both primary and secondary data sources have been utilized. Primary data is obtained from employees and top level management through distributed of questionnaires, personal interview to the management staff members and foremost customers by choosing randomly.

Secondary data is obtained from the documents of the organization. The documents like; organizational structure, formation, annual financial reports and other documents of the organization.

# 3.3. Target Population

The researcher targeted the employee of local companies from selected three units, which are marketing, operation and supply and distribution departments. From the sampled four companies, 65 (sixty five) employees are selected and 4 (four) higher level managers are selected for interview. In order to test the customers perception, 50 (fifty) customers are addressed in the research.

# 3.4. Sample Size and Sampling Techniques

The research has been conducted by using different kinds of sampling techniques in order to effect the study and select a sample size from the stated population. Considering the main activities of the organizations and their formation, the researcher has selected three units of each organization, marketing (commercial & Retail), supply and distribution and operation departments, those which are involved in the core activities of the companies, of each organizations.

The researcher selected the employees who are working in the stated organizations from the top management to lower experts of local companies, by concentrating to the marketing, operation and supply and Logistics departments of the companies at their head offices by including all of the population from each department in Addis Ababa. Census techniques have been applied to conduct the study through distributing the questionnaires to the staff of local Oil Companies, because their number is below one hundred, in order to get the full picture the researcher believed to use this

technique over others. Hence, 65 (Sixty Five) questionnaires have been distributed to the employee of four local oil companies, and then the 7 (Seven) are not returned to the researcher and finally 58 (fifty Eight) questioners are collected and used for the research. Judgmental Sampling techniques have been applied in order to select individuals/top level managers for interview, up on their deep rooted knowledge and experience of the business. Hence, 4 (four) top level managers are selected randomly from the local companies for interview and conducted accordingly.

In addition, in order to address the preference of the customers; the researcher selected five stations which are convenient from both local and internationals Oil companies by choosing two high ways, from Bole Airport to Meskel square, from Meskel square to Urael church and Kasanchis, which are Bole NOC, Total and Oilibya around Bole printing, Bambis NOC and Kasanchis Total, 50 (Fifty) questionnaires have been distributed to randomly selected customers critically in convenient time, then 46 (Forty Six) of them are returned to the researcher and unfortunately 4 (four) questionnaires among the distributed are not returned to the researcher. To get relevant information for the study, this technique is very suitable.

To collect the required data, the researcher applied stratified sampling technique by grouping the population based on their department rather than collecting data from all workers of the organization, because to collect the relevant data, stratified sample selection technique from each department is the best option rather than using other techniques.

The population is stratified by departments; marketing, operation, and supply and Logistics units from Local companies: National Oil Ethiopia (NOC), Yetebaberut Beherawi Petroleum (YBP), TAFOIL Ethiopia and Dalol Ethiopia. Ethiopian petroleum Supply Enterprise (EPSE) is the governing body for fuel products established by the Ministry of Energy and Mining also contacted for any information needed for the subject study, secondary data about their stand in the market in terms of market share in fuel, lubricant and the like. International Companies have also contacted in order to assess their main core competencies in the market through concentrate on their secondary data. Ministry of Trade (MoT) also regulates the market by setting a ceiling price for lubricants and other industrial products to the retail market.

#### 3.5. Methods of Data Collection

In order to collect the required data, the researcher used both primary and secondary source of data by distributing questionnaires and interviewing employees of the local companies and top level managements respectively, referring to their basic written materials and annual financial reports by analyzing its trend.

The interview question designed to the top level managers of all companies and addressed to them by selecting randomly from their basic units. The questionnaires have been designed in two ways: in order to address the company employees and to address their foremost customers.

#### 3.6. Procedures of Data Collection

The researcher used both primary and secondary data sources to conduct the study. Questionnaire, interview and observations have been applied to collect primary data. To get secondary data, the researcher used the documents available in the organization.

The researcher is delivered the questionnaire to the organizations human resource manager to distribute the questionnaires as per their stratified group. The human resource manager distributed the questionnaires to each department in the organization. The heads of each department randomly distributed the questionnaires to individual respondents as per their stratified groups to minimize biasness. The heads of each department has collected the complete questionnaire and submitted to human resource manager.

The researcher has been collected the questionnaire back from human resource manager. The human resource manager helped the researcher to get the required secondary data and to conduct the interview and physical observation. To conduct the interview with the management staff members, the researcher prepare interview questions and communicate with the human resource manager for interviewing schedule arrangement and the interview had conducted accordingly.

# 3.7. Methods of Data Analysis

Descriptive data analysis method is used to analyze the gathered primary and secondary data. By using descriptive method, the collected quantitative and qualitative data are described and analyzed both quantitatively and quantitatively to interpret the results of the findings. Editing, Categorizing, tabulating, measuring and interpreting activities are conducted during data analysis. The descriptive data analysis method helps the researcher to describe the figures easily and to interpret the findings of the study. Tools like average, percentage and table is used to analyze the collected data.

## 3.8. Ethical Considerations

The researcher sought the necessary permission from the organization for this study and for the questionnaires distributed to the respondents. Participants were also made aware that no information would be made public and that the study was for academic purpose only. The final research report made available to any of the organization which expresses an interest in using it.

## **CHAPTER FOUR**

#### RESULTS AND DISCUSSION

#### 4.1. Introduction

This chapter includes presentation of results and analysis of data which are collected through questionnaires and interview from local oil company employees. In order to assess the challenges of indigenous oil companies, the Researcher used questionnaire, interview from local companies and customers and secondary data from both local companies and foreign companies, which are engaged in retail oil industry in Ethiopian market.

The questionnaire was distributed to 65 (sixty five) employees of the companies but unfortunately 7 (seven) employees are not willing to give response, and the summarized responses of the respondents are given in the next section. The questionnaires were distributed to all employee of the company's main department, which is marketing (Commercial and Retail), supply and logistics and operation departments. Furthermore, in order to address the preference of the customers, 50 (fifty) questionnaires are distributed through five service stations which contains both local and foreign companies, 46 questionnaires are collected and the rest are not returned to the researcher.

The Researcher prepares 5 (five) open ended interview questions, which are conducted to 4 (four) top level managers of the local companies. It was designed to get information about the company's financial capability, expertise and their products brand ability, which are the main source of challenges to the local companies and the industry as well. For suitableness with presentation, the 5 main questions were grouped in to three major parts, which are directly related to the statement of the problem.

It is important to note here that the respondents do not necessarily give response to all questionnaires and some companies are also not willing to give data to the researcher.

