

PRACTICABILITY OF THE BULK PROCUREMENT OF PETROLEUM
PRODUCTS AND SINGLE RECEIVING POINT: PERSPECTIVES FROM
SELECTED STAKEHOLDERS

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CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled “*Practicability of the Bulk Procurement of Petroleum Products and Single Receiving Point in Tanzania: Perspectives from Selected Stakeholders*” in partial fulfillment of the requirements for the award of the Degree of Masters of Business Administration Corporate management (MBA-CM.) of Mzumbe University.

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DEDICATION

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ABSTRACT

This study explores stakeholders' perspective on the practicability in terms of efficiency, effectiveness, and economy of the bulk procurement of petroleum products and its proposed bulk storage (single receiving point). The specific objectives of the study were to examine the efficiency and applicability of the Bulk Petroleum Procurement and bulk storage process in Tanzania, to determine the effectiveness of the bulk procurement process and storage of petroleum product in Tanzania, and to analyze the economic benefit of the bulk procurement of petroleum product on a single receiving point. In order to obtain information regarding the problem under study, the researcher used three research approaches namely; Questionnaires, interview and documentary sources. Primary and secondary data collection was conducted from various sources that exist within various stakeholders and from internet sources. The data collected was analyzed by using statistical package for social sciences (SPSS). Findings show that the Bulk Procurement System (BPS) of petroleum products has to a greatest extent helped in reducing tax evasion, reducing loses and no demurrages. Petroleum products are used across the entire economy in every country. Also, findings show stakeholders' agree on the time used to change from one terminal to another affect the efficiency of the bulk procurement system and its intended purpose due to multiple terminal receptions which results into delays of products unloading according to the contractual time agreed, and hence demurrage charges. Adequate and reliable supply of transport services and electricity in turn are essential for economic development. Due the fundamental role of petroleum product in the economy of a country Bulk Procurement System of petroleum product on single receiving point is inevitable. It is a time for the Ministry of energy to send a bill to the parliament on establishment of bulk procurement of petroleum product on single receiving point.

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter basically gives a background of the problem as well as highlighting the general objectives that was considered as the foundation for the research. The chapter further points how important this study was, should it be done successfully and the limitations foreseen. The chapter ends by highlighting the scope that the research was conducted in.

1.2 Background of the study

According to the World Bank, the petroleum sector has been made less strict for all stakeholders to participate by allowing the private sector to participate in the procurement of importation of refined products through competitive tenders (Bacon, 2001) . Up to early 2001, Tanzania Petroleum Development Corporation (TPDC) had the monopoly on the importation of petroleum products, which later, together with other private Oil Marketing Companies (OMCs) were involved in the importation of refined products. Bu as from 2012, it stopped entirely from being involved in the importing petroleum products.

Petroleum products are the end products that are derived from crude oil residuals as it is processed in oil refineries. Contrary to the petrochemicals, which are a collection of well-defined and usually pure chemical compounds, petroleum products are complex mixtures (Speight & Ozum, 2001).

The OMCs participation in the competitive tenders can be traced back to March 2004, where they participated in tenders for gasoline with financing provided by some banks. The primary consumer for petroleum products is the transport which accounts for over 80 percent of total consumption in 2003.

According to the African Development Bank & African Union, (2009), households accounted for 6.2 percent, whereas the industry used about 6.7 percent and the agriculture sector accounted for

4.2 percent. Variety of petroleum products are used for household purposes such as kerosene for lighting, and cooking; Liquefied Petroleum Gas (LPG) for cooking; 3 percent is accounted for gasoline and diesel used for private and commercial vehicles as well as a source of power for tractors, irrigation pumps, and generators. Petroleum products are one of the significant inputs for economic production. The distribution of commodities within and outside Tanzania, as it is elsewhere, depends on the availability of these petroleum products. Most farmers and traders rely mostly on transportation services to trade their goods in order to receive incomes for their livelihoods.

An efficient and effectively managed downstream was benefit all sectors of the economy (that is the distribution of petroleum products up to the end consumer's) that delivers petroleum products in the required quantity and quality. Fuel shortages contribute significantly to price level fluctuations; this is especially true to some parts of Sub-Saharan Africa (Kojima, Matthews, & Sexsmith, 2010). The shortages of fuel raise the prices of not only petroleum products but also their substitutes. For instance, kerosene and LPG shortages in Uganda in late 2008 and early 2009 pushed up the prices of charcoal, used in cooking, as some shops ran out of kerosene and LPG which in the long run might lead to deforestation as large number of trees are cut for charcoal making. (Africa, 2009).

This can also be evidenced in some parts of Ghana as the demand, and use of charcoal increases any time there is a fuel shortage. However, more money is paid for the petroleum products during periods of fuel shortage than the actual cost each household spends directly. Also, price fluctuations of petroleum products increase the prices of all other goods that have oil as an intermediate input. The most notable among these goods is food, especially for low-income countries. Again, transport costs tend to increase; this decreases adequate income (The African Development Bank & African Union, 2009).

In the 1960s, the government of Tanzania jointly with AGIP Tanzania Limited established TIPER (Tanzania and Italian Petroleum Refining Company Limited) where each shareholder owned 50% of shares equally. TIPER being a small refinery had the capacity to process 600,000 tonnes per annum. Before the liberalization of the petroleum industry in 1997, TIPER had the capacity to produce 30 percent of the local requirements and the remaining amount was imported

by the government-owned TPDC. However, due to pressure from the International Monetary Fund (IMF), one of the reasons being that TIPER was operating below 60 percent of its capacity, the operations of the refinery was significantly slowed down in 1991. In 1999, Oryx Energies which is Swiss-based acquired all of AGIP's assets in Tanzania. Later in 2012, the government of Tanzania was considering using the oil terminal as part of its national strategic petroleum reserve.

TIPER as a refinery was officially closed in 2000. This means that all petroleum products used in the country were imported. Oil Marketing Companies (OMCs) were free to import refined petroleum products on their own with close guidance of TPDC. Companies such as TOTAL, SHELL, AGIP, CALTEX, and ESSO had the most significant say in oil pricing in the country since they were the only OMCs that had the capability to import the required number of products to meet the country's monthly demands.

Oil marketing companies are all companies that are legally registered in the country to conduct petroleum products business. This includes both companies that have storage tanks as well as those that depends on other companies to store their products.

However, in 2012, smaller Oil marketing companies (OMCs) that were not able to supply more significant consignments for all products claimed they should be considered in the supplying of smaller consignments which would give them room to grow in the market as well. Petroleum Importation Coordinator Limited (PICL) was established where it was an association of OMCs that were responsible for managing the country's fuel Bulk Procurement System.

According to Petroleum Bulk Procurement Agency (PBPA) website, (2019), Bulk Procurement can be defined as a system that is established to oversee the regulations made by the minister of energy to govern the whole process of importing petroleum products in Tanzania. The system is however applied to gas oil, gasoline and dual-purpose kerosene.

Petroleum Bulk Procurement Agency (PBPA) being the government agency responsible for the procurement and monitoring of fuel stocks in the country is one of the most important stakeholders in the industry. The agency was established in the year 2010 under an executive agency which was created under the executive agency act cap.245 with all the mandates of

coordinating and managing efficient procurement of petroleum products. The mandate is operationalized by the petroleum (bulk procurement) regulations, 2015.

In order to improve Petroleum Importation Corporation's (PIC) efficiency in its responsibilities, in 2015, a government agency Petroleum Bulk Procurement Agency (PBPA) was formed under the executive agencies act, vide GN.423. It is mandated to administer and manage the import of petroleum products in the country. Some of the agencies tasks are to coordinate the Bulk Procurement System by collection procurement needs of petroleum in respect to all oil marketing companies. It also conducts competitive bidding among the suppliers for the procurement of bulk petroleum products either by Cost, Insurance and Freight (CIF) or Delivered at Place (DAP) as it may deem necessary from time to time. PBPA also forecasts the supply and demand of petroleum products by consulting the Oil Marketing Companies on the bases of local use as established by EWURA.

Therefore, in the long run, PBPA ensures that there are sufficient fuel stocks. This protects against any supply disruptions. The agency assesses the costs as well as benefits of maintaining contingency stocks and then deciding how large, who maintains and who pays. The value of maintaining some contingency stocks is universally accepted.

In October 2009, Global markets direct published a report indicating oil storage capacity increased globally from 2.39 billion barrels in 2000 to 2.96 billion barrels. This is equivalent to one-tenth of the world's annual oil consumption in the first half of 2009 (Kojima, 2013).

Despite having a clear policy, standard and procedure which is well known to all market players within bulk procurement system but still bulk procurement of petroleum products and storage at single receiving points are not in a place like our neighboring country Kenya. Not only that, its contribution to the economy of the country was not measured. That is, how much do we lose by having bulk procurement of petroleum products, but not having a bulk storage at a single receiving point instead every terminal that is connected to the Single Point Mooring (SPM) receives products from the ship hence escalation of product losses and difficulty in tracing where the product is lost within the Petroleum Industry. That makes the importation of petroleum product through the Bulk procurement system and its discharge from the vessels as well as bulk storage at a single point to be an area that has to be looked into broader range.

As petroleum products are received from the vessels, every terminal receives its own product to its particular terminal. With a total of eighteen terminals in Dar es Salaam that are supposed to receive petroleum products from the discharging vessel; having a single terminal that receives the whole consignment can be termed as a single receiving point.

1.3 Statement of the problem

In Tanzania despite the bulk procurement system of petroleum products being in place, which was expected to lower the price of fuels to the consumers that were experienced when individual companies were procuring their consignments, fuel prices have continued to escalate every year. This is partly and at a significant margin caused by the losses encountered when ships discharge product to every individual terminal instead of having a single receiving point and storage for bulk procured petroleum products as it is done in countries such as Kenya (Nyoni, 2013).

For instance, considering the Gasoil discharge system, since the Single Point Mooring (SPM) that was commissioned in 2012 for the purpose of accommodating more massive tankers that cannot berth at the Dar es Salaam Port (Kurasini Oily Jetty), the discharge process has been conducted as follows: vessel berths at SBM, necessary paper works completed by relevant authorities and others namely TPA, TBS, EWURA, TRA, WMA, and Agency Surveyors, discharge sequence is prepared and agreed by vessel and receiving terminals, and discharge commences following the agreed discharge sequence. (PBPA sop, 2013)

Oil marketing Companies receive their cargos into the terminals which they nominate. Total number of terminals as of now are eighteen (18). The PBPA shipping and supply contract has set a minimum cargo batch quantity of 1000 metric tonnes. The vessel is supposed to pump product at a maximum pressure of 10bar and a minimum of 7bar. For instance, TIPER which is the largest storage terminal in the country by far, has a receiving capacity of between 1600m³ and 1800m³ per hour while the other receiving terminals on Kigamboni side have the receiving capacity of 1200m³ per hour and Kurasini depots have the capacity of 600m³ per hour.

However, this current system of receiving products from the ship has some shortfalls such as ullage constraints issues compel depots to receive in two or more batches per consignment. For

instance, for the 18 terminals, 36-54 hours are lost due to changing from one terminal to another between batches. PBPA has not been able to apply the penalty clauses in the shipping and supply contract to enforce improvement in discharge efficiency.

Tanzania Revenue Authority (TRA) was established in 1995 under the act no.11. The authority is mandated with the collection of central government taxes which also include but not limited to non-tax revenues. With the authority given to TRA, it is responsible for the collection of tax for imported petroleum products as well. Revenues obtained from these petroleum products contribute to about 40% of the total country's revenue on goods imported and it also contribute about 25% of all TRA tax collections in the country. This means that the petroleum sector contributes greatly to the tax collected in the country. Tax evasions and losses for the petroleum products leads to loss of revenues for the country (Nyoni, 2013).