#### 4.2. Respondents characteristics

As it's shown from the below table 1, out of the total 58 respondents, 69% of the respondents are male and the rest 31% are females. The companies are mainly well thought-out with male employees. The numbers of female employees are very low when we compare to the male company employees. The age composition of respondents indicates that 65% of the respondents are from age 25-39, another 14% consist of ages from 40-49, 14% consist of ages from 18-24 and the rest 7% of are above 50 years. This implies that most of the employees are above the 25 year, means the organizations are structured by a very young people.

The majority of the employees have served the organization for 3 to 5 years. Accordingly, 47% of the respondents worked in the organization 3 to 5 years. 38% respondents have worked more than 6 years and 16% of the respondents worked less than two years. Concerning the educational background of the respondents as shown from the below table 1, 88 % have first degree holders, 7% have diploma and the rest 5% of them have masters.

Table 1: Respondents' demographical composition

Description	Category	Frequency	Valid Percent	Cumulative Percent
	Male	40	69	69
Gender	Female	18	31	100
	Total	58	100	
	18-24	8	14	14
	25-39	38	65	79
Age	40-49	8	14	93
	>50	4	7	100
	Total	58	100	
	Diploma	4	7	7
Educational	BA/BSC	51	88	95
Background	Master's	3	5	100
	Total	58	100	
	<2 Year	9	9	9
Work	3-5 Year	27	47	62
Experience	>6 Year	22	38	100
	Total	58	100	

#### **Departmental composition of respondents:**

The respondents are from three main department of the organizations, which is marketing, supply and logistics and operations department. Then, 55% of the respondents are from marketing department and 21% and 24% are from logistics and operation department respectively.

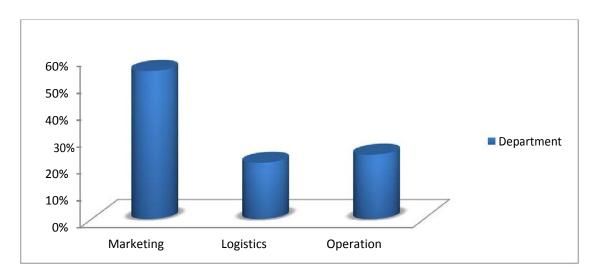


Figure 1: departmental composition of the respondents

#### 4.3. Companies financial capability

The Oil industry is capital intensive, in order to operate, retain and spread the business the companies need huge amount of working capital. In this part the researcher tries to assess the capacity and ability of the local companies in terms of their financial capacity and their main challenges on the subject matter.

Concerning the financial ability of local companies in reaching their customers, As shown from the below Table 2, 14% and 24% of the respondents are strongly agreed and agreed respectively and 24% are disagreed and 7% of the respondents are strongly disagreed. Whereas, the rest 31% of the respondents are neutral, neither agreed nor disagreed. Hence, 38% of the respondents are believed that the local companies are capable enough in their financial aspect and the rest 31% are doubt their financial abilities.

**Table 2: Financial capability of local companies** 

The comp	any has capable enough	Frequen	Valid	Cumulative
financially	y	cy	Percent	Percent
Valid	Strongly agree	8	14	14
	Agree	14	24	38
	Neutral	18	31	69
	Disagree	14	24	93
	Strongly Disagree	4	7	100.0
	Total	58	100	

Expansion of service station is one way of addressing their customers, the local company's ability to increase their service station, as shown in the below table 3, 14% and 17% of them are strongly agreed and agreed respectively and 34% are disagreed and 10% of them are strongly disagreed. The rest 24% of the respondents are decide to be neutral. So, only 31% of the respondents are believed that the local companies are capable of expanding their service stations and the rest 44% and 24% are not agreed and neutral respectively.

**Table 3: Companies capability in expanding service stations** 

companie	s are equally competent in		Valid	Cumulativ
expanding	g service stations	Frequency	Percent	e Percent
Val	Strongly agree	8	14	14
id	Agree	10	17	31
	Neutral	14	24	55
	Disagree	20	34	89
	Strongly Disagree	6	11	100.0
	Total	58	100	

The local companies ability to supply all types of products especially those which needs high investment, as shown in the below table 4, among the respondents 11% are strongly agreed, 17% are agreed, 31% are disagreed and 17% of the respondents are strongly disagreed, while the rest 24% are neutral. Hence, 28% of the respondents are thought that local companies are adequate or competent in supplying all type of products, while the rest 48% and 24% are unconvinced and neutral respectively.

Table 4: Local companies' ability to supply all type of products

Local Comp	anies ability in supplying		Valid	Cumulative
all type of p	roducts	Frequency	Percent	Percent
Valid	Strongly agree	6	11	11
	Agree	10	17	28
	Neutral	14	24	52
	Disagree	18	31	83
	Strongly Disagree	31	17	100.0
	Total	58	100	

The industry involves many stakeholders which they have to maintain a good relation and sometimes get power to manage them for the benefit of the customers, as shown in below table 5, 17% of the respondents are strongly agreed and 31% are agreed, whereas the rest 10% are disagreed, 17% of them are strongly disagreed and 25% of the respondents are neutral. Therefore, 48% of the respondents are trust that the local companies are capable enough in working with their stakeholders, while the rest 27% and 25% are doubter and uncertain respectively.

Table 5: Company's ability to work with stakeholders

Local Companies ability to work with			Valid	Cumulativ
their stakeho	olders	Frequency	Percent	e Percent
Valid	Strongly agree	10	17	17
	Agree	18	31	48
	Neutral	14	25	73
	Disagree	6	10	83
	Strongly Disagree	10	17	100.0
	Total	58	100	

The companies have a huge amount of payables every month for the purchase of fuel from Ethiopian Petroleum Enterprise (EPSE) which needs liquidity in order to settle it on time, as shown from below table 6, only 24% of the respondents are agreed and the rest 48% and 28% are disagreed and neutral respectively. So, the result depicted the inefficiency of local companies in settling their

overdue that, only 14% are agreed and the rest 48% and 28% are not believed and uncertain respectively.

**Table 6: Liquidity of local companies** 

Companies	liquidity in timely settling		Valid	Cumulative
EPSEs over	due	Frequency	Percent	Percent
Valid	Strongly agree	0	0	0
	Agree	14	24	24
	Neutral	16	28	52
	Disagree	20	34	86
	Strongly Disagree	8	14	100.0
	Total	58	100.0	

## Discussion on Companies financial capability

The above table 2 data depicted that, 38% of the respondents believed the local companies have adequate and capable enough financially to reach their customers, while 31% of the respondents are disagreeing. The rest 31% are neutral. Accordingly the respondents are not aware of their company's competence in this aspect or they are not willing to portray the truth. The percentage is very close because some local companies are very competent in the market the like of National Oil Ethiopia (NOC) and rest are on the other extreme. The 31% of the respondents which not agreed on their company's financial ability shows that still there is a unenthusiastic gap between the local and foreign companies in financial capability, which is the main factor. The companies source of finance are also matters, as the foreign companies are able to get financial aid from their parent companies (abroad) and the local are only limited to the locally.