Ministry of Energy is responsible for overseeing all the energy issues within the country. The ministry has some agencies such as Energy and Water Utilities Regulatory Authority (EWURA) and PBPA under it that are responsible with the day to day activities. Its mission is to provide an input to the development of the country through developing policies related to the petroleum sector that can help facilitate the reliable and efficient energy production, transportation, and distribution to the end users well as procurements.

Tanzania International Petroleum Reserves (TIPER) which was established in the early 1960s as refinery now works as both a bonded warehouse for storage of imported petroleum products as well as storage of products for clients that wish to expand their storage capacity in the country. TIPER has a storage capacity that is the greatest in the country and can serves as a strategic reserve in case of any emergencies since the government owns 50% of its shares.

The inefficiency mentioned earlier in the existing discharge system is estimated to following cost implications to the operations: demurrage, cost at SBM per shipment is TZS.30, 000,000/- and Tug Boat expenses TZS.7, 347,500/- average losses, and total costs per shipment is TZS. 953,840, 442/. Therefore, this study seeks to assess the bulk procurement, bulk storage of petroleum and single receiving products as well as stakeholder's perspectives on its efficiency, effectiveness, and economy.

This study seeks to explore or examine the stakeholders' perspective on the practicability (in terms of efficiency, effectiveness, and economy) of the bulk procurement of petroleum products and its proposed bulk storage (single receiving point) in Tanzania. Petroleum products, which include but not limited to gasoline (Petrol), gas oil (Diesel), kerosene (IK, JET A1), and liquefied petroleum gas (LPG) are vital almost all economic activities in Tanzania. However, the bulk procurement of these petroleum products is limited to only Gas oil, gasoline and Kerosene. The rest of the petroleum products, termed as non-PBPA tenders, are procured on basis of individual Oil marketing company requirements with regards to its clients, hence they are not controlled by Petroleum Bulk Procurement Agency (PBPA). With the increase in prices of these bulk procured petroleum products, and an increase in losses evidenced from the discharge of vessels to multiple terminal, this study seeks to find out how effective and efficient the bulk procurement of petroleum products is to the economy and whether there is a need to receive the bulk procured petroleum products into a single point which was reduce significantly these losses.

1.4 General objective of the study

The general objective of this study is to explore stakeholders' perspective on the practicability (in terms of efficiency, effectiveness, and economy) of the bulk procurement of petroleum products and its proposed bulk storage (single receiving point).

1.5 Specific Objectives

- i. To examine the efficiency and applicability of the Bulk Petroleum Procurement and bulk storage process in Tanzania.
- ii. To determine the effectiveness of the bulk procurement process and storage of petroleum product in Tanzania.
- iii. To analyze the economic benefit of the bulk procurement of petroleum product on a single receiving point.
- iv. To analyze the challenges that face the bulk procurement of petroleum products and bulk storage at a single point in Tanzania.

1.6 Research Questions

- i. How efficient and practical has the bulk procurement and storage of petroleum products in Tanzania been?
- ii. How effective is the bulk procurement and storage of petroleum products in Tanzania?
- iii. What economic benefits was the bulk procurement and storage at a single receiving point bring?
- iv. What challenges are faced by the bulk procurement of petroleum products and bulk storage at a single receiving point system?

1.7 Rationale of the study

The success of this research will contribute to the academic knowledge and informing the government for the formulation of policy. In academic perspective, the success of this research will be used a reference material by other students and academicians that will need to conduct a study on similar areas of petroleum products. The ministry of Energy for instance, will benefit from this research by formulating policies that will improve the procurement and storage of petroleum product.

1.8 Scope of the study.

Geographically this study was conducted precisely in Dar es Salaam, Tanga and Mtwara Tanzania. The main organization of the study was Tanzania International Petroleum Reserves Ltd (TIPER). However, other stakeholders such as Oil Marketing Companies like GPB and in GM Mtwara were consulted. Other stakeholders in Dar es Salaam include EWURA and PBPA. The coverage of this study had its center of interest on efficiency, effectiveness, and economy on the practicability of bulk procurement and storage of petroleum products. Data used in the study was collected from all the stakeholders.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This chapter presents the literature related to the study by reviewing previous studies and papers. The previous studies are presented to be the framework for understanding and systematically analyzing the procurement of petroleum product and storage. Literature review helped to find out the existing knowledge on the study which enabled the researcher to identify the knowledge gap. It is also the source of general knowledge on the subject, here being the bulk procurement of petroleum products with a single receiving and storage point being the center for the study (Kumekpor, 2002). The chapter has three sections; general overview of petroleum in Tanzania, theoretical review and empirical review.

2.2 General Overview of Petroleum in Tanzania.

This section explains an overview of the petroleum sector in Tanzania.

2.2.1 About the Petroleum sector in Tanzania

The petroleum sector can be put into two categories, which are upstream and downstream. Upstream category involves activities such as exploration and production activities, while downstream category involves importation, storage, transportation, export, inland transportation of crude oil as well as refined petroleum products, wholesale and retail distribution of petroleum products which including liquefied petroleum gas. According to The Energy and Water Utilities Regulatory Authority Act, Cap 414 the petroleum downstream is referred to as the regulated petroleum sub-sector (Nyoni, 2013).

As stated earlier, the Energy and Water Utilities Regulatory Authority is a regulatory authority that is responsible for both technical and economical regulations of petroleum, natural gas, water as well as electricity. It was established in the year 2001 under the energy and water utilities regulatory authority act, cap 414 (Nyoni, 2013). The functions of EWURA among others include monitoring performance and standards with much emphasis on safety, quality, health and environment as well as licensing. The agency is also responsible for protecting the interests of

consumers and promoting the availability of regulated services such as petroleum products as well as its regulation as mandated by the petroleum act, cap 392 which was amended in 2003 and 2007. The regulatory includes but not limited to petroleum importation, unloading, transportation, as well as storage. It is also mandated to compute and publish monthly indicative / cap prices that are supposed to be followed by all oil marketing companies at a maximum upper deviation of 7.5%. Even though the oil marketing companies are not always happy with these derivations, they are obliged to abide to them (Nyoni, 2013).

Tanzania consumes approximately 1.54 million cubic meters per annum of the petroleum products which are wholly imported. The products imported are from various countries such as the Mediterranean, Arabian Gulf and sometimes from Durban, South Africa. Since January 2000, the Oil marketing companies in the downstream sub-sector were allowed to individually procure and trade petroleum products with respect to their market requirements and setting pump prices based on the prevailing market forces (Nyoni, 2013).

2.2.2 Tanzania experience on Bulk Procurement System

This section attempts to review the matters relating to the bulk procurement system of petroleum products including key determinants of prices and their regulation. Petroleum products are mostly imported from orientated drilling and refining centers in the Mediterranean, some from the Arab Gulf, and some from Singapore. In order to transport petroleum products to the consumer countries, many arrangements have to be done, for example, transportation and Insurance, storage and so on. As such domestic prices of fuels are expected to be derived from international crude oil prices, refining charges (where applicable), freight and insurance (CIF price), international supply and demand of petroleum products, the prevailing exchange rate, local transportation, local taxes including import duty and dealers' costs and margins. The most significant component of the primary fuel price should be the price that importers pay in the international markets when purchasing the products as this keeps on changing as a result of various factors including OPEC actions in volume restrictions (Competition, Consumer Commission, & Samuel, 2007).

In order to ensure the efficient implementation for the importation of the petroleum products as well as lower the retail prices between 12 and 18 percent, the Energy and Water Utilities

Regulatory Authority devised the Bulk Procurement System which became operation early January 2012. The government however considered the bulk petroleum products procurement as a temporary measure until a permanent solution to the escalating fuel prices could be obtained. The idea was to have a permanent solution by creating the national strategic petroleum reserves which would ensure the stability in the local market (Nyoni, 2013).

2.2.3 Transportation of Petroleum Products

Depending on the country of study, the transportation of petroleum products differs significantly from one country to another. According to (Kojima et al., 2010), the transportation of crude oil to domestic refineries for countries that have refining capacity and subsequent transportation of refined products from refineries to final destinations whether domestic or overseas defines a significant fraction of end-user prices. This means that for countries that have refineries fuel prices are expected to be lower compared to countries that do not have refineries and expect to import product from other countries. Therefore, markets far from refining centers are always be hit by high prices of fuel.

Therefore, with the above context, in terms of cost per liter of fuel transported over the land, provided other economies of scale are achieved, the less expensive method of fuel transportation is through pipeline transport (except for fuel oil which would first need to be heated in order to be pumped). The next least cost is transportation by rail, and finally truck transportation. For instance, by using pipeline transport from Buipe depot in Ghana which covers most of the distance on the Volta River has contributed significantly to minimum fuel prices.

2.2.4 The National Energy Policy

The National Energy Policy of February 2003 (the Policy) states that "In line with the overall economic policy of the country, the market-oriented concept shall apply to the supply of energy products and services. Implicitly, medium and long-term services of independent economic actors should determine the allocation of resources. Competition on fair Petroleum Sector Inquiry –Stakeholders Comments document and fair conditions among independent actors shall form the basis for market efficiency". The Policy further states: "A regulatory agency was established to oversee activities in the petroleum sub-sector and deal with the enforcement of

open market and fair competition, administration of licensing and the overall monitoring of the petroleum market.

2.2.5 Significance of the single bulk receiving and storage of petroleum product

The single receiving and storage point for petroleum products if implemented would improve the following areas which are of great interest.

1. Demurrage

No demurrage as the whole vessel will be discharged within the contractual period. In worst cases, a few hours may be charged. Live example is the 100,000 metric tonnes crude oil vessel which often discharges to TAZAMA storage facility within three days.

2. Losses

The discharge pipeline between SBM and TIPER had to be isolated to eliminate any possibility of product diversion from the vessel to an unintended destination. Discharge losses are expected to come down to be within the internationally accepted tolerance limits.

The inefficiency described above in the existing discharge system is estimated to have the following cost implications to the operations:

Demurrage; (USD 25,000/day for eight days at the exchange rate of TZS 2,300/USD) amounts to TZS. 460,000,000/-

Estimated TPA crew cost at SBM per shipment is TZS.30, 000,000/- and Tug Boat expenses TZS.7, 347,500/-

Average losses (253.9m³) into CIF per call is TZS.456, 492,942/-

Total costs per shipment are TZS. 953,840,442/-.

There are 24 estimated calls per year at SBM which implies that the total cost of inefficiency translates to TZS. 22,892,170,608/- per year.

With PBPA in place and ensuring petroleum products are always available at all times in the country. It would be more efficient if the procured petroleum products would be bulkily received

and stored at a single terminal. Taking an example of TIPER which is the largest and most efficient of all the storage facilities in the industry, this is how the procedure would be:

The full vessel will discharge into TIPER after all the procedures are completed. TIPER, being capable of receiving gasoil at a rate of up to 1800m³ per hour and the TPA designed flow meter rate is 1950m³ it would take four days to discharge a full vessel continuously without in between interruptions due to batch/depot change.

Having completed receipt into the nominated tanks, the product is allowed to settle for 24 hours or prescribed standard whichever is less. All measurements pertaining to the reception tanks should be kept in proper records as per procedure.

From day 3 TIPER will start delivering products to the OMC's as per the agreed discharge sequence. Full transfer to terminals/depots is expected to be completed in 6 days. It means the first reception will be delayed by two days but time is shortened for the subsequent vessels.

2.3 Theoretical Review

Two theories are discussed under this section. Supply chain theory and Economic efficiency theory.

2.3.1 Theory of Supply Chain Management

The theory illustrates that the connection of links or points in a supply chain helps to achieve functions that eventually contribute to the value of petroleum products as it is taken through the supply chain. Any point or link within the supply chain that does not in one way or another function well reduces the overall effectiveness of the entire supply chain. Hence, for the supply chain to be effective, the connections within it should all work effectively to contribute to the overall supply chain objective.