The companies which are engaged in retail market are highly in need of expanding their service station throughout the country. The above table 3 shows that, 31% of the respondents are sure about their companies' competence to expand service stations as equal to the foreign companies, whereas 44% and 34% are disagreed and neutral respectively, hence this is a huge gap to the local companies. Like any other business, the oil industry has its own chain starting from the supply Point to reach to final user or customers, service stations are the backbone of the companies in terms of reaching and providing the company's products and services to the final user. As shown in the table

3 the local companies have not competent enough in expanding service stations which means, reaching to the customers when they are compared to the foreign companies, the gap rigorously show that, local companies are not competitive enough in this aspect.

The above table 4 data obviously shows that, only 27% of the respondents are believed that the local companies ability of supplying all types of products. Whereas, the rest 24% are indifferent and 48% of the respondents are disagreed which means, the local company are not capable enough to supply all types of products as equal as foreign companies which are engaged in the market. This is the real implication of their financial incapability and other health and safety related factors. The industry is highly capital intensive, in order to plant a depot and other fire fighting and safety equipments it requires investing a huge amount of money. The local companies source of finance are only limited to the national level are also play its own role for their financial weakness. The safety of the human environment as well as health protection should be the number one priority or concerns in the oil and gas industry. Legislation like implementation of ISO15926 has forced oil and gas companies to comply it. Hydraulic fracturing, a common technique in extracting gas from unconventional reservoirs have resulted to lots of environmental concerns and issues with the water table. Therefore, oil firms should pay greater attentions to health and safety issues with broader operation concerns through the various stages of the value chains.

Managing external stakeholders is very important role for the companies, because in terms of transports they can play a very significant part in the industry. The timely deliveries of products are one of the necessary things for both the companies and the customers as well. In the above table 5, 48% of the respondents are agreed that the local oil companies are competent in working with transporters. The rest 27% and 24% are disagreed and neutral respectively. This is a real treat and breach for the local companies, because the gap is very huge, losing their power over the transporters and other stakeholders lead them to misplace their main activity and trust from the customers and deals as well. In order to distribute all fuel products, currently all companies are using trucks for the transportation of fuel products. The ability and loading capacity of these obsolete trucks brought an enormous problem to the local companies and the industry as well. The local companies' ability to manage the above mentioned and other stakeholders play a great role for their growth.

All oil Companies are working intimately with the Ethiopian Petroleum supply Enterprise (EPSE), as it's the governing body of the industry and their main and only supply of fuel products. Companies are expected to settle their overdue on time as per the agreement they entered with the enterprise, as per the above table 6, analysis many respondents are not believed their company can able to settle its outstanding on time, which lead the company to pay unnecessary interest. These depicted that, the local oil companies are struggling to liquidity problem, that's caused mainly by weakness in their ability and capacity of handling their customers those which bought their product and expected to settle on time. When the collection process is not clear and time taking the company pays unnecessary interest for not paying on time.

## 4.4. Expertise and formation of local companies

Expertises are very important resource for any companies, in this contemporary business environment having adequate and knowledgeable expertise are used as competitive advantage in the industry. The lack of skilled personnel and manpower or main operations requiring high tech processes in the oil and gas industry is a challenge in most parts of the world especially in the upstream sector of the industry. Processes in the upstream sector such as exploration and production requires high technicality and therefore there is need for skilled manpower. This problem can however be solved by attracting and encouraging more talented young men and women into the science and engineering discipline and hence into the oil and gas industry.

In terms of having adequate and knowledgeable expertise with deep rooted products and industry knowledge, as shown from the below table 7, 24% are agreed, 34% are disagreed, 14% are strongly disagreed and the rest 28% are neutral. Hence, only 24% of the respondents are believed their companies have adequate knowledgeable expertise and 48% and 28% are doubtful and uncertain respectively. The companies are significantly affected in the commercial market, those who need the assistance of expertise. Among the respondents disagreed in table 7, 27% and 37% are strongly agreed and agreed respectively. While the rest 36% of the respondents are neutral and disagreed similarly.

Table 7: local Company's expertise power

Company ha	as adequate &		Valid	Cumulative
knowledgea	ble expertise	Frequency	Percent	Percent
Valid	Strongly agree	0	0	0
	Agree	14	24	24
	Neutral	16	28	52
	Disagree	20	34	86
	Strongly Disagree	8	14	100.0
	Total	58	100.0	

The challenge of long time existence of foreign companies in the local market, as shown in the below table 8, 21% of the respondents are strongly agreed, 52% are agreed, 17% are disagree, 3% are strongly disagreed and the rest 7% of the respondents are neutral. Thus, 73% of the respondents believed that the foreign companies' long time existence to the local market has brought a huge challenge to the local companies. While the rest 20% and 7% are not agreed and uncertain respectively.

**Table 8: The effect of long time existence of foreign companies** 

Effects of lo	ong time existence of		Valid	Cumulative
foreign com	panies in the market	Frequency	Percent	Percent
Valid	Strongly agree	12	21	21
	Agree	30	52	73
	Neutral	4	7	80
	Disagree	10	17	97
	Strongly Disagree	2	3	100.0
	Total	58	100.0	

As shown in the below table 9, among the respondents 7% and 21% are strongly agreed and agreed respectively and 30% and 14% are disagreed and strongly disagreed respectively and the rest 28% are neutral.

**Table 9: Companies structure and formation** 

Structure &	formation of local companies		Valid	Cumulative
compare to	foreign companies	Frequency	Percent	Percent
Valid	Strongly agree	4	7	7
	Agree	12	21	28
	Neutral	16	28	56
	Disagree	18	30	86
	Strongly Disagree	8	14	100.0
	Total	58	100.0	

As shown in the below table 10, 17% of the respondents are strongly agreed and 31% are agreed that the local companies are able to attract expertise, which have adequate knowledge. But the rest 42% and 10% are disagreed and neutral respectively.

Table 10: Company's ability to attract knowledgeable expertise

Local comp	anies ability to		Valid	Cumulative
attract expe	rtise	Frequency	Percent	Percent
Valid	Strongly agree	10	17	17
	Agree	18	31	48
	Neutral	6	10	58
	Disagree	14	24	82
	Strongly	10	18	100.0
	Disagree			
	Total	58	100.0	

#### Discussion on Expertise and formation of companies

The large numbers of respondents are not agreed that, the local companies have adequate expertise with deep rooted product and industry knowledge, hence the company significantly affected in spreading its sales to commercial market. As can depict from table 7, in this aspect, 64% of the respondents are agreed and 18% are not agreed and the rest 18% of the respondents are neutral. The industry supplies different kind of lubricants and fuel products for the local market, the different

kind of lubricants need to have an expert who have technical knowledge of the product. Especially the commercial market used different kind of lubricants for their factories with maximum care by the support of the oil company's expertise. The local companies still encounter this problem, which cause them to lose a maximum amount of market share of the lubricant market.

The long time existence of foreign companies in Ethiopian market brought a strong challenge to the local companies. As per the above table 8 data, 73% of the respondents are believed that the local companies are highly challenged by this problem and the rest 7% and 20% of the respondents are neutral and disagreed. A strong attachment of the product with the mind of the customers are not came overnight, rather it takes time and built over years, so that as per the above data the foreign companies the like of Total Ethiopia are stayed in the country for many decades, hence it brought a real challenge to the local companies. Growth is also often related to the age of the firm, with newer firms showing the highest growth rates. Large firms have much higher survival rates and exhibit greater stability than small firms, typically pay higher wages and non-wage income and offer greater job satisfaction and job security, but demand more hours of work per week.

In order to depict the full picture of an organization, having a clear structure and organizational formation with clear procedure, working manuals, etc is fundamental for any business companies. As per the above table 9, 28% of the respondents are believed their company is competent in this aspect. Despite of that, 28% and 44% of the respondents are neutral and disagreed. So that, the local companies are not sufficiently compete with foreign companies in terms of organizational structure and formation. The company's organizational structure and formation are used to maintain a consistent and enclosed working procedure, which helps to have a clear and hierarchical organizational formation.

The industry needs a highly qualified expertise, because most of their customers need the assistance of the experts to use the products in particular commercial customers the like of factors are very curious of the product they are using for their machineries. The above table 10 analysis depict that, only 48% of the respondents are believed that the local companies are capable of attracting experts from the foreign companies and the rest 42% are doesn't believe that and out of the respondent only 10% are neutral.

#### 4.5. Brand awareness of local company products

Branding is the ongoing process of creating and enhancing the brand. The brand is the emotional connection that encourages the clients to cling to the organization, product or person. It is important to understand that branding is an emotional connection. And emotion is devoid of logic. Brand is a name, term, sign, symbol, or design, or a combination of them, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors.

As can be depicted from the below table 11, in terms of addressing their products, the local oil companies have able to create strong brand awareness, 7% and 14% of the respondents are strongly agreed and agreed respectively, whereas 44% and 14% are disagreed and strongly disagreed, the rest 21% are neutral.

Table 11: Company has created strong brand awareness

Local companies are created strong			Valid	Cumulativ
broadbai	nd awareness of their products	Frequency	Percent	e Percent
Valid	Strongly agree	4	7	7
	Agree	8	14	21
	Neutral	12	21	42
	Disagree	26	44	86
	Strongly Disagree	8	14	100.0
	Total	58	100.0	

The local oil companies exertion to create a strong awareness towards their products, As shown from the below table 12, 7% and 24% are strongly agreed and agreed, 38% and 7% are disagreed and strongly disagreed, while the rest 24% of the respondents are neutral.

Table 12: Company's effort to create product awareness

Companies	effort and mechanism to	Frequen	Valid	Cumulative
create stron	g product awareness	cy	Percent	Percent
Valid	Strongly agree	4	7	7
	Agree	14	24	31
	Neutral	14	24	55
	Disagree	22	38	93
	Strongly Disagree	4	7	100.0
	Total	58	100.0	

As shown from the below table 13, among the respondents 10% and 21% are strongly agreed and agreed respectively, 25% and 10% of the are disagreed and strongly disagreed, though the rest 34% are neutral.

Table 13: product loyalty created by local companies

The brand regarded and respected in		Freque	Valid	Cumulativ
customers	perception towards quality	ncy	Percent	e Percent
Vali	Strongly agree	6	10	10
d	Agree	12	21	31
	Neutral	20	34	65
	Disagree	14	25	90
	Strongly Disagree	6	10	100.0
	Total	58	100.0	

As depicted in below table 14, 7% and 10% of the respondents are strongly agreed and agreed and in another hand 38% and 17% are disagreed and strongly disagreed, whereas the rest 28% are neutral.

Table 14: The benefit of brand created in securing price premium

Brand benefited the company in securing			Valid	Cumulative
price premit	ım	Frequency	Percent	Percent
Valid	Strongly agree	4	7	7
	Agree	6	10	17
	Neutral	16	28	45
	Disagree	22	38	83
	Strongly Disagree	10	17	100.0
	Total	58	100.0	

As can depicted in below table 15, the brand of local companies has been able to compete and win in the market, 10% and 7% are strongly agreed and agreed respectively, and 41% and 21% are disagreed and strongly disagreed, while the rest 21% are neutral.

Table 15: The brand able to compete and win in the market

Brand able to compete and win in the market			Valid	Cumulative
without a	big challenge	Frequency	Percent	Percent
Valid	Strongly agree	6	10	10
	Agree	4	7	17
	Neutral	12	21	38
	Disagree	24	41	79
	Strongly Disagree	12	21	100.0
	Total	58	100.0	

#### Discussion on Brand awareness of local company products

In Ethiopian current situation, all companies are engaged in retail market, which is only limited to supplying of all Fuel and lubricants by importing from abroad in hard currency. The countries retail market is regulated with ceiling price of all products. While, the commercial market is open for negotiation between the two parties, which makes the difference in their margin. As we can see from the above table 11 analyses, 58% of the respondents are disagreed that the local companies are not able to create a strong branding of their products.

Branding makes a big difference to customer perception of the product. A famous example is the Pepsi vs. Coca-Cola tests. If people taste the products without knowing which is which, they mainly prefer Pepsi: if they can see the brand name on each, they prefer the Coke. The contemporary business situation is highly linked to creating a strong brand in order to compete and win in the market. Products with the same quality and standards which are accredited by the industry standard control authority make a difference by their acceptability to the market, because of the brand awareness of the customers. The above table 12 data shows, 45% and 24% of the respondents are disagreed and neutral respectively, means the employee of the companies are not agreed about their products are known by the customers and the companies are not move enough to create strong branding to make their products differentiate in the market.