This theory does help to achieve functions that contribute to the value of quality and quantity that is to be received into the country as far as petroleum products supply is concerned. Effective supply chain helps the flexibility in the supply of petroleum products. The notion of supply chain

management here is used because it necessitates the management of profitable ways by regulating the time of arrival for the petroleum products as well as the quality for the same. Coordination between suppliers and distributors has become an essential characteristic of the Supply Chain.

2.3.2 Theory of Economic Efficiency

The economic efficiency theory explains the use of available resources in order to maximize the supply of petroleum products in order to avoid shortages at any point in time. An economic system is considered to be more efficient than the other when it can provide more without using more resources.

In economics, economic efficiency refers to the use of resources to maximize the production of goods and services (O'sullivan and Sheffrin, 2003) . An economic system is said to be more efficient than another (in relative terms) if it can provide more goods and services for society without using more resources. In absolute terms, a situation can be called economically efficient if, No one can be made better off without making someone else worse off.

2.3.3 Empirical Review

According to the study conducted by Speight and Ozum, (2001), China was planning to build its strategic petroleum reserves to at least 100 million barrels by 2010. Being among the world's ten largest oil consumers, China has already constructed two underground storage reserves in east China and has put into use two more storage bases soon. China's goal was to build strategic oil reserves which would be equivalent to 30 days of imported oil by 2010. China's move followed similar steps in the United States, the world's top oil consumer. By 2010, China's reserve amount was still only about one-seventh of the U.S. level, but China is likely to increase its reserves at a faster pace, thus adds more impact on world's oil demand. Oil reserves are often built in ten years with a slow pace to avoid rattling the oil market.

In Haiti total petroleum product storage capacity is 1,688,451 barrels (bbl) (Dziedzic & Perito, 2008). Of this total storage capacity, diesel accounts for 852,405 bbl, gasoline for 369,000 bbl, fuel oil for 178,095 bbl, kerosene for 139,200 bbl and LPG for 23,271 bbl. Comparing this storage capacity to the total annual consumption of petroleum products, including the fuel

consumption of power plants, it seems to be sufficient for 5-6 months of petroleum products consumption. In terms of storage capacity, it is quite sufficient, but it is essential to know how much of this capacity holds all the time a strategic reserve of petroleum products to decrease the country's vulnerability to oil product disruption. As an example, European Union countries are obliged to maintain oil products stock to cover 90 days of consumption (Dziedzic & Perito, 2008).

India is building strategic crude oil storage facilities to contain a total of 5 million metric tonnes (about 35 million barrels, equivalent to 12 days of 2008 consumption) at three locations. Indian Strategic Petroleum Reserves Limited was established for this purpose; it is owned by the Oil Industry Development Board of the Ministry of Petroleum and natural gas underground rock caverns was used for the storage, and the plan is to complete the three sites by 2012 (Nakai, 2009).

Likewise, the government of Rwanda announced in January 2009 that 7 million liters of gasoline and 5 million liters of diesel had been ordered to supplement strategic reserves containing 1.3 million liters at the time and that construction of additional fuel storage tanks was underway (Johannesson, 2010).

Recently, the government of Uganda announced a plan to build a fuel depot in Kampala with a capacity of 150 million liters. It started building strategic fuel reserves at four locations in the 1970s, but only the fuel depot in Jinja was completed. Restocking this depot has encountered financing difficulties. In 2008, for example, the energy ministry attempted several times, unsuccessfully, to refill the reserves in Jinja. The government recently handed the depot over to a private firm as part of the Kenya-Uganda pipeline project (Amoah, 2011).

In Zambia, the Ministry of Energy and Water Development has been tasked with establishing national petroleum strategic reserves. The ministry issued a tender to rehabilitate government-owned depots at three locations; four more locations were to be rehabilitated in 2009, and a 40-million-liter storage facility to be constructed in Ndola to store strategic diesel stocks. Thus, before the end of 2009, the country envisaged having strategic reserves equivalent to 30 days of consumption (Amoah, 2011). The Energy Regulation Board, through its licensing system, requires fuel suppliers to maintain a 15-day stock. Full compliance had not been achieved as of

end-2008 because of the high costs of holding stocks. The National Oil Corporation of Kenya was charged in April 2008 with maintaining strategic stocks equivalent to 30 days of consumption and eventually to reach 90 days over the coming years (Anyanzwa & Adero, 2008). The Tanzanian minister for energy and minerals stated in 2007 that the government would establish strategic petroleum reserves, but little progress appears to have been made.

2.3.4 Research gap

2.3.5 Significance of Petroleum Product to the Economy

The African Development Bank & African Union, (2009) stated that energy insecurity undermines human development and institutional capacities and lowers economic growth. Energy security is correspondingly closely linked with social, economic, political, and environmental development, thus making it a cross-cutting issue rather than one of merely finding geological energy resources. Households use a variety of petroleum products: kerosene for lighting, and cooking; liquefied petroleum gas (LPG) for cooking and use by vehicles; and gasoline and diesel for private and commercial vehicles as well as captive power generation. Fuel and another price increase effectively reduce household income. For those who are already below the poverty line, this could mean forgoing such essential goods and services as food, housing, primary healthcare, and education. Effective income reduction could also force some previously non-poor households into poverty (Kojima, 2009)

According to UNIDO and FAO (2008), in a world where agriculture is increasingly a commercial activity, Sub-Sahara Africa (SSA) exhibits historical patterns of subsistence farming in a deteriorating physical environment. Agricultural communities are thereby locked into poverty, food insecurity and excessive reliance on food imports. Increasingly, rural youth, who associate subsistence and even potential commercial farm activities with hard physical labor and

drudgery, are disenchanted with the little opportunities for a rural livelihood, worsening an already marked tendency to rural-urban migration.

2.3.6 Conceptual framework

The purpose of this section is to develop a conceptual framework. Conceptual framework is used here to outline a possible cause of actions which can be used to present a preferred idea. This framework was used to guide the researcher during his study. The conceptual framework explains the main issues under the study in either graphically or in a narrative form (Kumekpor, 2002). The conceptual framework also explains the relationships between variables. This study focuses on important variables and their relationship in order to be well understood and guide the information to be collected and analyzed.

Independent Variables

Dependent Variables

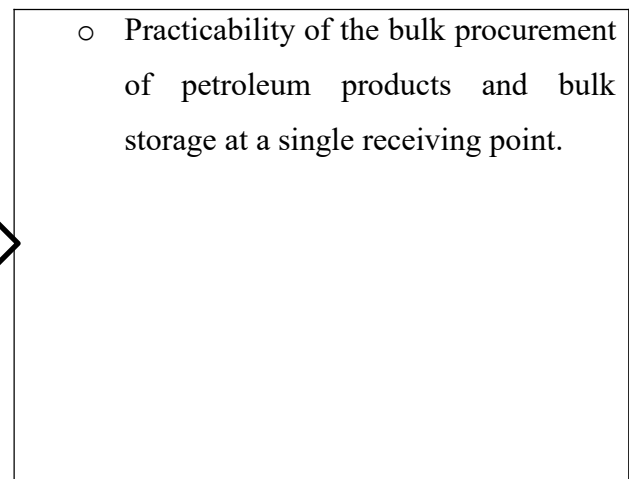
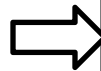
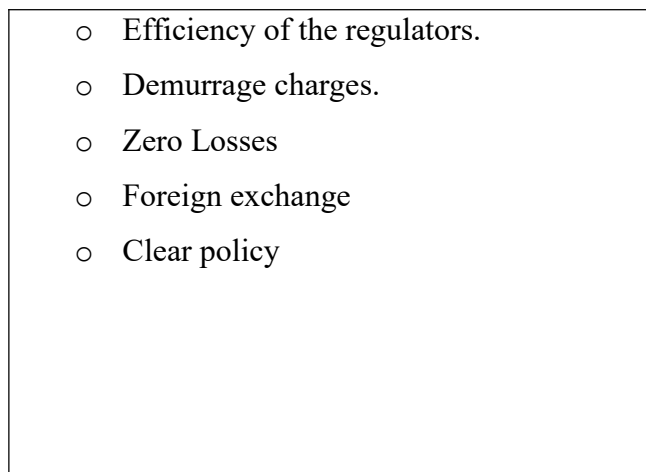


Figure 2.1.

The conceptual framework, developed by researcher, 2019

Efficiency of the regulators as an independent variable, sought to understand how better they perform their activities in ensuring that it's practical to implement bulk procurement of petroleum products. The regulators here are such as the Energy and Water Utilities Regulatory Authority (EWURA) which is responsible for technical and economical regulations of among others petroleum products imported into the country. Among their responsibility is setting up

prices monthly which are determined after all importation processes are completed. If stakeholders are satisfied with how EWURA performs its duties, it implies that bulk procurement and storage of petroleum product will be effective. Other regulators are such as Tanzania Bureau of Standards (TBS) as well as Weights and Measures Agency (WMA)

Demurrage charges are all those expenses that are to be paid to the ship owner as a result of detaining it beyond the allowable time for unloading or discharging of products. This is usually paid as a penalty for delaying the unloading of a ship and the responsible terminals are charged for the same in case they are responsible in one way or the other for such delays.

Much delay or demurrage signifies that more costs will at the end of the day will be carried by the end consumers hence an increase in price in every aspect that is involved in production process that uses petroleum products. The rate of demurrage charges were measured by the time the ships used to discharge products into Oil Marketing Companies (OMCs) compared to the required number of days (three days for SPM and two days for KOJ).

Zero losses is another independent variable which is expected to imply that the bulk procurement and storage of petroleum products at a single receiving and storage point would be practical. Losses basically is the difference between the amounts of product that is discharged from the ship against the amount of product that is received at an OMC. If terminals have more losses it will imply the respective companies will have less revenues and hence less tax will be paid by them to the government and hence affect the economy in one way. Losses were measured by analyzing the ships discharged quantities against the received quantities into various terminals as well as the use of Likert scale which is the scale used to represents individuals attitude towards a particular topic.

Clear policy as used in here as an independent variable implies the willingness of the government to either have a single receiving point thereby reducing demurrage charges as well as control losses for all products or continue with the multiple receptions into various terminals where controls are difficult to properly implement. Stakeholder's perspective on the government policy was used to measure how this variable contributes to the dependent variable.

Foreign exchange normally do not have a centralized market, rather a foreign exchange market happens whenever there is a trade of two foreign currencies taking place. Importation of petroleum products is not excluded in trading using foreign currencies. The strength of Tanzanian shilling against the US Dollar is used to measure how the flexibility affects economy as one of the measurements of the dependent variable.

The independent variables in this study are factors that affect the practicability of bulk procurement and storage at a single receiving point of petroleum products and the dependent variables is the practicability of the bulk procurement and storage at a single receiving point.

Effectiveness of the bulk procurement of petroleum products was measured by the benefits brought by lowering losses, decrease of demurrage charges as well as a clear policy and lower government charges.

Efficiency was measured by how much the indirect variables contribute to the practicability of the bulk procurement and storage at a single point of petroleum products.

Economy was measured by the Gross domestic product and its effect on the procurement of petroleum products.

S/NO	Variables	Measurement
1.	Efficiency of the regulators.	Ratio of output to total input
2.	Demurrage charges.	Number of demurrage charges
3.	Zero Losses	Capital – Cost = Profit Likert scale
4.	Foreign exchange	Likert scale
5.	Government charges	Likert scale Low government charges.
6.	Clear policy	Likert scale Number of stakeholders aware with policy

- | | | |
|----|--|--|
| 7. | Practicability of the bulk procurement and bulk storage at a single receiving point. | Measured in terms of efficiency, effectiveness and economy |
|----|--|--|
-

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

The main purpose of this chapter was to elaborate on the methodology used in the study, to meet the purpose of the chapter the researcher has covered the whole process of conducting the research. Secondary and primary data were gathered by using questionnaires and documentary review guide. Quantitative and qualitative (mixed approach) was selected as the appropriate approach in meeting the objectives of the study. This is a methodology that is used for conducting research which involves the collection, analysis and integration of quantitative (e.g. surveys) and qualitative (e.g. interviews) research. The approach also facilitated the understanding of the meaning of the perceptions that are attached by the respondents with regards to implementation of bulk procurement at single receiving point.