Branding makes customers to discriminate Products among marketers' offers in a way it creates value. The perception and attitude of the customers are not built overnight; it needs time and great effort from the local companies to fix it, from the above table 13 data 34% and 35% of the respondents are neutral and disagreed. The gap is very huge and more effort is expected from the local companies in order to exterminate or obliterate the gap, by using various mechanisms creating a strong brand will benefit the companies in the long run. A brand is the perception customers have as a result of marketer's positioning effort about a distinguishable offer.

The added value endowed on products and services, which may be reflected in the way consumers, think, feel, and act with respect to the brand. From the above table 14 data, 55% of the respondents are disagreed that the companies are not getting any loyalty from the customers over their products to secure enormous edge. Among the benefit of strong brand of a product or company, whenever there is price fluctuation the customers are stick to their products instead of shifting to other company products. The above gap is also huge challenge to the local oil companies.

From the customer's point of view, brand equity is part of the attraction to – or repulsion from – a particular product from a particular company generated by the "non-objective" part of the product offering, i.e., not by the product attributes per se. While initially a brand may be synonymous with the product it makes, over time, through advertising, usage experience, and other activities and influences, it can develop a series of attachments and associations that exist over and beyond the objective product. Importantly, brand equity can be built on attributes that have no inherent value

(Broniarczyk and Gershoff 2003; Brown and Carpenter 2000; and Carpenter et al. 1994), although Meyvis and Janiszewski 2002, show irrelevant information can be counterproductive in consumer decision-making.

There are different types of branding strategy using different perspective again that manufacturers or retailers are using to market their products in such a way that customers can easily related, associate and differentiate their product, in line with; their strategy, from competitors by the respective brand of the product. The above table 15 data shows that, 62% and 25% of the respondents are disagreed and neutral; means the brand of local companies' products are not able to compete and win in the market smoothly. The competition of the market is only depend on sales of their product as they are not the manufacturer, hence the marketing strategy implemented and other mechanisms might help to spread the sales without creating a strong brand awareness which is remedial in the short run but not exist and used consistently in the long run.

#### 4.6. Customers perception to local company products

The below data and discussion only focused on the customers awareness of the local companies and their products. The study addressed customers through service stations to test their awareness of branding knowhow of the industry and their preference with reasonable justification.

As shown from below table 16, among the respondents 35% and 16% are good and satisfactory knowhow of the companies engaged in oil industry, whereas the rest 39% are not aware enough.

Table 16: customer's level of awareness

Customers level of awareness towards			Valid	Cumulative
oil companies		Frequency	Percent	Percent
Valid	Good	16	35	35
	satisfactory	12	16	51
	Not Sure	18	39	100.0
	Total	46	100.0	

In terms of preferring products for their cars, the below table 17 shows, 26% of the respondents are use foreign companies products. Whilst the rest 20% of the sampled customers are loyal to local company products, while the remaining 54%, which is the largest percentage are not bother about either the product nor the company they use, rather they can use simply from both of them.

**Table 17: Customers product preference** 

Customers product preference on		Valid	Cumulative
local and foreign companies	Frequency	Percent	Percent
Valid Foreign	12	26	26
Local	9	20	46
Both	25	54	100.0
Total	46	100.0	

While thinking about the products and companies engaged in Ethiopian oil industry, as shown from the below table 18, 46% of the respondents are belongs to the current lubricant market share leader, Total Ethiopia and 26% of the respondents are fit to NOC. The rest 15% and 13% of the respondents are Oilibya and YBP & other company products are coming to their mind, while thinking about the industry.

Table 18: Company coming to mind first, while thinking the industry

Company coming first to	customers		Valid	Cumulative
while thinking the industry		Frequency	Percent	Percent
Valid Total		21	46	46
NOC		12	26	72
Oilibya		7	15	87
YBP and o	other	6	13	100.0
Total		46	100.0	

As shown in below table 19, 22% of the respondents are convinced by the company's strong advertizing and promotional work and 48% are persuaded by always hearing positive things from the people about the companies. The rest 20% and 10% of the respondents are influenced by the proximity and nearness of the companies and other reasons.

Table 19: Ability and way of Companies to keep in mind

The way of	customers think and		Valid	Cumulative
know about the company		Frequency	Percent	Percent
Valid	Advertising	10	22	22
	Good Will	22	48	70
	Proximity	9	20	90
	Other reason	5	10	100.0
	Total	46	100.0	

From the below table 20, 11% and 28% of the respondents are convinced by the company products fair/low price of their product and good will of the companies. Proper customer handling and quality service given to their customers win the loyalty of 13% of the respondents. The remaining 41% and 7% are choosing due to consultancy of technicians to use the products and other reasons respectively.

Table 20: The preferred company's differentiation

Customers preferred company differentiate			Valid	Cumulative
from others		Frequency	Percent	Percent
Valid	Fair/low price	5	11	11
	Good will	13	28	39
	Quality Service	6	13	52
	Consultant	19	41	93
	Other reason	3	7	100.0
	Total	46	100.0	

As shown in below table 21, defect encountered/experienced which results from the usage of other company's products; 41% of the respondents have encountered a problem but they are not willing to state the defects encountered by using other company products. Though, the rest 59% are not come across any difficulty.

Table 21: Defect encountered using others products

Objective defect result from using		Valid	Cumulative
other company products	Frequency	Percent	Percent
Valid Yes	19	41	41
No	27	59	100
Other reason	0	0	100.0
Total	46	100.0	

The respondents involved in the study as shown from the below table 22, 57% of the customers believed that the local companies are not competent enough in the market, while 43% of the respondents think that they are competent in all aspects as equally to the international companies.

Table 22: The competency of local companies

Company's	competency in		Valid	Cumulative
Ethiopian oi	l industry	Frequency	Percent	Percent
Valid	Competitor	20	43	43
	Not Competitor	26	57	100.0
	Total	46	100.0	

#### Discussion on Customers perception to local company products

In order to know the preference of the customers, the researcher raised 10 questions and addressed. The customers are not willing to fill the open ended questions as all, that's because of their urgency and negligence, it might affect the research result a little bit. As cab depicted from the above table 16, among the respondents, 35% and 26% have sufficient and little knowhow of the local and foreign companies those engaged in Ethiopian oil industry. Whereas, 39% of the respondents are not aware of that, means it's a clear and huge gap for both local and foreign companies.

The customers' preference in using fuel and lubricants, as can show from the above table 17, 26% and 20% of the respondents use in foreign and local company product and services. While the rest

54% are not loyal to neither to the local and nor to foreign companies. This clearly shows that, the local companies are unable to advertise their products as needed and expected. Obviously it's known that, the customers are very stick to foreign company products, the local companies should have to work to convince the customers.

The preference of a product or a company first conceive in the mind of the customers, as tried to know that; the above table 18 depicted that, 61% and 39% of the respondents are first remember foreign and local companies respectively. This is mainly because of the long time existence of foreign companies in the market; give them an advantage of making strong attachment with customers. Brand positioning involves establishing key brand associations in the minds of customers and other important constituents to differentiate the brand and establish (to the extent possible) competitive superiority (Keller et al. 2002). Besides the obvious issue of selecting tangible product attribute levels (e.g., horsepower in a car), two particularly relevant areas to positioning are the role of brand intangibles and the role of corporate images and reputation.

The garage technicians are also advice the product of foreign companies over the local one without any technical justification. The wrong perception of garage and other technicians towards the products of local companies cost them in convincing those biased customers. This lack of awareness doesn't bound to those customers, even the local company employees especially the marketing department employees are not loyal to the product of their company. A variety of branding and marketing activities can be conducted to help achieve the desired brand positioning and build brand equity. Their ultimate success depends to a significant extent not only on how well they work singularly, but also on how they work in combination, such that synergistic results occur. In other words, marketing activities have interaction effects among themselves as well as main effects and interaction effects with brand equity.

The contemporary business brought a great challenge for organizations, particularly those engaged in similar business sectors. In order to get the loyalty of the customers they have to use many mechanisms, among that advertising, offering low price, adding a new features to their products and the like. Hence, after overcoming those problems encountered through doing their business they can able to build a loyalty and good will. As shown from the above table 19, 22% and 48% of the respondents are remembering the companies through their advertising and good will. The rest 20% and 10% are because of the proximity and other unstated reason they can able to remember the

companies engaged in Ethiopian oil business while thinking about the industry. The consultant's effects in choosing lubricants are the main challenge to the local companies. As shown from the above table 20, 41% of the respondents are convinced by their consultants/technicians to use lubricant oil for their car. The good will built over so many years is the main element to win the customers preference, seconded by quality service offered by the companies and their low/fair price respectively. The consultants/technicians are convinced by the long time familiarity of the products, without a real experimental result they can advice their customers to use the products of foreign companies over the local companies. Because of the above mentioned and other reasons, the customers are not convinced by competency of local companies, as shown from the above table 22, 57% of the respondents are not persuaded. This is the real challenge brought to the local oil companies, in order to compete and win in the market, lack of adequate advertising and promotional work made these kinds of unacquainted customers.

The value of a brand – and thus its equity – is ultimately derived from the words and actions of consumers. Consumers decide with their purchases, based on whatever factors they deem important, which brands have more equity than others (Villas-Boas 2004). Although the details of different approaches to measuring brand equity differ, they tend to share a common core: All typically either implicitly or explicitly focus on brand knowledge structures in the minds of consumers – individuals or organizations – as the source or foundation of brand equity.

To capture differences in brand knowledge structures, a number of hierarchy of effects models have been put forth by consumer researchers through the years (AIDA, for Awareness-Interest-Desire-Action). Customer-level brand equity can largely be captured by five aspects that form a hierarchy or chain, which are bottom (lowest level) to top (highest level) as follows:

- ✓ Awareness (ranging from recognition to recall)
- ✓ Associations (encompassing tangible and intangible product or service considerations)
- ✓ Attitude (ranging from acceptability to attraction)
- ✓ Attachment (ranging from loyalty to addiction)
- ✓ Activity (including purchase and consumption frequency and involvement with the marketing program, other customers through word-of-mouth etc., or the company)

The awareness of the customers must be enhanced through different advertizing and promotional mechanisms in order to boost their awareness and develop knowhow about the products and the industry in general.

#### 4.7. Interview Results

The researcher conducted interview with four to managements from the sampled local companies, the commercial managers of NOC, Retail manager of YBP, supply and distribution manager of TAF oil and Operation manager of DALOL.

The decisive challenges of local companies in terms of financial capability over the international companies; for foreign companies there is always financial fellow from both countries hence they support each other during financial shortage. Not paying EPSEs loan on time entails interest, in hundred millions per annual for the case of local companies which could have been avoided if financially capable. Liquidity is the company's ability to pay the bills as they come due.

An international company has access to international media for advertizing their products and services. Promotion made on international channels and preferred like DSTV (super sport) reaches more people and people with high probability to use the product.

The long time existence of foreign companies in Ethiopian market the like of Total Ethiopia has created a strong image and branding of its products and services. Someplace in some local towns are called by the oil companies. There are places called AGYP, Total and Shell in some local towns in Ethiopia which has a great impact on product selection. Brand equity has a direct effect on sales volume because consumers gravitate toward products with great reputations. For example, when Apple releases a new product, customers line up around the block to buy it even though it is usually priced higher than similar products from competitors. One of the primary reasons why Apple's products sell in such large numbers is that the company has amassed a staggering amount of positive brand equity. Because a certain percentage of a company's costs to sell products are fixed, higher sales volumes translate to greater profit margins.

In today's dynamic business environment having adequate and knowledgeable expertise are very crucial. Experience (corporate) level is being copied from international companies while the local companies strive to copy, international ones to improve.

In this contemporary world, Organizations have a clear structure, system and procedure and working manuals which help them to create competitive advantage over others. The fore mentioned things are developed over time and international companies being older and experienced have a well structured set. While local companies standard are very poor and the focus is more on the business that the structure of the company. An organization structure is the manner in which subunits in organizations are inter-related and grouped. An organizational structure specifies how subordinates report to their superiors. This enhances coordination in the activities of the members of the group. There are various organization structures which include line, functional, product and matrix organizational structures. A major advantage of an effective organizational structure is that it reduces conflict between employees regarding who is to carry out certain jobs in the organization.

#### 4.8. Secondary data presentation and analysis:

As shown from the below market share trend by companies over the past 10 years, only one local company has dominate the market for the past three years. The other indigenous companies are not competent in the market when we compare them in terms of their market share, for instance Yetebaberute Beherawi Petroleum (YBP) is not competent enough in the market, it has established the same as National Oil Ethiopia (NOC), which is the current leader of the market share, but not grows up as expected. Starting from 2005 for the past 7 years, the industry has been totally controlled by foreign companies.

After the departure of two foreign companies, Mobile and Shell in 2007 & 2008 respectively from the countries market, NOC has emerged and achieve a great growth in the industry. Currently, the market share is seized by one local company and followed by two giant foreign companies, Total and Oil Libya.