Kothari, (2004) defines research methodology as a systematic approach used to solve a particular research problem. The researcher decided to design a research methodology for the problem by considering the logic behind in his context of the study area.

3.2 Research Approach and Design

This study has been undertaken by employing a case study research design. There are many reasons for the researcher's decision to use this research design. Yin, (2017) and Kothari, (2004) both concur that, the case study design is very useful as it seeks to describe the problem under study in more detail. This reason makes the study design to be mostly referred to as the method of study in depth rather than the dimension Kothari, (2004). This design was useful to the study since it seeks to describe the problem in more detail, to look at it as a whole and through its conclusions has been made.

Furthermore, the case study provides very detailed information about a particular subject that it would not be possible to acquire through another type of method, also it is capable of investigating a contemporary phenomenon within its real-life context when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence used. Also, it is flexible in the use of data collection methods which was allowed the researcher to generate in-depth contextual information and draw a reasonable conclusion.

3.3 Population of the study

This study targeted stakeholders of petroleum products, since the downstream sector has fewer and reachable participants. The targeted population were the government employees from the energy sector such as EWURA, PBPA, as well as OMCs and staff from TIPER. Most of these stakeholders are based in Dar es Salaam and some are located in Tanga region as well as Mtwara region.

3.4 Sampling size and Sampling Techniques

Sampling is a process of selecting units from a population of interest so that by studying the sample we may reasonably generalize our result back to the population from which they were chosen. Due to limit time and financial resources, the researcher might not be able to collect data from the entire population instead of sampling techniques was employed to get a representative sample. For this research, the researcher used non-probabilistic sampling procedure in order to come up with good sample judgmental or purposive sampling method/technique used to select group of resourceful persons with regard to the individual ability to provide the type of information sought.

3.5 Sampling Procedure

Kothari, (2004) argues that sampling procedure involves the decision of the type of the sample and methods to be used in selecting the items for the sample as it is difficult for a researcher to collect data from every individual. In this study, the researcher used a non-probabilistic sampling technique in order to get the sample representative of the entire population. This sampling technique was appropriate for this study and less expensive compared to the probabilistic sampling technique.

Sample Size

Sample size refers to the number of items that was selected from the population. To obtain the information needed for the research, the researcher consulted at least fifty people, this being due to the fact that the downstream petroleum sector has fewer people that can as well be reached easily. Of these people, five were from among PBPA staffs, and five from EWURA staff, five from TIPER, five from GBP Tanga, five from GM Mtwara, five from TPA and twenty from all the OMCs as the relevant stakeholders in this study who was randomly selected. This sample was adequate and affordable to study the problem.

Table 3.1 Sample size Category of Respondents

S/NO	Members category	Target Respondents	%
1	PBPA staff	5	10
2	EWURA staff	5	10
3	TIPER staff	5	10
4	GBP Tanga staff	5	10
5	TPA Staff	5	10
6	Other OMCs	20	40
7	GM Mtwara	5	10
	TOTAL	50	100

Source: Field data, 2019

3.6 Data Collection Methods and instruments

In order to obtain information regarding the problem under study, the researcher used three research methods namely; Questionnaires, interview and documentary sources. Primary and secondary data collections was conducted from various sources that exist within various stakeholders and from internet sources.

3.6.1 Questionnaire

Questionnaire refers to a form containing a series of questions either structured or unstructured that are to be answered by a respondent. This is the popular method of data gathering which involves sending questionnaires to the respondents by requesting them to provide answers by ticking the appropriate answers and giving some explanations and sending back to the researcher. In this study written question was distributed to the selected stakeholders and collect data from respondents through recording the responses by writing. The researcher prepared the questions and arranges them to form a questionnaire.

These methods used to collect quantitative as well as qualitative data from various respondents as stated above. The method can solve the purpose of the study due to its ability to achieve the following: -

- i. It is a cost-effective method in terms of time and resources to be used.
- ii. The method is researcher free from bias since the respondents have adequate time to respond to the questions.

However, using this method as the data collection tool has got some remarkable limitations such as some of the questions might not be answered by the respondents due to wrong interpretations; it is difficult to know whether respondents was willing to provide information and non-response from some of the respondents (See Appendix I). These limitations

3.6.2 Interviewing

An interview is a purpose discussion between two or more people. The researcher collected data from selected stakeholders; this was done through face to face, and the phone as some

interviewees' were not available when the researcher visited their offices for data collection (Saunders, Lewis, & Thornhill, 2009).

This method of data collection was applied in this study due to its ability to provide more information that is in greater depth and that; the method gives the researcher greater flexibility and opportunity to restructure questions especially during unstructured interviews (Kothari, 2004) (See Appendix II).

3.6.3 Documentary Review

This method was applied by the researcher to find out the already available data on the problem under study published or unpublished. These data are those that have already been collected and analyzed by other researchers (Kothari, 2004). However, the researcher could not rely on this method due to its disadvantages as before deciding to apply this method of data collection one has to be sure on issues such as reliability, suitability, and adequacy of data (Kothari, 2004).

3.7 Types of Data

The researcher used both primary and secondary data. The researcher was decided to use both to cover a wide range of data collection.

3.7.1 Primary Data

Primary data as those which is collected from a fresh and for the first time and thus happen to be original. In this study, the primary data was collected through questionnaires and interviews.

3.7.2 Secondary Data

According to (Kothari, 2004), secondary data are information already collected and compiled by others, and these data have already been passed through the statistical process. The researcher reviewed specific reports, documents, and books related to the bulk procurement and storage of petroleum products.

3.8 Data analysis and presentation

The analysis of data, its interpretation and presentation were conducted as discussed below.

3.8.1 Data Analysis

Data analysis is the computation of specific indices or measures along with searching for patterns of relationship that exists among the data groups. The process of data analysis is essential for the aim of coming up with clear, understandable, reliable and up to date information that aims to achieve the research objectives (Saunders et al., 2009). Therefore, the data to be collected was checked and examined for errors and tabulated accordingly. The researcher adopted Descriptive statistics as it is one of the effective methods while dealing with quantitative data.

The role of statistics in research is clearly explained by Kothari, (2004) as to act as a designing tool, analyzing collected data and drawing conclusions from the collected and processed data. During research studies, a large volume of raw data is always collected. These raw data must be reduced so that it can be easily read and hence be used for further analysis. It is this reason that statistics cannot be avoided in any research study.

During this study, the quantitative data that was obtained through questionnaires was sorted and analyzed by using the Statistical Package for Social Science (SPSS) Software in order to determine the descriptive statistics such as percentages as well as frequencies of the variables to be studied. In this way, the researcher was able to make a comparison between the interviewed groups and hence be in a position to draw the recommendations and conclusion for the research problem.

3.8.2 Interpretation

After the analysis the interpretation of data based on the output obtained, the interpretation process based on the percentage or the number response from respondents.

3.8.3 Presentation

Data was presented in terms of detailed tables, pie chart, and graphs frequencies according to the variables of the research output obtained from the analysis.

3.9 Addressing issues of validity and reliability

The issues of reliability and validity was ensured in this study as illustrated below.

3.9.1 Reliability

The researcher used different methods of data collection techniques to compare if the same results could be obtained for the same requirement. Also, a pilot study was carried out to test the reliability of the data.

3.9.2 Validity

To achieve validity, the Researcher was ensured the measurement instrument was provide adequate coverage of the topic by containing an adequate representative sample of the universe. The researcher used word questions as instruments of measuring answer of respondents concerning the research problem, research question, and the researcher avoided the source of error by selecting a good sample, setting questions simple and straight.

3.9.3 Ethical considerations

The study has taken into consideration ethical rules according to the Mzumbe University regulations as well as the researchers' personal ethical consideration, which is, it's improper to use one's work and claim it to be yours. The study also was recognized and acknowledges other scholars' work accordingly as well as following all the procedures of acquiring information from the informants without doing any disturbances

CHAPTER FOUR

PRESENTATION OF THE FINDINGS

4.1 Overview

This chapter of the dissertation provides data presentation, analysis and discussion. It covers presentation of the findings of this study on the practicability of the bulk procurement of petroleum products and bulk storage at a single receiving point. The study was directed by the research questions as shown in the Appendix (i).

4.2 Sociodemographic characteristics of the respondents

This section presents background characteristics of the respondents; it presents respondents variability in their profiles based on questions asked. This section intended to explore respondents' composition in terms of gender, level of education and years of working experience.

Female participated were 38%, while male was 62% of all respondents', therefore with regard to gender findings revealed that female also involved in the oil industry but the percentage of male was greater than females. These respondents were approached through questionnaires and interview. Other findings show that, 12 percent have been working in the oil industries especially petroleum between one to five years while 54% have been working in the company between six

to ten years. On the other hand, findings revealed that 44% of respondents attained bachelor's degree level of education, this implies that the stakeholders and employees involved in petroleum industries had enough education to run the business.

Table 4. 1 Socio-demographic characteristics of Respondents

Item	N	%
Gender		
Female	19	38
Male	31	62
TOTAL	50	100
Years working in the oil industry		
1-5	6	12
6-10	27	54
11-15	10	20
Above 15 years	7	14
TOTAL	50	100
Education level		
Certificate/FTC	8	16
Advanced	11	22
Bachelor's degree	22	44
Master's Degree	9	18

TOTAL	50	100
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Field data, 2019

4.3 Efficiency and applicability of the Bulk Petroleum Procurement and bulk storage

The Bulk procurement of petroleum products in Tanzania is currently being practiced. However, the bulk storage process in Tanzania is not clear yet as to how it should be undertaken. This section has been thoroughly discussed in subsection 4.3.1. In the same consideration, the efficiency of the petroleum product regulators has been discussed in subsection 4.3.2; whether the capacity and storage of petroleum product enough in Tanzania is also discussed in details under section 4.3.3. How time used to change from one terminal to another affect the efficiency of the bulk procurement system and its intended purpose is also discussed under section 4.3.4 as well as how the government charges affect the applicability of bulk procurement of petroleum product.

4.3.1 Efficiency of the of Petroleum product regulators (e.g. EWURA).

Efficient implementation for the importation of bulk procurement petroleum product depends greatly on performance of product regulators. 44% of respondents were satisfied on how the regulators of petroleum product work, 22% they were neutral neither satisfied no dissatisfied. This indicates that petroleum products regulators are well above average on their performance of the various regulative activities. One of the respondents' comment regarding EWURA's performance was *"they have done quite an amazing job in regulating and controlling the fuel prices from what was once every chaotic price settings"*. This indicates that as one of the regulators, EWURA has been able to perform its responsibilities in an encouraging way.

Table 4.2 Efficiency of the of Petroleum product regulators (e.g. EWURA).

Response	Frequency	Percent
very satisfied	7	14

Satisfied	22	44
Neither satisfied nor dissatisfied	11	22
Dissatisfied	8	16
Very Dissatisfied	2	4
Total	50	100.0

Source: Field data, 2019

4.3.2 The capacity and storage of petroleum product in Tanzania

The capacity and storage of petroleum product is very important to be known. This is true as enough capacity will imply that the country can be able to cope with any catastrophic incidences that might happen out of the country and hinder the importation of petroleum products. The study seeks to find out to what extent the capacity and storage of petroleum product enough in Tanzania. Results shows 28% the capacity is above average, 62% average and 10% below average. By this findings, there is a need to construct more storage tanks to cover the consumption for at least six months compared to the current one month consumption storage capacity. However, *“it’s really hard to tell if the available capacity can be used for strategic reserves since every terminal stores its product or hospitality for other clients and this can either be transit parcels or local, not specifically for the nation’s reserve”* noted one of the respondents.

Table 4.3: The capacity and storage of petroleum product enough in Tanzania

Response	Frequency	Percent
Above average	14	28
Average	31	62
Below average	5	10

Total	50	100.0
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Source: Field data, 2019

4.3.3 Time used to change from one terminal to another affect the efficiency of the BPS

“Had we have been receiving at one point, we would have avoided the wastage of time that is experienced now due to change from one terminal to another terminal, and this usually leads to high demurrage charges at the end”. This was one of the stakeholders’ response on the time used to change from one terminal to another whether it affects the efficiency of the bulk procurement system and its intended purpose, where generally the findings revealed 44% replied that the process meet expectation, while 48% replied that the time used was below expectation. The results mean the time used to change from one terminal to another affect the efficiency of BPS due some delays which leads to great demurrage charges.

Table 4.4: Time used to change from one terminal to another affect the efficiency of the BPS

Response	Frequency	Percent
Exceeded expectations	4	8
Met expectations	22	44
Below expectations	24	48
Total	50	100.0

Source: Field data, 2019

4.3.4 The government charges affect the applicability of BPS of petroleum product

The aim here is to find out how various charges imposed by the government affect the applicability of the bulk procurement system for petroleum products. Findings shows 60% respondents replying that the charges affect a lot the process, and 30% said moderate. This implies that the Government through regulatory authorities and oil marketing companies should considers change of such charges to make the applicability of BPS to be effective.

Table 4.5: The government charges affect the applicability of BPS of petroleum product

Response	Frequency	Percentage
A great deal	2	4
A lot	30	60
A moderate amount	15	30
A little	3	6
None at all	0	0
Total	50	100

Source: Field data, 2019

4.3.5 The current discharge system and sequence contribute to the demurrages

As noted earlier from the respondents, the study finds out that the current discharge system and sequence contribute to the demurrages, where 84% of respondents agreed that it is true the discharge system contribute to demurrages. This means the bulk procurement system under multiple terminal causes demurrages a lot. The solution to this would be to discharge all cargo from the ship into one terminal, there after distribution into various oil marketing companies.

Table 4.6: The current discharge system and sequence contribute to the demurrages

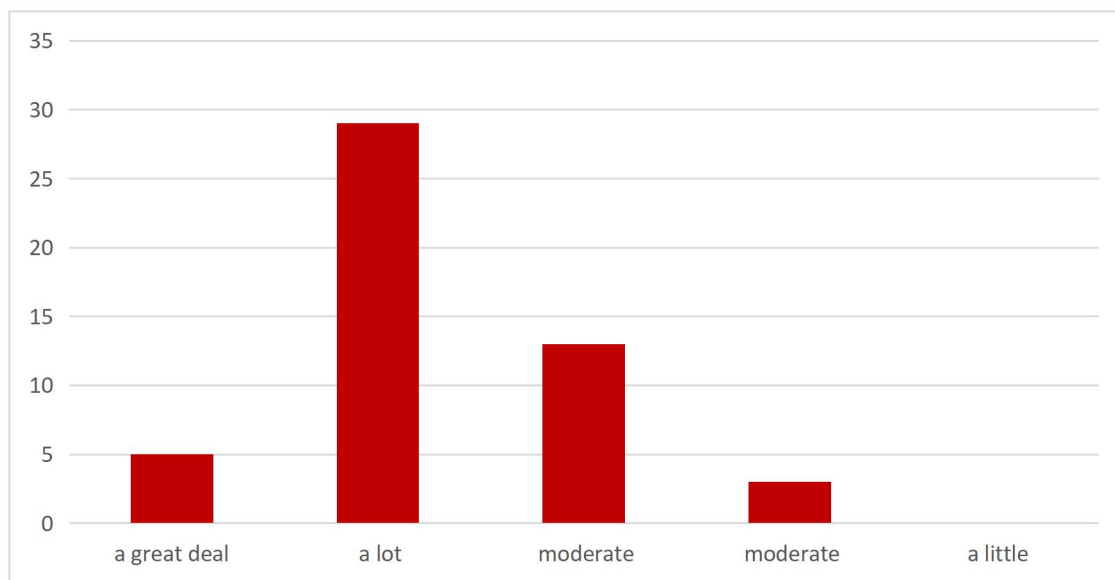
Response	Frequency	Percentage
YES	42	84
NO	8	16
Total	50	100

Source: Field data, 2019

4.3.6 Effectiveness of the BPS and storage of petroleum product in Tanzania.

The question required the respondents to answer to what extent is the bulk procurement process and storage of petroleum product in Tanzania is effective? The response of 58% of respondents replied bulk procurement process and storage of petroleum product in Tanzania is effective a lot. On other side 26% of respondents replied the process is moderate. The result means the stakeholders and regulators of oil product were committed to their job. This can be evidenced as prices can be easily set and regulated compared to when individual companies would procure their own consignments and then set their own prices.

Figure 4. 1: Effectiveness of the bulk procurement process and storage of petroleum



Source: Field data, 2019

4.4 Economic benefit of the BPS of petroleum product on a single receiving point.

Section 4.5 describes the various economic benefits from bulk procurement of petroleum product on a single receiving point. Energy security is correspondingly closely linked with social, economic, political, and environmental development, thus making it a cross-cutting issue rather than one of merely finding geological energy resources. Households use a variety of petroleum products: kerosene for lighting, and cooking; liquefied petroleum gas (LPG) for cooking and use by vehicles; and gasoline and diesel for private and commercial vehicles as well as captive power generation. Fuel and another price increase effectively reduce household income. This section was divided into five subsections which explains the economic benefits:

4.4.1 Has the BPS of petroleum products benefited the country compared to the previous procurement system?

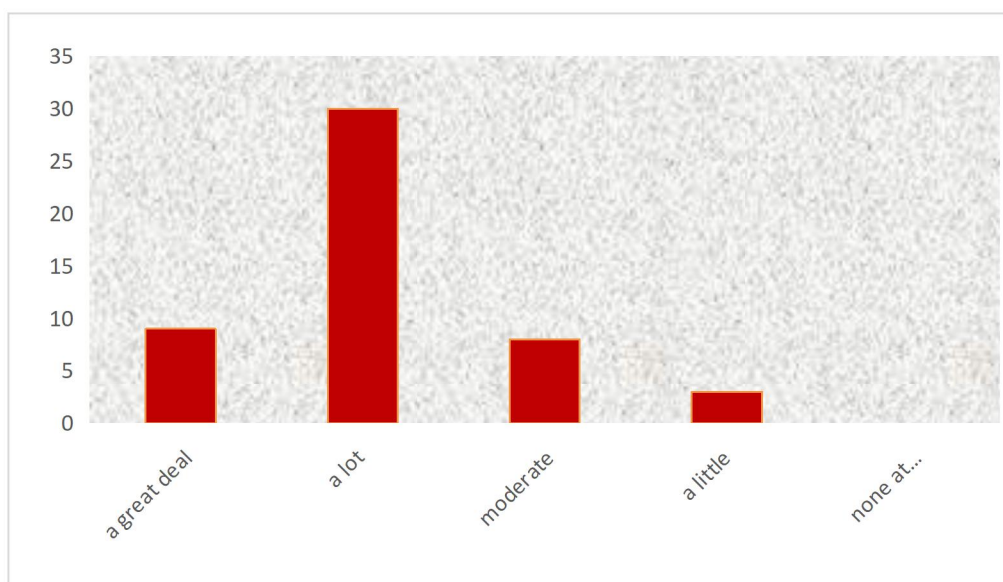
This subsection provides the extent of bulk procurement of petroleum products benefited the country compared to the previous procurement system by 60% of respondents replied that bulk procurement of petroleum products benefited the country a lot

Table 4.7 The bulk procurement of petroleum products benefited the country

Response	Frequency	Percentage
A great deal	9	18
A lot	30	60
A moderate amount	8	16
A little	3	6
None at all	0	0
Total	50	100

Source: Field data, 2019

Figure4.2: The bulk procurement of petroleum products benefited the country



Source: Field data, 2019

4.4.2 Bulk procurement of petroleum products and lower the prices to the end consumers.

Another economic benefit of bulk procurement of petroleum product on a single receiving point the process facilitates the lowering of prices to the end consumers. In line with that, in order to ensure the efficient implementation for the importation of the petroleum products as well as lower the retail prices between 12 and 18 percent, the Energy and Water Utilities Regulatory Authority (EWURA) devised the Bulk Procurement System (BPS) which became operation early January 2012. The government however considered the bulk petroleum products procurement as a temporary measure until a permanent solution to the escalating fuel prices could be obtained. The idea was to have a permanent solution by creating the national strategic petroleum reserves which would ensure the stability in the local market (Nyoni, 2013).

Table 4.8 Bulk procurement of petroleum products has contributed to lower the prices to the end consumers.

Response	Frequency	Percentage
YES	36	72
NO	14	28
Total	50	100

Source: Field data, 2019

Figure 4.3: The BPS of petroleum products and lower the prices to the end consumers.

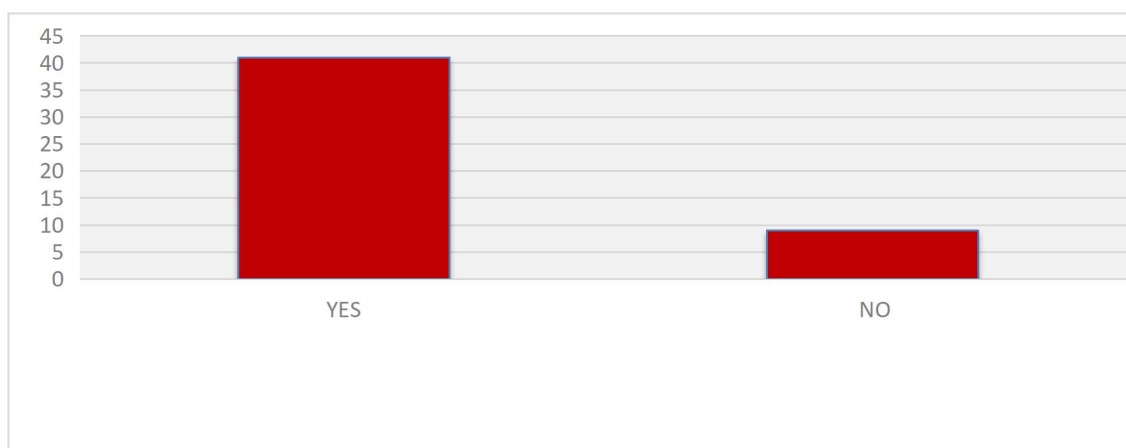


Source: Field data, 2019

4.4.3 The losses incurred during discharge to the oil marketing companies be lowered

Out of 50 respondents 41(81%) respondents replied yes to the question whether the losses incurred during the discharge of petroleum products to the oil marketing companies can be avoided. Others economic benefits of single receiving point of bulk procurement of petroleum product was lowering the product loses, reduce tax evasion, Control quality and quantity of the products, reduce demurrages etc. see box 4.1 for more economic benefits.

Figure 4. 4: The losses incurred during discharge to the oil marketing companies can be lowered



Source: Field data, 2019

Economic benefits that are associated with single receiving point for the bulk procured petroleum products as shared by some of the stakeholders during data collection. (Box 1)

Box 1: Economic benefits associated with single receiving point.

Below are some of the comments from various stake holders and justification about them.

“Will drastically reduce products losses as well as cut short the demurrage losses”. This is true since receiving at a single point will strengthen the control of loading activities and ensure that there are no diversions of products to other oil marketing companies.