Figure 2: Market share trend by companies for the past 4 years

As shown from the below chart, the maximum portion of the lubricant share has been controlled by foreign companies. The oil market main source of margin is the lubricant and other industrial products, while the fuel market both the company and dealer margin is regulated by the government and it's obviously known. Despite of the ceiling price set for both fuel and lubricants in the retail market, companies make a good margin from the lubricants because they can able to import by dealing from international market by themselves without the interference of government. The real challenge of local companies in the market is due to the strong brand of foreign companies they cannot able to penetrate the market easily.

When customers attach a level of quality or prestige to a brand, they perceive that brand's products as being worth more than products made by competitors, so they are willing to pay more. In effect, the market bears higher prices for brands that have high levels of brand equity. Positive brand equity increases profit margin per customer because it allows a company to charge more for a product than competitors, even though it was obtained at the same price.

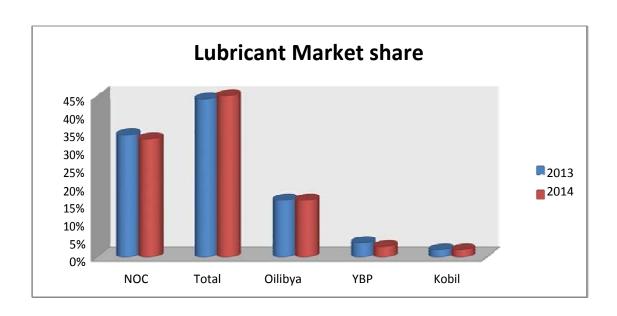


Figure 3: Lubricant market share



Figure 4: Industry Lubricant sales volume

As shown from the above chart 3, the lubricant market is rapidly growing since 2005. The lubricant market has attract many companies to the industry, because it the sole unit which gave a huge

amount of return. The local companies market share hinder them from benefiting in this regards, because the foreign companies engaged intensively and give more focus to than other products. As it's clearly shown from their market share, the largest part, more than 64% of the lubricant market share has been controlled by international companies.

Market share and profitability are strongly related. Business units with very large market shares enjoy rates of return more than three times greater than small-share business units mainly due to the economies of scale that larger businesses experience. More specifically, when comparing firms with less than 7% market share to those with 38% or more, it was found that ROI for those with the larger share was 33% compared to 10% for the smaller

## **CHAPTER FIVE**

# SUMMARY, CONCLUSION AND RECOMMENDATION

## **5.1. Summary of Findings**

The study brought and portray that the local companies are not competent enough in the industry to compete equally with the international companies. There are huge gap in terms of their financial ability, accessibility to the customers, supplying all type of products which needs huge investment, lack of power over their stakeholders and liquidity problem. The finding of the research shows that the local companies are highly challenged by lack of working capital. Especially, in supplying Airplane fuel (Jet –A1) only one local company has been involved, the rest are occupied by foreign companies.

The branding of foreign company products are very strong in the industry, the research depict that the local companies are highly challenged in penetrating to the market especially the lubricant market is very difficult. The current market share has been acquired by one local company, but the lubricant market is untouchable, which fetch the highest margin. The local company's lack of access to international media, long time existence of foreign companies, promotional capacity and strategy and good will are the main challenges brought to the local firms.

International companies are engaged in the industry both on upstream and downstream business, which gave them the experience and immense knowledge. The local companies are not having the experience of upstream business and they are also involved in the industry only for the past two decades. The experience assists them to have an adequate and deep rooted knowledgeable expertise on each and every product. Large companies, like cement factories need expertise in order to use lubricants for their machineries, the local companies which have not get the advantage of knowledgeable expertise are highly affected. The lack of awareness also play a huge part for having a low market share in lubricant market, they have to promote their products by using different mechanisms in order to aware the customers adequately.

The structure and formation are very important element of an organization to compete and retain in the business. One of the newest organizational structures developed in the 20th century is team and the related concept of team development or team building. In small businesses, the team structure can define the entire organization. Teams can be both horizontal and vertical. While an organization is constituted as a set of people who synergize individual competencies to achieve newer dimensions, the quality of organizational structure revolves around the competencies of teams in totality. The local companies in this respect are not competent, because they mainly focus on expanding their sales rather than maintaining a well structured firm.

#### 5.2. Conclusion

As per the research findings, the local companies have immense gap when we compare them to the international companies. The local companies have a great challenge in terms of working capital, educated human resource and branding of their products and services. Many things will be expected from the local companies in order to get the confidence of their customer and to control the market share by equally competing with the international companies. In terms of creating a strong and competitive brand the like of international companies, they have to go intensively through advertizing campaign.

The capabilities of foreign companies in their finance ability have brought an immense challenge to the local one, as the industry is capital intensive, the challenge is very significant. When we see the aviation industry, which needs huge investment, only one local company has been engaged, for many decades it was totally controlled by only the international companies. In addition, for most big industries which need the advice of expertise about the product, the international companies are more preferable, because they have enough educated and deep-rooted product and industry knowledge expertise both inside the country and abroad.

In today's contemporary business environment, branding is a very strong tool of marketing, which have the power to shift and retain the customers. The advertising power and accessibility of foreign companies has created a strong brand in the mind of the customers. Means of advertising and industry knowledge plays a great role, beyond that the attitude of the customers for foreign product and companies also a huge challenge for the local companies.

Promotion is a very important element of marketing, which may create awareness of the product or the company. Many customers are not aware of their product and services, which is very challenging for their judgment. Having quality and knowledgeable is also mandatory for the business, as giant companies need counseling about the product they are using. Losing giant (commercial) customers means losing their main market share and huge margin, because the retail market is regulated with ceiling price, which is not attractive and profitable when we compare to the commercial market.

#### 5.3. RECOMMENDATIONS

Despite of many local and international oil companies taking part, the industry is not fully utilized. The international companies have both the upper stream and lower stream experience for many years, which give them a competitive advantage in the industry. The local companies have been challenged by so many problems and difficulties in the market.

The researcher put forward the below recommendations to solve the problems, which are addressed in the above discussions; -

- ➤ The local companies should have placed a firm operating manual against their dealers in order bring harmony while working with them, Ensuring strong interface between transporters, dealers and Lubricant distributors/Resellers.
- Develop additional Retail sites, distributors, resellers in and outside Addis Ababa. As the industry is highly supported and encouraged by the government, the local companies should have to involve in all service as equal as foreign companies.
- ➤ In order to enhance their sales volume on all type of products, particularly for lubricant oil, they have to develop, agree and implement sales target for all company Service Stations.
- In the current situation, there is insufficiency of trucks for fuel and dry transportation. Modernizing the current transportation system and overcoming the shortage of available bulk trucks at national level and aging of those that are on the road needs focus to maximize Lubricant marketing and Sales.