“Reduce tax evasion, Controls quality and quantity of the products, Reduce demurrages”. Tax evasion would surely be controlled since only one point of offloading products would imply proper control of actual products unloaded by the ships and hence more control. Furthermore, product adulteration would be greatly controlled.

“Transparency, Reduction of demurrage charges”. Single point of receiving advocates for complete transparency and ships would discharge at a higher rate and hence reduce demurrages. An example of this is the crude oil vessel which uses only three days to discharge about one hundred thousand metric tonnes.

“Less losses. Accurate tax payments. Better product quality. Lower demurrage cost. Cost savings can be transferred to end user. Lower fuel costs in the market can boost economic activity”. As stated earlier, it’s easier to control product quality at one place rather than having tens of receiving terminals. However, it’s true that tax collection would be made significantly easier if the products were received at one point.

“May prompt to reduction of price”. All factors such as demurrage charges that are used in price setting can be used at a single receiving point and prices would slightly go lower compared to current prices.

*“Quality assurance, zero tax evasion, less loss during receiving and transfer
Easy monitoring of stocks”.*

|Reduces demurrages’ and transfer losses respectively”.

Source: Field data, 2019

Multiple terminal receptions from the ship take longer than it would take if the discharge was at a single terminal. The study finds out that multiple terminal receptions from the ship take longer than it would take if the discharge was at a single terminal. 76% of the respondents admitted that multiple terminal receptions from the ship take longer than it would take if the discharge was at a single terminal while 24% replied no. The results means multiple terminals receptions take longer than single receiving points hence the demurrage charges experienced. The solution to this would be to discharge at one point and avoid unnecessary extra costs that are incurred by the current discharging procedures.

Table 4.9 multiple terminal receptions from the ship take longer than it would take if the discharge was at a single terminal

Response	Frequency	Percentage
YES	38	76
NO	12	24
Total	50	100

Source: Field data, 2019

Single receiving for bulk petroleum products ensures reliability in receiving and supply of products. The study finds out that the single receiving for bulk petroleum products ensures reliability in receiving and supply of products, 48% strongly agree, and 30% agree which makes a total of 78% agreeing on the process of single receiving point in order to ensure the reliability in supply of petroleum products.

Table 4.10 Single receiving for bulk petroleum products was ensure reliability

Response	Frequency	Percentage
----------	-----------	------------

Strong agree	24	48
Agree	15	30
Somewhat agree	10	20
Neither agree nor disagree	0	0
Somewhat disagree	1	2
Total	50	100

Source: Field data, 2019

Single receiving petroleum point reduces tax evasion, easy to monitor all petroleum products and know what is actually to be paid for tax.

Finding revealed that 44% of respondents strongly agree single receiving petroleum point will reduce tax evasion and help to monitor all petroleum products.

Table 4.11 Single receiving petroleum point will reduced tax evasion, easily to monitor all petroleum products and know what is actually to be paid for tax

Response	Frequency	Percentage
Strong agree	22	44

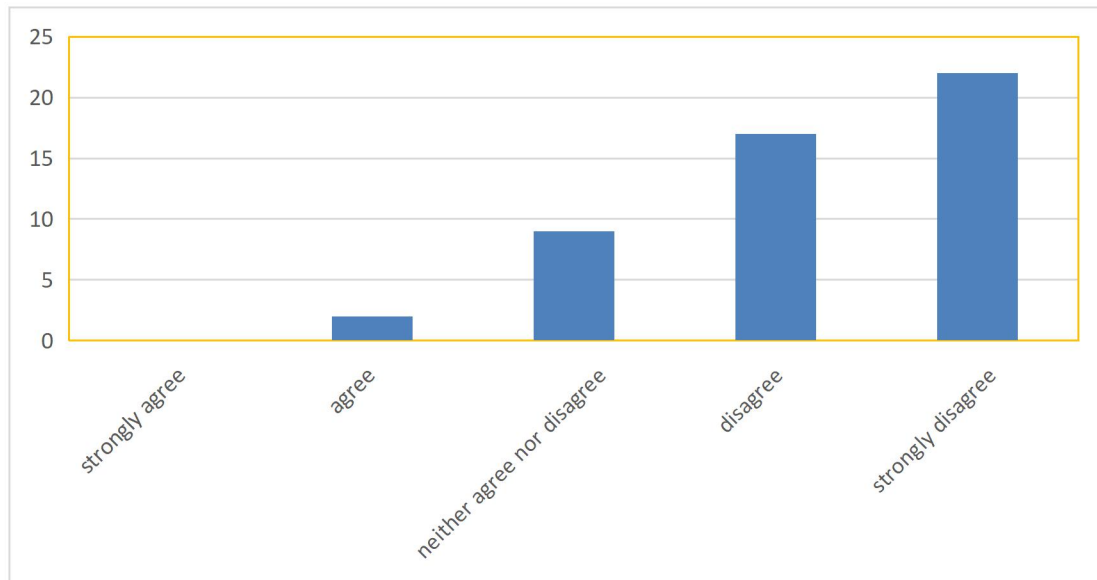
Agree	18	36
Somewhat agree	2	4
Neither agree nor disagree	8	16
Sstrong disagree	0	0
Total	50	100

Source: Field data, 2019

4.4.4 The losses incurred during transfer from TIPER to OMCs

The stakeholders perceptive on the losses incurred during transfer from TIPER to Oil marketing companies if was greater than the losses incurred during discharge from the vessel to OMCs were discussed in this section. The question was if the losses incurred during transfer from TIPER to OMCs greater than the losses incurred during discharge from the vessel to OMCs? 44% of respondents strongly disagree and 34% disagree that the losses incurred from TIPER was greater than discharge from vessel to OMCs. This means losses incurred during transfer from TIPER to OMCs were very smaller since the quantities transferred from Tiper are smaller compared to the quantities from the ships into separate OMCs.

Figure: 4.5 Are the losses incurred during transfer from TIPER to OMCs is larger than the losses from the ships to OMCs?

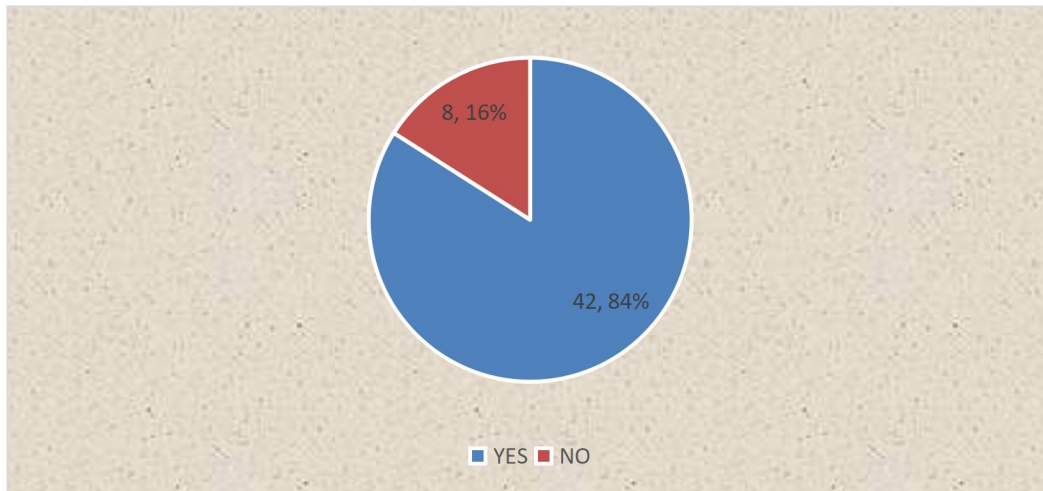


Source: Field data, 2019

4.4.5 The current discharge system and sequence contribute to the demurrages

This section based on current current discharge system (multiple terminals) and its sequence contribute to demurrages. The question was ‘does the current discharge system and sequence contribute to the demurrages? The result was 84% of respondents said yes, while 16% said no. this means usually the current discharge system in the multiple terminals contributing to demurrages.

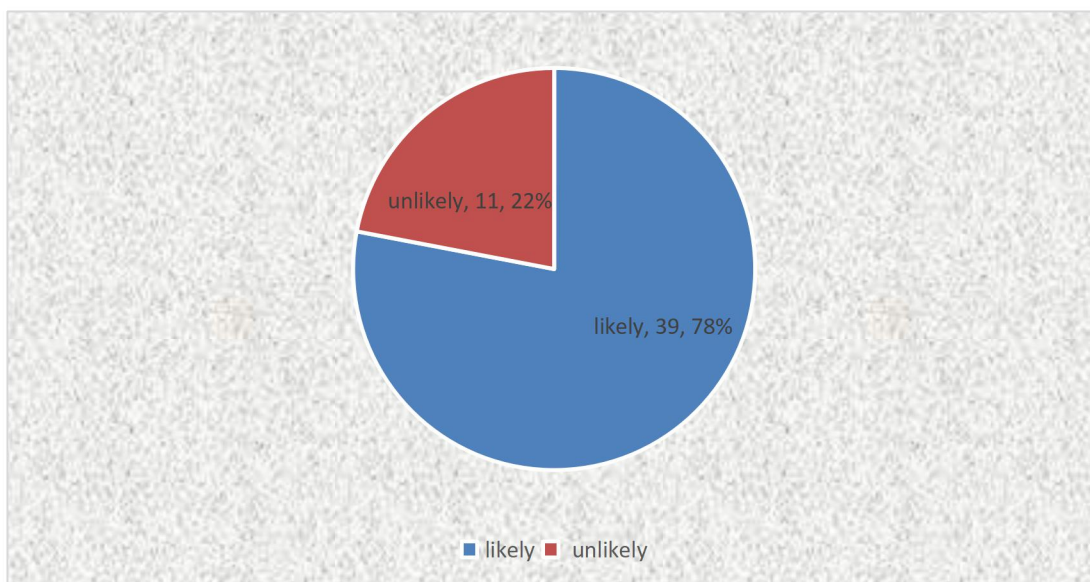
Figure 4.6 The current discharge system and sequence contribute to the demurrages



4.4.6 Change in policy with regard to mitigation of demurrages incurred

The section was about a change in policy with regard to how the discharge of products is currently being carried out help to mitigate demurrages incurred? 78% of respondents were replied the change of policy is likely helps to mitigate demurrages incurred, 22% replies unlikely. This means it is possible the change of policy will help to reduce demurrages if not eliminate.

Figure 4.7 Change in policy with regard to mitigation of demurrages incurred

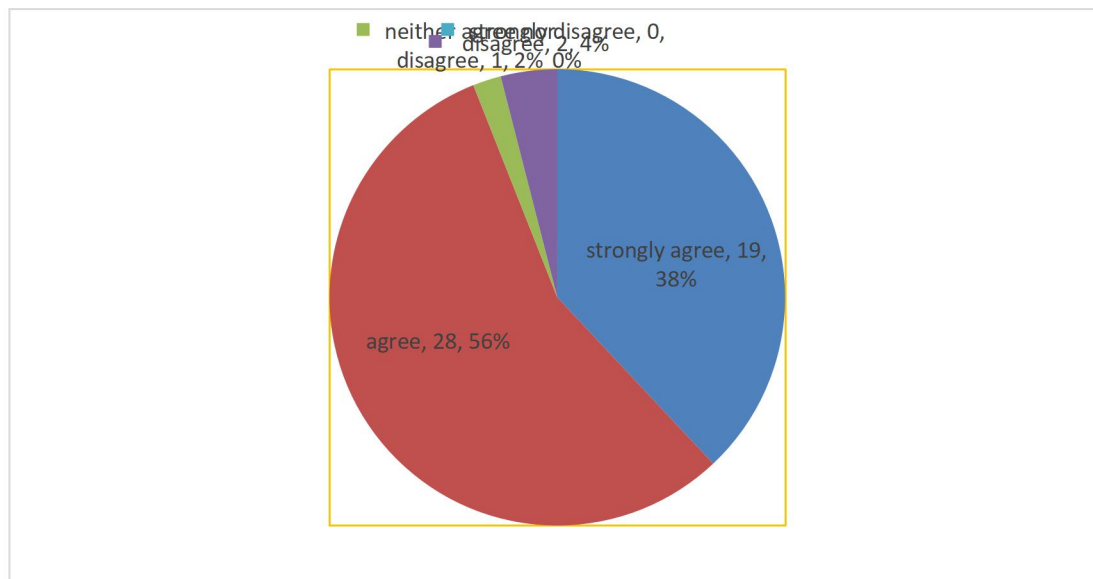


Source: Field data, 2019

4.4.7 Single receiving point will boost power to regulate rates charges to petroleum products.

The results show if single receiving point is implemented effectively will regulate rates charges to petroleum product, this was reported by 56% and 38% of respondents were replied agree and strongly agree respectively. This is among of many benefits of single receiving point system including reduce losses and demurrages.