- ➤ Identify and respond to emerging market opportunities, involving in the countries macro projects the like of power generating projects in supplying fuel and lubricant also help them to create a strong financial position and develop public trust.
- > Implement clear and effective credit policy in order to work with their dealers, commercial and retail customers to solve their liquidity problem.
- ➤ The companies should have to attract, hire, train and retain their expertise by enriching through training and improving their employees life standard.
- ➤ Organizational structure and standard operational manual is very important, this manual lists the all the tasks that are essential for the business success, how to do these tasks, and who is responsible for the tasks listed, companies must implement this.
- Most of local companies are lead by the shareholders or owners. This kind of organizational structure and formation have no room for employees to bring improvement and exercise their responsibility in full. The owner makes every decision despite of the procedure and working manual of the company and the consent of higher level management.
- Almost all local companies are imported their lubricants from the world giant companies, by lack of adequate promotional and advertizing they cannot able to lead the industry market share. In order to create their product awareness they must massively promote the products through many mechanisms.
- ➤ Usually, the unit product cost for local companies is on the higher side as compared to the international companies. As a result the unit margin for local companies will be relatively lower. Therefore, it is advisable to wisely look for imports of other brand lubricants that are equivalent to their major grades at fair price so that they can compensate the lost margin and strongly compete with international companies through this strategic approach.

The researcher believed that, the above mentioned recommendations are able to improve and reduce the gap of indigenous companies in order to compete and win in the Industry.

# References

- Arene, E.O. and T. Kitwood, (1979). *An Introduction to the Chemistry of Carbon Compounds*. Longman Group Ltd., London.
- Broniarczyk, S., A. D. Gershoff, (2003). *The reciprocal effects of brand equity and trivial*.
- Brown, C. L., G. S. Carpenter, (2000). Why is the trivial important? A reasons based account for the effects of trivial attributes on choice. J. Consumer Res.
- Carpenter, G. S., R. Glazer, K. Nakamoto, (1994). <u>Meaningful brands from meaningless</u> <u>differentiation</u>: <u>The dependence on irrelevant attributes</u>. J. Marketing Res.
- Daniel Yergin, (1990). The Prize: The Epic Quest for Oil, Money, and Power.
- EIA, (2005). Petroleum supply annual 2004.
- Eneh, O.C., (2000). <u>Soap and Soap-Kindred Products Industries.</u> Welfare and Industrial Promotions International, Enugu.
- Eneh, O.C., (2007). *Entrepreneurship in Food and Chemical Industries*. Institute for Development Studies, Enugu.
- Hobson, G.D., (1973). *Modern Petroleum Technology*. John Wiley and Sons, London, New York.

http://www.history.com/topics/oil-industry: 24/02/2015

http://www.naturalgas.org/index.asp, 20/03/2015

http://www.pbs.org/wnet/extremeoil/history/, 15/02/2015

http://www.priweb.org/ed/pgws/history/pennsylvania/pennsylvania.html, 27/02/2015

http://www.prnewswire.co.uk/news-releases/east-african-oil--gas-market-2014-2024-273447551.html, 25/03/2015

- Janiszewski, C., S. M. J. van Osselaer, (2000). <u>A connectionist model of brand-quality associations</u>. J. Marketing Res. **37**(August).
- Keller, K. L., S. Sood, (2004). *The effects of product experience and branding strategies*on brand evaluations. Working paper, UCLA, Anderson School of Management.
- Kimberlin, C.N., (1957). *Chemistry in the manufacture of modern gasoline*. J. Chem. Educ.,
- Kymisis, M. and K. Hadjistavrou, (2008). *Short-term effects of air pollution levels on Mark pulmonary function of young adults*. Internet J. Pulmonary Med., Vol. 9.
- Meyvis, T., C. Janiszewski, (2002). <u>Consumer beliefs about product benefits: The effects</u> of <u>obviously irrelevant product information</u>. J. Consumer Res. **28**(March).
- McCain, W.D., (1970). *Properties of Petroleum Fluids*. Pennwell Pub. Chicago.

- Nelson, T.W., (1954). The origin of petroleum. J. Chem. Educ., .
- Nelson, W.L., (1958). Petroleum Refinery Engineering. 4th Edn., McGraw-Hill, USA.
- NRC, (2003). *Oil in the Sea III: Inputs, Fates and Effects*. National Academies Press, Washington, DC.
- OPEC (Organization of Petroleum Exporting Countries), (2007). *World Oil Outlook*. Vienna.
- Paul H. Giddens, (1938). The Birth of the Oil Industry.
- Rossini, F.D. and B.J. Mair, (1951). <u>Composition of Petroleum. In: Progress in Petroleum</u>

  Technology
- Sachanen, A.N., (1945). *The Chemical Constituents of Petroleum*. Reinhold Publishing Corp, Chicago.
- Saepudin, D., P. Sukarno, E. Soewono, K.A. Sidarto and A.Y. Gunawan, (2010). <u>Oil</u>

  <u>production optimization in a cluster of gas lift wells system</u>. J. Applied Sci., 10:
- Sharma, B.K., (2002). *Engineering Chemistry*. Krishna Prakashan Media Pvt. Ltd., Meerut-India.
- Stevens, P. (2008). "<u>National Oil Companies and International Oil Companies in the Middle</u>

  <u>East: Under the Shadow of Government and the Resource Nationalism Cycle</u>."

  Journal of World Energy Law and Business.
- Sweeney, W.J., (1950). *Petroleum and its products*. J. Chem. Educ.
- Tabieh, M.A.S. and A. Al-Horani, (2010). <u>An economic analysis of water status in</u>

  <u>Jordan</u>. J. Applied Sci.,.
- The Deloitte Guide to Oil and Gas in East Africa, (2014).
- Ugwu, D.S., (2009). <u>Effects of oil exploration on agriculture and natural resources in</u> <u>the niger delta region of Nigeria</u>. Sustainable Human Dev. Rev.,.
- USDE, (1999). *Environmental benefits of advanced oil and gas exploration and production technology*.http://fossil.energy.gov/news/techlines/1999/tl\_envrpt.html.
- Van der Linde, C., (2000). *The State and the International Oil Market: Competition and the Changing Ownership of Crude Oil Assets*. Boston: Kluwer Academic Publishers.
- Villas-Boas, J. M, (2004). *Consumer learning, brand loyalty, and competition*. *Marketing Sci.* Waddams, A.I., (1973). *Chemicals from Petroleum*. John Murray, London.
- www.tullowoil.com/ara, 05/04/2015.

# APPENDIX