Figure 4.8. Single receiving point will boost power to regulate rates charges to petroleum products.



Source: Field data, 2019

4.5 Challenges that face the bulk procurement of petroleum products and bulk storage at a single point in Tanzania.

This section points out challenges that face the bulk procurement of petroleum products and bulk storage at a single point in Tanzania. The researcher had quoted various stakeholders from TIPER, PBPA and OMCs during interview conducted on 26th and 27 March, 2019

“Unclear chain of command because EWURA is controlled under Ministry of energy at the same time is under Ministry of water”

“Not applicable no policy yet which allow Single receiving”.

“I need it urgently”

“Contradiction of policy and rules between key regulators EWURA and SUMATRA”

“Single receiving storage can result more wasting of time for delivery petroleum products to other oil company after being received at single point terminal”.

Receiving at single Terminal will increase costs as it will requiring more storage fees and also extra pumping costs from single points to individual Terminal, and time waiting for one to be supplied while another one is receiving, also infrastructure for single point is still not enough to satisfy the receiver.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Overview

The previous chapter presents findings that were observed through the analysis of data obtained from field through various methods. This chapter focuses on discussion of the findings by establishing causal relations between approaches used facilitating the bulk procurement of petroleum products and the stake holders awareness on the importance of having a single receiving and storage point for the bulky procured petroleum products based on field findings, theoretical and empirical literature.

5.2 Discussion

Storage Capacity

In implementing the governments' desire to have the National Petroleum Strategic Reserves (NPSR) as the long term to avoid shortage of petroleum products in the country, (EWURA, 2011) encouraged oil marketing companies to expand their storage capacities where the storage capacity has since the year 2012 been increasing. However, the rate of increase of the storage capacity is not satisfactory as shown in table (4.3) where the stakeholders think the nations' storage capacity is generally average to the actual demand. The respondents were however satisfied with how efficient EWURA and other petroleum regulators have been able to monitor and control all their tasks as indicated in Table (4.2).

Notable increase has been done, however, most of the oil marketing companies for business reasons do not store products that are to be consumed locally, rather prefer the transit business which has more benefits to them other than the local market. This therefore on performing weekly assessments, PBPA finds that the products stored for local consumptions are not enough for more than twenty five (25) days at any point in time. Therefore, the storage capacity might be enough if all products are locally consumed. The increase in storage capacity of terminals most of which are privately owned has not saved the purpose of having the national strategic petroleum reserves as (EWURA, 2011) and (Nyoni, 2013) suggests.

For the best and sustainable storage and to really have the national petroleum strategic reserves, the government can choose to either build its own storage facility, which will be larger in capacity compared to all other terminal capacities, or choose to use TIPER, which the government has a 50 percent ownership share and increase its capacity to make it completely a nations strategic reserve center. This would be in line with the suggestions of (Speighet et al, 2001) and (Dziedzic et al, 2008) on how China and USA among other nations have been able to create their own storage reserves.

Ships discharge system and demurrage

The bulk procurement of petroleum products on its inception, among other things was expected to lower the costs that are carried by the end consumers as well as making tax collection more efficient. However as indicated in Table (4.4) and Table (4.6) it has been witnessed that changing from one terminal to another during ship discharge takes more time than it should really have, this not only affects the efficiency of PBPA in performing its intended purpose, but also contributes greatly to demurrage charges which eventually affects the end consumers. Most respondents as shown in Table (4.8) believe that the current bulk procurement of petroleum products helps in lowering the prices of petroleum products compared to when individual companies would procure their own consignments and set individual prices. However, with the current sequencing of receptions considering even clients with as less as 500 metric tones which wastes a lot of time in aligning. This is not as bad as it was before, but it's far from what

(Competition, Consumer commission, & Samuel, 2007) suggests on the interests of end consumers and fair competition of oil marketing companies.

Single receiving point, Losses and Economic benefits

With multiple terminal receptions, as indicated in figure (4.9), it takes longer time for the ship to discharge the whole consignments compared to if it would discharge to a single receiving point. Most respondents as seen in Table (4.1) believe that the ships discharge would be more reliable and efficient if it would have been done at a single receiving point since it takes fewer days, taking into consideration the crude oil tankers which takes only three days to discharge 100,000 metric tones consignments, while the gasoil consignments of the same amount take up to 12 days to discharge into 14 different terminals.

As discussed earlier and indicated in Table (4.6), the current discharge system contributes to demurrage charges. Similarly, multiple terminal receptions are hard to monitor and properly control hence the losses that are repeatedly experienced tend to increase. Respondents strongly believe as shown in figure (4.4) these losses can be lowered or completely avoided if one point of reception will be decided hence more control measures be directed at that point. The losses incurred in return affect the oil marketing companies' revenues and hence little tax is collected by the government from them. These findings inadequately fulfils a call by Nyoni (2013) to have a single point for receiving all petroleum products.

It was again agreed by respondents, Table (4.11), that a single receiving point would reduce tax evasion and it would be easy to monitor all petroleum products and control what it is actually supposed to be paid as tax to the government. If done, this would have been in line with the suggestions of Bacon (2001) with regards to petroleum tax collections, trends in fuel taxes and their implications.

The rate of losses experienced from the ships to other receiving terminals combined, was agreed to be higher by respondents compared to the rate of losses when TIPER transfers products from its storage facility to other receiving terminals, figure (4.5). Therefore, if losses from the ships to TIPER are fewer, and transfers losses from TIPER to other receiving terminals are fewer compared to ship losses to other receiving terminals, then a single receiving point would reduce

or avoid losses completely and hence increase the OMCs revenues and hence more tax would be obtained by the government. This suggestion if done, it will be in line with the suggestions of Nyoni, 2013.

Since the bulk procurement of petroleum products has economic benefits to the country in general as agreed by respondents, Table (4.7), then having a single receiving point for the bulk procured products would bring even more economic benefits to the country as suggested by Nyoni (2013) and Bacon (2001) who concurs on the same opinion

Conclusively, findings from this study indicates that a change in ships discharge policy by the government would bring a likely bring positive advantages to both the government itself as well as the end consumers which are industries and normal individuals.

CHAPTER SIX

SUMMARY, CONCLUSION AND IMPLICATIONS OF THE FINDINGS

6.1 Overview

The summary gave overview of how the efficiency applicability of the Bulk Petroleum Procurement and bulk storage in single receiving point boost economic benefit and reduce unnecessary losses. The conclusion provides way forward in the change of policy. BPS policy is in place but the study suggest the minor changes to allow single receiving point system.

6.2 Summary of the study

The general purpose of this study was to explore stakeholders' perspective on the practicability in terms of efficiency, effectiveness, and economy of the bulk procurement for petroleum products and its proposed bulk storage (single receiving point). The research design used was a case study and method used was interview and documentary review in the collection of primary data.

Findings show that the applicability of the Bulk Petroleum Procurement is currently in place in Tanzania. Efficient implementation for the importation of bulk procurement petroleum product depends on the efficiency of product regulators. 44% of respondents were satisfied on how the regulators of petroleum product work. However, bulk storage of the procured petroleum products is still not being implemented.

In addition time used to change from one terminal to another affect the efficiency of the BPS. Stakeholder's responses on the time used to change from one terminal to another during ships

discharges and its effect on the efficiency of the bulk procurement system and its intended purpose due to multiple terminals receptions causes some delays and hence the increase in demurrage charges.

Finding revealed 44% of respondents strongly agree single receiving petroleum point would reduce tax evasion and help to monitor all petroleum products.

Also the findings indicated the benefits of a single receiving points such as less losses, accurate tax payments, better product quality (avoid adulteration of petroleum products) and Lower demurrage cost whereas cost savings can be transferred to end user.

Moreover the study finds out if multiple terminal receptions from the ship take longer than it would take if the discharge was at a single terminal. Apart from that challenges that face the bulk procurement of petroleum products and bulk storage at a single point in Tanzania were identified for instance, currently there is no clear policy yet which allow Single receiving for all consignments at one point and since some of the decision makers are politicians who are also stakeholders in the petroleum business hence they will be directly affected by the decision to receive products at a single point. Again, in case TIPER fails to manage its pumping capability, the single receiving storage can result into more wasting of time for delivery petroleum products to other oil company after being received at single point terminal

6.3 Conclusion

Findings shows the bulk procurement systems and bulk storage at as single receiving point would reduce tax evasion, reduce loses, avoid products adulteration as well as lower or avoid completely the demurrages. The specific objectives of the study were to examine the efficiency and applicability of the Bulk Petroleum Procurement and bulk storage process in Tanzania, to determine the effectiveness of the bulk procurement process and storage of petroleum product in Tanzania, to analyze the economic benefit of the bulk procurement of petroleum product on a single receiving point, to analyze the challenges that face the bulk procurement of petroleum products and bulk storage at a single point in Tanzania, to examine the efficiency and applicability of the Bulk Petroleum Procurement and bulk storage process in Tanzania, to determine the effectiveness of the bulk procurement process and storage of petroleum product in

Tanzania, to analyze the economic benefit of the bulk procurement of petroleum product on a single receiving point, and to analyze the challenges that face the bulk procurement of petroleum products and bulk storage at a single point in Tanzania.

Petroleum products are used across the entire economy in every country. Oil is used in power generation, accounting for eleven percent of total electricity generated in Africa in 2007 (IEA, 2009). Adequate and reliable supply of transport services and electricity in turn are essential for economic development. The private sector that is seen as the engine of growth cannot operate without adequate and reliable supply of petroleum products. The study findings draw the conclusion that bulk procurement system under single receiving point is more important for economic development of the country. Therefore in current environment petroleum product on single receiving point is inevitable.

6.4 Implication of the Findings

6.4.1 Theoretical Implication

Findings is in line with economic efficiency theory. It explains the use of available resources in order to maximize the supply of petroleum products in order to avoid shortages at any point in time. An economic system is considered to be more efficient than the other when it can provide more without using more resources. In economics, economic efficiency refers to the use of resources to maximize the production of goods and services (O'sullivan & Sheffrin, 2003). An economic system is said to be more efficient than another (in relative terms) if it can provide more goods and services for society without using more resources. In absolute terms, a situation can be called economically efficient if, no one can be made better off without making someone else worse off.

6.4.2 Policy Implication

The energy policy is in place and the bulk procurement system, but there is a policy gap that needed to address since it does not state BPS on single receiving point.

Due to many economic benefits of Bulk Procurement System of petroleum product on single receiving point it is a time for the Ministry of energy to send a bill to the parliament on establishment of bulk procurement of petroleum product on single receiving point

There is a need of having a single storage when receiving petroleum product. Multiple terminals can result to delays, losses and poor controls.

PBPA should enhance trustful and transparent dialogue sessions with OMCs in order to get right information for its decisions and work closely with other government agents and stakeholders like TRA.

EWURA has to periodically review its bulk procurement policy to ensure that BPS on single receiving point procedures are up to date and that it is economic and relevant to both consumers and OMCs. This is because even currently although OMCs comply with the BPS, but the extent of accuracy of the cap prices themselves is not 100% known due to the fact that some OMCs affords to sell at low prices even from indicative prices, the question is how do they afford this? Is it because of cost management efficiency, procurement effectiveness or selling adulterated fuel?

EWURA should be conducting researches that will avail relevant information for it to determine relevant regulations for the sector.

In order to stabilize the sector and address interest of its stakeholders EWURA should enhance its cooperation with other government agents whose responsibilities cut across the petroleum sector. This includes for example Tanzania Port Authority (TPA) (on speed of offloading to avoid demurrage / storage charges), TBS, Weight and measures agency and police force (fuel adulteration and malfunctioning pump scales), TRA (importation records data for various purposes) and ministry of Finance (for various fiscal policies issues).

Although experts did not buy this idea, establishment of stabilization fund whereby OMCs contributes to a central fund from which significant purchasing costs changes occurring are funded from has been practiced in some countries like Australia and seem to be successful, it can be tested in Tanzania.

OMCs have to push for their orders on bulk procurement when there is political interference on ship berthing by ensuring berthing schedule is clearly followed. In efficiency of discharging will increase cost on the consignment as the results will increase cost to product and make Bulky procurement system to be inefficient. `

OMCs have to improve on their general procurement practices to ensure that they incur reasonable costs. This includes proper planning for procurement, clearance of 69 cargo, financing arrangement and better negotiation and sourcing. Improvement in this area may lower the total cost of acquisition and hence lower unit cost and selling prices.

OMCs have to properly use the indicative / cap price as guides only and not the price at which they sell their products which seeming to be their currently practice.

6.5 Limitations of the study and suggestions for future research

The research was based only strictly to three regions namely Dar es Salaam, Tanga and Mtwara. Despite having thirty regions, only these regions have ports and terminals that are capable of receiving petroleum products from tankers. Covering the whole country would result in collecting data from irrelevant sources. However, it could have been done better if other ports in neighboring countries could be visited and conduct interviews there on how they implement the idea of bulk procurement of petroleum products and storage in the respective countries.

Including data or physical study from the neighboring ports such as Mombasa on how they operate their single receiving on petroleum products would have increased the sample size and hence would have had a wider coverage.

I would suggest the future research to be more focused on other countries operations on the same topic, which is a single receiving of the bulky procured products and how they are stored at a single point and the relevance of the same to the country at large. Kenya currently does the same, it would be a great addition into the study if this was done further to learn how they benefit from the system compared to Tanzania's operation of the same. This can also be studied in countries such as Mozambique, South Africa, and Nigeria to name a few.

The future research should also focus on enquiring why the government is not ready to embrace the idea of a single receiving point for the bulky procured petroleum products even when its relevance is literally known to all decision makers.

Secondly, the population that was involved in the study was very small. Based on the PBPA stakeholders' meetings, less than forty stakeholders participate in the weekly meetings which reflect the active stakeholders in the petroleum importation and distribution sector. The sample included all these active stakeholders in an unbiased way in order to get a better data. However, it can be practical to next time involve even the inactive stakeholders however difficult it is to reach them and find their opinions on the matter.

Even with the small sample size, some stakeholders didn't give an honest opinion since the study might be against their view of what should be implemented. For instance, if it happens that there are some dishonest stakeholders in the industry, suggesting a single receiving point for the bulk procured petroleum products would mean they won't benefit shortcoming of the current system.

Although the study discussed about the price fluctuations, the researcher did not interview end consumers as it this would move the concentration of the researcher from the actual problem which is bulk procurement and bulk storage at a single point.

Finally, the study also used secondary data whose accuracy cannot be guaranteed for the purpose of this study.

Therefore, the above-stated limitations should be overcome by the researcher in order to make this study successful.

6.6 Contribution to the existing knowledge

Little research about the bulk procurement of petroleum products and the bulk storage as well as single receiving point for the bulk procured products has been conducted. Specifically, the research has looked deep into how the bulk procured petroleum products can be received at a single point and how this will benefit the country.

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APPENDICES

APPENDIX I-QUESTIONNAIRE

This study is premised in collecting information related to the practicability of bulk procurement and storage of petroleum products at a single receiving point in Tanzania. This study is conducted by Mzumbe university student who is carrying out a research in a part of fulfilment of masters' degree program. Any information provided was useful for academic purpose only.

Contact details:

Name: CLEMENT MARWA CHACHA

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Mobile: 0620 800 400

Please round up correct answer and fill the blanks for the question below:

Part A. Respondents Personal Information:

Please provide an answer to each question below:

I. Respondents' Age:

☐ 18 -30 years

☐ 31- 40 years

☐ 41 – 50 years

☐ Above 50 years

II. What is your level of education? (Tick one)

☐ Ordinary Level

☐ Advanced Level

☐ College

☐ University

III. Employment Occupation:.....

IV. Gender

☐ Male

☐ Female

Part B: Detailed Questions on Interviewee's awareness on bulk procurement of petroleum products and storage at a single receiving point in Tanzania.

1. For how long have you been working in the Petroleum industry?
 - a. 1-5
 - b. 5-10
 - c. 10-15
 - d. 15+
2. How do you rate the Efficiency of the of Petroleum product regulators (e.g. EWURA).
 - a. To a very low extent
 - b. To a low extent
 - c. To some extent
 - d. To a great extent
 - e. To a very great extent
 - f. Not at all
3. To what extent is the capacity and storage of petroleum product enough?
 - a. To a very low extent
 - b. To a low extent
 - c. To some extent
 - d. To a great extent
 - e. To a very great extent
4. To what extent does the government policy affect the bulk procurement of petroleum product
 - a. To a very low extent
 - b. To a low extent
 - c. To some extent
 - d. To a great extent
 - e. To a very great extent
5. How has the bulk procurement of petroleum products benefited the country compared to the previous procurement system?

- a. To a very low extent
 - b. To a low extent
 - c. To some extent
 - d. To a great extent
 - e. To a very great extent
6. To what extent does the government charges affect the applicability of bulk procurement of petroleum product?
- f. To a very low extent
 - g. To a low extent
 - h. To some extent
 - i. To a great extent
 - j. To a very great extent
7. Does the bulk procurement of petroleum products lower the prices to the end consumers?
- a) Yes
 - b) No
8. Are the losses incurred during discharge of petroleum products to the oil marketing companies avoidable?
- a) Yes
 - b) No
9. Can the losses incurred during discharge to the oil marketing companies be lowered by having the product being discharged at a single terminal?
- a) Yes
 - b) No
10. Does it make sense to have the bulk procurement of petroleum products being stored at a single point?
- a) Yes
 - b) No
11. Does multiple terminal receptions from the ship take longer than it would take if the discharge was at a single terminal?
- a) Yes
 - b) No

c) Maybe

12. How does the time used to change from one terminal to another affect the efficiency of the bulk procurement system and its intended purpose?

- a) To a very low extent
- b) To a low extent
- c) To some extent
- d) To a great extent
- e) To a very great extent

13. Does the current discharge system and sequence contribute to the demurrages?

- a) Yes
- b) No
- c) Not sure

14. Is it possible to discharge gasoil from SPM at a higher rate and fewer hours as it is for the crude oil vessels?

- a) Yes
- b) No
- c) Not sure.

15. Would discharging of products from vessels in fewer hours lower demurrage charges?

- a) Yes
- b) No

16. Would a change in policy with regard to how the discharge of products is currently being carried out help mitigate demurrages incurred?

- a) Yes
- b) No

17. How easy is it to monitor the discharge of petroleum products from a vessel to various OMC?

- a) Very easy

- b) Not so easy
 - c) Very hard
 - d) Extremely hard.
18. How convenient is it to monitor the quality and quantity of products received at a single point compared to receptions at various points?
- a) Very easy
 - b) Easy
 - c) Very hard
 - d) Extremely hard
19. Is it possible to have zero losses from the vessels to the shore tanks?
- a) Possible
 - b) Impossible
20. Are the losses incurred due to discharge to multiple terminals normal?
- a) Yes
 - b) Not normal
 - c) Within acceptable range
21. Single receiving for bulk petroleum products was ensure reliability in receiving and supply of products. Do you agree with this statement?
- a) Yes
 - b) No
22. Single receiving point was boost power to regulate rates charges to petroleum products. Do you agree?
- a) Yes
 - b) No
23. Does foreign exchange rate affect the practicability of the bulk procurement of petroleum products?
- a) Yes

- b) No
24. How does the government charges affect the practicability of the bulk procurement of petroleum products?
- a) To a very low extent
 - b) To a low extent
 - c) To some extent
 - d) To a great extent
 - e) To a very great extent
25. To what extent is the bulk procurement process and storage of petroleum product in Tanzania is effective?
- a) Very effective
 - b) Somehow effective
 - c) Not effective
26. What is your view about a single receiving point for bulk procurement of petroleum product?
- a) Practical
 - b) Not practical
 - c) Very good idea
27. Single receiving and storage point was ensure security, and quality of petroleum products supply and zero adulteration. What is your view?
- a) Agree
 - b) Strongly Agree
 - c) Disagree
 - d) Strongly disagree
28. Single receiving and storage point of bulk products protect interest of consumers, efficient suppliers and government. Do you agree?
- a) Agree
 - b) Strongly Agree
 - c) Disagree
 - d) Strongly disagree
29. Single receiving was optimize costs with respect to procurement? Do you agree?

- a) Agree
- b) Strongly Agree
- c) Disagree
- d) Strongly disagree

30. Single receiving petroleum point was efficient tool for price setting. Do you agree?

- a) Agree
- b) Strongly Agree
- c) Disagree
- d) Strongly disagree

31. Single receiving petroleum point was reduce tax evasion, easily to monitor all petroleum products and know what is actual to be paid for tax. Are you agree?

- a) Agree
- b) Strongly Agree
- c) Disagree
- d) Strongly disagree

32. Is the Bulk Procurement system of petroleum products and storage at a single receiving point applicable?

- a. Yes
- b. No

33. If not, why?

.....

.....

.....

.....

34. Are the losses incurred during transfer from TIPER to OMCs greater than the losses incurred during discharge from the vessel to OMCs?

- a. Yes
- b. No
- c. Maybe

35. What would be the benefit of Bulk Procurement of petroleum products and storage at a single receiving point?

- a.
- b.
- c.
- d.

THE END

THANKS FOR YOUR KINDNESS

APPENDIX II:

INTERVIEW QUESTIONS

- i. What are the challenges that face the bulk procurement of petroleum products and bulk storage at a single point in Tanzania?
- ii. What is the storage capacity of petroleum product at TIPER, is it enough, should all products be discharged to TIPER?
- iii. How is the pumping capacity of TIPER to OMCs?
- iv. How fast can product received into TIPER be discharged to Individual OMCs and meet their business needs?
- v. How was TIPER manage to do its operations unbiased considering that its half owned by an Oryx who is a competitor to other OMCs?
- vi. What is your opinion to improve bulk procurement of petroleum products and bulk storage at a single point?

- vii. Why are the fuel prices still high even after implementation of the PBPA?
- viii. Does the multiple terminal receptions increase losses from the PBPA vessels?
- ix. Can losses be minimized if the whole vessel was discharge at a single point?
- x. Are the losses incurred during transfer from TIPER to OMCs greater than the losses incurred during discharge from the vessel to OMCs?
- xi. To what extent has PBPA managed to control the importation of petroleum products?
- xii. Does the bulk procurement of petroleum products help in price control?
- xiii. What is the greatest obstacle to having a single receiving and storage point for the bulk procured product as it is in Kenya?

THE END

THANKS FOR YOUR CONTRIBUTIONS